

sdt

*Self-Determination
Theory Conference 2019*



ABSTRACT BOOK

**7th Self-Determination Theory Conference
MAY 20-24, 2019 The Netherlands**

Foreword from the Chief Organizer

Dear Colleagues,

I am honored to be organizing SDT 2019 and welcoming you to the Netherlands. I am thankful to Richard Ryan, Edward Deci and Maarten Vansteenkiste for giving me this opportunity.

Attending the 4th International Self-Determination Theory conference 2010 in Ghent, Belgium, was a life changing event for me. I was mesmerized by the research ideas, the depth of knowledge and cutting edge thinking that I experienced at this conference. Most of all I could identify with the theoretical concepts of SDT as they helped me to explain the experiences I had in my daily life from the lens of motivation. Being a part of the SDT community is something I cherish every day.

I would like to thank the Steering Committee, Conference Programme Committee, the Paper and Poster Review Committees, my trusted team members, the student volunteers and VUmc Events for putting in their best effort to make this a promising conference.

I look forward to the 21st of May!

Warm regards,
Rashmi Kusurkar,
Chief Organizer,
SDT 2019,
Amsterdam UMC location VUmc.



Foreword from the Local Organizing Committee

We are excited to welcome you at Hotel Zuiderduin for the 7th International Self-determination Theory Conference!

This three-yearly conference is happening for the first time in the Netherlands. We hope that you like the setting we have chosen for you: next to the beach, with most delegates staying in one or two close hotels creating a great and warm atmosphere for sharing great ideas, building knowledge and taking the field forward.

We have organized long coffee and lunch breaks so that the time for networking is maximized. For informal networking you can indulge in free bowling at the bowling alley with other researchers.

A great Wifi connectivity allows you to freely and actively interact with social media and participate in audience response systems if they are used by the presenters. We encourage you to tweet or post on social media about the conference using the #SDT2019.

Our team, easily visible with their special white and yellow lanyards, is always available to help you when you have questions or need help. The registration desk will be manned at all times for your convenience. All sessions will be chaired and supported by our team of researchers to ensure a seamless programme.

Our Conference Programme Committee has worked hard to put together what we believe to be an inspiring and intrinsically motivating programme. You have the opportunity to personally contribute to SDT even if you do not have a presentation. You can do this by participating actively in the discussions after presentations and in one of the fifteen organized brainstorm sessions on the Applied Day to generate new ideas for the future of SDT research and its application to practice. These ideas will be disseminated to the delegates during the closing plenary.

We have planned wonderful menus which include one Dutch delicacy per day. We really hope you enjoy these as much as you enjoy the conference dinner and the party after.

As this is a Green conference, we will not be handing out any printed material. Even the name badges are made purely of paper.

We have also arranged a surprise “photo booth” and a Dutch memento for you so that you can carry the memories of this conference wherever you go.

We wish you an unforgettable time at the conference!

Warm regards,
The Local Organizing Committee,
SDT 2019,
Amsterdam UMC location VUmc.

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Abstracts Keynote presentations

K-001

Creating the Conditions under which People Can Motivate Themselves

J. Reeve

Korea University, SEOUL, Korea

When people experience psychological need satisfaction, they are fully capable of motivating themselves and their own engagement, learning, exploration, and skill development. Thus, understanding the conditions that allow (or preclude) people from experiencing psychological need satisfaction is an important theoretical and practical question. The primary condition that enables high need satisfaction is autonomy support (but also competence and relatedness support). When people enter an activity, relationship, or social context with an existing experience of need satisfaction, then supporting autonomy is not that difficult, as one can take the other's perspective and support the initiative they already have. When people are currently experiencing need dissatisfaction or need frustration, then supporting autonomy requires a great deal of interpersonal skill. Because this is so, I identify what we have discovered in our intervention research on teachers' motivating styles to offer suggestions and recommendations on how to do this. Overall, the talk is about (1) identifying the conditions that allow people to experience psychological need satisfaction, (2) identifying the conditions that orient people away from satisfaction and instead toward need dissatisfaction and need frustration, and (3) suggesting evidence-based recommendations about how people can create need-supportive conditions—either for themselves or for others. Though people can certainly create need satisfying conditions for themselves (as through agentic engagement, intrinsic goal pursuit, etc.), illustrative examples focus primarily on creating need-satisfying conditions for others (e.g., teachers supporting students).

K-002

Integrative Processes

F. Philippe

Université du Québec, MONTRÉAL, Canada

Weinstein, Przybylski, and Ryan suggest that the integrative process is composed of three subprocesses: awareness, ownership/autonomy, and nondefensiveness. I propose that these constitute an effortful secondary integrative process, which seeks to build a coherent self and manage past need thwarting experiences. A more automatic primary integrative process would deal with basic approach/avoidance responses, based on whether past events were experienced as need satisfying or need thwarting. I will show with empirical studies how both these primary and secondary integrative processes are independent and implicated in how past events are encoded, organized, and incorporated into the memory system. This has strong implications for emotion regulation and well-being.

K-003

SDT goes to college: Using SDT principles to build a large course transformation program and create autonomy supportive learning environments in higher education

C.L. Levesque-Bristol

Purdue University, WEST LAFAYETTE, United States of America

In this keynote, I will briefly describe how a large course transformation program was created following the principles of self-determination theory. Using data gathered from thousands of students taking these transformed courses, I will present a series of studies examining the implementation of SDT principles and the general SDT model in higher education. Evidence from a mix of correlational and quasi-experimental studies, with implications for both theory, practice, and policy decisions in higher education, will be presented and discussed.

K-004

Conceptualizing and Testing a New Tripartite Model of Interpersonal Communication Styles

N. Ntoumanis

Curtin University, PERTH, Australia

Many measures have been developed in the SDT literature to assess perceptions of the degree to which individuals in position of authority or expertise support or thwart others' psychological needs. In this presentation, I will propose that it is also important, from a conceptual and a measurement standpoint, to distinguish between styles that thwart versus styles that are indifferent to individuals' needs. This distinction is potentially useful, as individuals' experiences of need frustration, and concomitant negative outcomes, are more likely to occur in an environment that actively thwarts (vs being indifferent to) others' needs. In this presentation I will outline the conceptual rationale, and the development and validation of a new multidimensional measure of athletes' perceptions of coaches' need supporting, thwarting, and indifferent interpersonal styles. I will also discuss a parallel effort to develop an observational scale that assess these three styles using an observational scale in the context of an exercise class. I suggest that this tripartite conceptualization and measurement can be useful in further advancing conceptual understanding and intervention work on interpersonal styles in the physical domain, and potentially other life domains.

K-005

The promotion of volitional functioning in persistent rule-breaking contexts

G.A. Mageau

Université de Montréal, MONTRÉAL, Canada

SDT posits that people have a natural tendency to internalize the values and regulations of their social groups such that even socially prescribed behaviors may be enacted with a sense of agency and ownership. Autonomy support refers to observable behaviors that support this internalization process, thereby promoting volitional functioning. Yet, exactly what these behaviors may be in different domains of socialization remains unclear, as the operationalization of autonomy support has greatly varied across studies. In addition, autonomy-supportive behaviors have mostly been studied in situations of guided learning or limit setting, thereby limiting authority figures' capacity to remain autonomy-supportive in rule-breaking contexts. This research examines a new authority exertion strategy that could potentially make rule-enforcement more autonomy supportive.

In rule-breaking contexts, classic autonomy-supportive behaviors such as rationales can be less effective to elicit compliance than mild punishments (unpleasant non-coercive behavioral constraints; MP). Yet, MP are also associated with negative outcomes shown to hinder internalization (e.g., anxiety, fear). Past theoretical writings (Farkas & Grolnick, 2010; Ginot, 1965) propose that logical consequences (LC), defined as behavioral constraints that directly address transgression-induced problems, should be more effective than MP in promoting internalization. We tested this proposition and compared the effects of LC and MP on youth's cognitions, emotions and autonomy. Using experimental vignette methodologies, we found that children (M age = 10.42) and adolescents (M age = 15.28) believe LC to be as effective as MP to prevent future transgressions but they rated LC as more acceptable than MP. Children also felt that LC would make them less angry and more empathic following rule-enforcement. Finally, we found that the problem-constraint link predicts adolescents' autonomy and positive appraisals of parental authority in real-life settings. Together, these results suggest that LC could help foster internalization and volitional functioning in rule-breaking contexts.

K-006

Understanding the motivation to learn new languages: Interdisciplinary exchange between SDT and second language acquisition research

K. Noels

University of Alberta, ALBERTA, Canada

For 20 years, SDT has served as one of several theoretical frameworks to guide psychological, applied linguistics, and communication research on why and how people are motivated to learn a non-native language. SDT offers a coherent and comprehensive theoretical framework for understanding language learning motivation, along with clear implications for language education. Its major tenets have been empirically validated in over 100 studies, demonstrating their importance for predicting engagement and language proficiency within the language classroom and in interactions with members of the target language community. That said, other motivational models developed within second language acquisition research raise important issues that could inform SDT scholarship. These include consideration of the importance of (1) the socio-structural context and intergroup relations between ethnolinguistic groups; (2) notions of identity, capital, and investment; (3) the inclusion of "imagined", "future", and/or "ideal" selves and communities; and (4) reframing motivational processes in terms of complex dynamic systems.

K-007

Autonomy-supportive strategies of regulating problematic social behaviors

N. Legate

Illinois Institute of Technology, CHICAGO, United States of America

Problematic social behaviors like prejudice and bullying can have devastating consequences for victims, but decades of research show that efforts to regulate these problem behaviors among perpetrators are not very effective. Evidence from two cross-sectional studies in very different samples suggests that autonomy-supportive strategies may be effective at regulating these problematic social behaviors. The first study surveyed 2538 police officers and staff and found that autonomy-supportive strategies used in communications to reduce prejudice (i.e., perspective-taking, limiting pressure, and providing choice, rationale, and structure) related to lower antagonism towards diversity initiatives and higher warmth towards diverse groups. The second study used a preregistered plan, and examined these dynamics among parents trying to regulate cyberbullying behaviors in their adolescents. Findings with 1004 parent-child dyads showed that parents who used more autonomy-supportive strategies – understanding the adolescent’s perspective, offering choice, and giving rationales for prohibitions – had adolescents who reported engaging in less cyberbullying than parents who used controlling strategies (especially using guilt, shame, and conditional regard). In both studies, autonomy-supportive strategies were effective because they lowered feelings of reactance, or the desire to do the opposite of what was requested. These two studies suggest the potential benefits of autonomy-supportive strategies in interventions aiming to reduce various problematic social behaviors in wide ranging populations.

K-008

The Personal and Interpersonal Sides of Goal Pursuit: A Self-Determination Theory Perspective on Goal Pursuit

R. Koestner

McGill University, MONTREAL, QUEBEC, Canada

We explore the role of autonomy in the selection, pursuit, and relinquishment of goals in everyday life by integrating self-determination theory with the motivational theory of life span development. The integration of these two important current theories of motivation offers new insight into how individuals might better select and strive for the personal goals which give shape and meaning to their lives. For example, our recent findings suggest that autonomous motivation is just as critical in later phases of goal pursuit as in early phases and that progress in disengaging from unattainable goals is associated with biological as well as psychological indicators of wellness. Our findings will be relevant for practitioners in organizational, educational, and clinical psychology.

K-009

How Radical is SDT's Universality Claim? Taking a Closer Look at the Role of Individual Differences in the Basic Psychological Needs

B. Soenens

University of Ghent, GHENT, Belgium

At the heart of SDT is the claim that all people have three basic psychological needs, the satisfaction of which is beneficial for individuals’ psychological growth and the frustration of which increases risk for ill-being and maladjustment. This strong claim about the pivotal and universal role of the psychological needs in psychosocial adjustment is sometimes interpreted mistakenly as a rather simplistic assumption that the psychological needs would play exactly the same role in all people’s lives. According to this caricature of SDT’s viewpoint, there would be little, if any, room for individual differences in the effects of the psychological needs. Also, contextual support for and thwarting of the needs would relate to developmental outcomes invariably across interindividual differences. In this joint keynote, we present recent correlational and experimental research in diverse life domains (i.e., parenting, education, sports, and cross-cultural dynamics) about basic psychological need theory that underscores SDT’s more nuanced view on the consequences and antecedents of the psychological needs. First, research has begun to show that individuals differ to some extent in their sensitivity to the psychological needs, for better (in the case of need satisfaction) and for worse (in the case of need frustration). However, the role of these individual differences (in variables such as need strength, motivational orientations, and personality) is largely a matter of gradation as they affect the strength (but not the direction) of the effects of the psychological needs. Research on the transdiagnostic role of need frustration across different forms of psychopathology further points to individual differences in the manifestation of psychological need frustration.

K-010

How Radical is SDT's Universality Claim? Taking a Closer Look at the Role of Individual Differences in the Basic Psychological Needs

M. Vansteenkiste

University of Ghent, GHENT, Belgium

At the heart of SDT is the claim that all people have three basic psychological needs, the satisfaction of which is beneficial for individuals' psychological growth and the frustration of which increases risk for ill-being and maladjustment. This strong claim about the pivotal and universal role of the psychological needs in psychosocial adjustment is sometimes interpreted mistakenly as a rather simplistic assumption that the psychological needs would play exactly the same role in all people's lives. According to this caricature of SDT's viewpoint, there would be little, if any, room for individual differences in the effects of the psychological needs. Also, contextual support for and thwarting of the needs would relate to developmental outcomes invariably across interindividual differences. In this joint keynote, we present recent correlational and experimental research in diverse life domains (i.e., parenting, education, sports, and cross-cultural dynamics) about basic psychological need theory that underscores SDT's more nuanced view on the consequences and antecedents of the psychological needs.

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Research on the transdiagnostic role of need frustration across different forms of psychopathology further points to individual differences in the manifestation of psychological need frustration.

K-011

Silencing the self: Autonomy and the dynamics of self-expression and inhibition

N. Weinstein

Cardiff University, CARDIFF, United Kingdom

Autonomy support is a powerful catalyst for self-expression. One recent review of studies indicates that autonomy support is consistently associated with individuals feeling more authentic and genuine in relationships. This talk will explore the dynamic of self-expression and self-inhibition and examine how they play out across cultures, relying on data from Turkey, Iran, Poland, Peru, Saudi Arabia, the US, and the UK to do so. Further, I will focus on the role of autonomy support in self-silencing and self-expression in an organizational context where the opportunity for self-expression is particularly important, namely, policing within the UK. The talk will expand on this and consider groups for whom self-expression may be especially challenging when they receive lower support on the whole (e.g., women, LGBT+ [lesbian, gay, bisexual, and transgender]). I will further focus on how these individuals experience the support for autonomy. The talk will close with a discussion of promising future research to provide a better understanding of the precursors to, and importance of, self-expression.

K-012

The curious case of beneficence as a candidate need - Examining the nature and criteria for what makes something a basic psychological need

F. Martela

Aalto University, AALTO, Finland

Self-determination theory has always been open to examine the possibility of alternative psychological needs beyond the established needs for autonomy, competence, and relatedness. This talk documents the quest to investigate one such candidate need: beneficence as the sense of having a positive impact in the lives of other people. With my colleagues we have in several studies demonstrated that it seems to have a direct relation with various indicators of well-being, even when controlling for the three established needs. While this means that it fulfills one key criterion of basic psychological needs, there are a number of other crucial criteria as well, such as frustration of the need leading to ill-being. The talk takes a close look at what these other criteria are, how well beneficence is able to fulfill them, and comes to make a proposal about making a distinction between three types of needs: enhancement needs, deficit needs, and basic psychological needs.

K-013

Takin' it to the Streets: Leveraging SDT for Commercial Health Solutions

H. Patrick

Carrot Inc., REDWOOD CITY, United States of America

The application of self-determination theory (SDT) to health conditions, behaviors, and outcomes, has long been recognized as a critical area of study for SDT scholars. Indeed, over the past 30 years, research has examined the role of providers (e.g., physicians, coaches, nurses, teachers) in supporting basic psychological needs and facilitating the internalization of motivation for preventing and managing chronic conditions. There is also a robust clinical trials literature demonstrating the causal role of psychological need satisfaction and self-determined motivation in the long-term maintenance of health behavior change and associated positive outcomes for physical and mental health.

Despite the strength of this evidence base, there are very few examples of translation, dissemination, and implementation of SDT principles into commercial health solutions—in healthcare systems, community health organizations, and digital health. We are currently living in a time when the market is seeking scalable, commercial applications of behavioral science. Executives in a range of health-related fields (e.g., health plans, wellness providers, health tech) are increasingly interested in and becoming well-versed in perspectives such as behavioral economics, tiny habits, and motivation. SDT scholars have an opportunity and a responsibility to more actively participate in the translation, dissemination, and implementation of the extant literature applying SDT to health in diverse arenas to achieve population and public health impact.

Drawing from real-world experiences working in federal government research institutions, employee wellness providers, and digital health start-ups, this presentation will address the following: (1) Developing science communication skills for discussing SDT principles with diverse audiences; (2) Navigating rigorous timelines for deliverables; (3) Using best available evidence when gold standard evidence is not available; (4) Translating intensive intervention components into effective, useable, scalable solutions; and (5) Measuring outcomes that meet the needs of both commercial interests and scientific standards. The presentation will include illustrative examples from preliminary evaluation of a comprehensive digital smoking cessation product that utilizes a digital carbon monoxide breath sensor, mobile application, and dedicated human coaching delivered via in-app chat.

K-014

From theory to practice: New avenues for future SDT-based intervention research

L. Haerens

Ghent University, GHENT, Belgium

One of the greatest challenges for ongoing research is to exert a real and meaningful impact on practice. One way to exert a significant and meaningful real world impact, is by conducting intervention research. In the past, many SDT researchers have successfully trained physical education teachers and sport coaches to adopt a more motivating style through carefully designed and rigorously set up randomized controlled trials (RCTs). In this talk, Leen Haerens will review some of this recent work, while simultaneously addressing exciting avenues for future intervention research. She will focus on the importance of (a) more closely involving practitioners in the design and development of SDT-based interventions, (b) intensifying SDT-based trainings by including self-reflection activities about one's own motivating style, and (c) by paying more attention to the wider scale implementation of interventions after effectiveness has been proven.

K-015

Taking Stock of Teacher Autonomy Support and Control

E. Patall

Rossier School of Education, LOS ANGELES, United States of America

Teachers play a critical role in stoking the flame of students' motivation and engagement or alternatively, putting it out. From a Self-Determination Theory perspective, teachers' autonomy support in the classroom is theorized to serve as a primary condition for supporting students' motivation, engagement, achievement and well-being, while control is theorized to thwart motivation or promote sub-optimal forms of motivation and engagement. Hundreds of classroom-based studies and experiments have been conducted to examine these tenets. However, there have been limited efforts to comprehensively synthesize the evidence linking teachers' autonomy support and control to students' academic outcomes across classroom settings, making it difficult to ascertain the range, magnitude, and boundaries of teachers' autonomy support and control correlates and effects. In this talk, I present a comprehensive research synthesis and state-of-the-art meta-analysis of over 200 correlational and experimental published and unpublished studies on the role of teachers' autonomy support and control in students' motivation, engagement, achievement, and well-being. Two overarching questions will be addressed. First, what is the average relationship between teacher autonomy support or control and student achievement and psychosocial outcomes? Second, to what extent does the nature of support or control, the age and demographics of the sample, the educational setting, and the nature and timing of the outcome explain variability in the relationships between teacher autonomy support or control with student outcomes? The implications of this synthesis of research will be discussed for theory and educators every day practice, including the challenges and solutions associated with implementing desirable classroom practices that support motivation.

K-016

SDT research in health professions education

R. Kusurkar

Amsterdam UMC, location VUmc, AMSTERDAM, The Netherlands

Motivation was a neglected topic in health professions education, and research on motivation was scarce and lacked a theoretical foundation. Until 2010 there were only a couple of published papers applying SDT in health professions education, although SDT was a well-known theory of motivation. Both, small and big, transformative reforms failed to take student or teacher motivation into account while designing health professions education curricula. In 2018 the scenario is quite different. SDT research now spans the whole continuum of medical education and practice, i.e. the pre-medical period, undergraduate, postgraduate and continuing education, and other health professions education like nursing, pharmacy, midwifery, interprofessional education, etc. This keynote is meant to provide a broad perspective on how and why motivation is an important dependent and independent variable in health professions education, the key research findings, and an overview of the development of scholarship on SDT in health professions education in the last decade.

K-017

Fostering human goodness: How mindfulness attenuates ego-involvement and enhances positive social behavior

K. Brown

Virginia Commonwealth University, RICHMOND, VIRGINIA, United States of America

Support for, even glorification of self-centered worldviews and behavior has substantially increased in the United States and other countries within the past 30 years. Indeed it has been argued that egoicism is rampant in Western cultures; political discourse, social media, television, film, and other cultural forces promote self-interest. At the same time, there is popular and scholarly recognition of the negative consequences of such egoicism. Self-determination Theory has detailed how social agents can foster healthy human qualities, including less ego-involved behavior, but less attention has been paid to inner resources that can lessen ego-involvement and support positive psychosocial behavior associated with integrated self-functioning. This talk will highlight new theory and research showing how mindfulness, a receptive, moment-to-moment awareness of thoughts, emotions, and behavior, can promote "hypo-egoic" social functioning, including lower defensiveness in the face of social threat, more positive relations with others, and benevolence. Discussion will address future directions for this young line of research.

K-018

Can money buy performance and well-being in the workplace? The differential motivational power of money and psychological needs

J. Forest

Université du Québec, MONTRÉAL, Canada

This talk is about the motivational power of different aspects of money (namely pay satisfaction, contingent rewards, bonus amount and procedural justice) and workers' psychological need satisfaction of autonomy, competence, relatedness and beneficence, and their impact on positive and negative performance and well-being/ill-being indicators.

A first study sample of 265 workers from Greece completed all measures, and results of the analyses show that over and above all the monetary variables, psychological need satisfaction significantly predicts more in-role and extra-role performance, more positive impact in society, more engagement, and less organizational deviance. These results encourage organizations to primarily concentrate their efforts on satisfying psychological needs and, as a secondary target, take care of monetary rewards; this is exactly the opposite of what is now done in the workplace. This seems to be a chief way of achieving both well-being and performance in the workplace.

A second study, with 257 Canadian workers, aimed at testing, after people earned their salary and money at work, how they spend their money, what are their motives to do so, and how it impacts their daily-life experiences. Based on the Motives for Making Money Scale, we developed the Motives for Spending Money Scale. Results show that four factors emerge, namely 1) being better than others, 2) spending on others, 3) security and 4) fairness.

Regarding the consequences of the motives for spending money, it seems that negative spending (i.e., Being better than others) increases symptoms of depression. These preliminary results on motives for spending money fits with researchers calling for more in-depth understanding of why people spend and its impact on themselves and the planet. Taken together, these results show that money, in and of itself, does not have much motivational power. However, the meanings of money, both in earning and spending it, is what explains most of the variance. We therefore invite the SDT community to explore the different meanings money have to grasp the whole array of potentially positive and negative effects it can have on humankind.

K-019

The implicit self in SDT

K. Sheldon

University of Missouri, MISSOURI, United States of America

The existence of an “implicit self” has long been implicit within SDT. In this talk I will try to summarize what we know about this non-conscious, growth-focused entity. Sheldon et al. found evidence for an implicit organismic valuing process, which biases people (on average) to make more growth-promoting goal selections when remembering or reconsidering initial choices. Sheldon’s concept of self-concordance uses goal-ploc ratings to reveal the implicit self’s true goal preferences, finding that people better achieve goals that align with such preferences. Also, recent research shows that people make more growth-promoting choices when asked to rate the self-concordance of candidate goals before (rather than after) making goal selections, which apparently allows them to better evaluate the choice options. Assor’s concept of the “inner compass” refers to a non-conscious knowledge structure that can inform people “what they truly value and need,” especially when educational contexts promote and support access to the structure. Similarly, mindfulness meditation can allow people to reduce the clamor of conscious experience, enabling them to hear more subtle voices inside themselves. Gureau and Gureau used IAT methodologies to assess implicit self preferences, finding that people perform better when they manage to align their explicit and implicit self preferences. Keatley, Clarke, and Hagger showed that implicit autonomous motivation explained unique variance in time spent on experimental tasks, and was “better suited than explicit autonomous motivation for explaining variance in behaviors that are more spontaneous or unplanned.” Whereas organismic integration theory describes how people actively internalize social environments and values, an implicit self theory can explain how people can push back against malign environments and values, even when they are consciously deceived by those environments, or deluded about their own deeper values.

K-020

What do we mean when we talk about the need for autonomy? Freedom, inner compass, and how they help us to be resilient and do what we truly need to do

A. Assor

Ben-Gurion University of Negev, NEGEV, Israel

Self Determination Theory made seminal contributions to our understanding of the importance of the need for autonomy and its critical role in human thriving. Yet, there appear to be some unresolved questions regarding the conceptualization and assessment of the need for autonomy. In an attempt to address these questions I will suggest (based partly on Assor, 2017, and Deci & Ryan, 2000, and consistent with Sheldon’s self-concordance notion), that humans have a general propensity for autonomy (true self direction) that has three basic components: (1) Striving for freedom to self-direct (2) Striving to have an authentic inner compass (AIC; self-guiding schemas of autonomous values, need-satisfying aspirations, interests, and derived goals), which inform us on what is truly important to us), and (3) Striving to realize one’s inner compass in behavior. In short, we feel fully autonomous when we know and feel what is truly important to us, we are free to try to realize what we consider important, and we realize it. When we do not have an inner compass, we feel confused and may escape from freedom.

To support this view, I will present: (1) A study supporting the tripartite conception of the general propensity toward autonomy, and (2) Studies from widely different cultures, suggesting that having an authentic inner compass (AIC) promotes the formation of integrative identity commitments, resistance to peer pressure, and wellbeing, and reduces delinquency and risk behaviors; the studies also indicate that there are two recently conceptualized autonomy-supportive practices which promote AIC formation: Inherent Value Demonstration, and Reflective Inner Compass Facilitation.

Finally, I will examine how our inner compass may support resistance to pressures and temptations to act in ways that seem appealing, but actually undermine growth. Specifically, I suggest that the AIC may act as a more reliable guide in misleading or stressful situations, when relatedness and competence needs are satisfied, and if it is supported by capacities for impulse control, beliefs about how we can best satisfy our basic needs, and perhaps also integrative emotion regulation and mindfulness.

Abstracts Symposium presentations

S-001

Choosing to Regulate Emotions: Pursuing Emotion Goals in Autonomy Supportive and Controlling Contexts

M.B. Benita

University of Haifa, HOD HASHARON, Israel

According to a motivational approach to emotion regulation, emotion regulation is based on the pursuit of an emotion goal. In our investigation, we applied self-determination theory to emotion regulation and tested the potential effects of autonomous versus controlled motivations on the pursuit of emotion goals, emotional intensity, and emotional processing. In four experimental studies (N=242), in which participants viewed a fear-eliciting film clip or emotion-eliciting pictures, participants were prompted to pursue emotion goals with either autonomy supportive or autonomy suppressive instructions. We found that autonomy support and controlling instruction were equally likely to motivate participants to engage in emotion regulation when directly instructed to do so. However, when they were allowed to spontaneously choose whether to regulate emotions or not, participants in the autonomy support condition were more likely than those in the controlling condition to independently pursue emotion goals. Study 1 showed that when exposed to two different stimuli, controlling instructions yielded increased emotional intensity over time, while autonomy support did not. Studies 2 and 3 showed that participants in the autonomy support conditions continued to spontaneously pursue the goals, while those in the controlling conditions did not. Study 3 also showed that participants in the autonomy support condition engaged in less defensive processing of emotion-eliciting stimuli, while controlled participants' written expressions were more indicative of defensive coping. Study 4 found that participants in the autonomy support condition chose to regulate their emotion more than those in the controlling condition, when given the option to do so. The former also reported less increase in emotional intensity than controlled participants when moving between trials in which they were instructed to regulate and trials in which they were instructed to choose. These results indicate that people are more likely to regulate their emotions of their own accord when they are instructed to pursue emotion regulation in an autonomy supportive manner.

S-002

Integrative and Suppressive Emotion Regulation Differentially Predict Well-Being through Basic Need Satisfaction and Frustration: A Test of Three Countries

L. Matos¹, M. Benita², M. Maya², C. Torres³

¹*Pontifical Catholic University of Peru, LIMA, Peru*

²*University of Haifa, HAIFA, Israel*

³*University of Brasília, BRASÁLIA, Brazil*

The aim of this research was to study the extent to which the relations between integrative (IER) and suppressive (SER) emotion regulation and well-being are mediated by the satisfaction/frustration of individuals' basic psychological needs. Data were collected in three countries, Israel (n=257), Peru (n=305), and Brazil (n=203). Multi-group structural equation modeling (SEM) results showed that IER positively predicted well-being, mediated by psychological need satisfaction. Moreover, psychological need frustration mediated the relationship between SER and well-being.

S-003

The transdiagnostic role of emotion regulation and psychological need experiences in (non)clinical adolescents' internalizing and externalizing psychopathology

K.B. Brenning, B.S. Soenens, M.V. Vansteenkiste, B.D. De Clercq

Ghent University, GHENT, Belgium

There is growing evidence for the presence of one general psychopathology factor (i.e., the p-factor) underlying both youth and adults' psychiatric disorders (Caspi et al., 2014; Patalay et al., 2015). The traditional view of mental disorders as distinct, episodic and categorical conditions has been challenged by rapidly growing rates of comorbidity and evidence that many disorders are recurrent/chronic and exist on a continuum (Caspi et al., 2014). Therefore it is interesting to identify transdiagnostic processes that can help to explain dysfunction across internalizing and externalizing psychopathology (Aldao et al., 2016). One factor that has received considerable attention in this regard is emotion regulation (Kring & Sloan, 2009). A second potentially important transdiagnostic risk factor that could be investigated is basic psychological needs. Abundant research, based on Self-Determination Theory, has demonstrated that psychological need frustration increases the risk for psychopathology, whereas need satisfaction is linked to psychological well-being (Vansteenkiste & Ryan, 2013). Although both emotion regulation and basic psychological needs could be seen as two potentially important processes in psychological well- and ill-being, no study to date investigated them together in an integrated model. In the present study, we aim to investigate emotion regulation and basic psychological needs as two potentially important transdiagnostic processes when studying adolescents' internalizing and externalizing symptoms.

Method: A heterogeneous sample of both non-clinical and clinically-referred adolescents (N = 168, 50% referred) reported upon emotion regulation (i.e., emotional integration, suppression and dysregulation), basic psychological needs (i.e., need satisfaction and frustration), and both internalizing and externalizing problems.

The results indicated that both adolescent emotion regulation (more specifically dysregulation) and basic psychological needs (more specifically need frustration) were positively linked to internalizing as well as externalizing problems. Next, a joint examination of the interplay between both factors, suggested that need frustration may function as a transdiagnostic underlying mechanism (i.e., partial mediator) in the relation between emotion regulation and psychopathology. Overall, no interaction effects emerged between emotion regulation and basic psychological needs (with the exception of the buffering role of emotional integration in case of high need frustration), and no interactive effects with clinical status were found. The current study provides first evidence that both emotion regulation and basic psychological needs are important when studying adolescents' internalizing and externalizing symptoms. Results will be discussed at the conference presentation, together with practical implications, emphasizing the importance for future prevention and intervention programs focusing on both emotion regulation and psychological need experiences.

S-004

Disentangling the two dimensions of integrative emotion regulation: receptive attention and intentional exploration

G.R. Roth

Ben-Gurion University of The Negev, METAR, Israel

SDT defines adaptive emotion regulation as integrative emotion regulation, which has two main components: first, non-defensive receptive attention to one's emotional experience; second, intentional exploration and integration of the experience with other aspects of one's self. Three studies will be described (N = 720) that explore the relative importance of each dimension and support the hypothesis that the first dimension may facilitate the second dimension, which, in turn may predict well-being and adaptive functioning

S-005

Developmental trajectories of maternal autonomy support across adolescence: Perspectives of mothers and youths

C. Ratelle, A. Plamondon, D. Litalien, S. Duchesne, F. Guay

Université Laval, QUÉBEC, Canada

Catherine Ratelle et al. provides an account of the developmental trajectories of maternal autonomy support across adolescence from the perspectives of both mothers and youths. Results across four waves showed the presence of two trajectories based on maternal reports (i.e., High + Stable; Moderate + Stable) and three trajectories based on the adolescents' reports (i.e., High + Stable; High + Decreasing; Moderate + Increasing). This talk will also focus on antecedents and outcomes of these trajectories.

S-006

The role of personality in effects of psychologically controlling parenting

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Introduction

According to SDT, all children would suffer from psychologically controlling parenting to some extent, because such parenting thwarts the universal needs for autonomy, competence and relatedness. This prediction does not suggest, however, that there is no room whatsoever for moderation by individual differences (personality) in effects of parental psychological control at all. First, personality may affect the degree to which psychologically controlling parenting is related to maladjustment, meaning that the associations will be stronger for children with a more maladaptive personality profile compared to those with a more adaptive personality profile. Second, personality may also affect the manifestation of developmental problems associated with psychologically controlling parenting. We hypothesize that for children with more undercontrolled traits, psychologically controlling parenting will be associated mainly with externalizing problems, whereas for those with more overcontrolled traits, psychologically controlling parenting will be associated mainly with internalizing problems.

Methods

In a set of three studies, the role of child and adolescent personality will be investigated within a cross-sectional, diary-based and longitudinal design, respectively. While the cross-sectional design focuses on between person differences, the diary-based and longitudinal designs make it possible to disentangle effects of parental psychological control (and the role of personality therein) at both the level of between-person differences and the level of within-person change. From a between-person perspective, examining the moderating role of personality means that one is looking at the question for whom the associations between parenting and outcomes are stronger, weaker or non-existent. From a within-person perspective, examining the moderating role of personality means that one is looking at the question which children are more or less susceptible to changes in parenting compared to their own mean of perceived parenting.

Results

Across the three studies, 11 out of 90 possible interactions (i.e., 12%) turned out to be significant. Five interactions emerged in the prediction of internalizing problems and six in the prediction of externalizing problems.

Discussion & Conclusion

The moderating role of personality in associations between psychologically controlling parenting and children's and adolescents' problem behaviors was modest. Most interactions indicated that personality affected the manifestation of problems associated with parental psychological control, with Agreeableness and Emotional Stability playing the most prominent roles. Other interactions were more inconsistent and differed depending on the time frame examined. Overall, the findings are consistent with the principle of universality without uniformity, according to which there is some room for individual differences in generally universal processes.

S-007

Autonomy support within the context of parent-child talk about the past

J.V. Van der Kaap-Deeder, B. Soenens, S. De Pauw, M. Vansteenkiste
Ghent University, GHENT, Belgium

Jolene van der Kaap-Deeder et al. zooms in on autonomy support within the context of parent-child talk about positive and negative autobiographical memories. In a longitudinal observational study among mothers, fathers, and their preschoolers, it was found that autonomy-supportive parental reminiscing related to a higher level of adaptive emotion regulation in the child.

S-008

Examining the effects of autonomy support on self-defining memories and goal progress

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¹*National Institute of Education, SINGAPORE, Singapore*
²*Université du Québec à Montréal, MONTRÉAL, Canada*

Sook Ning Chua et al. presents research on autonomy support outside the parenting context, namely within the context of romantic relationships and friendships. Results of two longitudinal studies showed that autonomy support from partners and friends related to a higher level of need satisfaction in goal-related memories which in turn predicted goal progress.

S-009

Self-Determination in people with intellectual disability: feeling related, being autonomous

P.J.C.M. Embregts
Tilburg University, TILBURG, The Netherlands

Self-determination is an essential dimension of quality of life. In this presentation, Petri Embregts PhD provides a greater understanding of the extent to which people with intellectual disability (ID) themselves experience (relational) autonomy and self-determination. How do people with intellectual disabilities learn to be autonomous and self-determined? Moreover, with respect to the autonomy supportive environment, Embregts highlights recent research about vital aspects in supporting people with ID from their own perspective.

S-010

Longitudinal links between need satisfaction and well-being of people with intellectual disability: A Self-Determination Theory perspective

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¹*Netwerk Samen Kunnen Kiezen, TILBURG, The Netherlands*
²*VU University, AMSTERDAM, The Netherlands*
³*Tilburg University, TILBURG The Netherlands*

While it has been claimed that the basic psychological needs, autonomy supportive environments, and motivational regulations are universally important, application of these concepts to understand wellbeing in people with intellectual disability (ID) is lacking. Noud Frielink PhD will present longitudinal findings on the basic needs, motivational processes, and well-being of people with mild to borderline ID (N = 116). Significant associations were found between need satisfaction, autonomous motivation, and well-being, and between need frustration and ill-being. Current findings show the strength of prospective associations.

S-011

Type of motivation of parents and therapist for parent self-management: One, two, three, to autonomy?

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Carlo Schuengel PhD discusses the shift towards the self-management paradigm in rehabilitation for children with physical and developmental disabilities, presenting findings from a mixed-methods study on the type of motivation of parents (N = 239) and therapists (N = 175) for parent self-management. Findings include a significant, but weak association between autonomy support from professionals as perceived by parents and autonomous motivation for self-management. Analyses of open-ended interviews with parents shed light on the concrete forms of support that contribute to skills and confidence needed to take on self-management.

S-012

Group Climate and Treatment Motivation in Secure Residential and Forensic Youth Care from the Perspective of Self Determination Theory

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Treatment motivation in secure residential youth care is assumed to be a necessary condition for effective treatment, and therefore a key element in the reduction of problem behavior and criminal recidivism. Based on SDT, we examined whether a therapeutic (open) group climate and low levels of institutional repression were associated with treatment motivation of adolescents residing in (semi-) secure residential youth care facilities (N = 179). It was found that a positive group climate in the first month after placement predicted greater treatment motivation three months later.

S-013

A Meta-analysis of Different Types of Extrinsic Work Motivation

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³Rotterdam School of Management, ROTTERDAM The Netherlands

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Introduction: Intrinsic motivation is considered to lead to more beneficial outcomes than extrinsic motivation. Yet, work is not all fun, and very few jobs include only interesting and enjoyable tasks, leaving the burning question of how to optimally motivate employees. Self-determination theory advances the existence of different types of extrinsic motivation, i.e., external to introjected and identified motivation. Research on SDT is booming, yet its assumptions may not yet be clear, leading to different theoretical and methodological approaches in empirical studies. The current study aims to settle the debate by presenting a review of the literature and meta-analysis showing how exactly the different types of motivation associate with employee optimal functioning in terms of well-being, attitudes and performance, and providing pathways for future research and theory development.

Methods: We conducted a meta-analysis summarizing 125 studies including 139 samples.

Results: Meta-analytic correlations and subsequent relative weight analyses show that identified motivation relates about as strongly to employee outcomes as intrinsic motivation, suggesting that both types of motivation are equally beneficial. Introjection has a janus-face in relating both positive and negative optimal employee functioning. External motivation contributed to some extent to employee behavior, but yielded high well-being costs. Lacking any type of motivation (i.e. amotivation) had considerable detrimental implications.

Discussion and conclusion: These results clarify and nuance the previous assumptions about the different types of motivation as formulated in Self-determination theory: They highlight the importance of (a lack of) the quantity of motivation and point at the complexity of the quality of motivation. Although it is frequently considered an essential part of paid labor, our results show that little benefit can be expected from external motivation. Introjection seems to be a separate type of motivation, with both positive and negative implications, which merit further study. Employees can be equally well motivated when pointed at the intrinsic qualities as well as at the value and meaning of their work, supporting the overall notion of autonomous motivation.

S-014

Self-determination theory at work: A test of some basic assumptions

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Introduction: According to SDT, motivation can vary in form and intensity. Form is reflected in the distinctions made between intrinsic motivation and various types of extrinsic motivation. The latter vary on a continuum of increasing self-determination from external, through introjected, to identified regulation. Intensity differences are reflected in the distinction between these purposeful forms of motivation and amotivation. To our knowledge, these assumptions have yet to be tested directly, but are inferred from the patterns of relations with other variables, including performance and well-being. Our objective was to measure perceived intensity, autonomy, and external control directly to investigate how they relate to employees' stated reasons for exerting effort on their jobs, as well as work behavior and well-being.

Method: Working adults ($N = 468$) recruited through Mturk completed surveys, including the Multidimensional Work Motivation Scales (MWMS) and established measures of basic need satisfaction, satisfaction with life, personal growth, physical health, organizational commitment, job performance, and turnover intention. They also responded to new measures developed to assess motivation strength and perceptions of autonomy and external control.

Results: We found a strong positive correlation between our motivation strength and autonomy scales; the correlation between strength and external control was weaker and negative. The MWMS intrinsic motivation, identified regulation and introjected subscales correlated positively with autonomy and negatively with external control, but also correlated positively with motivation strength. The correlations for amotivation were in the reverse direction and, with one exception, the correlations for the extrinsic regulation subscales were non-significant. Intrinsic motivation and identified regulation correlated as expected with the outcome measures, but these relations were attenuated when motivation strength, autonomy, or both were controlled. Finally, using exploratory structural equation modeling, we replicated previous findings regarding the bifactor structure of the MWMS. However, contrary to earlier interpretations as a reflection of global quantity of self-determination, the global factor was predicted better by motivation strength than by autonomy.

Discussion: Our findings support the general notion that employees will be happier and more productive when they feel autonomously motivated rather than externally controlled. However, employees who report greater autonomy also report a higher level of overall motivation, raising the possibility that autonomy and strength might be confounded in interpretation of correlations with individual MWMS scale scores. Our findings also support recent suggestions that extrinsic regulation can be experienced differently and might best be considered in combination with more autonomous forms of regulation within motivation profiles.

S-015

Do incentives increase or decrease the quantity and quality of work motivation? Views from expectancy theory and self-determination theory

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Introduction: The use of monetary incentives to drive individual, group and organizational performance is ubiquitous in an increasing number of countries around the world. Several reviews of research conducted to determine the efficacy of monetary incentives show mixed results and present contradictory conclusions. Two of the major theories of motivation that have dominated this field of research are expectancy theory and self-determination theory, which yield contradictory predictions. While SDT predicts high quality motivation through the satisfaction of autonomy, competence, and relatedness, expectancy theory predicts high motivation through perceived contingencies (expectancy/competence and instrumentality). This translates into SDT predicting that incentives would not yield the highest quality motivation, while expectancy theory would.

Methods: 552 full-time American workers were recruited via Amazon MTurk to participate in two Qualtrics surveys with a four-month lag. They answered several questions about their compensation (T1), need satisfaction/frustration (T1), expectancy and instrumentality (T1), work motivation (T2) and work performance (T2).

Results: Being in a *high autonomous/low controlled* profile yielded the best outcomes in terms of lower turnover intentions and higher performance, and better than a *high autonomy/high controlled* profile. Receiving incentives increased the odds of being in a *moderate autonomy/moderate controlled* profile over being in a *high autonomous/low controlled* profile or a *high autonomy/high controlled* profile. Perceived instrumentality increased the odds of being in a *low motivation* profile or a *moderate autonomy/moderate controlled* profile over being in the other two profiles. Autonomy and competence satisfaction increased the odds of being in a *high autonomous/low controlled* motivation profile over being in the other three profiles. Autonomy frustration decreased the odds of being in the *high autonomous/low controlled* motivation profile over being in the other profiles.

Discussion: Results supported SDT more than expectancy theory in explaining the effects of incentives on work motivation. In order to develop the best motivation profile (*high autonomous/low controlled*) it is important to satisfy (and not frustrate) autonomy, and satisfy competence. Contrary to expectancy theory predictions, receiving incentives and perceiving instrumentality (contingency of incentives on performance) did not promote the best motivation profile. These results have implications for the use of incentives to drive motivation and performance at work.

S-017

Solutions that Bring SDT to Scale: Challenges and Opportunities

C.S. Rigby

Immersyve, Inc., CELEBRATION, United States of America

One of SDT's great strengths is dynamically understanding the subjective experience of each individual. However, this strength poses significant challenges when trying to build codified systems, programs, and processes that can be broadly deployed across large layperson populations. This talk will review key practical and technological considerations for building such solutions.

S-018

Making SDT Meaningful to Commercial Developers

T.D.S. Skinner

Immersyve, AUSTIN, United States of America

While SDT has incredible power as a framework for understanding how to create customer value, it can be challenging to provide meaningful insights, tools, and support to layperson development teams that enables them to understand and execute on SDT principles. Using examples drawn from ten years of hands-on work with software development teams, this session will unpack key strategies for success.

S-019

Strategies for Efficient SDT Measurements in Commercial Settings

C.R.D. DeHaan

Immersyve, Inc., CELEBRATION, United States of America

While many well-validated metrics exist in the SDT literature, commercial application remains problematic due to the length and format of many scientific scales. This session will review some of the approaches we've taken to create efficient psychometrics that balance such practical concerns with internal and predictive validity to create more flexible and scalable instruments.

S-020

Does Student's Perception of Teacher's Autonomy Support and Structure Predict Teacher's Perception of Student's Agentic Engagement?

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In a 5-week diary-type survey with 257 Turkish middle school students and 13 teachers, we showed through multilevel analyses that student agentic engagement reported by the teacher was positively predicted by student's perception of autonomy support as well as by their initial level of autonomous motivation. Students' agentic and behavioral engagement assessed by themselves was positively predicted by their perceived autonomy support and structure, respectively as well as by their initial level of autonomous motivation.

S-021

Students' agentic engagement recruits teacher-provided autonomy support

R. Gargurevich¹, L. Matos¹, J. Reeve², D. Herrera¹, M. Claux¹

¹*Pontifical Catholic University of Peru, LIMA, Peru*

²*Korea University, SEOUL, Korea*

Using a classroom-based longitudinal design, 336 Peruvian university students self-reported their teachers' perceived autonomy-supportive teaching and four aspects of engagement (behavioral, emotional, agentic, cognitive) at the beginning (T1) and end (T2) of a semester. As expected, perceived autonomy-supportive teaching T1 predicted longitudinal increases in all four aspects of students' late-semester engagement. More importantly, students' early-semester agentic engagement predicted longitudinal increases in perceived autonomy-supportive teaching suggesting that students' classroom engagement may recruit greater perceived autonomy support.

S-022

Antecedent Conditions that Empower Students to Become More Agentially Engaged

S. Shin

Korea University, SEOUL, South-Korea

As a learner, being agentially engaged involves taking initiative to bring about positive, constructive changes in the surrounding learning environment. Using a two-wave longitudinal design, multilevel structural equation modeling, and questionnaires from 540 middle school students, three individual predictors independently predicted growth in end-of-semester agentic engagement (controlling for beginning-of-semester agentic engagement)—self-efficacy, autonomy need satisfaction, and personal growth initiative.

S-023

How peer support is associated with agentic engagement

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²*Bar-Ilan University, RAMAT-GAN, Israel*

The research explored how students' perceptions of their peer support is associated with agentic engagement, beyond teachers' support. Elementary school students (N=616; 51% girls; age=11.25) completed self-report surveys. Path analysis using SEM supported our hypothesis, indicating that peer support is associated with autonomous motivation, which in turn led to agentic engagement. Second phase was a qualitative study that analyzed in-depth interviews (10 students and 10 teachers), which found major processes of internalization underlying agentic involvement.

S-024

Does admission to medical school through a lottery affect academic motivation differently than admission through a qualitative selection procedure?

A. Wouters

VUmc School of Medical Sciences, AMSTERDAM, The Netherlands

Globally, medical school applicants outnumber the available places. Medical school admissions in the Netherlands were based on a lottery procedure before selection procedures based on thorough assessment of applicants were introduced. The consequences of this change for the quality of the student population in terms of motivation, the assessment of motivation in such a high stakes situation, and the motivation of (future) medical school applicants will be discussed in this presentation.

S-025

Entrustment decisions in the assessment of trainees in the health professions and their relationship with self-determination

T.J. ten Cate

University Medical Center Utrecht, UTRECHT, The Netherlands

In competency-based medical education the new concept of "entrustable professional activities" (EPAs) changes the assessment of medical trainees by relating it to entrustment of activities in patient care with a specified level of supervision. Formal 'entrustment' is a statement that implies a recognition of capability, of increased autonomy and of engagement in a professional community. These three elements align with the basic needs fulfilment foundational to SDT. Their relationship will be explored in this presentation.

S-026

How self-determination theory can be applied in continuous professional development of healthcare professionals

S.T.A.T. Schouten

KNMP, DEN HAAG, The Netherlands

An important barrier for continuing education (CE) in health professions may be a *lack of motivation*. In a study we found how different motivational profiles in pharmacists related to their CE participation. Longitudinal data showed an increase of pharmacists' controlled motivation at the expense of autonomous motivation for CE. The structural relations found between frustration of the basic psychological needs, controlled motivation, well-being and lifelong learning adaptability of Dutch pharmacists will be discussed in this presentation.

S-027

Self-determined motivation among medical specialists and healthcare teams

S.M. Peerdeman

Amsterdam UMC - Location VUmc, AMSTERDAM, The Netherlands

Continuing professional development (CPD) is important for the performance and wellbeing of medical specialists and quality of care. Although autonomous motivation stimulates these concepts among health professionals, lack of motivation is a barrier for CPD. Different motivational profiles related to motivation for CPD, and structural relations between basic psychological needs, work motivation and motivation for CPD will be discussed. Furthermore, factors influencing specialists' motivation daily and a coping mechanism for these stressors are presented.

S-028

Elementary School Students' Intrinsic and Extrinsic Motivation in Two Educational Systems - Traditional and Innovative

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Although current literature provides valuable insight into how student motivation and school climate perceptions are consistently associated with academic achievement, research examining the mediating effects of motivation in linking innovative educational systems, school climate, and academic achievement is limited. In this study the potential of the El'konin-Davydov system of developmental education is considered (Davydov, 2008). With respect to academic motivation, self-determination theory was applied as a useful theoretical framework that allows for the consideration of both the intensity and the quality of motivation (Deci, Ryan, 2000, Ryan, Deci, 2017). For now, the research within SDT on elementary school children motivation is limited to intrinsic motivation and academic achievement (Garon-Carrier et al., 2016). The study examines a model that illustrates the role of intrinsic and different types of extrinsic motivation in linking the El'konin-Davydov system of developmental education and school climate to the academic achievement of elementary schoolchildren.

Participants were 345 3rd and 4th graders drawn from four public schools, with some (N=192) educated in the traditional system and others (N=153) in developmental education. To measure intrinsic and different types of extrinsic motivation we created an extended version of the SRQ-A (Ryan & Connell, 1989). CFA for the questionnaire is CFI = 0.841; NNFI = 0.820; RMSEA = 0.061. T-tests conducted upon the academic motivation scales comparing two educational systems revealed that students in the developmental education system showed significantly lower external motivation (Teachers, General and especially Parents subscales ($d=0.60$)), higher RAI, had more positive attitudes towards school and studies and a slightly more positive perception of school, which was demonstrated both via self-report and nonverbal measures. The results of SEM showed that the hypothesized model fit the data well, supporting the hypothesis that student external motivation plays a mediating role in linking educational system (innovative vs traditional) with academic achievement. Students' intrinsic motivation played a mediating role in linking positive perceptions of school climate with academic achievement. The model yielded a good fit to the data: CFI= 0,961; NNFI=0,952; RMSEA= 0,058.

These results highlight that the developmental education (DE) approach compared to the so called traditional approach provides better instructional quality, promoting more beneficial motivational profile including decreased external motivation, which in turn is associated with higher academic achievement. Examples of pedagogical strategies used in developmental education which satisfy autonomy and competence (including innovative grading system) basic needs are provided and suggestions for further research will be provided.

S-029

A Self-Determination Theory Perspective on RIASEC Occupational Themes: Motivation Types as Predictors of Self-Efficacy and College Program Domain

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Using the RIASEC model of occupational themes, this one-year prospective study investigated whether identified, introjected, and external regulations for vocational activities were relevant to understand vocational behavior, over and above vocational interests (i.e., intrinsic motivation). Results provided good support for our hypotheses, suggesting that the sole assessment of vocational interest (intrinsic motivation) might not be sufficient to guide students toward self-satisfying school and career paths.

S-030

The role of autonomy support and passion in the persistence of STEM education

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This research provides evidence of how teacher autonomy support positively affected students' harmonious (HP) and obsessive passion (OP) for science, whereas parental autonomy support led to HP only. Both types of passion also predicted intentions to pursue in science, but only HP also predicted academic performance and wellbeing outside of school. The role of autonomy support in the development of passion is further investigated by showing how students with HP persisted in science at university.

S-031

Antecedents and affective outcomes of motivation in a multidimensional and hierarchical perspective

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The aim of this study was to investigate antecedents and affective consequences of academic motivation in a multidimensional (i.e., self-determination theory, SDT, Deci & Ryan, 1985) and hierarchical (i.e., at the global, contextual and situational levels) perspective. The first objective was to replicate the specificity-hypothesis (Chanal & Guay, 2015) with university students. Specifically, we wanted to demonstrate that autonomous motivations were more school-subjects-specific than controlled ones. The second objective was to investigate relationships that exist between antecedents and affective consequences with particular regulations in light of this hypothesis.

In a longitudinal study, 314 psychology university students assessed a three waves in-line questionnaires. At time 1, they were assessed some individual antecedents of motivation. At time 2, they answered about their motivation for different academic school-subjects and their motivation for their global motivation in psychology. Finally, at time 3, they were assessed their affective feelings according to the different school subjects.

Results confirmed the specificity-hypothesis. Autonomous motivations were found to be more specific (...) than controlled motivations (...) depending on their position on the self-determination continuum. Moreover, relationships between antecedents and motivational regulations also depend on this position. For example, autonomy-supportive climate in different school subjects are specifically related to autonomous motivation in these subjects but not related to controlled ones.

This study specifically tested important assumptions of the well-known Hierarchical Model of Intrinsic and Extrinsic Motivation of Vallerand (1997) and show that this model need to be redefined considering the specificity-hypothesis.

Abstracts Paper presentations

2A-001

Teachers' relational trust at work, psychological need satisfaction and thwarting, and well-being

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Teachers' relational trust (RT) in their administration, colleagues and students is an important social binding agent. RT is defined as a teacher's willingness to rely on a referent who demonstrates benevolence, reliability, competence, honesty and openness toward the teacher (Hoy & Tschannen-Moran, 2003). RT contributes not only to student retention and academic achievement, but also to the optimal functioning of the teachers. In addition, teachers' motivational resources have been shown to be a central element in understanding the relationship between teachers' RT and work outcomes. For instance, drawing from SDT, Clément, Fernet and Austin (2018) found that the satisfaction of teachers' basic psychological needs (BPNs)—autonomy, competence, and relatedness—acts as a mediating variable between teachers' RT and positive work outcomes (vitality, organizational commitment, subjective job performance).

Although many empirical studies have confirmed the key role the social environment play in employees' personal growth through BPN satisfaction, very few studies have simultaneously looked at the competing roles of both BPN satisfaction and BPN thwarting as mediating variables. This study makes a contribution in providing insights into the differential mediating roles of BPN satisfaction and BPN thwarting in the association between teachers' RT and distinct states of psychological functioning, namely teachers' well-being (vitality) and ill-being (emotional exhaustion). This empirical study was conducted with 429 teachers (62.6% women; $M_{age}=42.2$; $SD=9.2$) from nine colleges in Quebec (Canada). Tested with structural equation modeling, the dual mediation model provides satisfactory fit to the data. The results show the mediating role of BPN satisfaction between teachers' RT in the administration and colleagues and their vitality (estimation=.15, $p=.08$), but not exhaustion. Conversely, BPN thwarting mediates the association between teachers' RT in the three referents and their emotional exhaustion (administration and colleagues: estimation=.20, $p<.05$; students: estimation=.11, $p=.08$), but not vitality. The two facets of BPN were very highly correlated. The theoretical and managerial implications of this study are discussed in the light of these results.

Clément, L., Fernet, C., & Austin, S. (2018, submitted). In Whom College Teachers Trust? On the Role of Specific Trust Referents and Basic Psychological Needs in Optimal Functioning at Work. *Higher Education*.
Hoy, W. K. & Tschannen-Moran, M. (2003). The conceptualization and measurement of faculty trust in schools. In W. K. Hoy and C. Miskel (Eds.), *Studies in leading and organizing schools* (p. 181-208). Greenwich, CT: Information Age Publishing.

2A-002

A meta-analysis of the correlates of autonomous relative to controlled teacher work motives

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The increasing stress and burnout of teachers is an issue globally, with the teaching profession recently ranked as *the most* stressful occupation across Australia, the UK, and the US. While studies have investigated the pathways to reduced distress in teachers, most of them have explored "top-down", structural determinants (e.g., policy changes), that are resource-intensive to modify. While some studies have examined the motivation of teachers, no study has systematically reviewed the motivational determinants that either attract teachers into the profession in the first place, or which might keep them in the profession, as well as the corresponding consequences of this. This gap is important because autonomously motivated behavior can have beneficial consequences for the mental health, well-being, and performance of teachers. This contrasts with controlled motivation, which is generally associated with greater burnout, stress, and lower psychological well-being. In this study, we present a systematic review and meta-analysis ($k = 58$, Total $N = 24,974$) on the correlates of the full continuum of self-determined motivation in samples of teachers and teaching-related professions. We focus on quantifying the relative effects of autonomous relative to controlled work motives for teacher psychological functioning, performance, retention, and student-related outcomes. Using meta-analytic path analysis, we also present the examination of a self-determination theory derived model of teacher motivation.

2A-003

The significance of the schools' ethos

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School ethos can be seen as resulting from the interaction that takes place at school, as a basic structure of value orientations, which characterize the behavioral patterns and thus the school as a social organization. Rutter and his colleagues showed that schools can make a difference. In a study of twelve secondary schools, the team found that so schools were demonstrably better than others at promoting the academic and social success of their students. They also found that the best schools had a common practice based on a set of values and norms that characterize the school as a whole, represented by a combination of a number of single factors that were decisive as expressed in the teachers' practice. When professional, pedagogical and disciplinary principles had the support of the entire staff, common practices developed. These helped teachers to become carriers of the school's values. The Rutter study highlighted community, unity and consistency to be the key values, which led to less absenteeism and better exam results. The purpose of this study was to investigate whether students' perceptions of the school ethos were related to different types of students' motivation, wellness, thriving, grades and school completion. Learning and performance goal structures assessed the school ethos (Skaalvik & Skaalvik, 2013). Inspired by intrinsic goals (SDT), two more goal structures were included; helpful and caring behavior, which are central to Norwegian core curriculum. The participants of the present study were 463 students from three upper secondary schools in Norway (response rate .81%). About 60% went on vocational tracks, while the rest tracks for general study competence. The data were collected in the period of 2016-2018, and analyzed by means of structural equation modeling (SEM). While learning goal structures have shown to relate positively and strongly with motivation, thriving, and persistence, performance goal structures have shown less fortunate responses for the individual. The significance of the school's signals of appreciating helpful and caring behavior are more uncertain. The results underline that schools with advantage should strive to establish a learning and caring goal structure.

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2A-004

Using SDT to Support Instructional Development

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How can theory support and inform college instructor and program development and effectiveness? This complex question, along with questions about measures of effectiveness remain central in discussions about encouraging and supporting institutional programming in faculty development. While many see success manifesting itself in higher grades for students, grades are not necessarily reflective of learning. It is rare that we can make direct connections between any single developmental activity and increased grades or performance by students on an assessment (Kreber & Brook, 2001). As an alternative, we rely on SDT to meet instructors' desires for increased student motivation and engagement, through emphasizing the need to meet students' basic needs for autonomy, competence, and relatedness. Working from this perspective, we measure the success of our developmental programming based on participants' practice in meeting these needs for their students, with the expectation that appropriately enhanced student learning will follow.

In this session, we discuss how faculty developers can apply SDT principles to support college instructor and staff development. The presenters share their work across multiple ongoing efforts to integrate needs-supportive methods into the delivery of programming and the resultant teaching of participants. On a large scale, we discuss a course transformation program reaching 581 courses and 332 instructors since inception in 2011. Additionally, we describe multiple smaller-scale programs established in the fall of 2018, reaching over an additional 100 instructors. We root practices in training instructors to support students' basic psychological needs in curriculum development and course design. The basic needs are embedded in program outcomes as well as programming instructors participate in.

In measuring effectiveness, we will share how we coded and analyzed guided, inquiry-based reflections, surveys, and portfolios to examine the results of these programs, demonstrating different ways instructors engage with and apply SDT in their classrooms. We will also present case studies of various instructors and improvements in student learning. Thus, we will not only discuss the changes in instructional development, but how those can be examined in student performance. We will conclude with our next steps in the process of developing this culture at our institution and beyond.

2A-005

Self-determination theory and public school leaders: Principal behaviors and associations with teacher motivation and job satisfaction

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Introduction. This paper explores relations among school principal leadership behavior, type of motivation experienced by teachers, and teacher job satisfaction. Research on principals' leadership suggest transformational types of behaviors are associated with a greater sense of teacher autonomy. Furthermore, leadership style is associated with the degree to which a teacher experiences motivation as autonomous or controlling. Potential mediating effects of autonomous motivation in the relationship between school principal leadership style and teacher job satisfaction have yet to be examined in the research. This is specifically addressed in our paper.

Method. Participants included 154 public school teachers in the state of Illinois. Three self-report measures were given electronically, all of which were previously validated and have strong psychometric support, 1) the Multifactor Leadership Questionnaire Form 5X measures nine leadership factors; 2) the Multidimensional Work Motivation Scale, which is grounded in SDT, measured workers' motivation along the SDT continuum. The five constructs represented in the survey are amotivation, extrinsic regulation, introjected regulation, identified regulation, and intrinsic motivation; and 3) the Job Satisfaction Survey which measured teacher job satisfaction. All data were anonymous and all institutional review board procedures were followed.

Results. Research Question 1: What are the associations among principal leadership behaviors, teacher motivation, and teacher job satisfaction? Correlational analyses revealed significant correlations among many leadership variables, motivation types, and job satisfaction. For example, Job Satisfaction is positively correlated with Transformational Leadership and Autonomous Motivation. Conversely, Job Satisfaction is negatively correlated with Passive/Avoidant Leadership and Amotivation. Research Question 2: Does autonomous motivation mediate the association between transformational leadership and teacher job satisfaction? This research question, as well as research questions 3a and 3b, were analyzed utilizing the Hayes Process Macro for SPSS, Model 4, which tests for statistical mediation. The association between Transformational Leadership and Job Satisfaction was mediated by Autonomous Motivation. Research Question 3a: Does amotivation mediate the relationship between transactional leadership and job satisfaction; and 3b: Does amotivation mediate the relationship between passive avoidant Leadership and job satisfaction? For both 3a and 3b, no mediation was present.

Significance. Study results offer important contributions to the understanding of principal leadership behaviors, teacher motivation, and teacher job satisfaction. Principals and principal training programs will benefit from a clearer understanding of how specific leadership behaviors can create a work environment that supports or thwarts specific types of motivations in teachers.

2B-006

Developing professional identity in undergraduate pharmacy students using self-determination theory

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Abstract

Introduction:

Professional identity has been reported to be an essential element in the professional development of students in health education. Evidence for effective pedagogical strategies in the development of professional identity is lacking, however self-determination theory (SDT) has been identified as providing an appropriate theoretical approach#_ENREF_1. SDT states that identity development relies upon support for student competence, relatedness and autonomy, prompting this study to develop a Professional Identity Program (PIP) based on the theoretical tenets of SDT#_ENREF_2. The study also sought to measure changes in student motivation as they progressed through the program, using an adapted version of an existing motivation scale.

Methods: The basic tenets of SDT were used to inform the instructional design of a series of workshops, integrated into the BPharm curriculum. Featuring autonomy-supportive teaching, the program was delivered across four semesters (2 years), introducing students to professionalism and the development of their professional identity. A mixed methods approach was used to evaluate the program including a survey instrument to assess levels of motivation amongst the participating students (Pharm-S), and focus groups to explore participant perceptions of the PIP.

Results: Students responded positively to the introduction of the PIP, with 84% of the participants stating that the PIP "improved my sense of professional identity". Analysis of Pharm-S survey data revealed a statistically significant increase in student motivation after completing the program ($U=421$, $Z=-2.5$, $p=0.012$).

Discussion & Conclusion: This study is the first of its kind to apply SDT to the development of professional identity in undergraduate pharmacy students. The PIP represents a longitudinal, early intervention, theory-based approach to professional education for pharmacy students. Student motivation levels increased by the end of the PIP with students reacting positively to its introduction. Supporting student autonomy also has implications for the provision of quality health care, equipping students with the ability to provide autonomy support for patients, thus improving health behaviours and potentially leading to better health outcomes.

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Mylrea MF, Gupta TS, Glass BD. Design and Evaluation of a Novel Professional Identity Development Program for Pharmacy Students. *Am J Pharm Educ*. 2018;1(1):1.

2B-007

Developing autonomous teachers in Singapore: Need fulfilment and perceived competence during practicum

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In recent years, Singapore's teacher education programs have undergone significant enhancements in her quest to develop *autonomous thinking teachers*. However, not much is known about the impact of the enhancements. According to the self-determination theory, social contexts that support students' basic psychological needs will promote more autonomous motivation, greater internalization, engagement, adaptation and psychological growth (e.g., Deci & Ryan, 2000). This cross-sectional study utilises the SDT framework to examine the potential impact of the enhanced practicum model by comparing the need fulfilment and perceived competence during practicum of two cohorts of student teachers before (N = 855) and after (N = 362) its implementation. Using a cluster analytic approach, the study also examines whether there are distinct clusters of student teachers in terms of the fulfillment of their basic needs after the enhancements. In essence, the study established that there are significant differences between the two batches of student teachers in terms of their need for competence, autonomy support and their perceived competence in lesson preparation, classroom management, and feedback and assessment. There are also distinct clusters of student teachers with different levels of need fulfilment and different outcomes. The findings are discussed together with suggestions for enhancements of the Singapore's enhanced practicum model. Practical implications of the findings are also highlighted with suggestions for cooperating teachers in developing strategies to fulfil student teachers' basic needs.

Reference:

Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227-268.

2B-008

Development of student teachers' motivation, teacher-efficacy, and teacher-identity during teacher-training course

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While the speed of the societal changes and progress is quickened by new knowledge and technologies, student teachers are still expected to become professionals who are capable of encouraging their students to develop 21st century competencies. Together with the projected decrease in the number of fresh school leavers recruited to be teachers, it is important for universities to offer high quality teacher-training courses that will enable student teachers to learn the necessary knowledge and skills of an effective teacher. However, such courses have not always resulted in producing student teachers with adequate teaching skills, a disposition and passion for teaching, or adequate proficiency. Self-determination Theory suggested that enhancing learners' intrinsic motivation will lead high performance and adaptation. It is predicted that student teachers' motivation toward the training course will enhance their development of skills, efficacy and identity as a professional.

The aim of this study is to investigate student teachers' development in their motivation, beliefs, and attitude during the four years of their teacher-training course. The participants were 142 second-year, 115 third-year, and 185 fourth-year (final year) student teachers from a Japanese university. A questionnaire was used to measure the student teachers' reasons why they want to be a teacher, motivation for taking the teacher-training course, teacher self-efficacy, and teacher-identity.

The results of correlation showed that internal reason for being a teacher and intrinsic motivation for taking the teacher-training course were highly associated with teacher-efficacy and teacher-identity. The results of one-way ANOVA showed that fourth-year student teachers displayed higher scores than second-year student teachers on internal reason for being a teacher ($F(2, 439)=5.79, p<.01$), teacher-efficacy ($F(2, 439)=4.98, p<.01$), and two types of teacher-identity ($F(2, 439)=4.02, 6.12, p<.05, .01$). They scored the lowest on external reason for being a teacher ($F(2, 439)=7.03, p<.01$) and two types of extrinsic motivation for taking the teacher-training course ($F(2, 439)=7.81, 4.24, p<.01, .05$). The observed differences could be a result of maturation processes and the effects of teacher-training that supported adaptive learning style, beliefs, and attitude.

2B-009

the 'what' and 'why' of college majors: choice of majors and the underlying motive predict college adjustment

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SDT proposes that both the “what” and “why” of human behaviors are underlain by different degrees of self-determination. The current study examines the “what” and “why” of a specific choice that has profound implications for the young, i.e., choosing a career direction in college. Across five sub-studies, we demonstrate that both “what” major students choose and “why” students chose it predict their college adjustments.

Study 1 focuses on the “what” of majors. Based on occasional research evidence and general perceptions, we hypothesized that the quality of academic motivation and performance is higher than average for students in the social sciences and humanities, and lower than average for students in business-related majors.

Study 1a and 1b used campus-wide datasets from a midwestern US university ($N = 3999$ and 13570 , respectively), supporting the hypothesized differences between majors on academic motivation and learning outcomes.

Study 1b also provided support for two explanations for the observed difference. First, the *socialization* explanation was supported, such that the differences between majors is explained by learning climate differences. Second, the *selection* explanation was supported, such that newly-enrolled students already significantly differ in trait-level self-determination in the hypothesized direction.

Study 1c used a more comprehensive sample collected across the same campus for seven semesters (number of responses = 30765, from 18875 students) to examine longitudinal trajectories. Controlling for individual-level and classroom-level variances, cross-classified paths analyses showed that students in business-related majors decrease, whereas students in social sciences and humanities increase, in self-determined motivation and perceived autonomy support.

Study 2 focuses on the “why” of majors.

Study 2a shows using structural equation modeling in American college students ($N = 146$) that self-determined motivation to choose major predicts higher academic performance and psychological well-being, via the mediation of self-determined academic motivation; also, self-determined motivation to choose major is predicted by parental autonomy support and individual-differences in autonomous functioning. Study 2b replicated these findings using a longitudinal sample of Chinese freshmen ($N = 479$). Alignment method also supports the invariance of relationships between cultures.

In addition, Study 2b also showed a significant relationship between “what” and “why”, such that students who chose business-related majors are also more likely to have made their choice out of non-self-determined reasons, whereas students in social sciences/humanities chose their majors for significantly more self-determined reasons.

Overall, the five samples supported the importance of both the “what” and “why” of college majors for students’ college functioning.

2B-010

Intrinsic Motivation for e-Portfolio: A Framework using Self-Determination Theory (SDT).

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At the National Institute of Education (NIE), as part of the Professional Practice and Inquiry (PPI) course, all student teachers are required to build their e-Portfolio. The e-Portfolio comprises of carefully selected sets of coached or mentored accomplishments substantiated by samples of student’s work. With the cognitive framework provided by the e-Portfolio, student teachers engage in professional conversations during their practicum attachment where they clarify their professional teacher identity, question their understanding and assumptions on teaching and learning, and facilitate their inquiry into their practices with the guidance from their faculty supervisors and school mentors. The e-Portfolio is thus a vehicle used to develop student teachers to be autonomous learners who are self-motivated to improve themselves. Self Determination Theory (SDT) suggests that three basic psychological needs – Competence, Autonomy and Relatedness, are crucial in fostering one’s intrinsic motivation to accomplish any activities (Ryan & Deci, 2000). Using SDT as a framework to enhance the design of the e-Portfolio, this study aims to determine its impact on student teachers’ intrinsic interest towards e-Portfolio and their perceived usefulness, importance and benefits of the e-Portfolio.

The participants for this study were pre-service teachers pursuing Postgraduate Diploma of Education (PGDE) in NIE. An online questionnaire was distributed to two group of student teachers, those enrolled in July 2014 (old e-Portfolio) and July 2016 (enhanced e-Portfolio using SDT). A total of 540 student teachers from the PGDE 2014 cohort and 331 student teachers from the PGDE 2016 cohort took part in this study. The questionnaire administered to student teachers examined their perceived utility of the e-Portfolio, perceived intrinsic interest towards the building of their e-Portfolio, perceived attainment value of e-Portfolio and their perceived benefits of using e-Portfolio in their learning and teaching.

Independent t-tests were conducted and results indicated positive significant increase in all 4 constructs with the use of the enhanced e-Portfolio. The findings suggested that emphasis should be placed on the design of the e-Portfolio to satisfy student teachers' basic psychological needs so that they are intrinsically motivated to use the e-portfolio to assume ownership of their learning. In addition, implications on how SDT can be used to underpin the design of e-Portfolio to improve student teachers' motivation and cognition will be discussed.

References

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2C-011

Need satisfaction and need frustration as opposing but co-occurring constructs: Effects on motivation and psychological health in physical education and sport

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Introduction:

SDT-based research has increasingly focused on both the bright and dark sides of the three basic psychological needs, suggesting that satisfaction predicts positive outcomes and frustration predicts maladaptive outcomes. Of additional interest, however, is the possibility that one can experience both the satisfaction and frustration of psychological needs in the same environment. It is, therefore, important to examine the concurrent relations between these opposing but potentially co-occurring constructs and their simultaneous impact on motivation, well-being, and ill-being.

Methods:

Data from two independent samples was analysed using hierarchical cluster analysis to identify distinct need profiles. Sample 1 consisted of 273 PE students (n = 134 males; n = 139 females; mean age = 14.18 years, SD = 1.42). Sample 2 focused on voluntary leisure-time sport and involved 160 athletes (n = 73 males; n = 87 females; mean age = 22.98 years, SD = 8.79). All participants completed a questionnaire including measures of need satisfaction and frustration as well as behavioural regulations (Study 1) and enjoyment, vitality, and burnout (Study 2).

Results:

Three profiles emerged from the PE data (1. High Satisfaction–Low Frustration; 2. Low Satisfaction–High Frustration; 3. Moderate Satisfaction–Moderate Frustration). Significant differences in the expected direction were found between the three clusters for intrinsic motivation, identified regulation, and amotivation. No significant differences were found for introjected regulation. Furthermore, external regulation was significantly higher in profile 2 where high levels of need frustration were reported. Four profiles emerged from the Sport data (1. High Satisfaction–Low Frustration; 2. Low Satisfaction–High Frustration; 3. High Satisfaction–High Frustration; 4. Moderate Satisfaction–Low Frustration). Athletes within profile 1 exhibited the most positive outcomes whilst those in profile 2 exhibited higher levels of burnout and lower levels of enjoyment and vitality. Other profile comparisons indicated that buffering effects can occur between need satisfaction and need frustration constructs. For example, both clusters 2 and 3 were characterised by high levels of frustration, but athletes experienced less burnout and more enjoyment and vitality when need satisfaction was also high (profile 3) compared to when it was low (profile 2).

Discussion & Conclusion:

The identification of distinct need profiles– which had unique associations with motivation, well-being, and ill-being – provided evidence for the opposing yet co-occurring nature of need satisfaction and need frustration. These need experiences cannot be studied in isolation if we are to fully understand their impact on motivation and psychological health.

2C-012

Personality differentially predicts sensitivity to need support and thwarting, and subsequent behavioural response planning.

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Self-determination theory (SDT) is clear that the evidenced positive and negative effects of need support and thwarting respectively, are seen as universal. However, emerging research extending SDT recognises that individual differences might moderate sensitivity to need thwarting or support (Mabbe, Soenens, Vansteenkiste & Van Leeuwen, 2016). We theorise that this assertion should also encompass reactions to need satisfaction and frustration, termed here 'response behaviour'. The present research proposed and tested an explanatory model for *how* and *why* individual differences might moderate the effects of need thwarting and support. Two pathways through which such moderation might occur were tested, namely whether personality alters i) sensitivity to experiencing satisfaction or frustration, and ii) the response to experienced satisfaction or thwarting, in the form of more or less adaptive subsequent behavioural responses.

One hundred and seventy-seven undergraduate students ($Mage = 19.73$, $SD = 1.98$, Male = 109) completed self-report personality questionnaires (Big Five Inventory-10, Narcissistic Personality Inventory-16, and Hypersensitive Narcissism Scale) and six SDT-informed vignettes. Each vignette systematically described a need supportive or thwarting experience in an academic context. Participants responded to each vignette reporting their felt need satisfaction (e.g., cared for by the lecturer [need satisfaction], feeling inadequate as a student [need frustration]) and subsequent planned need orientated behaviour (e.g., find ways to learn new material [need seeking], avoid contact with others [need avoidance]).

Hypothesised associations were observed, including extraversion predicting more satisfaction, and both neuroticism and covert narcissism predicting less satisfaction and more frustration. Five of the 20 moderated regressions were significant suggesting that on the whole personality does not moderate post-satisfaction or frustration response planning. Where interactions were observed, these took the form of personality exacerbating responses to unfavourable conditions (e.g., interaction between neuroticism and level of need satisfaction on planned need avoidance; ($\Delta r^2 = .026$, $\Delta F = 5.282$, $p\Delta F = .023$).

The somewhat deterministic relationship between satisfaction and adaptive planned responses, and frustration and maladaptive planned responses, is concerning. Satisfaction leading to greater engagement with environments and activities likely to provide further satisfaction supports SDT's organismic and growth-oriented perspective whilst also undermining arguments that need satiation might occur in highly-satisfying environments. Conversely, if frustration results in maladaptive responses it is only likely to exacerbate the negative outcomes of frustration. This has important implications for psychological health; identifying and effectively altering harmful cognitive styles associated with neuroticism and narcissism might promote more adaptive need seeking behaviours and wellbeing.

2C-013

A two-by-two model that finds shared features of need frustrations in Basic Psychological Needs Theory

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If the three psychological needs are rooted in the same evolved human nature, wouldn't we expect the ways in which they are frustrated to share common features? Shouldn't they be graspable by the same conceptual model? The need for autonomy is found to be frustrated by **controllingness** and *identity confusion*, the need for competence by (e.g.) **rote learning** and *unguided trial-and-error*, and the need for relatedness by **contingent regard** and *neglect*. These frustrations share a pattern. They can be mapped by a model that combines two prominent aspects of human flourishing: the two dimensions of stability and flexibility pertaining to the norms, rules and institutions that structure human existence. When such structures are both stable and flexible, they support needs and enable flourishing, and when they're not, they don't.

Thus, as captured by cell 2, high stability combined with low flexibility equals rigidity, which in the three need-frustration cases takes the form of **controllingness**, **rote learning** and **contingent regard**. Conversely, as captured by cell 3, low stability combined with high flexibility equals chaos, which shows up as need frustrations such as *identity confusion*, *unguided trial-and-error* and *neglect*.

Further, the need satisfactions may be captured by cell 4. It combines high stability with high flexibility (which may be expressed as "flexstability"). Here we find authenticity, structure and involvement.

This flexstability model maps a number of issues addressed by the SDT community. For example, the three causality orientations: Controlled (= cell 2 rigidity), impersonal (cell 3 chaos) and autonomous (cell 4 flexstability). Some parenting types are authoritarianism (cell 2 rigidity), permissiveness (cell 3 chaos) and gentle guidance (cell 4 flexstability). Extrinsic factors (Deci and Ryan, 1985 book, p. 64) come in three flavors: Controlling (rigidity), amotivational (chaos) and informational (flexstability). Examples are legion.

The model points to the unitary nature of the needs. Are they really just different ways of saying that the structures and forms that guide human action need to be stable and flexible at the same time to facilitate need satisfaction and eudaimonia? Further (radical) implications for the very concept of need will be discussed.

2C-014

Big Five Personality Traits, Well-being and Ill-Being: The Mediating Roles of Basic Psychological Need Satisfaction and Frustration

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Recent research on Self Determination Theory have consistently shown that basic psychological need satisfaction and frustration are distinct constructs. While need satisfaction is uniquely related to well-being, need frustration is significantly associated with ill-being only. Past research also indicated that personality might be an important factor to consider in looking at these associations. In this study, we tested the mediational role of need satisfaction between personality and well-being, and the mediational role of need frustration between personality and ill-being.

Self-report measures were used to assess basic psychological need satisfaction and frustration, life satisfaction, ill-being symptoms, and personality traits. The data were collected online from 353 adults aged between 18 and 65 from Turkey. The analyses revealed that basic psychological need satisfaction mediated the relationship between personality and well-being, while basic psychological need frustration mediated the relationship between personality and ill-being. Findings, thus, suggested that personality traits are important in having individuals either satisfy or frustrate their basic psychological needs, which in turn is associated with their well-being or ill-being.

2C-015

Need Satisfaction and Frustration at Work Predicting Psychological Internalization and Well-Being: Achievements and Concerns

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A recent meta-analysis of basic psychological need satisfaction at work (Van den Broeck, Ferris, Chang, & Rosen, 2016) highlighted a concern for organizational SDT researchers: the extent to which measures of basic psychological need satisfaction seem biased towards predicting more positive forms of motivation and well-being. In particular, the meta-analysis found need satisfaction better predicted more “positive” forms of internalization (e.g., intrinsic and identified motivation) compared to more “negative” forms (e.g., introjected and external motivation; need satisfaction accounted for only 1% of the variance in these constructs). Similarly, the meta-analysis found need satisfaction better predicted more “positive” forms of psychological well-being (e.g. job satisfaction, positive affect, engagement) compared to more “negative” forms (e.g., burnout, negative affect, and strain). These results are troubling, since a fundamental criteria for basic psychological needs being “basic” is that they significantly predict psychological internalization and well-being.

One potential explanation for these findings is that organizational SDT researchers should consider both need *satisfaction* and need *frustration*. In particular, the findings may reflect the well-established finding that the presence and absence of positive events (such as need satisfaction) better predict positive outcomes, while the presence and absence of negative events (such as need frustration) better predict negative outcomes. In this paper presentation, we will present the results of a study that tested this idea using a multi-wave study of 256 employed university alumni, where participants completed established measures of need satisfaction and frustration (T1) as well as established measures of psychological growth, internalization, and well-being (T2).

To broadly summarize our findings, our results provide both good and bad news for SDT researchers. With respect to psychological well-being, need satisfaction significantly predicted more positive forms of well-being (engagement and positive affect), while both need satisfaction and need frustration significantly predicted more negative forms (e.g., strain and negative affect). However, with respect to psychological internalization, neither need satisfaction or frustration significantly predicted introjected or external motivation.

Overall, the results of our study generally support the importance of examining need satisfaction and need frustration together, as each seem to predict different psychological well-being outcomes. However, the failure of both need satisfaction and need frustration to predict more negative forms of psychological internalization remains a quandary for organizational SDT researchers.

Reference:

van den Broeck, A., Ferris, D. L., Chang, C.-H., & Rosen, C. C. (2016). A review of self-determination theory's basic psychological needs at work. *Journal of Management*, 42, 1195-1229.

2D-016

A randomized waitlist control study of a basic need satisfaction intervention for the adjustment of international students

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Introduction: Currently, there is an increasing number of students pursuing their tertiary studies overseas. While studying abroad might provide a lot of exciting opportunities, such experience could come with pressure and difficulties associated with adapting to a new environment. Language barrier, academic stress, and sociocultural differences are a few factors that may impact the life of international students. Prior research mainly focused on the conditions that could enhance basic need satisfaction and mental health outcomes for general people, but there were few attempts to examine the effect of psychological need intervention on the well-being of international students, especially in Asian culture. Applying self-determination theory (SDT; Deci & Ryan, 2000), this study investigated the extent of a weekly need-satisfaction intervention(modified from Weinstein, Khabbaz, & Legate, 2016) can promote adjustment of first-year mainland Chinese students in Hong Kong.

Methods: Fifty-five first-year students who come from mainland China at the Education University of Hong Kong ($M_{Age} = 18.20$ years, $SD = .40$ years) were randomly assigned to the intervention group or the waitlist control group. All participants were asked to complete a pre-questionnaire, post-questionnaire and delay-questionnaire, including questions on demographic information, basic psychological need satisfaction, and student adaptation to college. The intervention consisted of a 15-minute counseling session that focused on guiding the participants to plan and pursue need-satisfying activities during a week.

Results: Results showed that 1) mainland Chinese students in Hong Kong with higher psychological needs satisfaction would predict better adjustment in university; 2) the 5-week-long intervention could enhance the satisfaction of three needs, and, in turn, improved their academic and institutional adjustment in college; and 3) the intervention showed lasting effect on maintaining higher need satisfaction and better adjustment after a 5-week-long delay.

Discussion & Conclusion: Discussion focused on how these findings supported the universal importance of need satisfaction, and how a simple need-based intervention can improve the adjustment of them.

2D-017

'I sit in the corner of the teachers' room trying not to be seen...' experiences of psychological need frustration among beginning teachers in Bedouin schools

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This study looks at the motivation of beginning teachers in the Arab-Bedouin sector. Conducted in the theoretical framework of SDT, the study focuses on experiences of either satisfaction or frustration of teachers' basic needs (Deci & Ryan, 2000; Vansteenkiste & Ryan, 2013). The research paradigm is qualitative. Written in the phenomenological genre, the study highlights the narratives of beginning teachers in Bedouin schools. The research question is: what characterizes the school environment and the experiences of beginning teachers with regard to need satisfaction or frustration?

Participants: 80 new teachers, 68 answered open questionnaires while 12 participated in semi-structured in-depth interviews. Data analysis was conducted through a thematic analysis.

The findings indicate that beginning teachers are a disadvantaged, low status group. Most experiences reported by the teachers were negative, indicating need frustration by school authorities and veteran teachers. A central theme was autonomy suppression. Teachers reported a sense of coercion, exploitation by the school authorities, belittlement and scorn, and gender related oppression. The second theme related to competence-frustration, expressed through negative feedback, non-assistance, judgement, and difficulty in the interactions with students and parents. The third theme touches on relatedness-suppression. The beginning teacher feels the pressure of different cultural groups in the teachers' room, experiencing a conflict between belonging to the school and belonging to the family or tribe. A fourth theme refers to cultural characteristics that affect the way teachers' needs are addressed. As a result of these experiences, the teachers express emotional burnout, reduced autonomous motivation, and less inclination to invest in their work. They resort to non-adaptive coping strategies such as avoidance or rebellion against the oppressing authorities, which, in turn, bring about additional negative consequences. The findings show that a substantial change is needed in the culture of teacher induction in Bedouin schools. In the lecture we will present relevant quotations and will describe the intervention program we are currently running through the Kaye College Induction Unit, which includes SDT-based workshops and creating induction communities that center on satisfying interns' and beginning teachers' psychological needs in Bedouin towns and schools.

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Vansteenkiste, M., & Ryan, R. M. (2013). On psychological growth and vulnerability: Basic psychological need satisfaction and need frustration as a unifying principle. *Journal of Psychotherapy Integration*, 23, 263–280.

2D-018

Intrinsic and extrinsic goals: Both types matter to predict life satisfaction in different developmental stages in Brazilian youth

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This research project had two main goals: first to validate the Aspiration Index for the Brazilian Context, and second, was to investigate if there were differences between the types of goals Brazilian youth prioritize depending on the stage of their development, and its effects on life satisfaction. Participants were 970 Brazilian youth aged from 18 to 30 years old (56.8% women; $M_{Age} = 22.8$; $SD = 3.4$), selected from 11 different cities across Brazil. For the first aim, a confirmatory factor analysis (CFA) demonstrated the adequacy of the original 11-factor model for the Brazilian context, and the multi-group CFA showed that this structure was invariant across different socio-economic groups. Furthermore, the multidimensional scaling modeling (MDS) replicated the results of previous studies (Grouzet et al., 2015), positing a two-dimension structure as representation of the data. With one dimension underlying the intrinsic versus extrinsic goals; and the second dimension defined by the self-transcendent and the physical goals.

For the second aim, the research project focused on three developmental stages: (1) aging from 18 to 21, (2) from 22 to 26, and (3) ages from 26 to 30. The instruments were a socio-demographic questionnaire, the Aspiration Index (*alphas* ranging between .67 and .94), and the Satisfaction with Life Scale ($\alpha = 1.00$).

Results for the first group showed that goal related to affiliation and sense of community appeared to be important. For the second group, in addition to affiliation and sense of community, appeared for the first time an extrinsic goal: the aim for financial success, showing a negative effect on life satisfaction ($r = -.16, p = .05$). Finally, for the third group, adding to affiliation, self-acceptance goals appeared for the first time, with a significant positive effect on life satisfaction.

Thus, our results suggest that the *AI* is a reliable measure and can be used with the Brazilian population from different regions and socioeconomic levels. As for the second aim, results suggest that throughout all the developmental stages here evaluated, life satisfaction is mostly connected to how the individual feels regarding his/her connections with others, may those be by relationships with family and friends, or with the larger community.

References:
Grouzet, F. M. E., Kasser, T., Ahuvia, A., Dols, J. M., Kim, Y., Lau, S., Ryan, R. M., Saunders, S., Schmuck, P., & Sheldon, K. M. (2005). The structure of goal content across 15 cultures. *Journal of Personality and Social Psychology, 89*(5), 800-816.

2D-019

Know thy needs? Assessing inter-individual differences in perceived and observed associations between need fulfillment and well-being

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Past research has largely provided evidence consistent with Self-Determination Theory's universality assumption, claiming a positive effect of fulfillment of the needs for autonomy, competence, and relatedness on well-being for virtually all individuals. Nevertheless, individuals differ in the strength (more so than the direction) of this association and these inter-individual differences can meaningfully predict future behavior (e.g., participants' response to experimentally induced need frustration; Neubauer, Lerche, & Voss, 2018). In the present research, we compared two approaches towards assessing inter-individual differences in the effect of need fulfillment on well-being: (a) cross-sectional self-report measures in which participants are asked about their perceived need strength (e.g. for competence: "When I take on and master hard challenges, I feel particularly good."; further called "explicit need strength"), and (b) observed within-person couplings of need fulfillment and well-being obtained in a daily diary study (each individual's person-specific association between today's need fulfillment and today's affect; "observed need strength"). Results from a pilot study ($N = 179$) showed that explicit need strengths were represented by six factors (corresponding to the satisfaction and dissatisfaction of the three needs for autonomy, competence, and relatedness, respectively). In a second study (daily diary study; $N > 1,000$; ten days), we examined the convergence of these explicit need strengths and observed need strengths as cross-level interactions (explicit need strength \times daily need (dis)satisfaction) predicting positive and negative affect. Results showed rather weak correspondence between these measures. Hence, participants who indicated that they profit in particular from, for example, competence satisfaction, were not necessarily the same participants who showed a pronounced within-person coupling between competence satisfaction and positive affect. Correspondence was stronger for the dissatisfaction – negative affect connection than for the satisfaction – positive affect connection. Hence, participants were better able to indicate whether they suffer from frustration of a need than whether they profit from the satisfaction of a need. This suggests that individuals' perceptions of how they think their well-being is affected by need (dis)satisfaction is not strongly related to the observed within-person coupling of need (dis)satisfaction and well-being. Findings are discussed in light of potential limitations of self-assessments of within-person couplings, as well as potential differences between the experiencing self and the remembering / believing self.

Neubauer, A. B., Lerche, V., & Voss, A. (2018). Interindividual differences in the intraindividual association of competence and well-being: Combining experimental and intensive longitudinal designs. *Journal of Personality, 86*, 698–713. <https://doi.org/10.1111/jopy.12351>

2D-020

The Effect of Need Satisfaction and Need Frustration on Psychological Well-Being and Depressive Symptoms Among Undergraduate Arab Students from Five Countries

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Background: Self-Determination Theory (SDT) suggested three individual's basic needs: autonomy, competence, and relatedness. Studies revealed that the importance of satisfying these needs are varying according to individual and cultural determinants, furthermore, many studies worldwide showed that need satisfaction is associated with psychological well-being, while the need frustration leads to psychological ill-being. Thus, we intended to shed lights on this theory involving undergraduate students from Five Arab countries.

Objectives: The study aimed to validate the Arabic version of the Basic Psychological Need Satisfaction and Need Frustration (BPNSFS) after back-translated it into Arabic. It also aimed to investigate the association between need satisfaction and psychological well-being and the association between need frustration and depressive symptoms in the Arab context.

Procedures: A back-translated version of Basic Psychological Need Satisfaction and Need Frustration Scale, the Beck Depression Inventory-II, and the Warwick-Edinburgh Mental Well-Being Questionnaire have been self-administered on a sample consisted of 1096 undergraduate students from Five Arab countries (495 males and 601 females; mean age = 20.04 ± 1.88 years).

Results: The Confirmatory Factor Analysis showed that the Six-Factor Model (autonomy satisfaction, autonomy frustration, competence satisfaction, competence frustration, relatedness satisfaction, and relatedness frustration) is the most fit model comparing the other two factor models (Two-Factor Model, and Three-Factor Model) although this model is somewhat poor in the Arab context compared to others (examples: American, Chinese, and Spanish). Furthermore, linear regression showed that need satisfaction predicts psychological well-being while, need frustration predicts psychological ill-being.

Conclusions: The current study found that basic psychological need satisfaction suggested by Self Determination Theory contribute to psychological well-being, while need frustration contributes to psychological ill-being among the undergraduate students in Arab countries

2E-021

Reasons underlying dominant achievement goal pursuit in secondary school students: A variable-centered and person-centered approach.

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The current study combined Self-Determination Theory with the Achievement Goal Approach (Elliot, 2005) to investigate the importance of the underlying autonomous and controlled reasons for pursuing an intrapersonal or interpersonal achievement goal. 860 secondary school students (grade four to seven; *M*age = 16 years) reported on their dominant achievement goal (Van Yperen, 2006) for their studies, the reasons for pursuing that goal and on how they prepare for examination, appraise exams, their cheating behavior and eventually how they score on exams. First, using a variable-centered approach, a series of Structural Equation Models was produced. Results revealed that the underlying autonomous reasons for pursuing a dominant intrapersonal-approach goal were positively associated with students' results on school exams. This relationship was fully mediated by students' persistence and concentration while preparing for the examination. Furthermore, the underlying controlled reasons for such intrapersonal-approach goal were not directly related to the exam results, but showed indirectly a negative relation through students' lack of persistence during exam preparation. Similar results were evident for the autonomous reasons underlying students' interpersonal goals. The positive association with students' exam results were partially mediated by the presents of more persistence during preparation. Interestingly, controlled reasons underlying these particular achievement goals were unrelated to students' results. Concerning students' cheating behavior, it was evident that both students with a dominant intrapersonal- or interpersonal-approach goal were more likely to cheat when they appraised the examination as a threat. This threat appraisal was preceded by more controlled reasons for pursuing that specific dominant achievement goal. Secondly, using a person-centered approach, the current study aims to identify distinct profiles of students who aim for a particular dominant achievement goal, but differ in the quantity and quality of reasons for doing so.

The presentation will discuss the importance of considering the reasons underlying achievement goal pursuit in order to advance the Achievement Goal Approach and its implications for goal promotion. Further, identifying distinct profiles may inform us on the prevalence and consequences of specific combination of goals and reasons.

2E-022

Motivation and self-regulation: Processes through which autonomous and controlled motivation lead to goal attainment

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Autonomous goals pursued out of interest or personal importance are more likely to be attained than externally motivated, controlled goals. This talk will discuss why that may be the case, focusing on the types of self-regulatory strategies used during goal pursuit. Our recent research finds that autonomous goals feel easier to pursue (Werner et al., 2016), and that people report encountering fewer obstacles when pursuing autonomous goals (Milyavskaya, Inzlicht, et al., 2015). The literature, however, is currently silent on whether people actually encounter fewer obstacles or whether the self-reported difference is the consequence of subjective perception. And, if they do encounter fewer obstacles, is this the result of enacting effortful strategies or of effortless (habitual) behaviour? I will present recent data from our lab addressing these questions, including online, experience sampling, and in-lab studies on situation selection and other self-regulatory strategies. The results across studies are somewhat inconsistent. For example, in a series of studies, participants reported on their motivation for eating healthy and then responded to a series of online scenarios about positioning obstacles and themselves (relative to obstacles) in their environment. We find that greater autonomous motivation is related to greater distancing of obstacles in the hypothetical online scenarios, but not in the in-lab studies. Discussion will focus on our evolving understanding of the effects of motivation on self-regulation, and the outstanding questions that still need to be addressed.

2E-023

Towards optimal motivation. What goals matter, how students benefit and how to promote it.

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Although the multiple goal approach is well-regarded in contemporary research, there exists a prevailing debate over the combination of goals that are most germane for optimal learning. Where classroom practice is concerned, current research also does not attend well to solving the practical challenges faced by educators. Should teachers develop competence by emphasizing deep learning and mastery, or should teachers encourage students to be competitive in academic pursuits? If both are desired, how should teachers teach to enhance student outcomes? The purpose of this study was to extend knowledge of distinct achievement goal profiles and their consequences on student outcomes, with a specific focus on optimal motivation. Following which, we investigated the instructional effects on the multinomial probabilities of a student belonging to an optimally motivated classroom. To this end, we examined three focal questions: what configuration of achievement goals leads to optimal motivation, what is the impact of optimal (and suboptimal) motivation on student outcomes, and what types of instructional practices promote optimal motivation.

Adopting a person-centered approach, a three-profile solution – low (36%), competitive (48%) and optimal (16%) – provided the most meaningful representation of learners' goal profiles in mathematics. The profiles were indicated by all-low goals, all-high goals and high approach-low avoidance goals, respectively. Students in the optimal group were most adaptive with respect to positive (mathematics achievement, mathematics self-efficacy and academic resilience) but not negative outcomes (fear of failure and mathematics anxiety). However, the reverse was true for those associated with the competitive profile. Results from multilevel analysis indicated a positive link between high quality instructional practices and optimal motivation. Specifically, and in support of self-determination-based instruction, the strongest instructional effects were found in instructional coherence (autonomy and competence supporting), adaptive procedural knowledge (competence supporting) and positive classroom climate (autonomy supporting). Our findings suggest that optimal-motivation promoting classrooms are best supported by all three, not one or the other. Finally, student- and class-level antecedent effects of being female and higher prior attainment were associated with the optimal motivation profile.

Overall, our findings show that, in the search for optimal motivation (Baron & Harackiewicz, 2001), the adoption of mastery and performance goals coupled with the near absence of avoidant goals provide the most optimum context for achieving positive student outcomes.

Reference

Barron, K. E., & Harackiewicz, J. M. (2001). Achievement goals and optimal motivation: Testing multiple goal models. *Journal of Personality and Social Psychology*, 80, 706-722.

2E-024

Self-efficacy, classroom engagement, and academic achievement of elementary students: comparing three theoretical frameworks

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Along with student behavioral (effort, attention) and emotional engagement (enjoyment, interest), self-efficacy is among the critical factors leading to achievement. Three of the most acknowledged motivational frameworks, i.e., Self-Efficacy Theory, Self-System Model of Motivational Development, and Expectancy-Value Theory, point toward different developmental processes linking these constructs. Following 671 students (51.8% girls), this study aims at testing the possible paths linking math self-efficacy, behavioral and emotional engagement, and achievement. An accelerated longitudinal design allowed gathering data for students on three consecutive school years (4th, 5th, and 6th grades). Each year, students rated their self-efficacy and engagement using validated tools, while teachers reported student math achievement. Missing data (maximum 28.6%) were handled with the Mplus7 Maximum Likelihood estimator. Accounting for student gender, we tested four models: one for each theory and a final model. First, all path expected based on the Self-Efficacy model were found ($\chi^2_{(8)}=54.66, p<.001$, CFI=.95, TLI=.89, RMSEA=.09, SRMR=.07): Fourth- and 5th-grade self-efficacy was associated with achievement one year later ($\beta=0.23$ and $\beta=0.19, p<0.001$) and prior achievement was associated with later self-efficacy ($\beta=0.12$ and $\beta=0.10, p<0.01$). Second, testing the Expectancy-Value model mainly confirmed the expected pathways ($\chi^2_{(42)}=227.07, p<.001$, CFI=.91, TLI=.86, RMSEA=.08, SRMR=.11): Fourth- and 5th-grade self-efficacy led to higher 5th- and 6th-grade emotional engagement ($\beta=0.10, p<0.05$ and $\beta=0.09, p<0.10$). Prior emotional engagement was associated with later self-efficacy ($\beta=0.16$ and $\beta=0.13, p<0.001$) and with 5th-grade behavioral engagement ($\beta=0.16, p<0.001$). Only behavioral engagement was unrelated to self-efficacy and to achievement. Third, results from the Self-System Model were less conclusive ($\chi^2_{(42)}=227.07, p<.001$, CFI=.91, TLI=.86, RMSEA=.08, SRMR=.11). Only the associations between prior self-efficacy and later emotional achievement were significant ($\beta=0.17, p<0.001$ and $\beta=0.15, p<0.01$), while the associations between prior self-efficacy and later behavioral engagement, and between prior emotional and behavioral engagement and later achievement were not significant. We tested a final model including a combination of the paths identified in previous models ($\chi^2_{(38)}=140.76, p<.001$, CFI=.95, TLI=.91, RMSEA=.06, SRMR=.07). Results are consistent with the models tested separately. We also found a few mediation effects. In line with Self-Efficacy Theory, 5th-grade achievement mediated the association between prior and later self-efficacy ($\beta=0.02, p<0.05$), as self-efficacy between prior and later achievement ($\beta=0.03, p<0.01$). This last model also revealed an unexpected indirect effect: 5th-grade self-efficacy acted as a mediator between 4th-grade achievement and 6th-grade emotional engagement ($\beta=0.02, p<0.05$). This may have great implications as emotional engagement is related to student well-being and intrinsic value of learning. Expected and unexpected results will be further discussed.

2E-025

Basic psychological needs as mediators between teachers' motivating styles and students' academic motivation

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The aim of the research was to check the effects of teachers' motivating styles – autonomy, structure and relatedness support – on students' academic motivation by testing mediatory influence of basic psychological needs. Academic motivation was measured in contexts, i.e. in specific school subjects – Serbian and history (representative of Humanities), and, mathematics and chemistry (representative of Sciences). The instruments applied on the sample of 494 students attending the final grades of elementary school (female 57,10%) and those attending secondary school (female 58,80%) encompass the following: *Scales for measuring teachers' motivating styles for autonomy, structure and relatedness support* (used four times in all the contexts); *Academic motivation scale* (used also in all the contexts) and *Questionnaire for measuring basic psychological needs* (used only once, measuring the needs in general). The mediators were involved in alignment with the theoretical assumption that autonomy support contributes to the satisfaction of the basic need for autonomy, that structure support satisfies the basic need for competence, while the third style – relatedness support – satisfies the need for relatedness. First of all, the results show that direct effects of teachers' motivating styles are much higher than indirect effects of basic psychological needs in predicting academic motivation. At the school subjects level, the results indicate that the satisfaction of basic psychological needs is a significant mediator in explaining academic motivation, much more so than in thwarting it. When the school subjects are placed in respective groups, the results show that the motivation for learning subjects from the Sciences group is generated both through thwarting and satisfying the needs, while the motivation for studying subjects from the Humanities group is provided only through satisfying those needs. The relatedness support is found to be the most effective in predicting all types of motivation in all contexts; however, according to students, teachers use it least of all types. It can be concluded that the teachers of the subjects from the Humanities group generate academic motivation in their students to a greater degree than the teachers of the subjects from the Sciences group. Due to the low indirect effects of basic psychological needs in tested relations, it can be assumed that the basic psychological needs of students are satisfied to a greater extent by various other influences rather than the teachers', as well as that measuring different phenomena at different hierarchical motivational levels poses an obstacle in their comprehension and interpretation.

5A-026

The role of a supportive interpersonal environment and education-related goal motivation during the transition beyond upper secondary education

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During their school years, adolescents face several school-related transitions in which both motivational and interpersonal factors are likely to play a crucial role. First, adolescents' own education-related goal motivation has been shown to play an important role in their success in fully dealing with these transitions (Vasalampi et al., 2012). Second, self-determination theory suggests that one's motivation is channelled by significant others. In the four-year longitudinal study we present here, we examined the role of supportive parent and peer relationships in: a) adolescents' motivation concerning their education-related goals, and b) in their success in dealing with the transition to further studies or working life following their upper secondary education. The sample consisted of 1,520 upper secondary education students attending either academic or vocational upper secondary school. They were surveyed three times: (1) in the first year of their upper secondary education, (2) in the second year of their upper secondary education, and (3) two years later.

The results show, that when students in upper secondary education pursued their educational goals out of autonomous motivation they also invested more effort in their goals, which was reflected in high levels of goal progress. High goal progress, in turn, was related to high levels of school satisfaction, whereas low goal progress was associated with the intention to drop out of school. By contrast, controlled motivation was associated neither with goal effort or goal progress in educational goals. Different interpersonal environments played unique and different roles in adolescents' educational goals. While mothers' affective warmth enhanced adolescents' autonomous motivation, fathers' affective support directly predicted high levels of school satisfaction and low intentions to drop out of upper secondary school. The role of peer acceptance (measured using a sociometric procedure) was twofold: it was related to high autonomous motivation in adolescents' educational goals, and it also directly predicted adolescents' satisfaction with their chosen educational track. The intention to drop out of school is an important warning signal of later actually dropping out. Additional analyses showed that the less adolescents had the intention to drop out of upper secondary school, the more likely they were to be successful in dealing with the educational transition from upper secondary school to further education or employment.

References:

Vasalampi, K., Nurmi, J-E., Jokisaari, M., & Salmela-Aro, K. (2012). The role of educational goal-related autonomous motivation, effort and progress to successful entrance into university. *European Journal of Psychology of Education*, 27, 591-604.

5A-027

Qualitative use of SDT basic psychological needs for analysis of persistence in secondary education programs

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Introduction: The aim of this paper is to investigate how Self-Determination theory and narrative method can be utilised together in an investigation of motivation of vulnerable young adults (aged 18-25) striving to complete upper secondary education programmes.

Dropout is a permanent problem in educational policy and thus in educational research projects, including a current Danish research project, **Staying on track: New perspectives and sustainable solutions to dropout for young adults**, investigating dropout among young adults in vocational education and training and basic general education for adults. While research into dropout often focuses on reasons for dropping out, this project investigates students' considerations and decision-making processes in relation to dropout, particularly the importance of fulfilment of the three basic psychological needs.

Methods: Data consists of two rounds of data collection, surveys and interviews conducted with 30 students from 14 different colleges during the autumn of 2017 and the autumn 2018. The purpose of the student surveys was to study specifically which of the two psychological needs, competence or relatedness, would have the strongest correlation with a determination to stay in school. Every week for 15 weeks the students answered three questions. One question regarding their sense of academic ability, one questions regarding their sense of relatedness (to school, classmates, teachers), and finally one question regarding their determination to stay in school. In addition to the surveys, every four weeks selected students were interviewed in order to elicit their narratives about their thoughts and actions in relation to their survey answers.

Results: On the basis of a preliminary analysis of the data, we find that there is a stronger correlation between feeling related to others, be it to teachers, supervisors or other students, and being determined to stay in school, than between feeling competent and being determined to stay in school. Data indicates that the more students feel appreciated by others and feel that they are a valuable part of a community in school, the more they are able to cope with feeling less academically competent at a given time, because they believe that they are in a supportive environment that will allow them to succeed and complete the educational programme.

5A-028

Supporting students' psychological needs and motivation within a high school career and technical education program: A mixed methods study

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Introduction

In high schools, School-Based Agricultural Education (SBAE) programs utilize classroom learning, FFA organization participation, and career exploration for the purposes of technical skill attainment, youth development, and fostering agricultural literacy. SBAEs offer a unique combination of Positive Youth Development (PYD) and Career and Technical Education (CTE). Research indicates certain PYD, CTE, and SBAE program mechanisms foster psychological needs but a dearth exists which identifies adult practitioners' processes that support students' psychological needs. Identification of adult practitioners' processes can potentially increase benefits associated with psychological need support.

Methods

The purpose was to identify the processes SBAE teachers utilized to support students' psychological needs. We utilized a mixed-methods exploratory sequential design. Exemplary SBAE teachers ($n= 5$) were purposive sampled and 368 students were recruited. The final usable student sample was $n= 222$ (60% response rate). First, quantitative data related to students' psychological needs support and teachers' autonomy-supporting orientation were collected. The quantitative findings helped identify interview participants, observation areas, and interview questions. Qualitative data were collected through classroom and FFA field observations. One-on-one interviews were conducted with all teachers and 15 students. The needs support process emerged through the qualitative and convergent data.

Results

We found that students experienced slight support for all needs, four teachers possessed controlling orientations, and one an autonomous-supporting orientation. The emerging theory identified the needs support process components: context-teacher beliefs, central phenomenon-relatedness, subsequent conditions-motivational strategies and intracurricular program, and student outcomes- psychological needs and motivational outcomes.

Discussion/Conclusion

Teacher beliefs fostered the needs support process. Teachers believed that without relationships, no motivational strategies would be affective. The beliefs were underlined by their controlling orientations and influenced the strategies utilized and the outcomes experienced. Following the development of relationships, teachers utilized extrinsic and intrinsic strategies to motivate students. They desired intrinsic motivation but lacked the ability to expand beyond their controlling beliefs. Intracurricular experiences were created to strengthen students' needs support. Specifically, competence was fostered through knowledge/skill application from one program component, the classroom, to another, the FFA organization or career exploration. Within the process, students displayed relatedness and competence support, autonomy support and thwart, and varied motivational outcomes. Supporting psychological needs was a sequenced process built upon teacher beliefs and student experiences. However, it produced a potpourri of student outcomes due to the teachers' inability to provide consistent autonomy. Further research should explore the development and application of teacher motivational beliefs and their influence on psychological needs.

5A-029

Another approach of Study Success. Implications of identity development and motivation differences in the educational choice process for study success.

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In the paper session results will be presented of the PhD dissertation *And what can I be when I grow up?* (Slijper, 2017). The longitudinal study focused on individual developmental trajectories and investigated the relationship between the process of educational choice of 89 Law students of higher professional education. Three empirical studies were done to investigate how students prepare themselves for choosing a major, and to explore their identity development and their concerns in choosing a study and the effects on study success. The paper session will focus on the first empirical study in which educational success was explored in relation to topics such as preparation for subsequent studies and the role of motivation and time perspective in the educational choice process.

The conceptual framework of the study was based on identity theories (Erikson, 1968), which consider making an educational choice as an important developmental task for adolescents, and on motivational concepts from the Self Determination Theory and the Future Time Perspective Theory, which are relevant for developmental tasks like educational choice. Besides, in theories on vocational guidance, the choice process is regarded as a sequence of motivation, exploration (in broad and in depth) and commitment formation.

The first empirical study started with a qualitative approach. Interviews were used to shed light on students' development in educational choices before and during the first year of their studies. Time perspective (future), motivation, and attitude were frequently discussed topics. A further quantitative analysis of these concepts showed that students with a distal time perspective - focussing on the ulterior profession - run higher risk to drop out than students with a proximal perspective. The latter are less occupied with their future, are more task-oriented and more intrinsically motivated. Educational choices driven by controlled motives were related to drop-out whereas autonomous forms of motivation were positively related to study outcome. Furthermore, analyses of students' attitudes towards their future studies in relation to study progress showed that students with an attitude characterized by doubt carry the highest risk to dropout. Finally, students who prepared themselves more intensively before making their choice, showed less dropout.

Discussion: How can we foster students' motivation in their educational choice process, taking into account the developmental perspective of the student?

References: Erikson, Erik H. (1968). *Identity: Youth and Crisis*. London, Faber & Faber.

Slijper, J. (2017). *En wat kan ik dan later worden?* Groningen: Dept. of Psychology. Doctoral Dissertation.

5A-030

Autonomous and controlled motivation among students attending Vocational education and training in Finland

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Lack of motivation is one of the main reasons students give when deciding to quit their studies in Vocational Education and Training (VET) in Finland. This study was planned to identify the ways in which autonomous and controlled motivation influence the academic life of VET students; especially concerning their on-time graduation. The participants are approximately 2500 students from Jyväskylä Educational Consortium in Finland. The students' motivation, learning difficulties, well-being, background and peer affiliations were measured at the beginning of the first and second school year, and non-attendance and drop-out data is provided by the school after the school years were over. The study will also be used to test the psychometric properties of a Finnish translation of Self-Regulation Questionnaire –Learner (SRQ-L). Preliminary results show that autonomous motivation predicts success in VET studies. However, the results for controlled motivation are more ambiguous. Further analyses are in progress.

5B-031

Body pressure and self-determined motivation for exercising at fitness centers

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Introduction: According to Thøgersen-Ntoumanis & Ntoumanis (2007), physical activity participation could have a negative impact on how one feels about the body. In their study of female and male aerobic-instructors they found introjected regulation to impact body dissatisfaction, social physique anxiety and physical self-worth. In a time when youth experience increasing sociocultural pressure on how they perceive their body (body pressure), through media and family, it is interesting to investigate how motivation for training at fitness centers impact body pressure of female and male participants.

Methods: The present study investigate how motivation for exercising in a fitness center impact perceived body pressure. Female (63%) and male members (N=693), with a mean age of 23.9 (SD=4.6), of a university fitness center completed the Behavioral Regulation in Exercise Questionnaire 2 (BREQ-2) (Markland & Tobin, 2004). Other measures included exercise frequency at fitness centers and global self-perception. Data was collected with an electronic questionnaire through Select Survey, distributed by e-mail to all members of fitness centers operated by the student welfare organisation (Sit).

Results: Preliminary analysis was conducted with a linear regression analysis with body pressure serving as dependent variable. The model was statistically significant ($F(10, 682) = 30.84, p < .001$), explaining 31.5% of the variance (adjusted $r^2 = .30$). Statistically significant independent variables included gender, age, exercise frequency, self-perception, external regulation and introjected regulation.

Discussion: Female members experience higher levels of perceived body pressure compared to men. Increasing age corresponds with less body pressure. A good global self-perception corresponds with less body pressure. Training frequency at fitness center displayed an interesting curve-linear, U-shaped, relationship with body pressure. This indicates that participants with lowest and highest exercise frequency experience the highest level of body pressure. Controlling forms of motivation (external- and introjected regulation) increases body pressure, whereas self-determined forms of motivation (identified regulation and internal motivation) have no impact on body pressure. Results indicate that young people who are motivated to exercise at a high frequency at fitness centers by controlled motivation are likely to perceive a high level of body pressure.

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Thøgersen-Ntoumani, C., & Ntoumanis, N. (2007). A self-determination theory approach to the study of body image concerns, self-presentation and self-perceptions in a sample of aerobic instructors. *Journal of Health Psychology*, 12(2): 301-315.

5B-032

Motivational profiles for exercise in Japanese adults: a self-determination theory perspective

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It is now well-documented that regular pursuit of sedentary activities combined with insufficient physical activity increases risk for chronic health problems. Notwithstanding these observations, data from the International Prevalence Study on Physical Activity (Bauman et al., 2009) indicate that only 21.20 percent of Japanese adults are considered highly-active. The present study examined the relationship between exercise motivational profiles and stages of exercise behavior change. Japanese adults ($N=1130$) participated in this study. In the first analysis, cluster analysis identified six meaningful clusters in exercise motivational profiles. The first cluster was labeled the 'amotivation profile' as the participants in this cluster had the highest scores in amotivation, and the lowest scores in autonomous motivation. The second was the 'low motivation profile' with low scores on all measured motivational variables. The third was the 'autonomous motivation profile' as subjects in this group demonstrated higher autonomous motivation than controlled motivation. The fourth was the 'extrinsic motivation profile' as subjects in this group demonstrated relatively high levels of extrinsic regulation, and relatively low levels of intrinsic regulation. The fifth was the 'controlled motivation profile' as subjects in this group demonstrated higher controlled motivation than autonomous motivation. The last cluster was the 'intrinsic motivation profile', which consisted of participants who had relatively high levels of intrinsic regulation, and the lowest scores in amotivation. The second analysis explored how motivational profiles are related to stages of exercise behavior change. Participants who had the autonomous motivation profile and the intrinsic motivation profile were most likely to be classified in the maintenance stage. The results from this study provided the foundation for successful strategies to develop exercise adherence in Japanese adults focusing on motivational profiles.

5B-033

Short-term effects of implementing needs-supportive strategies within a UK exercise referral scheme

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Background: With a focus on referring inactive individuals with health conditions for exercise, the UK exercise referral (ER) system has huge potential to impact public health. Yet current programmes are typically limited to 12-16 week gym access and offer little behaviour change support. Whilst Self-Determination Theory (SDT) provides a process model for fostering long-term physical activity engagement, previous attempts to implement needs-supportive delivery within ER have seen mixed results (e.g. Duda et al., 2014).

Methods: Participants were ER practitioners ($n=3$) and patients ($n=52$) taking part in a wider quasi-experimental trial comparing a co-produced SDT-based physical activity referral intervention with standard ER care (clinicaltrials.gov: NCT03490747). ER practitioners from the intervention centre were trained in needs-supportive communication strategies. Both the intervention and standard care included an induction and 12 weeks' subsidised fitness centre access. The SDT-based intervention also included needs-supportive behaviour change consultations at baseline, 4, 8, 12 and 18 weeks. Exercise motivation, psychological needs satisfaction for exercise, physical activity and mental wellbeing were measured at baseline and 12 weeks. Intervention fidelity was assessed through needs support questionnaires at 12 weeks and audio-recordings of consultations, coded for use of needs-supportive strategies. Between group differences were analysed using Mann-Whitney U tests.

Results: ER practitioners from the intervention centre were rated as providing significantly more autonomy support than ER practitioners from the standard care centre ($p=0.035$). This was supported by audio-recording data that showed a higher use of needs supportive strategies by ER practitioners at the intervention centre, with the most notable differences in the use of open questions and in offering patients the opportunity to have a say in their activities. There were no between-group differences in baseline-to-12 week change in motivation, psychological needs satisfaction, physical activity or mental wellbeing.

Conclusions: ER practitioner training enhanced needs-supportive delivery and the extent to which patients felt their autonomy was supported. This needs-supportive environment did not however translate to feelings of needs satisfaction or to enhanced autonomous motivation in patients. Whilst caution must be taken due to the small sample size, these results raise questions about the effects of needs-supportive strategies for patients (in the short-term). A 6-month follow up will investigate longer-term effects.

Reference

Duda, J. L., Williams, G. C., Ntoumanis, N., et al. (2014). Effects of a standard provision versus an autonomy supportive exercise referral programme on physical activity, quality of life and well-being indicators: A cluster randomised controlled trial. *IJBNPA*, 11, 10. doi: 10.1186/1479-5868-11-10

5B-034

Is regular physical exercise (or sports practice) related with higher academic self-regulation and lower procrastination in university students?

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Introduction

Academic self-regulation is of critical importance for university students, because it can promote performance and well-being in learning and affect subsequent possibilities within life, such as finding employment and building a family. Several attempts to enhance self-regulation in learning have been based on promoting academic values, improving learning strategies, or triggering high motivation through paying attention to positive future outcomes of academic achievement. However, there have also been approaches considering that self-regulation can be understood as a set of skills, which can be developed and improved in one performance domain, and afterwards be useful (and used) in a different domain. Hence, we asked: is it possible to argue that university students who regularly practice sports (or physical exercise) are more self-regulated? And, can sports practice (or physical exercise, including its frequency, intensity, duration, motives, and degree of psychological needs satisfaction) play a role in explaining differences in procrastination and academic self-regulation in university students?

Methods

Participants were private (n = ca. 300) and public (n = ca. 700) university students, from diverse fields of knowledge, who voluntarily and anonymously participated completing standardized 12-minute questionnaires, comprising validated measures for the description of their physical exercise or sports practice (frequency, intensity, duration, type), psychological needs satisfaction and motives for physical activity, academic self-regulation, and pure procrastination. As part of a publicly funded two-year research project, we contacted regular teachers in one public and one private university and asked them to allow researchers to address their students in class, such as to yield an intentional sufficient quota of participants per study field.

Results

Study variables are described and their bivariate correlations are analysed. Furthermore, we assess if differences in reports of variables in the physical exercise (or sports) domain account for changes in pure procrastination and academic self-regulation, controlling for the effects of variables like sex, age, and type of practice.

Discussion & Conclusion

For university students, procrastination and deficient academic self-regulation are two forms of dysregulation that hinder performance, well-being and life perspectives. We discuss the associations between regular physical exercise (or sports practice) and pure procrastination and academic self-regulation in university students. Furthermore, we explore the assumption that the domain of sports or exercise may contribute to the development of self-regulatory skills that can later on be useful for academic learning, such as time management.

5B-035

Changes in physical activity during a worksite intervention: Latent trajectories and their relationship to competence and motivational regulation

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Introduction: The study aimed to explore whether there were different patterns of physical activity (PA) among employees during and after participating in a worksite health-promotion intervention over a period of one year. Further, we aimed to assess whether potential patterns were associated with perceived competence and motivational regulations for PA. The design of the group-based intervention was based on the tenets of SDT.

Methods: The study consisted of employees (N = 202, M age = 42.5) working in Norway Post as drivers, mail carriers, and with sorting. A person-centered approach was applied in order to explore if there were different latent trajectories within the sample related to PA. The data was analyzed with latent class growth analysis (LCGA) and the modified BCH method.

Results: The a three-trajectory model obtained the best model fit indices: (1) employees high at baseline who declined significantly (n = 16), (2) employees who remained stable at a moderate level (n = 55), and (3) the majority of employees who reported low levels at baseline and increased significantly (n = 128). High levels of PA were associated with higher levels of perceived competence and autonomous forms of motivation for, which is in line with the tenets of SDT. Contrary to study hypothesis, controlled forms of motivation increased in all three trajectories after the intervention.

Discussion and conclusion: Different trajectories of PA were found, and the intervention was able to attract employees with low levels of PA and help them increase their PA significantly. However, participants reported relatively moderate-to-high levels of perceived competence and autonomous motivation for PA at baseline. These findings are in line with other SDT-based PA promotion intervention studies in the context of health care (Fortier et al., 2012). The results are promising given the large participation rate (68%). We encourage future intervention studies to explore whether the recruitment process can be altered to attend to the needs of employees with low levels of perceived competence and autonomous motivation for PA.

5C-036

METUX: An SDT-based Model for Technology Experience

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Despite a long-standing pursuit in human-computer interaction (HCI) for design strategies that foster sustained engagement, behavior change and wellbeing, the basic psychological needs shown to mediate these outcomes are rarely taken into account. This is possibly due to the lack of a clear model to explain these needs in the context of HCI and technology design more generally.

In order to develop a model to bridge basic psychological needs theory with technology design practice, we examined the various levels at which user experience can be impacted by technology use and applied self-determination theory at each of these levels. We then identified existing validated scales that might be used to measure need satisfaction at each of the levels. Where an appropriate scale did not already exist, we adapted existing scales to create appropriate measures for the technology context. We then ran an initial validation study of the scales via a survey (n=500) of technology experience.

Motivation, Engagement and Thriving in User Experience (METUX) (Peters, Calvo, & Ryan, 2018) identifies six spheres of analysis within which psychological needs must be taken into account in order to address, not only motivation and engagement, but also psychological wellbeing (including, for example, differentiating between healthy forms of engagement and addiction). These spheres of analysis constitute the user experience (UX) and include: at the point of technology *adoption*, during interaction with the *interface*, as a result of engagement with technology-specific *tasks*, as part of the technology-supported *behavior*, and as part of an individual's *life* overall. These five spheres of experience sit within a sixth, *society*, which encompasses both direct and collateral effects of technology use, as well as non-user experiences.

Four accompanying scales for measuring psychological needs satisfaction within these spheres are presented. The model is based on existing evidence within the context of the workplace, computer games, and health. We extend and hone these ideas to provide practical advice for designers along with real world examples of how to apply the model to design practice.

The METUX model provides a framework grounded in psychological research that can allow HCI researchers and practitioners to form actionable insights with respect to how technology designs support or undermine basic psychological needs, thereby increasing motivation and engagement, and ultimately, improving user wellbeing.

References Peters, D., Calvo, R. A., & Ryan, R. M. (2018). Designing for motivation, engagement and wellbeing in digital experience. *Frontiers in Psychology*, 9(MAY). <http://doi.org/10.3389/fpsyg.2018.00797>

5C-038

A configural approach to aspirations: The social breadth of aspiration profiles predicts well-being over and above the intrinsic and extrinsic aspirations that comprise the profiles

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People differ in the extent to which they prioritize intrinsic or extrinsic life goals or aspirations (Kasser & Ryan, 2001). A relative emphasis on intrinsic aspirations promotes well-being, whereas focussing primarily on extrinsic aspirations can predict ill-being. However, a recent meta-analysis (Bradshaw et al., under review) found considerable heterogeneity in the results linking aspirations to well-being, which could not be readily explained by traditional sources of observed variance such as age, gender, and socioeconomic status. The source of such heterogeneity is therefore unobserved and may be attributable to the existence of latent subsamples for whom the pattern of aspirations differs. We conducted latent profile analyses of the Aspiration Index to address the question of whether samples are comprised of latent subgroups with different patterns of aspiring, and then tested if belonging to those subgroups predicted unique variance in well-being. In this presentation, I will detail the results from three large studies including participants from Hungary (N=3370; 77% female; age: $M = 23.57$), Australia (N=1632; 51% female; age: $M = 16.6$), and America (N=6063; 82.2% female; age: $M = 21.86$). In each of these three studies, we conducted separate bifactor structural equation models to disentangle the level of higher-order intrinsic and extrinsic aspirations from the shape of specific aspirations and used the resultant factor scores as indicators in mixture models. The analyses yielded three replicable latent profiles: *Disengaged from relationships and health* (P1); *Aspiring for interpersonal relationship more than community relationships* (P2); and *Aspiring for community relationships more than interpersonal relationships* (P3). We interpreted these profiles as representing differences in people's *integrative span*, or the expansiveness of their interests and focus of caring. We predicted that as integrative span widens (from P1 to P3), so too would well-being and indices of other-oriented-ness such as nonattachment. Indeed, we found that P1 reported the lowest well-being and other-oriented-ness and P3 experienced the highest. We tested the incremental value of our person-centered approach to typical variable-centered methods, by controlling for the global and specific aspiration factor scores and found that profile membership showed incremental value in predicting outcomes. The study makes a novel contribution to goal contents theory by identifying replicable profiles that link to well-being, even in the most conservative tests, such that individuals aspiring highly in general, with a relative intrinsic orientation and an emphasis on community, showed the highest levels of well-being and other-oriented outcomes.

5C-039

Mindful Movement: Connecting physical and mental health and well-being.

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Summary: In this presentation I argue for a mutually beneficial and reinforcing interaction between Self-Determination Theory and Mindful Movement Practices, and put this in the context of ancient philosophy and modern theory of motor learning as well as psychotherapy practices.

Background: Self-Determination Theory is rooted in an organismic view of human nature that assumes an innate tendency of growth towards both greater complexity and integration. This view is in common with a variety of practices known as somatics, as well as with a number of popular approaches to psychotherapy.

SDT further posits that such growth requires the fulfilment of three psychological needs: autonomy, competence, relatedness. Mindfulness is central to realizing SDT by enabling the fulfilment of those needs, in particular autonomy. Beyond that, research on how people can enable their own growth is sorely lacking: as Deci and Ryan note in their recent book, “most incomplete is research on [...] personal change and responsibility.”

Movement: Mindfulness has a number of proven benefits in the mental health and well-being domains.

Nevertheless, standard interventions like MBSR rely heavily on sitting meditation – given today’s excessively sedentary lifestyles a potential problem. Time pressures also argue for combining mindfulness practices with the proven physical benefits of movement. Research in motor learning and performance provides additional evidence of the importance of attentional focus, which in turn is closely related to mindful acceptance and complementary to the role of autonomy.

Mindful movement: There is a plethora of approaches to mindful movement, both modern (e.g. the Feldenkrais Method: Mattes, 2018) and with traditional roots (e.g., Qigong, Ki-Aikido). Not only do at least some of these methods make (usually implicit) use of principles from SDT, but the literatures on these methods contain interesting leads on how SDT fits into a wider framework of practically applicable philosophies ranging from Daoism, Buddhism (Mattes, 20xx) to Greek philosophies like Stoa and Pyrrhonism, and also point to possible common ground with contemporary versions of psychotherapy both in the CBT tradition (like ACT or REBT) and humanistic (e.g., Existential Analysis).

References:

Mattes, J. (2018). <http://www.ippanetwork.org/positive-health/mindful-movement-self-determination-for-the-running-ape-a-practice-brief/>. *The Chronicle of Advances in Positive Health and Well-Being*, 1 (Open access).

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5C-040

Work addiction and its relationship to the Self-determination theory, work outcomes, health and job characteristics.

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Work addiction or workaholism is characterized by an irresistible inner drive to work very hard; it is a combination of working compulsively and excessively. The present study investigated in a representative sample of 1552 Belgian workers the prevalence of work addiction in the Belgian working population (2017). We also checked the relationship with job characteristics, several important work outcomes, impact on work life balance, health, stress, absenteeism, and burn-out. Finally and very interestingly, we link workaholism to the four regulations (types of motivation) as mentioned in the self-determination theory (intrinsic, identified, introjected and extrinsic motivation). In this study, we measured work addiction by means of a short version of the DUWAS, consisting of two core-components: Working Excessively (WE - 3 items) and Working Compulsively (WC – 3 items). Main conclusions are that 17% of the Belgian workers score high on both WE and WC, and can thus be labelled as workaholics. 66% of the workaholics state that their work has a bad influence on their health. They experience stress more often (83%) as compared to the non-WC and non-WE workers (40%). 25% has an increased risk on burn-out. Workaholics report themselves as longer and more frequently absent from their work due to sickness. Moreover, they experience less fun in their job. Finally, very interesting relationships were found with the central concepts of the self-determination theory, namely the regulations and the three basic needs. Employees that work excessively are both controlled and autonomous motivated, whereas employees that work compulsively suffer from inner pressure, as also felt within the introjected motivation. Work addicts do not experience a lot of belongingness and competence. Results for autonomy were mixed. Due to these interesting links, we propose that the prevention and cure of this addiction is based in the satisfaction of the three basic needs, and in the therewith associated increase of the autonomous and the decrease of the introjected motivation.

5D-041

Motivation and Psychological Need Satisfaction in an Aid Project in Madagascar: The Challenges of Developing Psychometric Scales in Developing Countries

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The purpose of this series of studies was to qualitatively measure the motivation towards participation in a training project for impoverished farmers in Madagascar and also to develop quantitative measures of motivation and basic need satisfaction in the context of development aid. Three surveys have been conducted thus far (and a fourth will be conducted by the time of the presentation) in Madagascar to participants of an aid project that aims to increase rice production through the training of rice-growing techniques.

The “why questions” approach developed by Chandler & Connell (1987) was used for measuring the quality of motivation. The approach was shown to be reliable, and findings will be discussed in comparison with a similar study conducted in Kenya by Sayanagi & Aikawa (2016). In sum, the motivation was more controlled for the Malagasy sample. This was probably due to the difference in the structure of the aid program being administered, but cultural factors may also be at play.

Developing quantitative measures of motivation and need satisfaction has proved to be challenging. First, as many of the subjects are not literate, pencil-and-paper questionnaires could not be used and thus all prototype measures were conducted orally as structured interviews. Next, there was almost no variance for the answers of many of the questionnaire items. The prototype measures were revised twice to address the latter issue: the first time, the expressions of the items were reworded to make the statements stronger; the second time, the items were reworded again so that they were in second person instead of first person (e.g., revised from “I feel...” to “Do you feel...”) as the subjects seemed confused answering first person statements stated by the interviewers; additionally, the questioning scheme was revised from a 4-point Likert-like scale to “yes-no” and then asking “strong or weak yes (no).” However, while the variance did increase slightly, even after the third version it was still too small to sufficiently detect individual differences. Further revisions are underway, and results of a fourth prototype measure should be ready by presentation time.

While psychological measurement of such marginalized subjects is challenging, it is important not just for SDT but also the field of psychology as a whole because evidence supporting many contemporary theories are based upon studies that completely exclude such subjects.

5D-042

Does basic psychological need satisfaction matter for self-esteem and school attendance of adolescent girls under conditions of resource-scarcity? A sub-Saharan African perspective

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A growing body of research is examining the way in which ecological dynamics, such as poverty, affect psychological processes. We connect to this line of research by examining key propositions derived from self-determination theory in the understudied context of sub-Saharan Africa. We examine the way in which basic psychological need satisfaction explains the self-esteem of adolescent girls as well as self-esteem’s relationship with school attendance under conditions of extreme resource-scarcity. After validating the Rosenberg Self-Esteem Scale in a rare sub-Saharan rural context (N = 1345), basic psychological need satisfaction is found to explain self-esteem even under conditions where physical need satisfaction is not guaranteed on a daily basis. Next, we test if scarcity interacts with need satisfaction and if need satisfaction explains the relationship between scarcity and self-esteem. A full mediation effect is found for competence, whereas scarcity is not found to affect relatedness and autonomy. Lastly, the longitudinal effect of school attendance on self-esteem is tested with the help of archival school records. We find that attendance at Time 1 predicts self-esteem at Time 2 because it increases the satisfaction of the needs for relatedness and competence, but not autonomy. Implications for psychological theory and practice as well as the field of international development are discussed.

5D-043

Monitoring the volunteer experience - basic need satisfaction in a globally active NPO

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The goal of this research was to develop a concise tool to monitor the experience of volunteers in a globally active non-profit organization. Satisfaction of the three basic psychological needs was considered as the core process mediating the impact of leadership, perceived appreciation, and social support on several indicators of sustained volunteerism: satisfaction, organization-specific role identity, intent to remain volunteering, value congruence, organizational citizenship behaviors, and psychological health.

Data from five countries (Austria, Ecuador, Ethiopia, Gambia, and Switzerland) are presented. The antecedents show differential relationships with the three basic psychological needs in a conceptually meaningful pattern. Satisfaction of basic needs is strongly related to volunteer outcomes. All three basic psychological needs are supported as mediator variables. The strongest mediator effects are observed via satisfaction of the need for autonomy.

In order to develop a monitoring instrument to be used on a regular basis, the number of items per scale has to be reduced to a minimum. Single items are investigated as appropriate "candidates" for this shortened questionnaire. Sub-analyses for various volunteer activities within the five countries are presented to challenge the suggested set of items.

Furthermore, the research explores several cross-cultural differences. The impact of social support, for example, on satisfaction of basic psychological needs (and the need for relatedness, in particular) is slightly stronger in more collectivist countries.

Theoretical implications of cross-cultural differences are addressed. Finally, the next steps of the project will be discussed: Linking the continuous monitoring of the volunteer experience with leadership training, team building activities, and the type of rewards given to the volunteers.

5D-044

Examining Ethiopian Female Undergraduate Enrollment and Retention Through an SDT Lens

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Women around the world face challenges to attending and completing higher education programs and earning degrees that will help them improve their standard of living. Ethiopia is not immune to this international problem. According to UNESCO, the enrollment rate of females into tertiary education in 2014 was slightly over 5%. According to the Hawassa University website, 28.86% of their students are female. Even though these numbers indicate Hawassa's female enrollment is above the national average, a need still exists in retention and increase of this population. Existing literature on the lack of female undergraduate enrollment and the overwhelming attrition in Ethiopia discusses personal, university, academic, and economic related factors. Much of the research on female student enrollment, achievement, and persistence in Ethiopia has been conducted inductively at specific universities, with many focused on specific programs.

This study will add to the literature by deductively studying female undergraduate students across the student population of Hawassa University to understand the motivations and situational factors affecting their enrollment and persistence using both quantitative and qualitative data through the lens self-determination theory (SDT). In the context of this study, causality orientations theory (COT) and basic psychological needs theory (BPNT), would be used to assess female student motivational orientation and persistence. This lens may help shed light on the best environments and supports that could be created and implemented for female student enrollment and degree completion. Using this lens will also assist in analyzing and interpreting both the quantitative and qualitative data and enabling comparison of the results to other studies in different contexts that are focused on motivation and persistence, as well as add to the literature about SDT. This study will provide a new perspective on the topic of female undergraduate motivation, persistence, effective supports, and troublesome obstacles in Ethiopia.

This presentation would explore the study that will be conducted while I reside in Ethiopia in 2019-2020. Data would be collected using surveys and interviews. The quantitative survey will consist of demographic data, data about the self-reported level of English language proficiency, General Causality Orientations Scale (GCOS), Aspirations Index (AI), and the Basic Psychological Needs Scales (BPNS), and will be analyzed to identify relationships among variables as well as differences. The qualitative data will be collected using interviews, focus groups, and document collection and will be analyzed to identify emerging themes directly through the voices of the female students.

5D-045

The postgraduate journey: A qualitative study on well-being and need-fulfilment amongst postgraduate students in South Africa

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Introduction. Postgraduate students are of great importance for universities and the economy, but at the same time mainly neglected in research and practice, especially in the Global South. Drop-out rates of master and PhD students are increasing and an alarmingly high number are suffering from poor mental health (i.e. psychopathology and low well-being). In this study, it was explored how postgraduate students experience their study and how they describe need-satisfaction and well-being.

Methods. A qualitative approach was used, conducting 20 semi-structured interviews with master and PhD students at three campuses of a South-African university. The students were invited to tell the story of their postgraduate journey (bottom-up approach). Then they were asked to describe their well-being and discuss their feelings of autonomy, competence and relatedness and how need-fulfilment could be supported (top-down approach). The interviews were transcribed and a thematic content analysis was conducted.

Results. Students described in both the bottom-up and top-down part that their feeling of competence, autonomy and relatedness was thwarted in their study life. Students felt ill-prepared by their undergraduate education and afraid to miss the competences to succeed. Supervisors were described as not having enough time to sufficiently support them to develop their competencies. In many cases, supervisors impeded their student's experience of autonomy in their research projects, not letting students make their own choices, so they felt controlled and not in charge of their own research. Fulfilment of relatedness was low in most students, especially for the students who described their well-being as low. This was true for both relationships within the university (e.g. with the supervisor) and in their private life. They felt that partners, family and friends were often not able to understand the situation they were going through. They also spent less time with them because of their work-load, impairing their sense of connection and causing feelings of guilt. Some were pressured by their family to earn money after the first diploma. Many students felt lonely and isolated. The participants had concrete ideas how need-fulfilment could be improved. Exemplified were peer-groups where they could share experiences, being able to choose your supervisor and research topic, and courses to strengthen the competencies they need.

Discussion & Conclusion. A recommendation to universities is to take well-being and need-fulfilment of their postgraduate students serious by implementing strategies to support competence, autonomy and relatedness. Specifically, supervisors should learn how to provide autonomy support.

5E-046

Autonomy support as indirect predictor of health, life-satisfaction and academic achievement: the mediating effect of school engagement and self-efficacy

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Introduction

Previous research has shown that student's experience of autonomy support from teachers is important for their motivation, learning, and well-being (Reeve, et al., 2004). The present study tested a structural equation model (SEM) in which perceived autonomy support predicted school engagement and self-efficacy, which in turn predicted subjective health complaints (negatively), life-satisfaction, and academic achievement. The theoretical assumption for this model was that autonomy support may be more directly linked with motivational variables (school engagement and self-efficacy), but also have an indirect effect on important outcomes (health, achievement and life-satisfaction).

Methods

Sample. A representative sample of Norwegian first year lower secondary school students (8th grade, n=830, mean age 13.6 years, 392 boys and 438 girls).

Autonomy support. The short 6-item version of the Learning Climate Questionnaire—LCQ (Black & Deci 2000) was utilized to measure the student's perception of their teachers' autonomy support.

Self-efficacy. A 6-items scale measuring self-efficacy for school performance (e.g. "I can manage schoolwork even when it is difficult"), with response alternatives ranging from 1 ("Disagree strongly") to 5 ("Agree strongly").

School engagement. A 5-items scale measuring school engagement (e.g. "I have fun at school") with response alternatives ranging from 1 ("Disagree strongly") to 5 ("Agree strongly").

Life-satisfaction. A 6-items scale measuring satisfaction with life (e.g. "Life is going well") with response alternatives ranging from 1 ("Never") to 5 ("Nearly always").

Academic achievement. The students were asked to indicate their level of academic achievement on a scale ranging from 1 ("Below average") to 4 ("Very good").

Subjective health complaints. An 8-items scale measuring psychological and somatic health complaints (e.g. "Headache" and "Feeling low") with response alternatives ranging from 1 ("Rarely or never") to 5 ("About every day").

Results, discussion and conclusion

A structural equation model (SEM) with latent variables showed that the students perceived autonomy support from teachers predicted school engagement and self-efficacy, which in turn predicted subjective health complaints (negatively), academic achievement, and life satisfaction. All paths were significant ($p < .01$), and fit indexes supported the model (CHISQ=1341.51, DF=455, CHISQ/DF=2.95, CFI=.95, RMSEA=.05). However, these findings are limited by the cross sectional design which precludes any strong test of causality. Despite this limitation, the present findings supports a multivariate model in which several motivational variables independently predicted important outcomes among students. Teachers should be aware about the potential importance of autonomy support for their students' motivation and well-being.

5E-047

Chronotype and autonomous vs. controlled motivational regulations for sleep related behavior among adolescents

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The prevalence of sleep problems among adolescents suggests the need to study the problem from a different – not just clinical – perspective. The purpose of the study was the examination of sleep problems in adolescents from the perspective of the psychological mechanisms involved in self-regulation postulated by the Self-Determination Theory. The effects of those mechanisms will be analyzed in association with individual differences in chronotype, which may help to demonstrate the role of eveningness, increased in adolescence, in the development of sleep problems.

The study explored the effects of a specific type of procrastination – bedtime procrastination – on the quantity of sleep and on indicators of sleep deprivation in a sample of 675 Polish adolescents. It also examined the relationship between bedtime procrastination, morningness–eveningness and autonomous vs. controlled motivational regulations for sleep related behavior.

Bedtime procrastination – or going to bed later than intended without any specific external reason – was prevalent in the adolescent sample and had a negative effect on the amount of sleep and on signs of sleep deprivation. Evening-type adolescents showed a greater tendency to put off bedtime. The relationship between eveningness and bedtime procrastination was mediated by non-autonomous regulation of sleep related behavior. Bedtime procrastination is more common among evening-type adolescents, because going to bed at a planned time is a greater challenge for their self-regulation skills. Improving those skills could involve developing autonomous motivation for regulating sleep related behaviors.

5E-048

The changes in students' motivation and perceived autonomy support from teachers and parents during the transition from primary school to lower secondary school

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Transition from primary school to lower secondary school can involve changes in, for example, students' learning environment, academic demands, and interpersonal relationships. These changes can further reflect to students' learning motivation and school well-being. The aim of this study was to examine to what extent students' motivation changes across the school transition, and to what extent this change is related to autonomy support that students receive from their parents and teachers. A total of 848 students (53.9% girls) rated their autonomous motivation (intrinsic and identified motivation), controlled motivation (introjected and external motivation), and amotivation before the transition in Grade 6 and after the transition in Grade 7. The students also rated how much autonomy support they received from their parents and from their teachers both in Grades 6 and 7. Latent growth curve models and their relationships were analyzed controlling for students' gender and GPA. The results showed, first, that on average students' autonomous motivation and controlled motivation decreased and amotivation increased from Grade 6 to Grade 7. Students' perceived autonomy support from their parents and teachers decreased from Grade 6 to Grade 7. The results further showed that the overall levels of autonomous motivation and amotivation were significantly related to the levels of perceived support from teachers and parents: the more autonomy support students felt they received from their parents and teachers, the higher was their autonomous motivation and the lower was their amotivation. Furthermore, the findings showed that the level of teachers' autonomy support predicted the change in students' autonomous motivation: the more support students received from their teachers, the less their autonomous motivation decreased from Grade 6 to Grade 7. Similarly, a higher level of students' autonomous motivation predicted less decrease in teachers' autonomy support across the transition from Grade 6 to Grade 7. In amotivation, the level of parents' autonomy support predicted a negative change across the transition: the more autonomy support parents provided, the less students' amotivation increased from Grade 6 to Grade 7. Reciprocally, a higher level of students' amotivation was related to less increase in parents' autonomy support from Grade 6 to Grade 7. No associations were found for students' controlled motivation with parents' or teachers' autonomy support. Based on the findings, the different roles that parents and teachers can have in supporting students' motivation during the school transition will be discussed.

5E-049

Teachers' support as correlate of student self-evaluation bias trajectories during junior high school: a joint trajectory analysis.

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This study aims to improve the understanding of the dynamics and the evolution of self-evaluation bias (SEB) over time and to develop our knowledge about its antecedent by investigating the contribution of teachers' support. Three objectives are aimed: 1) to examine SEB and perception of the teachers support trajectories over a period of 4 years, (2) to study the interdependence of these two phenomena by examining their concomitant evolution (3) to examine whether the school performance measured at the end junior high school depends on students' belonging to these joint trajectories.

We hypothesize a partition in three trajectories: a first grouping the students with a very negative SEB, a second grouping the students with a positive SEB and a third grouping the students who demonstrate a realistic perception of their academic competence.

We predict that belonging to a trajectory of negative SEB will be concomitant with belonging to another where perceived teachers' support is very low. Conversely, belonging to a trajectory where students show a realistic evaluation of their academic competence should be associated with a high probability of belonging to a trajectory where the perception of teachers' support is moderate. Finally, belonging to a trajectory where the SEB is positive may be concomitant with the belonging to a trajectory of high perceived teachers' support.

Finally, we predict that students' belonging to a trajectory combining a very negative SEB and a low perception of teachers' support will have poorer performance than students from all other combinations of joint trajectories.

To serve the purpose of the first objective we used a semi-parametric group-based method (Nagin, 1999). A joint trajectory analysis was then carried out to examine the unobserved heterogeneity of the development trajectories of the SEB and the perceived support. We used the group-based dual trajectory model.

The analysis was carried out using the *kml* and *kml3d* which are R packages designed to cluster longitudinal data (Genolini, 2015).

We identified 3 groups for SEB and 3 group for perceived teachers' support. We then examined the interrelationship between the two outcomes across the trajectory groups over 4 years. The two outcomes are associated longitudinally and evolve in the same direction. By examining dynamic linkages across all trajectory groups between the two longitudinal outcomes, the dual model provides a more comprehensive and realistic understanding of the underlying relationships between SEB and perceived teachers' support.

5E-050

Adolescents' psychological well-being at school: the impact of individual and group characteristics, and the role of autonomy support and peer relatedness

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Learning environment and school situations can trigger several affective states, which can include extreme feelings such as intense happiness or hatred. This study, based on a random sample (N= 26,470) of the Italian tenth grade students investigated: (1) the multilevel impact of individual and group characteristics on students' psychological well-being; (2) the mediational role of autonomy support and peer relatedness.

In the first part of the study the following factors were considered at the individual level: gender, immigrant background (first-generation and second-generation immigrants), socioeconomic background and achievement before entering high school. At the group level, the analysis included class size and compositional variables (i.e. gender ratio, immigrant ratio, classroom socioeconomic level, classroom achievement level before entering high school). The results of the first part of the study show that females, low-achievers, immigrants and low SES students are more at risk of psychological distress at school, with gender and achievement being the most important factors. A doubly latent model analysis reveals that while individual socioeconomic status and achievement have a positive impact on students' psychological well-being, the effect of the two variables at the classroom level is negative. Group socioeconomic status and group achievement before entering high school therefore show a negative compositional effect on psychological well-being.

The impact of immigrant classroom composition seems to be limited to positive affect and dependent on students' immigrant generation. All the compositional variables taken into consideration have effects over and above what would be predictable on the basis of individual characteristics and explain a significant amount of between classrooms variance in positive and negative affect. Finally, students in smaller classrooms show more psychological well-being at school.

In the second part of the study the mediational role of teacher autonomy support and of peer relatedness will be examined by means of a doubly latent model analysis.

7A-051

What can individuals do to manage their motivation and behaviour? An integrative classification and toolkit of self-enactable techniques

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Introduction: While the Self-Determination Theory (SDT) has theorised characteristics of social environments conducive to optimal motivation, a key gap in the current literature is the lack of consideration for what individuals themselves do and can do to sustain high levels of autonomous motivation and lower levels of controlled motivation. Indeed, most behaviour change theories and approaches have thus far focused on techniques that the intervention provider delivers to participants. However, effectiveness of most interventions depends on whether participants themselves enact those techniques. Empirical research on strategies for motivational self-management has been scattered in various strands of research, specific to the domain. Research and effective practical applications in this field are hampered by a lack of systematic overarching classification of such techniques. We aimed to compile a comprehensive list of actions that individuals themselves can undertake to change or maintain behaviour or their own motivation. Secondly, we aimed to create a practical toolkit for laypersons.

Methods: Using six existing taxonomies of behaviour or motivation change techniques and three scoping reviews in the domains of education, sport, and work as sources, we identified unique behaviour and motivation regulation techniques available for an individual to self-enact. All extracted techniques were converted to a self-enactable form, and a short definition and an instructive example were created. Qualitative feedback from expert intervention developers and potential endusers was used to improve the utility, congruence, and self-enactability of technique definitions and instructive examples.

Results: The final integrative listing includes 123 self-enactable techniques. The techniques (e.g. mental rehearsal of successful performance, self-monitoring, explore ways of dealing with pressure) were mapped onto four taxonomies (The Behaviour Change Technique Taxonomy v1 (Michie et al. 2013), the Taxonomy of Behaviour Change Methods (Kok et al. 2015), as well as classifications of SDT techniques (Teixeira et al. 2018) and Motivational Interviewing techniques (Hardcastle et al. 2015). Expert study identified techniques most likely to enhance one's autonomous motivation on one hand, and controlled motivation on the other.

Discussion: Designing interventions requiring participant engagement, for example self-management after a lifestyle counseling intervention, necessitates an understanding of what participants can be instructed to do to maintain high-quality motivation on the long-term. This integrative listing can contribute to both basic and applied research as well as intervention development.

7A-052

Self-regulation in challenging scenarios: differential use of first and second-person forms of self-directed speech (self-talk).

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Self-talk (self-directed speech) is an under-researched mechanism of self-regulation. Previous work has endorsed the use of second-person phrasing as optimal when high levels of executive control or self-regulation are required, replicating externally provided commands of childhood caregivers (Zell et al., 2012). Second-person self-talk has also been argued to benefit coping and self-evaluation through distancing.

However, other work has observed reactive orientation to first-person self-talk in controlling conditions, as well as beneficial effects of this on intrinsic motivation and affect (Oliver et al., 2008). It has been suggested that people may prefer second-person self-talk when engaging in difficult situations requiring self-regulation (Zell et al., 2012), but select first-person self-talk when orienting towards their feelings (Oliver et al., 2008). It is unclear, therefore, which is optimal in situations requiring both self- and emotional-regulation.

Testing these ideas in a sporting context, we examined whether athletes would report greater use of first or second person self-talk during challenging and emotive regulatory situations (i.e., losing; an evenly-matched competition; mid-task break) versus less-challenging situations (i.e., winning; practice).

57 athletes (10 males; 47 female; Mage = 23.0 SD = 7.0) were opportunistically sampled. Participants competed at international to University level, across 11 sports. Participants responded to vignettes and thought-listed their typical self-talk in these scenarios; resulting transcripts were analysed using linguistic frequency software.

Results identified significantly more self-talk use in challenging than in non-challenging scenarios. Across contexts, first person self-talk was used the most. With respect to hypotheses testing, findings were mixed. Both first person and second person self-talk were reported significantly more in competitive as opposed to practice scenarios, for example. Further exploration of the data identified that changes in first-person self-talk were driven by significantly greater use of the plural form ('we').

Findings suggest when performance is not immediately required, first person self-talk is preferentially used, potentially to facilitate self-reflection. During task performance, athletes report adaptive shifts to first-person plural and second person speech, which is aligned with self-regulation theories and work associating first-person plural speech and enhanced team performance. Ongoing work is examining the motivational and affective outcomes of these different types of self-talk.

Oliver, E.J., Markland, D., Hardy, J., & Petherick, C.M. (2008). The Effects of Autonomy-Supportive and Controlling Environments on Self-Talk. *Motivation and Emotion*, 32(3), 200-212.

Zell, E., Warriner, A.B., & Albarracín, D. (2012). When the You I talk to is Me and needs commands. *Soc Psychol Personal Sci.*, 3(5): 549–555.

7A-053

The motivational mechanisms of self-control

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Self-control has long been touted as a critical component of successful goal pursuit – the more willpower you have, the more likely you are to lead a happy, fulfilling life. However, recent research proposes that self-control can actually be effortless (Gillebaart & De Ridder, 2015; Werner et al., 2016) and motivation may play a key role (Werner & Milyavskaya, in-press). Specifically, autonomous motivation (e.g., pursuing a goal because it is personally important or enjoyable) has been linked to greater preference for goal-congruent options (e.g., finishing an assignment, saving money) and less of a preference for more tempting options (e.g., watching TV, buying unnecessary material goods). For example, Milyavskaya and colleagues (2015) found that autonomous motivation was linked to greater automatic attraction to healthy food and less attraction to unhealthy foods among people who had a goal of eating healthy. In our first study, we sought to replicate these findings by having participants rate their motivation for the goal to eat healthy, as well as rate their preference for various healthy and unhealthy food items. Results indicate that people with more autonomous motivation for the goal to eat healthy reported greater preference for healthy food and less of a preference for unhealthy food, whereas controlled motivation was associated with greater preference for unhealthy food. Together with Milyavskaya and colleagues, these findings imply that autonomous goals may not need self-control because there is no need to regulate oneself around “temptations,” as they are inherently perceived as less desirable. To test this idea, our next series of studies used tracing methods (e.g., eye-tracking, mouse-tracking) to examine whether motivation influences how people respond to possible temptations in-the-moment using both computerized (e.g., displaying pictures of a healthy/unhealthy food and asking participants to choose which food they want to eat as we tracked their mouse trajectories) and realistic decision-making tasks (e.g., wearing eye-tracking glasses as they choose a meal for themselves from the fake food buffet). While our findings so far suggest that autonomous motivation may guide us to the right path for success, unfortunately it does not necessarily give us ironclad self-control, as motivation is postulated to wax and wane over time (Inzlicht et al., 2014). In this regard, we will present results from an experience sampling study examining how motivation shifts throughout the course of a week, as well as the extent to which motivation influences whether people experience temptation in their daily life.

7A-054

Crafting Work and Leisure: The 'why' and 'how' of crafting within and across life domains

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Within recent years, there has been heightened interest in the active role of workers in shaping activities and experiences in pursuit of optimal functioning (i.e., feeling and performing well), referred to as job-, leisure- and work-life balance crafting. Different perspectives have emphasized distinct dimensions in crafting (i.e., motives, behaviors, life domains, and outcomes) resulting in a rich but fragmented theoretical account. We propose an integrative model to account for past conceptualizations of crafting motives and crafting behaviors across different life domains through the satisfaction of psychological needs as the underlying process in predicting key outcomes. This integration additionally highlights the importance of recognizing unfulfilled needs, matching needs and crafting behaviors, as well as possibilities for spillover and compensation processes between life domains. Accordingly, the integrative *Needs Model of Crafting* explains a) why and how people craft, b) when and why crafting behaviors may (not) lead to optimal functioning, c) how crafting sequences develop dynamically over time, and d) how crafting processes unfold across work and non-work domains.

7A-055

The lifelong learner: Self-determined and self-regulated

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Lifelong learning is increasingly important in the current educational landscape due to the emerging changes in the work and society. Practitioners and teachers should understand what lifelong learning is and how to identify a lifelong learner. From an educational psychology perspective, lifelong learning refers to the motivation for learning and competence to apply successfully in learning situations. Lifelong learning is commonly understood as continued learning and learning throughout one's lifespan or life (also known as "learning for life").

To overcome the challenges in this fast-paced knowledge society, we need to prepare our students to be self-regulated and self-determined for the 21st century. Based on the self-determination theory, it is a dialectic learning process that entails the interaction of two variables, the self and the environment. Through this dialect interaction, the self is evolving with the organismic tendency to seek and cope with challenges or tasks, learning new skills and integrating experiences into self. This macro theory is aligned with the Singapore's educational framework (Ministry of Education, 2010) – the 21st-century students should possess lifelong learning goals and life-ready competencies. An education institution or a school should provide learning environments in which students can be more involved in developing their personal and cognitive attributes that are related to lifelong learning. A self-determined and self-regulated learner has the ability to make own choices and perform the task or activity for its intrinsic perceived joy. The present study aimed to uncover an in-depth and meaningful understanding of learner profiles in terms of self-determined and self-regulated behaviours. It drew on four different clusters to identify the self-regulation and self-determined behaviours of a lifelong learner. These learner profiles differed significantly in their basic psychological needs (i.e., autonomy, competence and relatedness), motivational regulations (i.e, autonomous versus controlled motivation) and goal orientations (i.e., mastery versus performance). The most adaptive profile revealed the most self-determined and self-regulated behaviours, indicating the key attributes of a lifelong learner. Limitations and implications were also discussed.

7B-056

Work motivations as antecedents and outcomes of leadership

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Introduction

In the last three decades, a substantial body of research on leadership styles has showed that transformational and, to some extent, transactional leadership styles contribute to desired work-related outcomes among subordinates, such as positive attitudes and performance, while passive leadership appears to be detrimental. In an attempt to explain these findings, leadership scholars have argued that the transformational style better achieves desired organizational outcomes because it is more effective in motivating subordinates to apply their abilities and resources to a given goal. Despite the rich literature on leadership outcomes, little is known about what drives supervisors' leadership behaviors. Drawing on the self-determination theory of motivation and the full range model of leadership, we traced motivation throughout the leadership process, starting with supervisors' work motivations as antecedents of leadership styles and proceeding to how leadership styles shape subordinates' work motivations.

Method

Participants were 61 mid-level supervisors and their 244 subordinates employed in car selling agencies in Israel. Supervisors reported on their work motivation and subordinates reported on their supervisors' leadership styles and their own work motivation. We aggregated subordinates ratings to create the supervisors' leadership styles scores. Tests of ICC and WABA supported the reliability of the aggregated scores.

Results

Results of a 2-1-1 multilevel mediational model showed that supervisors' autonomous work motivation was linked with subordinates' ratings of supervisors' transformational leadership which, in turn, was linked with subordinates' autonomous work motivation. Results also indicated that supervisors' transactional leadership style mediated the association between supervisors' controlled motivation and their subordinates' controlled motivation. Lastly, supervisors' passive-avoidant leadership mediated the link between supervisors' and subordinates' amotivation. Controlling for participants' demographic traits and job tenure did not substantially change the results.

Discussion

Our integration of the full spectrum of the self-determination theory conceptualization of motivation with the full range of the leadership model provided insights into the motivational processes that naturally direct supervisors toward transformational, transactional, and passive-avoidant leadership styles and their consequent reflection in subordinates' motivations. The findings suggest that people produce different meanings as to why they engage in their work and these meanings are reflected in the ways they lead others. The work has both theoretical and practical implications.

7B-057

Evaluation of a self-determination theory based model of lawyer eudaimonic and hedonic well-being

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Media and public opinion regularly portray Australian lawyers as a group rife with psychopathology and behavioural dysfunction. Despite the popularity of these views, research from a well-being perspective has been limited. Positive aspects of well-being and possible protective factors remain unexamined. This research explored aspects of both psychological distress and positive functioning in a diverse sample of 702 Australian lawyers. Building on the contributions of Sheldon & Krieger (2014), we used Self-Determination Theory as both a critical and practical approach to explore factors influencing lawyer well-being. Controlling for various extrinsic factors such as income and work-life balance, we found that harmonious passion for lawyering (autonomous internalization of work role) and an autonomy supportive work environment contributed substantially to eudaimonic and hedonic well-being outcomes irrespective of the theoretical model. We then used Structural Equation Modelling to evaluate several models of workplace well-being outcomes. Results contribute to the growing empirical support for the mediating role of basic psychological needs in workplace well-being. Practically, it appears harmonious passion and autonomy support are key protective factors against psychological distress at work and promote various forms of well-being in the work domain which generalize to life more broadly. These findings add important depth to previous investigations of lawyer wellbeing by demonstrating the important contribution of new individual difference and environmental factors. Whilst legal professions worldwide rally to tackle a mental health crisis, these findings suggest strategies that promote self-awareness and authenticity, as well as environments that promote autonomy are most likely to reduce psychological suffering and increase flourishing among lawyers of all types.

7B-058

Employee reward and the role of the line manager: A self-determination theory perspective.

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Reward management is a fundamental element of the employment relationship, acting as a mechanism to motivate staff to work, elicit discretionary performance and encourage employee commitment. Line managers (LMs) have a critical role to play in rewarding employees, with Armstrong et al (2010:221) claiming that “*line managers can make or break a reward initiative*”. However the fundamental importance of the line manager (LM) in rewarding employees has been neglected in the literature to date. The current research addresses the gaps in the literature by exploring the role of the LM in rewarding employees through the lens of self-determination theory (SDT). Specifically this research aimed to identify how LMs may satisfy employees’ three basic needs through the rewards utilized. A qualitative methodology was adopted, utilising in-depth, semi-structured interviews as the primary method of data collection. Thirty in-depth semi-structured interviews with LMs at varying levels of seniority in five UK public sector organisations, specifically central government departments, were conducted between June 2016 and February 2017. Interview data was analysed using interpretative phenomenological analysis to identify key themes and areas of divergence.

The findings, framed in line with the theoretical propositions of SDT, offer a novel approach to understanding how LMs seek to satisfy the basic needs of their employees through the rewards they utilize. LMs provided several examples of how the rewards they utilize may satisfy their employees’ basic needs for competence and relatedness, including feedback, development and recognition. Of the three basic needs posited by SDT however, LMs in the current research spoke less about rewards that may satisfy their employees’ need for autonomy. This is perhaps unsurprising given the lack of autonomy that LMs themselves reported. LMs also spoke about providing their employees with extrinsic rewards, arguing that it was not the financial reward itself that was valued by the employees, rather that the financial reward was symbolic of how much their work had been valued.

This is the first attempt to theoretically frame the reward mechanisms utilized by LMs, as reported by LMs themselves, in terms of basic need satisfaction and thus contributes to the call for further “*theoretical integration*” in the field of reward management (Conroy et al 2015:121). Although the wider application of these research findings requires caution, the organizations involved in this study have a number of features that suggest the experiences of managers are likely to share commonalities with LMs in other organizations.

7B-059

The role of vitality in the lived experience of sustainability managers

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"The key to it all is vitality and wellbeing isn't it. That's the engine for it." So concluded a research participant in the debrief at the end of my study. The study had investigated psychosocial factors affecting enactment of pro-environmental values in organisational contexts, focussing on the lived experience of sustainability managers in their work to influence and improve environmental practices in their organisations. Vitality emerged as a recurring theme affecting the participants' cognitive functioning and psychological wellbeing and their effectiveness in achieving desired results. In this paper I present insights from this research about the role of vitality in lived experience. Illustrated with quotes from semi-structured interviews and aided by diagrams, I highlight tensions and threats to needs satisfaction in the participants' accounts, which arise largely from incongruence between the participants' environmental values and goals and those of their organisations. I show how some coping strategies used to deal with these tensions and threats (e.g. suppression of negative emotions about ecological crisis, numbing through alcohol) were experienced as energy depleting and may cause further thwarting of needs, and how other coping strategies (e.g. physical activity, being in natural places, social support) were experienced as revitalising. The regulatory processes involved had implications for these strategies with regards to adaptive/maladaptive outcomes. Vitality also featured in the effort that was expressed by participants as they worked to influence their colleagues and their organisation. As one participant reported, *"being in the system and trying to alter it is energetically exhausting"*. The insights discussed in this paper emerge from a transdisciplinary methodology that integrates Interpretative Phenomenological Analysis with frame and metaphor analysis, and draws on concepts and theories from social and ecopsychology, cognitive and ecolinguistics, systems thinking, organisational studies and environmental philosophy. This post-positivist methodology, which is explained in this paper, proceeds from the premise that people may not be consciously aware of all the processes involved in their experience (Willig & Stainton-Rogers, 2010). The methodology also works with the assumption that metaphor use is not arbitrary and that something can be inferred about how a speaker - consciously or unconsciously - conceptualises their world by their use of particular language (Lakoff & Johnson, 1980). The findings enrich our understanding of the complex relationship between vitality and other psychosocial processes in lived, embodied and situated experience, and may be of practical use to change agents in designing interventions to improve their efficacy.

7B-060

When a myth is more than a myth. The development of a cross-cultural leadership model and the impact on ARC needs.

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Multinational organizations now span many diverse countries and cultures than ever before. Each organization typically prefers a single leadership model that is supposed to apply across the globe for all job types. However, cultural differences often play a large role in how leadership dimensions in different models are interpreted and how performance ratings are used.

In order to bridge this gap, we integrated Jungian psychology and Joseph Campbell's work on the Hero's Journey to derive leadership dimensions that will likely be more consistent across, cultures, industries, and time than the standard. In the development of the Hero's Journey, Joseph Campbell utilized Carl Jung's theories of psychology to interpret myths and created a common cross-cultural template for how a hero is formed. Through experiencing the journey, Heroes evolve into a more integrated human. When translated into qualities of the leader we theorize that the following five dimensions will emerge through Confirmatory Factor Analysis: 1) Time Mastery, 2) Task/Relational Balance, 3) Deeper Relationship with Truth, 4) Capacity for Care, and 5) Growth Mindset. Campbell's hero's journey model describes a template for growth that aligns with how people satisfy their ARC needs and become comfortable in their own skin.

To test our hypotheses, we will use regression modelling with ARC needs as an outcome to compare the incremental validity of the proposed model (the Integrative Model of leadership) to a leadership model currently in use at a multinational, Fortune 100 company. Additionally, we will test the hypothesis that, compared to the Integrative Model of leadership, the typical leadership model tends to: 1) Overly focus on task building rather than the relationship building side of leadership and 2) Lead to employees following their leader's vision out of obligation rather than following the direction of their leader because it is what they feel is right.

The results of this study will have several practical and theoretical implications. It will lead to the creation and validation of a leadership model derived from a foundation that is global rather than specific to a culture and time. Also, this study will demonstrate the validity and reliability of the Integrative Model of leadership beyond leadership models currently used in practice.

7C-061

Autonomy in relatedness: How the fulfillment of needs interacts in close relationships

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Theory and research on close relationships has begun to uncover the motivational underpinnings of relationship maintenance processes. A driving force of relationship maintenance is the fulfillment of basic psychological needs, in particular the need for relatedness and the need for autonomy. The satisfaction of these needs is essential for psychological growth and well-being and motivates our relationship behavior (Deci & Ryan, 2000; Knee et al., 2013). Until now, research has considered the fulfillment of relatedness and autonomy needs as independent determinants of relationship functioning or as one merged construct called need fulfillment. Based on theoretical insights from Self-determination theory and Family systems theory, we test the general hypothesis that autonomy and relatedness need fulfillment interacts to affect relationship maintenance behaviors. That is, we predict that the combination of strong relatedness and high autonomy results in more accommodation, defined as the partners' ability to react constructively rather than destructively to a partner's potentially destructive behavior. We argue that partners who are not only well connected but also high in autonomy are able to support their partner's interests without feeling a loss of self-direction in the process. Because they maintain their sense of self-direction, they can respond more constructively when their partner behaves in less constructive ways.

In three studies (N = 388, N = 241, and N = 220), we tested the hypothesis that relatedness was positively related with accommodation, but especially (or only) when participants reported high, rather than low, autonomy in their relationship. In Studies 1 and 2, we used a cross-sectional survey design among two large samples of men and women involved in a relationship and Study 3 aimed to experimentally manipulate the level of autonomy. The results were consistent across studies: relatedness need fulfillment was positively related with the ability to react constructively to a partner's negative behavior, but especially (or only) when participants reported high, rather than low, autonomy. Our results provide evidence for an interactive model of how autonomy and relatedness need fulfillment affect relationship outcomes and emphasizes the importance of maintaining a sense of self while being closely connected to the partner.

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7C-062

Why Relatedness May be Key to Solidifying Undergraduates' Professional Identity

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Adolescence is a time characterized by angst, exploration, and frequent shifts of one's identity (Erikson, 1982; Marcia, 2014). For college students, it may be safe to presume that much of their identity revolves around their declared major and ultimate career choice. However, in one study, 30% of engineering students reported that, at the end of four years, they continued to be unsure about what it meant to be an engineer (Matusovich, Streveler, Miller, & Olds, 2009).

One way to maybe fortify graduating seniors' professional identities is by educating instructors on how to foster strong rapport with students. Professor-student rapport, within the social context of the college classroom, may best serve the basic psychological need of relatedness for students' well-being and success according to self-determination theory (SDT). Professor-student rapport, which, when present, also shows higher levels of student intrinsic motivation for learning (Author's Last Name, 2018). These two factors (i.e., professor-student rapport and intrinsic motivation) are therefore suggested to boost student self-esteem because of a) the social connection one feels to another when experiencing rapport and b) the positive feelings one experiences when pursuing a task for the mere sake of pure enjoyment (i.e., intrinsic motivation). In sum, the current research suggests that a graduating senior's professional identity will be strengthened when there is positive professor-student rapport, high student intrinsic motivation, and high student self-esteem. Furthermore, findings from previous research showing a strong, positive significant correlation between professor-student rapport and intrinsic-motivation ($r = .714, p < .001$) are predicted to be replicated.

To test the primary hypothesis, over 100 senior engineering students completing their capstone course will serve as participants in the study. Students were asked to complete an online survey using Survey Monkey during the last week of the semester. A battery of instruments as part of a larger study were presented to them for completion, but for the purposes of this research, the Intrinsic Motivation Inventory, Interest/Enjoyment Subscale (retrieved from <http://selfdeterminationtheory.org/intrinsic-motivation-inventory/>), Professor-Student Rapport Six-Item Scale (Wilson & Ryan, 2013), Rosenberg Self-Esteem Scale (Rosenberg, 1965), a measure of engineers' identity (Goodwin, 2015) in addition to demographic items were of most interest. Data are currently being collected and will be analyzed using correlational and descriptive statistics at the end of December 2018.

The importance of relatedness, intrinsic motivation, and self-esteem on undergraduates' professional identity development will be discussed as well as directions for future studies.

7C-063

Teacher-student relationships that promote the development of intrinsic motivation, behavioral engagement, and life satisfaction

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Introduction: Positive teacher-student relationships promote autonomous motivation, psychological need satisfaction, and happiness for diverse students of various ages (Froiland, Worrell, & Oh, in press). The kindergarten year is often considered a critical year for children, with kindergarten outcomes predicting student motivational and achievement outcomes years later. The current study examines the extent to which the teacher-student relationship in kindergarten predicts behavioral academic engagement in 4th grade via autonomous motivation and life satisfaction in 3rd grade. **Methods:** Using a sample that is nationally representative of kindergarten students across the US, this study applied Structural Equation Modeling to examine the extent to which the teacher-student relationship in kindergarten predicts behavioral engagement via autonomous motivation and life satisfaction. Rigorous statistical controls included the following covariates at kindergarten: SES, gender, and independently assessed vocabulary. **Results:** As predicted, the teacher-student relationship in kindergarten predicted behavioral engagement in 4th grade via autonomous motivation in 3rd grade. Autonomous motivation was also related to life satisfaction in third grade. However, life satisfaction in 3rd grade was not directly related to subsequent behavioral engagement. **Discussion and Conclusion:** These findings indicate that the kindergarten teacher-student relationship may be an important intervention or wellness enhancement target, because it holds the potential to affect student autonomous motivation years later. Via autonomous motivation, teacher student-relationships in kindergarten also have an indirect effect on life satisfaction and behavioral engagement. Namely, a positive teacher-student relationship in kindergarten can have cascading positive effects years later. This presentation will conclude with recommendations for promoting positive teacher-student relationships via autonomy supportive teaching (Su & Reeve, 2011). The author will share a video that he produced for pre-service teachers, which demonstrates what controlling teaching looks like vs. autonomy and relatedness supportive teaching. Furthermore, components of the autonomy and relatedness supportive style will be highlighted and discussed as relationship nutrients.

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7C-064

Relatedness and dehumanisation when ostracising others: how coaches cope with team selection decisions.

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Introduction

Dehumanisation concerns seeing individuals as lacking or with reduced human attributes. While most research has explored other-dehumanisation, there is a growing body of work examining self-dehumanisation as an adaptive response to one's own transgressions or negative treatment of others.

The present study proposes and explores a theoretical link between self and other dehumanisation and basic need satisfaction as discussed in self-determination theory. Specifically, we argue that greater relatedness satisfaction will increase the use of self-dehumanisation following negative actions, as it implies meaningful relationships within the context of interest and thus more self-protection will be needed (Bastian and Haslam, 2010). Conversely, relatedness satisfaction is hypothesised to negatively predict other dehumanisation.

These ideas are tested in relationships between coaches and athletes in sport settings. We propose that in sport, team selection decisions are a form of ostracism, with de-selection involving the exclusion of individuals from a group. Ostracising others has comparable affective costs to experiencing ostracism (Legate *et al.*, 2013) and therefore team selection was chosen as the context in which we examined coaches' levels of dehumanisation. We also argue that specific factors will mediate the coaches' tendency to dehumanise, including; their personal sense of power, emotional intelligence and resilience.

Methods and Results

Data is currently being collected from 130 coaches ranging from amateur to professional coaching levels. Participants complete measures of relatedness, self and other dehumanisation, personal sense of power, emotional intelligence, resilience and mental well-being. Results will use regression-based modelling to test direct and indirect relationships between coaches' tendency to engage in self and other dehumanisation when making a team selection decision, and relatedness satisfaction.

Discussion and Conclusion

The findings will underpin recommendations for coach education and have implications for understanding and supporting coaches' well-being. Theoretical implications include understanding how need satisfaction may impact on cognitive mechanisms of coping, as well as expanding the antecedents of self and other dehumanisation.

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7C-065

Self-Governed Autonomy, Reactivity, and Individual and Relational Outcomes

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In 2002, Hmel and Pincus analyzed 15 self-report autonomy scales (including SDT's General Causality Orientation Scale) and concluded that two distinct conceptualizations of autonomy were present in the literature: 1) autonomy as self-governance, and 2) autonomy as agentic separation. Each *type* of autonomy included an agentic core but could be distinguished, in part, by "their interpersonal content" as measured by differences in the NEO Personality Inventory—Revised. Not included in this analysis was Murray Bowen's concept of differentiation (Bowen, 1978; Kerr & Bowen, 1988). Differentiation, according to Bowen was the ability to balance two life forces—individuality (i.e., autonomy) and togetherness and doing this well was related to healthy individual and relational functioning. On the other hand, lower levels of differentiation (i.e., self-governance) are associated with reactivity, either in the form of distancing or separating oneself emotionally and physically from important others *or* through attempts to anxiously connect or merge (e.g., fusion, enmeshment) with important others. Though the manifestation of these two forms of reactivity are different (i.e., separation vs. fusion) they both represent responses to greater levels of external control (less self-governance). The current study has several foci. First, despite there being over 400 studies that use the concept of differentiation to understand individual and relational functioning, differentiation scales continue to be criticized for their imprecision. We believe the concept of autonomy as defined and measured in Self-Determination Theory can help clarify *what* is being measured by current differentiation scales, thus improving scale precision in this area as well as improving interpretation of this body of research. Second, we want to determine the associations between similar measures of separation/distancing reactivity (e.g., separation/engulfment anxiety/avoidant attachment) and anxious connecting or merging reactivity (e.g., enmeshment, fusion, anxious attachment) as well as the associations between these two types of reactivity. Third, we test the relationship between autonomy/self-determination from a SDT perspective and individual (e.g., psychological distress, life satisfaction) and relational (e.g., relationship satisfaction, relationship stability, sexual desire) well-being and whether these associations are mediated by reactivity (i.e., separation/distancing and anxiously connecting/merging). Data were collected from 500 individuals in emotionally committed relationships using Amazon's Mechanical Turk platform. Results will clarify our understanding of constructs related to self-governing autonomy and potential mechanisms or pathways (i.e., reactivity) through which self-governing autonomy is related to individual and relational outcomes. These results can also help to elucidate potential targets of intervention for clinicians.

7D-066

Have, be or be able to? The model of entering adulthood in the context of basic psychological needs

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Introduction:

Nowadays, young people reach adulthood in older age, if take into account the so-called traditional indicators. It is about moving out of the family home, getting married, giving birth to a child, completing education and taking the first job (so called "Big Five"). Once, these social indicators, adopted as a demarcation line between childhood and adulthood, now are subjects to individual reflection. The question that arises is whether young people are entering adulthood later or redefine traditional social markers of adulthood, changing them towards better tailored to individual conditions intrapsychic indicators understood in terms of basic psychological needs (Ryan, Deci 2000)?

Method:

The study was conducted using an on-line survey (CAWI) among 3264 young people aged 18-29. Due to the observed distortions (non-probability sampling), the procedure of weighing the data set was applied in order to reduce its deviation from the demographic structure of the surveyed population.

Results: According to the results young people are now departing from defining adulthood in terms of traditional social ("Big Five") markers for intra-psychic properties and competences.

Discussion:

The most important aspirations of respondents and intrapsychic markers they expressed during the research correspond with basic psychological needs: competencies, relationships, autonomy (SDT, Ryan, Deci 2000). At the macro level and in relation to traditional social markers of adulthood, the markers of competence (completing education and getting a job), relations (getting marriage and having family) and autonomy (moving out of the family home and having own household) are in line with the characteristics of four European models of adulthood, created by Cécile van de Velde (2008). In comparison with them, the Polish model seems to be hybrid in character, combining the large role of professional competence and autonomy with an emphasis on the self-development of an individual. This may indicate an increasingly individualized approach to meeting the most important psychological needs, as well as a departure from the traditional, socially determined pattern of entering adulthood.

Ryan, Richard M. & Edward L. Deci. 2000. *Self-Determination Theory and the Facilitation of Intrinsic Motivation, Social Development, and Well-Being*. "American Psychologist" 55(1): 68-78.

Van de Velde, Cécile. 2008. *Devenir adulte Sociologie comparée de la jeunesse en Europe*. Paris: Universitaires de France.

7D-067

The association between students' need satisfaction and motivation: the longitudinal change and stability of motivational profiles during a transition

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The transition from secondary education to higher education can be a risk for motivation, especially when the new educational environment is not aligned with students' basic psychological needs. The Stage-environment fit theory which builds on ideas related to Self-determination theory (SDT; Ryan & Deci, 2000) studies this alignment and posits that students' motivation is largely determined by the extent to which schools provide educational and social environments that meet adolescents' needs for competence, relatedness, and autonomy. SDT suggests that satisfying these three basic psychological needs are essential for autonomous motivation and well-being.

This study aimed at examining to what extent students' motivation changes after the transition to higher education and how students' need satisfaction is associated with this motivation. Students' need satisfaction was operationalized by four proxy indicators: satisfaction with major choice, social adjustment, academic adjustment, and self-efficacy. Our research questions were:

RQ1. What kind of motivational profiles can be identified before and after the transition?

RQ2. How do students change regarding these motivational profiles after the transition?

RQ3. How is students' need satisfaction associated with these motivational profiles after the transition?

The initial sample consisted of 7,785 applicants for fulltime bachelor's programs at a Dutch university. They filled out an online questionnaire as part of an intake procedure. Of these students, 1,311 (16.8%) agreed to participate again (62.5% female, $M_{age} = 19.18$, $SD = 2.04$). An attrition analysis justified that this research sample did not represent a biased sample. For our analyses we conducted Latent Profiles Analyses and multinomial logistic regression.

We identified three motivational profiles before and after the transition: a high quality profile, a high quantity profile, and a low quality profile (RQ1). Furthermore, we found that about 45% significantly displayed a stable motivational profile over time (RQ2). Finally, we found that the four proxy indicators of students' need satisfaction were positively associated with autonomous motivation (i.e., the high quality profile) (RQ3). These findings suggest that to enhance students' autonomous motivation after a transition, educational institutions should invest in interventions that make sure that students are satisfied with their chosen major (need for autonomy), that make students feel at home (need for relatedness), and that increase their self-efficacy and academic adjustment (need for competence).

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68-78.

7D-068

The Impact of Parent-Emerging Adult Interactions on Psychological Needs and Well-Being: Findings from a Daily Diary Study

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The proportion of North Americans who continue to live with their parents into emerging adulthood (ages 18-29) is increasing and relationships with parents remain important for healthy development in emerging adulthood. While previous studies have used self-determination theory (SDT; Deci & Ryan, 2008) as a framework for understanding parenting influences on emerging adult behaviour and well-being (e.g., Cui, Allen, Fincham, May, & Love, 2018), the research to date relies on cross-sectional and retrospective studies of psychological needs and parenting. To better understand how day-to-day interactions between parents and their emerging adult children facilitate (or hinder) well-being, more intensive assessments are required.

The current study uses daily diary methodology to examine 1) the daily impact of parents on emerging adults' basic psychological needs; and 2) the relationship between core SDT constructs and well-being in the daily lives of emerging adults. Participants reported on their interactions with parents for 30 days, along with daily relatedness fulfilled by parents and ratings of competence and autonomy. Analyses are from 142 emerging adults (77.6% women; 18-22 years old, $M_{age} = 19.89$, $SD = 1.39$) who interacted with parents on 68.3% of reporting days, primarily in person (45.4%), by phone (19.1%) or text (20.8%). Using Hierarchical Linear Modelling (HLM), the first set of analyses examined within-person associations between daily interactions with parents and psychological needs. Participants felt more connected to parents on days when parents listened to them, allowed them to assert their needs, provided them with guidance and solutions, and encouraged them to take action; they felt less connected on days when they felt criticized by parents. In addition, they felt more competent and autonomous in their daily activities when parents allowed them to assert their own opinions, less competent when parents criticized them, and less autonomous when parents insisted they take action on something. Greater fulfillment of psychological needs for relatedness, autonomy and competence was associated with greater daily well-being ($p < .001$), although parenting styles (helicopter parenting and autonomy-supportive parenting) did not moderate these relationships. Thus, while general styles of parenting may not impact daily connections between psychological needs and well-being, specific parenting behaviours enacted in daily interactions are highly influential. Using an SDT framework, these findings are the first to provide real-time evidence that parents can support well-being in their emerging adult children when they encourage competence and relatedness through autonomy-supportive and accepting interactions.

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7D-069

Emerging autodetermination: developmental trajectories and alternatives

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The approach we are presenting has grown from a cross-fertilization of SDT, Lev Vygotsky's cultural-historical psychology, Jane Loevinger's developmental theory, and Victor Frankl's theory of complementarity of freedom and responsibility as a human "existential". Autodetermination theory (ADT, Leontiev & Kaliteevskaya) suggests that agency develops from two roots: freedom (activity) and responsibility (autoregulation). Both develop in childhood independently from each other; adolescence is the critical period of their integration, resulting in an emerging capacity of personal autonomy. However, this is not always the case; if one or both of these developmental premises has not developed sufficiently, their integration may not happen, resulting in a lack of autodetermination. In a number of studies launched in early 1990s we made several attempts to trace the individual differences in emerging autodetermination or alternative developmental trajectories, basing on David Magnusson's approach to singling out holistic developmental patterns through adolescence using varied measures of key variables, varied methods of data processing, varied samples, including a sample of orphans. In a setting of intensive social change, the time of the investigation also turned out to be an important variable.

The summary of the findings:

Typically four (sometimes three) patterns of personality development were singled out by means of cluster analysis, based on different constellations of measures of freedom (self-support, autonomous causality orientation) and responsibility (internal locus of control). The autonomous pattern (integrated freedom and responsibility) turned out to be the most stable across studies, the other patterns did vary to some extent. The other typical patterns were impulsive (quasifreedom), symbiotic (quasiresponsibility), and conformist (lacking both freedom and responsibility). The adjustment and well-being outcomes seemed to depend on an interaction of personality patterns with social situation. Autonomous pattern predicted sustainable well-being at all times; impulsive pattern was associated with a similarly high level of well-being during stable times and diverged into patterns of successful and unsuccessful adaptation during more challenging times; the other patterns suffered still more from unfavorable social climate. Orphaned adolescents showed a similar spectrum of patterns, although with some quantitative differences, compared to those living in families. The predictive power of personality variables as compared to social environment was also stronger in orphans. In general, personality variables (somewhat mediated by gender and age) are more important than family conditions.

These findings seem to contribute to the concept of autonomy in SDT by suggesting new explanations and developing the research agenda.

Well-being, stress and quality of relationships in primiparous parents: Unique realities of the transition to parenthood.

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Introduction. The birth of a first child is a period full of wonder and excitement, as well as fatigue and stress. Research suggests that compared to nonparents, parents express less well-being and more couple hardship, and that this relationship is stronger for younger families (Nelson, Kushlev, & Lyubomirsky, 2014). Another novel reality of primiparous parents is the emergence of the coparenting relationship. Coparenting is a distinct construct from the couple relationship and it is defined as the degree of support, coordination or sabotage in the raising of children. It is uniquely related to child and parent welfare (Teubert & Pinquart, 2010). The satisfaction of the need for autonomy within relationships is associated with personal well-being, higher relational quality, effective conflict management in the relationship, and perceiving one's relationship as being of better quality, but has yet to be examined among new parents. The present study investigates how perceived autonomy support from spouses predicts primiparous parents' well-being, stress, and coparenting quality. We predict that, over and above previously established risk (young babies' age, difficult temperament) and protective (longer relationship length, relationship quality, parent's education) factors, perceiving more autonomy support from one's spouse will predict more parent well-being and a better coparent relationship quality.

Method. Primiparous parents (95% mothers; *N* preliminary sample = 80) of 6-month-old children (T1) were invited to complete online questionnaires, namely the *Interpersonal Behaviors Questionnaire*, *Coparenting Relationship Scale*, *Revised Dyadic Adjustment Scale*, *Perceived Stress Scale*, *Positive and Negative Affective States*, *Satisfaction with Life*, *Infant Behavior Questionnaire-Revised*.

Results. The baby's age and negative affectivity temperament, parent's education, couple relationship length and adjustment were included as covariates in our multiple regression model. Above and beyond these covariates, perceived autonomy support from one's partner was significantly related to the parent's positive affect ($\beta = .30$, $R^2 = .25$) and life satisfaction ($\beta = .24$, $R^2 = .46$), while perceived autonomy frustration from one's partner was significantly linked to the parent's negative affect ($\beta = .29$, $R^2 = .30$) and stress ($\beta = .26$, $R^2 = .34$). Similarly, both autonomy support and frustration were associated with coparenting quality (respectively, $\beta = .17$ and $\beta = -.21$, $R^2 = .54$).

Conclusion. This study suggests that perceived autonomy support from one's spouse promotes primiparous parent's well-being and coparenting quality, while the reverse is true for perceived spousal autonomy frustration. These results indicate that, above and beyond known covariates, satisfying the autonomy of one's spouse could improve the welfare of both parents and children within young families.

7E-071

Morality, autonomy and psychological realism

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For many scholars in Philosophy, Education and Psychology moral maturity is intimately tied to achieving autonomy. In these theories, autonomy has been mostly defined in cognitive terms as the ability to critically evaluate existing societal norms and reject those norms that do not adhere to fundamental moral principles. Yet, from the perspective of Self-Determination Theory (SDT) autonomy is different. It is achieved when individuals fully endorse the values that guide their moral actions (Assor, 2012; Arvanitis, 2017). While this notion of autonomous moral motivation is particularly attractive for contemporary virtue theorists (Curren, 2015), it has never been studied how realistic it actually is. This is puzzling as psychological realism has become an important guideline of philosophical theorizing (Besser-Jones, 2014).

In this presentation, we investigate moral autonomy from various angles. Findings are based on an interview study that assessed individuals' moral identity motivation in a sample of 14 to 65 years old Canadian respondents from a broad range of social backgrounds ($N = 256$, for details Krettenauer, Murua, & Jia, 2016; Krettenauer & Victor, 2017). First, we look into people's personal definition of the moral domain. It is well documented that morality includes a wide range of different value domains that are not equally endorsed by all individuals. We find that specific value domains (benevolence) support autonomous moral motivation more than others (tradition). Second, we investigate context differences. We find that autonomous moral motivation is far less common in the context of work and school as compared to family and community. Third, we investigate age-related differences and find that autonomous moral motivation significantly increases from middle adolescence to young adulthood (14 to 25 years) but does not increase much thereafter (25-65 years). Even in adult age groups autonomous motives make up only about roughly 30% of individuals' responses. Individuals who *consistently* endorse autonomous moral motivations across various social contexts do not exceed 15% of the adult sample. Overall, findings challenge psychological realism as they suggest that moral autonomy might not be as prevalent as commonly assumed. On the other hand, a mix of motives that combines external and internal motivations may be most functional in reliably producing moral action outcomes.

Key references: Krettenauer, T., & Victor, R. (2017). Why Be Moral? Moral Identity Motivation and Age. *Developmental Psychology*, 53(8), 1589–1596. Krettenauer, T., Murua, L. A., & Jia, F. (2016). Age-related differences in moral identity across adulthood. *Developmental Psychology*, 52(6), 972–984.

7E-072

Morality as a Basic Psychological Need

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Might there be a basic, and uniquely human, psychological need to feel moral? Could such a need explain between-person differences and momentary enactments of moral character? Here, three series of studies present empirical support for a moral need and examine its explanatory power via the exploration of specific moral motivational underpinnings. First, a series of studies reveal the important role of moral need satisfaction in the remembering of peak life events and for well-being, indicating that the moral need can at least pass a first test for basic need candidacy (cf. Sheldon et al. 2001). Second, an experience-sampling study of extreme groups of moral character (99 participants, 3,276 observations) revealed that momentary moral need satisfaction was tightly linked to moral behavior and psychological thriving momentarily, and that the low moral character group benefited most from enacting moral behavior. Third, a cross-sectional study (N = 142) examined reasons for people's recent moral behavioral peaks and the moral standards that contributed to moral need satisfaction in those episodes. Results indicated that relatively internalized reasons were more important than guilt avoidance for explaining moral behavior, and that the moral need was satisfied by striving for standards for compassion, fairness, and honesty, but not for authority, loyalty, or purity. In sum, satisfying the moral need appears to be integral to flourishing, and the moral need specifies moral content according to specific and largely autonomy-supportive moral standards.

7E-073

Why do we do the good thing? : Motivational profiles of personality strengths in two cultures

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Positive psychology assumes that exercising personality strengths and virtues results in well-being. But is the motivation behind strength use always intrinsic and, if not, does it influence the well-being outcomes? To address these questions, we conducted an empirical study based on Peterson and Seligman's (2004) Values in Action model of personality strengths and SDT's model of Relative Autonomy Continuum. Students in the USA (N = 327) and in Russia (N = 272) were asked to evaluate their perceived locus of causality for each of the 24 character strengths, as well as their level of strengths and strength use. Respondents also completed measures of subjective well-being and basic psychological need satisfaction. Principal component analysis of Relative Autonomy Indices calculated for each strength revealed a bidimensional structure in both countries with dimensions corresponding to more autonomously motivated strengths (e.g., curiosity, appreciation of beauty, hope, love, wisdom) and less autonomously motivated ones (e.g., self-regulation, prudence, teamwork, modesty, industriousness). When the cultures were compared, in Russia some strengths, mainly interpersonal ones (e.g., honesty, forgiveness, appreciation of beauty, love), emerged as more autonomous, compared to the USA. In the USA, mainly agentive and social strengths (e.g., modesty, persistence, self-regulation, leadership) were rated as more autonomous. Using multigroup path analysis and multilevel models, we investigated the differences in the effects of strength motivation and strength use across the strengths and cultures. The findings indicated that the association of strength motivation with strength use varied across strengths, but its associations with the outcome variables were uniformly positive. We also found cross-level interactions indicating that strengths that are generally more autonomous and more likely to be used in a society tend to have stronger effects on well-being and basic psychological need satisfaction. The data analysis is currently underway, but preliminary findings shed light on the way cultures may facilitate the internalization of socially desirable behaviours. The possible role of social values in this process and future research directions will be discussed.

Peterson, C., & Seligman, M. E. P. (2004). *Character strengths and virtues*. Washington, DC: APA.

7E-074

An SDT perspective on the formation of the moral self

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Although SDT is a theory of motivation that has long addressed the uptake of goals, values, and aspirations, its relevance to moral development or the formation of virtuous states of character has remained undeveloped and underappreciated. Recent work by Tobias Krettenauer, Alexis Arvanitis, Netta Weinstein, Avi Assor, and others has begun to change this, but the sphere of moral development is one in which cross-disciplinary synthesis drawing on both psychology and philosophy would be helpful. With this in mind, the goal of this paper presentation will be to delineate an SDT-based model of agentive moral self-integration, leading from the origins of the moral self in toddlers' intrinsically motivated intentional acts of positive relatedness, through aspirations and integrative processes to states of cognitive, motivational, and emotional integration that correspond to a virtuous state of character.

The paper will present a three-factor model of the nature of good character and a philosophical account of its motivational core – an autonomous responsiveness to the value of persons and the world. It will then show how SDT can explain key aspects of the nature and origins of such motivation. Another strand of the model accounts for the progress from a toddler's spontaneous but intentional altruistic acts, to ethically appropriate acts that involve volition, to the responsibility for self that is characteristic of moral selves and exhibited in agentic cognitive, motivational, and emotional self-integration. A final strand will be the role of social contexts in nurturing or hindering progress toward a well-integrated state of good character. In sum, SDT offers theoretical resources for a psychological model of virtuous motivation and responsibility for self, as well as fundamental insights into the role of needs-supportive social contexts in nurturing them.

7E-075

Workplace incivility and bystanders' motivation to intervene and helping behavior.

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Introduction: Workplace incivility has consistently been shown to have strong associations with perceived lower job satisfaction, higher turnover intentions, and lower levels of well-being. Witnessing incivility has been related to negative emotions and decreased performance. Despite these findings, only a few studies have focused on interventions aimed at increasing prosocial behavior to reduce workplace incivility. This makes it important to focus on witnesses' motivation and willingness to intervene in workplace incivility situations. Thus, the purpose of this study was to examine the impact of situational factors on a bystander's helping intentions. We draw on research on workplace incivility, self-determination theory, and job embeddedness and focus on helping intentions in the form of the bystander's different types of motivation to intervene and what roles bystanders take when witnessing incivility in the workplace.

Methods: 342 workers (65 % females) participated in two experiments. Participants were randomized to one of two conditions (manager behaving uncivilly toward subordinate and subordinate behaving uncivilly toward manager). Self-report measures of motivation to defend, participant roles, and embeddedness in the organization were used.

Results: Workplace incivility from a supervisor was rated as more severe than coworker incivility in both experiments. In the first experiment, supervisor incivility was related to higher introjected and identified motivation to intervene via mediation of perceived severity. In the second experiment, supervisor incivility was both directly and indirectly related to higher levels of social support, and indirectly related to lower levels of avoidance, and pro-uncivil behavior via mediation of perceived severity. Job embeddedness also predicted higher levels of confrontation and social support. Additionally, job embeddedness moderated the relationship between perpetrator power and social support.

Discussion & Conclusion: Taken together, these results suggest that workers show increased introjected and identified motivation to intervene, both when the incivility behavior comes from a manager and is directed at a subordinate and when the incivility is perceived as a severe moral transgression. These findings suggest that incivility researchers should pilot interventions that help bystanders to understand how their motivation is influenced by whether the incivility is severe or not.

Originality/Value: This study makes an important contribution by the focus on witnesses' different types of helping intentions, in the form of their motivation to intervene and roles, in uncivil workplace situations.

7F-076

Parenting youth with autism spectrum disorder: Relationships with child (mal)adjustment and parents' psychological needs.

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Objectives Ample research has shown that parenting a child with an Autism Spectrum Disorder (ASD) is a unique and challenging experience. Although it is often suggested that parents' decreased levels of well-being and the co-occurring behavioral problems of children with ASD increase the risk for dysfunctional parenting behavior, the interplay between parents' psychological functioning, child (mal)adjustment, and parenting behavior remains largely unexamined in this population. Through a combination of qualitative and quantitative studies we aim to gain insight into the role of parents' psychological needs and child (mal)adjustment as sources of parenting behavior among parents of children with ASD.

Methods Data will be presented from (1) a nine-year longitudinal study examining the interplay between child behavior and parenting behavior across three waves ($n = 139$, M_{age} children at T1 = 10.2), (2) a qualitative study in which interviews with parents of children with ASD were conducted ($n = 15$, M_{age} children = 10.6), and (3) a diary study examining the daily associations between parenting, parents' psychological needs and child maladjustment ($n = 41$, M_{age} children = 10.9).

Results The results from the longitudinal study confirm the important impact of child maladjustment on parenting behavior. Externalizing problems in particular were found to predict increased parental use of controlling parental behaviors which, in turn, increased the risk for further externalizing problems. Possibly because they are less directly visible or worrisome, internalizing problems were largely unrelated to parental behavior.

The qualitative study identified four themes of parenting behavior and five themes of experiences as essential for understanding parents' behaviors and need-based experiences when raising a child with ASD. This study also yielded new insights in how parents of children with ASD adjust to the child's (autism-specific) characteristics while simultaneously trying to care for their own psychological needs.

The diary study revealed that both daily child behavior and mothers' psychological needs relate to day-to-day variation in parenting. Moreover, the results revealed a maladaptive and an adaptive underlying pathway: stress accounted for the associations of externalizing child problems and maternal need frustration with controlling parenting, whereas vitality accounted for the association between need satisfaction and autonomy support.

Discussion & Conclusion The results of these three studies clearly indicate that parents' own need-related experiences and the child's (mal)adjustment are dynamically intertwined with the (daily) parenting behavior among parents of youth with ASD.

7F-077

The mediation role of personal and sibling need satisfaction and frustration between perception of sibling relations and interpersonal competence and social anxiety: an actor-partner model.

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Introduction: Although SDT has studied the family context considerably, most of the studies have focused on parents, while studies on siblings are still limited. Numerous studies have shown that the siblings relationship is an important factor for psychosocial adjustment, but studies based on the SDT are still limited. For this reason the aim of this study is to investigate the mediation role of need satisfaction and frustration in the relationship between the sibling relationship and anxiety and interpersonal competence in pairs of siblings. In fact to better understand the sibling dynamics, this study use an Actor-Partner Interdependence Model (APIM), that simultaneously test the predictive role of the self-perceptions of both siblings in the prediction of their own variables, and in the prediction of the variables of the other brother.

Method: A total number of 1711 pairs of biological siblings (3422 participants) took part to the research and both completed measures about their sibling relations, need satisfaction and need frustration, interpersonal competence and social anxiety.

Results: The Actor-Partner Interdependence Model tested showed good fit, $\chi^2(26)=296.40$, CFI = .95, RMSEA(90 %CI) = .08 (.07;.09), SRMR = .07, showing that the own perception of sibling relation positively predict the own level of need satisfaction, and negatively predict the own level of need frustration. Furthermore, own level of social anxiety was positively predict by the own level of need frustration, and was negatively predict by the own level of need satisfaction. In addition, own level of interpersonal competence was positively predicted by the own level of need satisfaction, the sibling level of need satisfaction, and the own perception of sibling relation, while it was negatively predicted by own level of need frustration. Finally, own level of need satisfaction positively mediate the relation between sibling relationship and interpersonal competence, while need frustration negatively mediate the relation between sibling relationship and social anxiety.

Discussion: Results clearly showed that sibling who experienced high level of positive sibling relations are more likely expire need satisfaction and less need frustration, and in turn this promote interpersonal competence and reduce social anxiety. From a dyadic point of view the results also showed that the own perception of sibling relation and need satisfaction and frustration have a strong role for own level of interpersonal competence and social anxiety, but also that other sibling variables could have also a relevant role.

7F-078

Children with special needs have basic needs too: Exploring the impact of need-supportive versus need-thwarting parenting on behavioral outcomes in youth with Autism, Cerebral Palsy, and Down Syndrome

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Introduction: SDT has greatly advanced our understanding of the impact of parenting socialization on child development. However, very few studies have inquired these relations in special needs populations. This study departs from SDT's universality claim that "all" children need to feel autonomous, competent and loved (Deci & Chandler, 1986) and tests to what extent need-supportive and need-thwarting parenting are differentially implicated in behavioral outcomes in children with Autism Spectrum Disorder (ASD), Cerebral Palsy (CP), and Down Syndrome (DS), and controls. As a first objective, we test the transdiagnostic (a)similarity of these parenting-adjustment relations across the four diagnostic groups. As a second objective, we explore the longitudinal impact of need-supportive versus need-thwarting parenting on psychosocial problems and strengths in the three disability groups.

Method: Data will be presented from our ongoing, longitudinal project inquiring child and family resources underlying well-/ill-being in Flemish children with ASD (n=139), CP (n=134), and DS (n=95) and their families, relative to controls (n=230). In each group, parents rated at multiple occasions, their use of need-supportive (autonomy support, responsiveness) and need-thwarting (psychological, overreactive control) parenting behaviors, as well as their child's internalizing and externalizing problems and psychosocial strengths. For the first objective, we cross-sectionally compare ratings of children aged 7-15 years across the four diagnostic groups. For the second objective, we longitudinally explore the parenting-adjustment interplay across three 3-wave studies (mean child age at T1 = 10), spanning a 9-year (ASD), 6-year (DS), and 3-year interval (CP), respectively.

Results: Based upon correlational and multigroup SEM-analyses, results for the first aim provide cross-disability support for the SDT-based premises. A 'bright' pathway was uncovered in all four groups, showing that autonomy-supportive and responsive parenting associates with more psychosocial strengths in the child. Also, a 'dark' pathway was found in all groups, showing that psychological and overreactive controlling parenting related to more externalizing, but not internalizing, problems. Results for the second aim provide longitudinal evidence for the 'dark pathway': in all groups, both psychological and overreactive controlling parenting predicted more externalizing, and to a lesser extent, internalizing problems. In the CP and DS group, longitudinal evidence was found for the 'bright pathway,' as need-supportive parenting predicted more psychosocial strengths over time.

Discussion and conclusions: This study contributes to SDT's universality claim, showing that beneficial effects of need-supportive, and the detrimental impact of need-thwarting parenting apply to *all* children, including those experiencing difficulties in psychosocial, physical, and/or cognitive domains of functioning.

7F-079

Why did you become a father and why do you engage in childcare? Questions we should be asking fathers to understand their involvement in childcare and parental experience

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Becoming a parent is an important and often challenging life transition for both mothers and fathers. The care mothers and fathers provide to their children is a central determinant of their development and well-being. A growing body of research on father involvement highlights its benefits for children and mothers, as well as its social and environmental determinants. Maternal support is recognized to be key for father involvement. However, men's experience and wellbeing as fathers has received less attention, with little research considering men's self-determination regarding parenthood and parenting. Many changes in Western societies have advocated the rights of women to more freely (and autonomously) choose to become mothers, but men's motivations seem implicitly assumed to take shape after the birth of their child. Gauthier, Senécal & Guay (2007) report that future fathers show less intrinsic and identified motivations and greater amotivation with respect to becoming parents compared to future mothers. Yet no research has considered how such motivations toward becoming a parent may predict the subsequent parental experience of fathers. The present study examines how men's autonomous and controlled motivations to become a father, prior to the birth of their first child, and subsequently to assume parental care of their infant may help account for their early involvement in childcare and parental satisfaction. First-time fathers in heterosexual cohabitating couples ($n=229$) completed online questionnaires during the third trimester of their partner's pregnancy and 2 months after the birth of their child. Replicating Bouchard, Lee, Asgary & Pelletier's (2007) findings with fathers of preschoolers, perceived support from mothers for the satisfaction of fathers' basic psychological needs account for greater paternal self-efficacy and more self-determined motivation for parental involvement, which in turn account for greater father involvement and parental satisfaction. Results further suggest that maternal support of need satisfaction is tied to more autonomous but not less controlled motivation toward childcare, and inversely to less controlled but not more autonomous motivation toward becoming a father. More autonomous and less controlled motivations toward becoming a father indirectly contribute to explaining paternal involvement and satisfaction through more autonomous and less controlled motivations toward childcare, but both also directly contribution to explaining fathers' parental satisfaction. In sum, why men become fathers and engage in childcare seems likely to influence their involvement with their child and satisfaction with their experience. Results highlight the need for more research on men's motivations and experience of fatherhood.

Links between basic psychological needs and well-being in adolescent-parent relationships: The mediational role of family cohesion and disclosure to parents

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Based on the basic psychological needs theory (Ryan & Deci, 2017), the present study examined the relationships between the gratification of basic psychological needs adolescents perceived in their relationship with their mother and father and their psychological well-being, as mediated by family cohesion, and disclosure and secrecy. It was hypothesized that perceived gratification of basic needs in both relationships would individually contribute to psychological well-being both directly and indirectly. Well-being indicators were multidomain life satisfaction, problem solving confidence, and anxiety.

The sample consisted of 1357 Turkish adolescents (798 girls and 559 boys) ($M=15.05$, $SD=1.5$; range =12-19) from eight public schools in a metropolitan city of Turkey. Adolescents filled out a battery of questionnaires on family relationships and psychological outcomes. A path analysis was performed to test the mediational model using M Plus 7.4. Fit indices indicated that there is a good fit between the data and the model: $\chi^2 = 30.58$, $df=22$, $p = .10$, $\chi^2/df = 1.39$, CFI/TLI = .993/.997, RMSEA = .034. Findings showed that needs-gratification perceived in relationship with mother was directly linked to all of the well-being indices as well as family cohesion. It was also linked with disclosure to both parents and secrecy from mother. Similarly, perceived gratification of basic needs in relationship with father was directly linked to all of the well-being indices, family cohesion, and disclosure to both parents and secrecy from father. Analyses of indirect relationships indicated that family cohesion mediated the links between basic needs-gratification and disclosure and secrecy behaviors as well as well-being indices. Disclosure and secrecy behaviors also mediated the links between basic-needs gratification and well-being indices. Findings pinpointed the importance of gratification of basic psychological needs in adolescent-parent relationships. This study is cross-sectional and it imply a causal relationship. Yet, the findings suggest a relationship dynamic in which the gratification of basic psychological needs facilitates family cohesion and sets a supportive environment in which adolescents share more information about themselves and keep less secrets. Basic needs gratification not only facilitate better well-being through gratification of autonomy, relatedness and competence, but it also betters of well-being in adolescents through facilitating information sharing with their parents and benefiting from their guidance. This study suggest that parent-training programs may include empowerment of parents as to how to support autonomy, give competence feedback and provide a caring environment for their adolescents.

12A-081

Is learning a new language different from one's own?: Comparing motivational profiles and achievement

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For many students and teachers, learning a new language in school may seem quite different from learning their own language. There has long been discussion of the differences between learning a mother tongue and learning a foreign language; unfortunately, many of these discussions are limited to the differences between natural language acquisition and school learning. Studies of motivation, ability-beliefs, and achievement looking at cross-subject differences have suggested that individuals' affinities for school subjects may be regulated more strongly by their abilities and interests, while subjects where they feel a weaker sense of competence and enjoyment are more related to their general motivation for schooling (Chanal & Guay, 2015). To understand the specific motivation for learning a foreign language and subsequent language learning achievement in a school context, it is thus necessary to compare individuals' motivational profiles for different school subjects. In this study, we aimed to address the motivational differences and similarities between learning a new (foreign) language and learn one's own language in formal school settings. We looked at a large representative sample of Japanese secondary school students ($n = 830$) to demonstrate person-centered differences using latent profile analysis. Results indicated the sample was divided into five theoretically consistent subgroups, replicating the profiles found by Vansteenkiste and colleagues (2009): low quantity motivation, poor quality motivation, high quantity motivation, good quality motivation, as well as a new subgroup representing neither high or low quantity or quality of motivation which we titled "moderate motivation." Across both languages, the moderate motivation group was the largest, while the high quantity motivation group was the smallest. Roughly 55% of the sample fit into the same subgroup for both subjects, indicating that the majority of students' motivation for learning a language was similar across school subjects.

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12A-082

Interrelations among beliefs about learning and motivation in EFL: Focusing on effect of perceived goals in English class.

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This study examined interrelations among beliefs about learning and motivation in EFL with longitudinal data. 345 Japanese students answered to the self-report questionnaire when they were in elementary school (Time 1) and in junior high school (Time 2). The questionnaire was consisted of items about perceived goals in classroom lessons, beliefs about learning (cognitive/non-cognitive), and motivation (intrinsic/extrinsic). The result of crossed-lagged structural model (CFI = .912, RMSEA = .082) revealed that intrinsic motivation negatively affected extrinsic motivation. Extrinsic motivation negatively affected intrinsic motivation and cognitive belief (e.g., "In English learning, understanding relations among each fact is important."). Non-cognitive belief (e.g., "In English learning, rote memorizing is effective.") had positive influence on extrinsic motivation. The model also found significant influences of perceived goals on beliefs about learning and motivation. "Repetition" (e.g., "In this class, teachers put importance on repeating English phrases.") had positive influence on non-cognitive belief and extrinsic motivation, while goal of "understanding other culture" (e.g., "In this class, teacher focus on understanding other culture.") positively affected intrinsic motivation. Interestingly, goal of "enjoy" (e.g., "In this class, enjoying with English is important.") had positive influence on both intrinsic and extrinsic motivation. In addition, perceived goal of "knowledge and skills" (e.g., "In this class, getting English skills is important.") had positive effect on both intrinsic and extrinsic motivation and both of cognitive and non-cognitive belief. Previous studies suggested that goal structure in classroom affected students' beliefs about learning and motivations (e.g., Nolen & Haladyna, 1990; Wolters, 2004), interrelations among these variables and effects of concrete activities in daily lessons have not been revealed enough. The findings of this study therefore suggest that motivation and beliefs about learning developed in elementary school is important factors for quality of learning in junior high school. And the result also suggested that intervening to teachers' teaching styles might affect students' perception of goals in English lessons, and affect their beliefs about learning and motivation.

12A-083

Using SDT to measure motivation in modern languages classrooms in England

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This paper uses SDT to report on student motivation in Modern Foreign Languages in English schools. An 'English is enough' mentality pervades many language classrooms and makes the issue of motivation a key one in increasing linguistic capabilities; however commonly used motivational frameworks in language learning are often more suited to English language learning. Self-Determination Theory provides a more practical way to assess Anglophone school learners' motivation by considering students' reasons for engaging with specific elements of their lessons, rather than language learning itself, which is often not something they make an active choice to undertake. Using the Self-Regulation Questionnaire (Academic), the Learning Climate Questionnaire and the Basic Psychological Need Satisfaction & Frustration Questionnaire, this study surveyed 1500 secondary school learners of modern languages aged 11-18. The three scales were combined into one paper questionnaire, administered during lesson time to students from three schools in one region of the UK. This combination of scales allowed motivation to be linked to the basic psychological needs, meaning that implications for practice could be considered. Regression models were used to identify links between the constructs, and changes in motivation according to school year group were also tracked, as well as the link to having been able to choose to study the subject.

Analysis is ongoing at the time of preparing this abstract, but initial findings show a significant positive link between both autonomy satisfaction and competence satisfaction and motivation, and a corresponding negative effect of autonomy frustration and competence frustration. Changes in motivation and in the satisfaction and frustration of basic psychological needs have also been found between year groups, and according to whether or not students were able to choose to take the subject.

Findings thus far therefore suggest that students' motivation in Modern Foreign Languages is linked to the satisfaction of their basic psychological needs. This has implications for the practice of foreign language teachers in that by providing a more autonomy supportive learning climate, they are likely to be able to have a positive influence on students' motivation in the subject with a potential corresponding impact on their engagement and attainment. In this paper, statistical findings from the full dataset will be presented and the methods of analysis will be discussed. The benefits of SDT scales in understanding motivation in secondary school settings will be highlighted and next steps considered.

12A-084

Development of autonomous reading motivation measures for U.S. middle school students

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Introduction. Reading motivation is vital to reading comprehension and development, yet in the middle school years, it tends to decline. While supporting middle schoolers' motivation to read is crucial, many teachers struggle with how. Knowing more about students' reading motivation can assist educators in creating ways to encourage students' reading. Autonomous reading motivation is an important aspect of reading motivation and it can be increased when teachers support students' autonomy. A first step in this process is measuring students' autonomous reading motivation. Therefore, we adapted and validated an English-language version of De Naeghel et al.'s (2012) SRQ-Reading Motivation (SRQ-RM) for use with U.S. middle school students.

Method. We surveyed 738 students at a diverse middle school (Grades 6-8) in the midwestern United States. Students completed an adapted SRQ-RM, and additional measures of motivation. The SRQ-RM measures students' perceived autonomy for reading in academic and recreational contexts. For the academic context, we asked students "Why do you read for school?". Students then endorsed items such as "Because I enjoy reading" and "Because others expect me to read." For the recreational context, students endorsed similar items in response to the question "Why do you read in your free time?". To adapt the SRQ-RM, we edited and added items to make them appropriate for English-speaking middle school students.

Results. Via principal components analysis on half of the sample, and exploratory factor analyses on the other half, we retained 24 items (12 academic context, 12 recreational context). We found a two-factor solution in each context: One factor consisted of autonomous reading motivation items, and the other of controlled reading motivation items. A confirmatory factor analysis resulted in four final scales: Academic Autonomous (4 items), Academic Controlled (8 items), Recreational Autonomous (5 items), and Recreational Controlled (7 items). Internal consistency for the final subscales was high. In our presentation, we will report relations among these four scales and other variables such as reading self-efficacy, reading perseverance, school engagement, and academic performance.

Significance. With this further development and adaptation of the SRQ-RM, we hope to contribute to the research and practice of studying and increasing reading motivation in middle schoolers. We envision researchers using this measure to investigate the effectiveness of teacher autonomy support on students' reading motivation. Educators can use it to determine how autonomous their students feel regarding reading and to inform the adjustment of instruction and interventions accordingly.

12A-085

Self-Determined to Write

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Abstract: Becoming a proficient writer is a core competency for college and career readiness for learners. Despite more rigorous standards and incorporation of writing across the curriculum, the majority of U.S. students fall short of grade-level expectations in writing. This study applies self-determination theory to an approach that integrates journalistic practices into middle school English language arts/social studies curricula. In this mixed-methods study, 53 sixth grade U.S. students participated in journalistic learning for 36 weeks. Applying SDT, the program fostered dynamic opportunities for individual interest, collaboration, and self-direction, catalyzing students' intrinsic motivation to write.

Method: This study used a student focus group protocol in the mixed methods approach of concurrent triangulation (Creswell & Plano-Clark, 2017) designed to understand if and how students' experiences and perceptions firsthand converged with survey findings. The research team developed and administered a survey protocol to students that built from several validated, extant measurement tools, aligned to SDT in writing and skills in collaboration and self-direction.

Results: Students experienced regular opportunities to learn and apply collaborative and self-directed skills in writing. Both quantitative and qualitative data demonstrated positive perceptions and attitudes, high levels of individual interest and intrinsic motivation to engage and persist in journalistic research and writing, a flow experience in the writing process, high levels of autonomy to be self-directed, competency for critical thinking, and relational support from their teachers and peers as a result of their participation. Comparing results from the early phase with results at the end, effects all trended in the positive direction with greater exposure and experience in the program.

Discussion & Conclusion: This study tested the theoretical alignment between a journalistic learning approach and motivational orientations of self-determination theory (Deci & Ryan, 2011). Findings supported hypotheses established by SDT and past research on the benefits of journalistic learning practices. The results provide several directions for research of journalistic learning and other approaches that are driven by student interest and emphasize collaborative publication. Future research can clarify which experiences in the writing process catalyze intrinsic motivation and learning skills most effectively.

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12B-086

Key features in doctoral students' experience of autonomy and non-autonomy in the university:

Phenomenological descriptions

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Background: Self-determination theory (SDT) researchers have obtained much information about the experience of autonomy by means of statistical analysis of quantitative data. The question arises whether new aspects of that experience might be brought to light through the analysis of phenomenological descriptions of the experience of autonomy, made by people, themselves. Which indicators do people describe first, and which appear most frequently in people's descriptions as they recall and reconstruct that experience in their memory while describing it to others? How do people compare the experience of autonomy with the experience of non-autonomy?

Method and Results: Doctoral students ($N = 116$) in Russia described two situations at university: one in which they acted autonomously, one in which they acted non-autonomously, such that another person might fully imagine them and experience them along with the author of the description. Students then compared these situations. A number of features emerged: emotional, intellectual-emotional, and psychophysiological manifestations; volitional effort; personal value of the situation; time (perception of time, speed of work, procrastination); optimality of one's own condition with respect to the activity (engagement, immersion, commitment); discovery of one's creative potential; attribution of success or failure to internal or external factors; influence of the situation on the subject's relationships with others; remembering or forgetting information obtained in the situation; influence of the situation on the author's identity and self-esteem; application of the acquired experience in one's future life. Clear differences between the situations emerged. For example, when acting autonomously, students experienced more positive emotional, intellectual, volitional, and temporal dimensions than when acting non-autonomously. Both types of situation were characterized by fear and a sense of usefulness, but only non-autonomous situations were characterized by feelings of futility.

Discussion: Several parameters identified in the phenomenological descriptions were expected and corresponded to those already found in existing, quantitative SDT research. Others however were quite new, suggesting the usefulness of this type of research. In this study the situations were limited to the sphere of education, to one, largely homogenous group in terms of age and culture. It is thus possible that comparison of people's experiences in other domains of activity, in other cultures, or at different ages might highlight additional aspects in the experience of autonomy. Discussion focuses on the potential contributions of this type of research to SDT's understanding of the experience of autonomy across cultures and across a range of human experience.

12B-087

Using SDT to study the PhD: A quantitative study of PhD students' and supervisors' perceptions of autonomy, competence and relatedness support in PhD supervision

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Intrinsic motivation is an important determinant to PhD completion and many studies showed the importance of the three basic psychological needs – autonomy, competence and relatedness (ACR) – for PhD students' motivation, success and satisfaction. PhD supervisors can support fulfilment of these needs.

Most studies on PhD supervision are qualitative, rarely refer to SDT, and only use PhD student samples (Devos et al., 2015). This quantitative study compares perceived received ACR support by PhD students and perceived provided ACR support by PhD supervisors. Furthermore, we look into correlates of ACR support in both samples. 839 PhD students and 472 supervisors completed measures of autonomy, competence and relatedness support, based on Overall et al. (2011). The surveys were anonymous, hence PhD students' responses could not be matched to those of their supervisors.

Interestingly, PhD students' perceptions of levels of received ACR support barely differed from supervisors' perceptions of provided support. Autonomy support was highest; competence support lowest. Competence support was higher for junior (first two years of PhD) than senior PhD students (last two years). Autonomy and personal support did not differ per phase of the PhD trajectory. Although supervisors' competence support was rated lower than relatedness and autonomy support, competence support showed the highest correlations with PhD students' progress, persistence, satisfaction with supervision (positive) and workload (negative). Relatedness support had the highest influence on satisfaction with the PhD trajectory overall and sense of belonging. Still, all support types were related to all outcomes. The PhD supervisor data showed that years of supervisory experience or current number of PhD students did not influence how much ACR support was provided. Self-efficacy in supervision, however, was positively related to all types of support, especially autonomy support. High competence support implied a high supervision workload, whereas high personal support was connected to a high level of work pleasure derived from supervision. These findings add to the development of well-theorized knowledge of PhD supervision and provide leads for graduate schools to support PhD students and supervisors better.

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12B-088

Clinical Interprofessional Education: what students value from a motivational perspective

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Objective

Students in medical education are trained in their silo, making it difficult to collaborate with other professions. Inadequate collaboration puts patients at risk. Interprofessional education (IPE) is intended to let students from two or more professions learn with, from and about other professions to enhance the collaboration and the quality of care. In the literature, facilitators of and barriers to interprofessional education have been described. In the success of interprofessional education, affective factors could be more important than content. This qualitative study investigates which elements of IPE in a hospital ward influence students' feeling of autonomy, competence and relatedness, and thus drive autonomous motivation, which in turn can improve performance (1).

Methods

Thirty-six students from medicine, nursing, pharmacy, physiotherapy and dietetics attended a 3- week IPE ward. Semi-structured interviews were conducted and analyzed, using a realist approach. First, two researchers independently identified meaning units using open coding, then they discerned themes. Thirdly, they categorized meaning units expressing autonomy, competence and relatedness. At each step differences of opinion were resolved through consensus.

Outcomes

Twenty-one students were interviewed: 10 medical, 5 nursing, 2 pharmacy, 4 physiotherapy. Factors that enhance autonomy, competence or relatedness were (a) Giving students responsibility to actively contribute to the care plan (autonomy); (b) Understanding how the clinical reasoning of each profession adds to the care plan (team competence); (c) Dedicating space for team meetings, which also facilitates informal contacts (relatedness).

Discussion and conclusion

Asking the students which experiences on the IPE ward were most valuable, least valuable and what they would change if in charge, revealed what students value in interprofessional learning. In this clinical IPE, students experienced feelings of autonomy, competence, and relatedness. The interpreted value can be viewed as intermediate endpoints for interprofessional collaboration. Applying the SDT perspective in qualitative research offers opportunities to strengthen the affective component of interprofessional education and offers clues for new IPE designs (2).

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12B-089

Exploring the optimal timing of medical student research internships using SDT

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Introduction

Training medical students in performing research is essential to acquire research skills and learn to translate research outcomes into daily clinical practice. The objective of this study was to determine the optimal positioning of the research internship, either before clinical clerkships, at the beginning of the medical Master's programme, or at the end. To this end we compared students' motivation for performing their research internship before or after clinical clerkships and characteristics of the internships.

Methods

A mixed methods study was carried out. We compared students' motivation for choosing to perform their research internship before or after clinical clerkships and we compared characteristics such as duration, location and grades for internships performed. We analysed students' answers to open-ended questions about the reasons for their choices, using the Self-Determination Theory of motivation.

Results

Most of the students' motivations (102 participants) were classified as extrinsic motivation for research. Students performing research before clinical clerkships more often showed intrinsic motivation for research, students performing research after clinical clerkships were mainly motivated by their career choice. Students performing their research internship before clinical clerkships (n = 338) opted more often for an extended internship (OR = 3.16, 95% CI = 2.32–4.31) and an international location (OR = 2.22, 95% CI = 1.46–3.36) compared to those performing their research internships after clinical clerkships (n = 459). Neither the internship grades nor the number of international publications differed significantly between the two groups.

Discussion and conclusion

Research internships performed before or after clinical clerkships seem equally effective for learning research skills. However, motivation of students and choices students make on duration and location, differ. To accommodate both groups of students, offering research internships before and after clinical clerkships is recommended. Offering different choices on timing of the internship, location and research project, thereby creating an autonomy-supportive learning environment for students, might increase their motivation for research. In addition, by showing the indispensable role of research in a medical practice, role models could influence students' perception of research, so that students consider it personally important.

12B-090

Self-determination in medical education: Learner empathy and learner-preceptor relatedness

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Introduction: Medical student empathy was thought to decline through medical school. Recent studies of medical student empathy suggest it may be more complex. The purpose of the first study in this series was to determine the relationship between self-determination and medical student empathy. The hypothesized model was that support for learner self-determination would support empathy perceptions. The second study qualitatively explored the impact of preceptor "pimping" on medical students' perceptions of their learning experience. Pimping is the act of questioning medical students to gauge knowledge, however, it is often perceived as intimidating by students and not relatedness-supportive.

Methods: Study 1: All medical students from a single institution were invited to complete several SDT related questionnaires and the Jefferson Scale of Physician Empathy. Demographic comparators were collected (e.g. gender, year of study, program site). Data were analyzed by ANOVA and correlations. SEM was used to test the model. Study 2: A purposive sample of up to 15 medical students, representing all years of the medical program, were invited to discuss their experiences of pimping using one-on-one interviews. Interviews were transcribed verbatim and thematic analysis was used to develop the themes.

Results: Study 1: One-hundred seventy-seven students participated in the study. Comparison of empathy scores between gender, program site, or year in program revealed no differences. Empathy scores had weak but statistically significant correlations with SDT scales, particularly for autonomy ($r=.243, p<.01$) and relatedness ($r=.225, p<.01$); less so with competence ($r=.171, p<.05$). There was no relationship between empathy scores and need frustrations. SEM revealed a model that fit the a priori model, despite a low R-squared value. Study 2: Nine 1st year, two 2nd year, and four 3rd year students participated. The majority of participants perceived pimping as a negative experience, describing incidents of condescension, singling out, and intimidation, resulting in lower confidence, embarrassment, and feelings of inadequacy. Participants expressed motivation to learn driven by a sense of guilt, shame, desire to impress the preceptor, or avoid future embarrassment.

Discussion and Conclusions: Given the weak relationship observed between SDT and learner empathy, empathic teaching through basic need support may only play a small role in learner empathy perceptions. More direct efforts to support empathy should be explored. Pimping, which was not viewed as empathic or need supportive, is common and produced primarily external/introjected forms of motivation. Students desire to be challenged but suggest a more relatedness-supportive approach to support engagement and learning.

12C-091

self-determination theory and implicit bias

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Research has shown that implicit biases can play an overriding role in people's decisions. In a study by Uhlman and Cohen (2005) participants were asked to choose a new police chief. Participants selected the male candidate but did not give the gender of the candidate as the reason for their choice. Instead, they 'manipulated' the importance of other factors, being streetwise and having the right education, that could be a reason to select the candidate to such an extent that they had more reason to select the male. In other words, at least part of their motivation to select a certain candidate was gender.

Participants in experiments such as these are unaware of what really motivated them. Furthermore, what motivated them is not something they explicitly endorse; most people do not explicitly think gender is a good reason to select someone for a job as police chief. Clearly, acting for an implicit motive that you do not endorse does not count as autonomous action according to the SDT (e.g., Ryan & Deci, 2000). However, the participants in these experiments are not aware that they are not acting autonomously. Instead, they might very well experience themselves as acting for a good reason, the person is more streetwise, and fully endorse their decision. Here, we see a difference between our *experience of autonomy* and *actual autonomy*.

But measuring people's experience of or perceived autonomy is common in the context of the SDT (Ryan & Deci, 2000, p. 70). However, in light of findings such as Uhlmann and Cohen's (2005), asking people about their experience of or perceived autonomy is problematic, because it does not capture the full scope of external motivation and lack of actual autonomy. They might as well act for motives that they reject, but since they are not aware of that they do not experience this. One possible solution to this problem is to distinguish between the experience of autonomy and actual autonomy, and to use tailored measurement methods for both. These two types of autonomy might be related to health and well-being in different ways.

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12C-092

Integrating a Dual-Process Model to Self-Determination Theory: Subliminal Priming of Autonomous Motivation Enables Explicit Autonomous Motivation to Predict Learning Performance

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Adopting a dual-process model within self-determination theory has recently been found to increase the predictive power of academic autonomous motivation (AM) on academic achievement (#_ENREF_1; #_ENREF_2). The *explicit-implicit model of AM* mainly proposed that when both motivational processes are in synergy the internalization of autonomous regulation is stronger, which ultimately can benefit their academic performance. Students who display a positive synergistic pattern between their explicitly declared AM and their implicit cognitive accessibility of AM are said to have integrated those motivational dispositions more deeply in their sense of *self*. This is what SDT refers to as the *integrative process*; an inherent tendency to coherently integrate experiences or behaviors that are autonomous in nature. In recent years, SDT researchers have tried to incorporate principles stemming from the implicit social cognition in order to have a more precise account of this theoretically important psycho-cognitive process (#_ENREF_3). Given the undeniable cognitive component of the integrative process, the *explicit-implicit model of AM* also hypothesized that the synergistic effect should only be operant in individuals with higher levels of working memory capacities (WMC). This dual-process model of AM as yet to be tested experimentally. In the present study, we examined the causal influence of subliminal priming of AM on the association between explicit self-reported AM and examination performance. An experimental learning situation was developed with the objective of replicating as much as possible the academic environment in which university students are exposed. Participants ($n = 164$) first completed measures of WMC and explicit AM for learning. Before the learning situation, participants were randomly assigned to a subliminal priming condition (AM, controlled motivation, neutral). At the end of the learning situation, all participants completed an exam on the learned content (verbal comprehension and math resolution). Moderated regression analysis revealed that explicit AM positively predicted the verbal component of the exam, but only for the AM primed group. This synergistic effect provided support for the central hypothesis of the explicit-implicit model of AM. However, contrary to our past findings, WMC had an opposite influence on the synergistic effect due to the contingency of priming methodology on WMC. For SDT, this opens a new research avenue because implicit situational cues in the social context – even those that are not always consciously perceived – might accentuate the association between explicit self-declared AM and consequential educational outcome.

12C-093

Is the need for novelty related to well-being regardless of whether people explicitly desire or value this need?

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Novelty has been proposed as an additional basic psychological need within self-determination theory, together with autonomy, competence, and relatedness. Nevertheless, new candidate needs must fulfill the inclusion criteria established by Ryan and Deci (2017). Ryan and Deci's (2017) sixth criterion determines that the effects of satisfaction versus frustration of basic psychological needs should be evidenced regardless of whether people explicitly desire or value these needs, and regardless of their sociocultural context and age. This work aimed to study the conformity of novelty with this criterion by examining the moderating role of importance assigned to novelty, and the openness to experience personality trait, in the relations between novelty satisfaction and frustration and diverse indices of well-being (vitality, life satisfaction, and meaning) in a general life context. 598 adults (274 males, 324 females) aged 18 to 75 years ($M = 35.47$, $SD = 11.89$) from 35 Spanish provinces participated by completing online questionnaires.

Results showed that vitality was positively predicted by satisfaction of the needs for autonomy, competence, and novelty ($\beta = .30$, $\beta = .21$, $\beta = .32$, respectively, $p < .001$), and negatively by frustration of competence and novelty ($\beta = -.34$, $\beta = -.33$, respectively, $p < .001$). Life satisfaction was positively predicted by satisfaction of the needs for autonomy, relatedness, novelty ($\beta = .38$, $\beta = .16$, $\beta = .15$, respectively, $p < .001$), and competence ($\beta = .11$, $p = .01$), and negatively by frustration of competence ($\beta = -.32$, $p < .001$), novelty ($\beta = -.17$, $p = .001$), and relatedness ($\beta = -.12$, $p = .004$). Presence of meaning in life was positively predicted by satisfaction of the needs for autonomy, novelty ($\beta = .27$, $\beta = .18$, respectively, $p < .001$), and competence ($\beta = .14$, $p = .003$), and negatively by frustration of competence ($\beta = -.23$, $p < .001$) and novelty ($\beta = -.17$, $p = .001$). Most associations between needs and well-being were not moderated by need importance. However, openness to experience moderated effects of novelty need satisfaction and frustration on well-being, although the same moderation effects were found for the three basic psychological needs. Future studies should seek to test the universality of the need for novelty across diverse behaviors, contexts, and populations.

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12C-094

Cognitive needs and motivational vectors in heterogeneous fields from the perspective of cultural homeostasis.

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This theoretical study is focused on three questions: (1) the potential of self-determination theory to explore and explain the quality, patterns of motivational vectors that emerge among various actors (individual and collective) at higher levels of social complexity. I resort to the model of motivational balance (Mamali, 1981,2004) at inter-individual an intergroup levels while ranging between motivational co-development and motivational co-regression; (2) the dynamic intersection between relatedness needs and attachment (Bolwby, 1969, 1973; Mikuklincer & Shaver 207, 2015; Shaver 1992; Shaver & Hazan, 1994) and belonging needs (Baumesiter & Leary, 1998) within the explanatory context provided by the theory of "cultural homeostasis" (Damasio, 2013, 2018) ; (3) the potential candidacy of basic psychological needs to the category of basic universal psychological needs, i.e., the need to know, search or cognitive needs, which for humans, turns into a powerful type of intrinsic motives identifiable in essential human activities such as exploration, non-canonical inquiry (from self-knowledge to cultural curiosity) and in scientific research processes. The need to know (search, find, process, keep, hide, protect, test, steal...information) is rooted in basic reflexes and innate tendencies such as startle, orienting reflex, reaction to stimulus deprivation, need for novel stimulation (Bexon, Heron & Scott, 1954; Moro; Pavlov, 1921; Sokolov, 1960; Tolman, 1959; Toda, 1981, 1985). This tentative is based also on a rich research tradition on the motivational functions of cognitions under various conceptual approaches such as "consonance" (Odobleja, 1938), self-consistency (Lecky, 1941), "cognitive dissonance" (Festinger, 1957), and on research focused on the specific role of the "need to know" (Cacioppo & Petty, 1981) ["the need to know", i.e. "the tendency for an individual to engage in and enjoy thinking" (Cacioppo & Petty, 1982, p. 116); "need for cognitive closure" (Kruglanski, 1989, 1990), and on the tendency to question (Mamali, 1971, 1982, 2011).

Based on a series of empirical studies the paper explores the chances to establish and maintain motivational co-development patters as the number of actors increases.

Key concepts: SDT, motivational balance, cognitive needs, cultural homeostasis.

12C-095

The roots and motivational consequences of overestimation of motor competence among children and adolescents with various levels of self-aggrandizement

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Introduction: Previous research shows that overestimation of motor competence might be a favorable phenomenon among children and adolescents in terms of autonomous motivation for physical activity (PA) and global self-worth. However, it is unclear whether overestimation is beneficial to all youngsters and under all circumstances. Therefore, the aims of this study were to 1. investigate whether different types of overestimators of motor competence exist, and 2. examine whether various overestimator-types differ from each other in their autonomous motivation for, persistence in and well-being during PA. It was hypothesized that overestimation characterized by high self-aggrandizement is rooted in parental conditional regard, and relates to lower autonomous motivation for, persistence in and wellbeing during PA compared to overestimation characterized by lower levels of self-aggrandizement.

Methods: Actual and perceived motor competence, self-aggrandizement, parental conditional regard, and autonomous motivation for, persistence in and wellbeing during PA was measured in in 195 American youngsters (50% boys, age=13.16±1.51y). Variable-centered analyses identified 28% ($n=55$) as overestimators. These overestimators were divided into three approximately equal groups based on levels of self-aggrandizement (low, average and high). ANOVAs were used to examine differences among the three groups in 1. parental conditional regard, a potential precursor of overestimation, and 2. PA-related outcomes.

Results: Significant differences among groups were found with post-hoc analyses revealing that all the significant differences were situated between overestimators with high and low levels of self-aggrandizement. As hypothesized, overestimators with high self-aggrandizement scored higher ($M=3.72$ on a 1-5 scale) on parental positive conditional regard than those with low self-aggrandizement [$M=2.46$, $F(2)=-6.66$, $p=.003$]. However, in contrast to our hypothesis, overestimators with high self-aggrandizement also had higher levels of persistence in [$M=6.30$ on a 1-7 scale, $F(2)=3.53$, $p=.004$] and wellbeing during PA [$M=4.13$ on a 1-5 scale, $F(2)=4.46$, $p=0.02$] than overestimators with low self-aggrandizement ($M=5.43$ and $M=3.49$, respectively). There was also a trend to significance in the same direction ($M=4.18$ and $M=4.58$ on a 1-5 scale, respectively) with regard to autonomous motivation for PA [$F(2)=2.57$, $p=0.09$]

Discussion: The results of this cross-sectional study suggest that overestimators with high self-aggrandizement had parents who mainly relied on conditional regard, which constitutes a controlling style. Yet, these hypothesized unhealthy forms of overestimation also aligned with higher levels of autonomous motivation for, persistence in and wellbeing during PA. Further research is needed to gain more insight into the precursors and (long-term) consequences of overestimation of motor competence, especially among youngsters with high self-aggrandizement.

12D-096

Approaching a broadened view on behavioral regulation in exercise: A closer look at different facets of introjected regulation using the revised BREQ-4

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Identifying different types of motivation that regulate behavior in an exercise context has been of high interest in exercise psychology science. One of the most widely used instruments for this purpose is the Behavioural Regulation in Exercise Questionnaire-2 (BREQ-2; Markland & Tobin, 2004), which recently has been revised (BREQ-3, Cid et al., 2018) to include also integrated regulation. In previous work, questions have been raised about the nature of introjected regulation, suggesting it can be divided into two different types of regulations, mirroring avoidance and approach. Therefore, BREQ-3 has been further revised to include items that measure: two facets of introjected regulation (approach and avoidance), resulting in a 28-item instrument (named BREQ-4) measuring seven types of exercise regulation.

The purpose of this paper is to examine: (i) the factorial structure of the new and revised instrument BREQ-4; and (ii) associations between the two newly developed facets of introjected regulation (approach and avoidance), exercise behavior and the other types of regulation in the context of exercise.

Two subsamples, one from the UK consisting of 412 younger (mean age: 21.6 years) adults recruited from various Facebook groups, and one from Sweden, consisting of 369 middle aged (mean age: 40.7) working individuals, also recruited via Facebook, were used. In both samples, data was collected online through Qualtrics. Structural equation modeling was used to examine factorial validity and associations between latent constructs of exercise regulation in BREQ-4 and self-reported exercise behavior.

Confirmatory factor analysis revealed that the 28-item 7-factor model displayed acceptable fit to data in both samples. Configural and metric invariance, but not scalar invariance, between the two samples was established. Avoidance regulation was unrelated to exercise behavior in both samples, whereas approach regulation was weakly and positively associated with exercise in the UK sample. Avoidance and approach was moderately to strongly associated in both samples. In terms of patterns of associations with the other types of regulations, results were similar in both samples: avoidance was more strongly associated with extrinsic regulation whereas approach was more robustly associated with self-determined types of motivation (identified, integrated and intrinsic motivation). The results indicate that the psychometric properties of the revised BREQ-4 instrument are acceptable. Moreover, the two newly developed facets of introjected regulation, reflecting avoidance and approach regulation, appear to share substantial variance but also differ in their association with other types of regulations and self-reported exercise behavior.

12D-097

The bright side of dark introjection - an overview of conceptualisations and operationalisations of introjected regulation

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Introjected regulation refers to behavioural engagement for the purpose of preserving a positive view of oneself. Phenomenologically, introjected regulation is described by themes of guilt, shame or ego-involvement, making it conceptually a controlled motivation. However, research has shown stronger positive associations with autonomous motivation, particularly identified regulation, compared to more controlled forms (Wilson et al., 2004). Most often these correlations are more positive than self-determination-theory predicts (Deci, & Ryan, 2000). What is wrong with introjected regulation? Do we conceptualise or operationalise introjected regulation the wrong way? To answer these questions, (1) theoretical definitions and (2) operationalisations of introjected regulation will be compared.

Resulting contradictions will be discussed and used to extend SDT's theoretical underpinnings by gaining insights into the role/function of introjected regulation in behavioural engagement.

A systematic review of English articles using PsynDEX, PsycINFO, PsycARTICLES and other context-specific databases was conducted using keywords and related terms of introjection, psychometric evaluations and context-specific descriptions. The contexts under investigation included: sport/exercise; health care; organisation/work; academia. Publication analysis comprised an individual consideration of each publication ($n = 34$) and systematic summarisations of available definitions and items of introjected regulation. Results of the analysis of definitions was compared with the questionnaire items assessing introjected regulation.

The content analysis of the definitions revealed five themes (*self-related feelings, proving things to oneself, fulfilling others' expectations, reputation, compulsion*) across contexts, all of which relate to processes of *avoidance- or approach-motivation*. The items analysis showed that most items focused on *avoidance-motivation* across contexts, with the health context being the only context that did not incorporate any approach-focused item. While *self-related feelings* (i.e., shame and guilt) were most frequently used to assess introjected regulation across contexts, *compulsion* and *reputation* were exclusively (in addition to self-related feelings) used in the sport/exercise and organisation/work context, respectively. *Fulfilling others expectations* was present in all contexts, but mostly in academia.

While the content analysis provides evidence for the richness of introjected regulation, it does also highlight the limited exploitation of its conceptualisation and operationalisation. Instead of exclusively focusing on *avoidance-motivation* and *self-related feelings* in the assessment of introjected regulation, a broader consideration of this thematically rich construct is recommended, which will result in a more comprehensive understanding of introjected regulation.

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12D-098

Self-determination and self-organization as sub-dimensions of students' perceived autonomy support: structure and relations of an underestimated factor

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Autonomy as a basic human need is widespread acknowledged as an important factor in learning situations. Social-cognitive theories specify autonomy support, amongst other distal factors, as social environmental antecedent of learners' control and value appraisals as well as achievement emotions. However, only little is known about the structure of autonomy support yet. While some theories distinguish between two aspects of autonomy (e.g. self-determination vs. option choices; Reeve, Nix, & Hamm, 2003) others differentiate three or even up to five dimensions of autonomy supportive teacher behavior (Peschel, 2002).

The aim of the recent study is to examine the structure of students' perceived autonomy support, its' differential dimensions and their correlations with appraisals and emotions.

In our cross-sectional study $N=1344$ students from German secondary schools were asked by questionnaire about their perceived level of autonomy support in mathematics. To assess criterion validity students' mathematical self-efficacy, internal and external values as well as achievement emotions were inquired. As a basis for item development we used the five-dimensional model of open education, which differentiates between organizational, methodical, content-related, social and personal autonomy support.

Exploratory as well as Confirmatory Factor Analyses suggest a five-plus-two-dimensional structure of autonomy support. The two higher-order factors on one hand represent a dimension of autonomy support that allows learners self-organization of instructional frame conditions (regarding content, organizational & social decisions) and on the other hand a factor of self-determination in students' problem-solving strategies and their personal relationship to the teacher (regarding personal & methodical autonomy).

Correlation analyses confirmed significantly positive relations between autonomy support, intrinsic values, self-efficacy and positive emotions on a moderate level, while negative correlations for negative emotions were largely significant but low. In sum, self-determination consistently shows higher correlations than self-organization.

In line with former findings, a two dimensional structure of students' perceived autonomy support can be assumed. The recent study contributes to a better understanding of these dimensions by differentiating further sub-dimensions of self-organization and self-determination. Autonomous learning situations respecting learners' views, requests and solution approaches may contribute to an emotionally beneficial education more than organizational option choices. Limitations are being discussed at SDT conference.

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12D-099

A meta-analysis of motivational outcomes within education

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Introduction : Students' intrinsic and extrinsic motivations are associated with many outcomes. Self-determination theory (SDT) provides a framework for defining these motivations and the ways in which they foster these outcomes. Specifically, SDT posits that autonomous types of motivation (intrinsic and identified regulations) produce positive outcomes at school, whereas controlled types of motivation (introjected and external regulations) as well as amotivation are associated to negative ones. However, in contrast with theory, past research fails to clearly show if and how introjected and external regulations are harmful for individuals (Van den Broeck et al., Under Revision).

Methods: Through an exhaustive synthesis of SDT research within the educational psychology literature, we investigate how each motivation type relates to positive and negative outcomes. In addition to unifying the literature and providing a comprehensive perspective of student motivation, we also address questions concerning the relative importance of these motivations and test whether these related constructs are all justified within the theory and within research.

Results: Results indicate that intrinsic and identified motivations each make valuable individual contributions to outcomes and are each highly effective forms of motivation for students. Predictably, they both correlate desirably with important outcomes (e.g., achievement, well-being, effort). Introjected motivation, on the other hand, relates positively to both desirable and undesirable covariates (e.g., anxiety, dropout), and is altogether less influential than autonomous forms of motivation. External regulation typically does not relate to desirable outcomes but can be detrimental to well-being. Amotivation is predictably negatively related to the majority of desirable outcomes, and positively related to undesirable ones.

Discussion and conclusion: All main motivation types within SDT contributed unique variance, albeit less so for controlled regulations, which suggests that further SDT-based educational research should pursue the current distinctions to obtain the most acute prediction. Furthermore, all motivation types had unique patterns of prediction with outcomes, suggesting differential practical implications for the various motivational profiles in students (Ratelle et al., 2007). Taken together, the present results demonstrate the nuanced associations of motivation with student functioning and offer notable implications for educational psychology research and practice.

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12D-100

An empirical comparison of motivation scoring methods within self-determination theory

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Self-determination Theory differentiates various types of motivation, each of which have different consequences for well-being and behavior. Despite broad agreement concerning the nature of different types of motivation, numerous different scoring methods, each of which rely on different assumptions, are commonly practiced. These practices range from multi-factorial approaches examining all motivation types as separate latent constructs, higher-order models grouping subscales to create a two-factor solution, to single score indices such as the relative autonomy index that collapse all types of motivation into a single index. To date, existing evidence does not strongly support the use of one method over another. To resolve this issue, Study 1 directly compared a range of commonly utilized methods, as well as additional recently developed methods, across six independent samples from various life domains in order to determine the effectiveness of each method. Study 2 demonstrates how relative weights analysis can be used to supplement regression-based analyses when utilizing multidimensional methods in order to reduce issues such as multicollinearity. This method is shown to contribute unique information, and thereby increase interpretability of results. Results of Study 1 demonstrate that higher-order models and the Relative Autonomy Index account for only 70% of the variance explained by multidimensional methods. As such, results of these two studies lead us to recommend multidimensional methods (e.g. exploratory structural equation modeling, B-ESEM, and CFA), accompanied by relative weights analysis, as ideal scoring practices for SDT researchers as these maximize construct relevant information.

12E-101

The ENJOY Scale: Validation of a Multi-dimensional Measure of Enjoyment

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Enjoyment has long been identified as a primary outcome experienced as a result of intrinsic motivation (Ryan & Deci, 2017). However, in the literature on enjoyment, there is little consensus on a standard definition of the construct, nor whether or not it is singular or multi-dimensional. Davidson (2018), examined how enjoyment has been defined and measured in psychological studies, and then created and validated a multi-dimensional measure of enjoyment. In Davidson's conceptualization, enjoyment is defined as a positive feeling that occurs as a result of engaging in a pleasurable and psychologically need-satisfying activity. Using both exploratory factor analysis (n=798) and confirmatory factor analysis (n=668), Davidson validated a five factor model of enjoyment, containing the variables: pleasure, relatedness, competence, challenge/improvement and engagement. The result of Davidson's efforts is the 25-item ENJOY Scale measuring the 5 above-identified variables constituting enjoyment. The first purpose of the proposed presentation is to present this new scale to the SDT community. Moving beyond basic scale creation, however, is the need to construct validate the scale. The second purpose of the presentation is to present the results from 4 different samples that took the ENJOY: 1) a general sample of adults, who were surveyed about their work environments; 2) a sample of ROTC students who were surveyed about their motivation for mandatory physical training; 3) a sample of athletes who were surveyed about their attitudes about their sport (in process), and 4) a group of honors and non-honors students surveyed about their academic attitudes (in process). For each sample, participants were instructed to answer the items on the ENJOY scale while considering the outcomes of their respective activity. In the general work sample (286 women and 255 men with a mean age of 32), higher levels of job satisfaction were positively and significantly correlated with all 5 ENJOY factors.

The correlations were also found to be stronger for those in management positions than those not in management. In the ROTC sample (n=160), a differential pattern of results was found. A higher level of external regulation was negatively and significantly correlated with pleasure and challenge, while greater intrinsic motivation was positively and significantly correlated with pleasure, relatedness, competence and challenge. Results for samples 3 and 4 will also be presented. Discussion, and perhaps debate, will center on the nature and measurement of enjoyment as a multi-dimensional construct.

12E-102

Personal desire for excitement and social autonomy support in sport: Links to harmonious and obsessive passion, and longitudinal intrinsic motivation and effort.

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Introduction: The aim is to study motivation and effort among young adults engaged in sports as for instance mountain climbing and jibbing. The purpose of the study was to test the role of the personal desire for excitement and its links to autonomy support, harmonious and obsessive passion, and longitudinal intrinsic motivation and effort in students sport.

Methods: At Time 1, 675 students attending a one-year study of their favorite outdoor life sport or physical activity at Norwegian Folk High Schools completed a questionnaire package. At Time 2, 447 of them completed a second questionnaire package eight months later. SEM was used to test the measurement and the structural model with hypothesized links.

Results: The desire for excitement positively predicted perceived autonomy support and the two types of passion. Autonomy support positively predicted harmonious passion, which in turn were positively linked to intrinsic motivation, which again positively predicted effort. Length of experience moderated the link between desire for excitement and obsessive passion. Further, participants with short experience in the activity relative to those with long experience, and males (relative to females) reported a higher desire for excitement and a higher obsessive passion.

Discussion: The path through autonomy support and harmonious passion is conducive to intrinsic motivation and effort, whereas the one through obsessive passion is unrelated to effort. Autonomy support is important for young adults pursuing activities giving experiences of excitement, speed, and risk. In such a social context it is important that significant other people who encourage them to further explore and to improve their skills understand their excitement-seeking personality. Hence, autonomy support might help the students to choose activities providing excitement arousal in a good way instead of high-risk activities with negative consequences. This study also reveals length of experience as a moderator of the links between the desire for excitement and the two types of passion.

The findings are important because personality factors may influence the development of harmonious and obsessive passion as length of experience or involvement in activities increases, and hence affect outcomes longitudinally.

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12E-103

Behavioural addictions and flow as dual outcomes of the dual process of passion and needs

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Introduction: The Dualistic Model of Passion, and Self-Determination Theory are two main approaches that have showed to be relevant to explain the motivational process in several contexts. Lalande et al. (2015) integrated the two approaches showing that need satisfaction inside and outside the passionate activity predict harmonious and obsessive passion. The dual process of passion and psychological basic needs could provide a relevant context for the understanding of the dual opposite process of behavioural addictions and flow experience. The aim of this study is to extend previous studies examining both the satisfaction and the frustration of psychological basic needs inside and outside the passionate activity, in the prediction of the two forms of passion, and examining the symptoms of behavioural addictions, and the flow experience as dual different consequences of harmonious and obsessive passion.

Method: Two studies were conducted. In the first study the activity selected was playing videogames, while in study 2 using social networks as activity was used. All the participants had to conduct in a regular base the selected activity and completed questionnaires to assess: need satisfaction and frustration for general life, need satisfaction and frustration for the specific activity, harmonious and obsessive passion for the specific activity, addiction symptoms, and flow experience for the specific activity.

Results: Results of the two studies have shown that overall need satisfaction and need frustration in general life predict respectively need satisfaction and frustration for the specific activity, and that in turn need satisfaction positively predicts harmonious passion, while need frustration for the specific activity positively predicts obsessive passion for the specific activity. Finally, harmonious passion positively predicts the flow experience, while the obsessive passion positively predicts the addiction symptoms for the specific activity.

Discussion: The integration of Dualistic Model of Passion, and Self-Determination Theory could provide a relevant contribution in the understanding of the motivational process that could distinguish between a maladaptive pattern as Behavioural addictions and an adaptive pattern as the flow experience. A need satisfaction experience could develop a harmonious passion for an activity that could generate a flow, while need frustration could develop an obsessive passion for an activity that could generate a behavioural addiction. In fact, although both flow and behavioural addiction are represented by an increment of hours spent in the activities, they could be considered two different manifestations of an adaptive and of a maladaptive motivational process.

12E-104

Unpacking adventure: Understanding how adventure recreation promotes well-being via psychological need fulfilment and nature contact

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Introduction

Despite positive outcomes associated with adventure recreation (AR), adventure activities are often portrayed as vehicles for thrill-seeking and hedonism rather than well-being. Subjective well-being (SWB) frameworks and eudaimonic benefits are largely absent from adventure studies. We propose a new framework for understanding AR by proposing that AR fosters eudaimonic SWB by satisfying four basic psychological needs and facilitating nature contact. Research from diverse adventure contexts is used to build the framework and critically evaluate how psychological models can advance adventure theory and practice.

Background & Conceptual Approach

As AR inherently involves voluntary risk-taking, participants have often been portrayed as 'adrenaline-junkies' or hedonists seeking to conquer nature. Recent investigations suggest that eudaimonic motives such as goal achievement, belonging, and resilience, play a larger role in participation than thrill-seeking. While many studies identify adventure benefits, the mechanisms underlying these benefits have been contested for three decades. Research has established links between (i) leisure and SWB and (ii) nature and well-being, however adventure pursuits have not been examined using SWB frameworks. Thus, there is a need for theoretical development in terms of (i) psychological mechanisms through which AR fosters SWB, and (ii) how encountering nature in AR may foster SWB.

The proposed framework synthesises advances in SDT and SWB and links these to adventure processes and outcomes. SDT concepts provide a coherent organising framework for the mechanisms underpinning adventure experiences. The framework posits that AR enhances eudaimonic SWB via: (i) nature contact and (ii) satisfaction of three basic psychological needs (*autonomy, competence, relatedness*) and a proposed fourth basic need for *benevolence* (Martela & Ryan, 2016). Eudaimonic SWB is operationalised in terms of (i) *life satisfaction* and (ii) *meaning*, which is comprised of three dimensions (i.e., *coherence, purpose, significance*) (Martela & Steger, 2016).

Conclusion

Reframing adventure in terms of psychological processes and SWB provides a pathway for advancing adventure research and practice. This approach may also enhance the quality of individual and group experiences by shifting the focus from risk to well-being. These shifts may encourage researchers, policy makers, and practitioners in public health, education, and recreation to broaden their approaches to well-being through adventure recreation.

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12E-105

On the Benefits of Being Sexually Autonomous and Costs of Being Sexually Pressured: The Contributions of Different Motives for Sex to Experiences of Well-Being

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For many people, cultivating a rewarding and lasting romantic relationship is one of life's most important goals. A growing body of research shows that a critical ingredient to relationship thriving is a pleasurable and fulfilling sexual life. Surprisingly, sexual activities, a core feature of romantic relationships, have received little attention so far from SDT research on close relationships. In this presentation, we provide an overview of research demonstrating how autonomous and controlled sexual motivation can meaningfully contribute to an understanding of optimal and non-optimal well-being experiences with respect to sexuality, relationships, and overall. First, we validated the psychometric properties of the Sexual Motivation Scale, a measure of the six types of motivation proposed by SDT in the context of sexual activities. Then, we examined individual differences in motivational antecedents and well-being consequences of autonomous and controlled sexual motivation at three levels of psychological functioning: sexual, relational, and global. Next, we investigated the associations between basic psychological needs, autonomous and controlled sexual motivation, and sexual well-being using in couples using a dyadic design and in the context of within-person variations using an experiential research design. Finally, we examined the links between autonomous and controlled, being present during sex, sexual satisfaction, and relational well-being. Across studies, higher autonomous sexual motivation was associated with more positive well-being experiences and less negative well-being experiences, whereas the opposite pattern was found for higher controlled sexual motivation. These findings held above the effect of frequency of sexual activities. Additionally, findings revealed that basic needs satisfaction and the extent to which global and relational motivation are autonomous or controlled are potential predictors of autonomous and controlled sexual motivation. Overall, this research illuminates for whom and when sexual activities result in benefits or costs to well-being. Practically, the findings provide valuable insights on concrete strategies to maintain or enhance well-being. We end by discussing how future research on autonomous and controlled sexual motivation can contribute to a better understanding of human flourishing.

12F-106

An examination of collegiate music students' motivations for practice

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This mixed-methods study, in-process, is designed to examine college music students' motivations for practice through the lens of Self-Determination Theory (SDT). The purpose of the study is to further understand factors that drive and inhibit collegiate music students' practice and to inform current praxis in collegiate level music education. SDT posits that when one's needs for autonomy, competence, and relatedness are satisfied, the result is psychological well-being and autonomous motivation. In two prior quantitative studies (Troum, 2010; Evans & Bonneville-Roussy, 2015) researchers employed this framework to examine collegiate music students' practice habits. To more fully explore the issue of practice in the USA, the authors of this study are administering a survey to collegiate music majors in 8 colleges and universities. The survey is comprised of questions designed to measure type and quality of motivation and include open-ended response options. Results of the study will be compared to those in the two aforementioned studies.

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12F-107

Examining the development of community music and its application of self-determination theory within a uk context: a case study of noise solution

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As the field of community music has developed in England over the last three decades, organisations and individuals within the field have increasingly reflected on their roles and on the function of music. This has led community music to be used as an intervention with the purpose of creating change among individuals and groups in society (Deane & Mullen, 2018). This pursuit of change has led community music workers towards an increased awareness of theories of personal and social change, and theories of the realisation and maintenance of psychological wellbeing. Self-determination theory (SDT) has proved useful both as a lens through which to evaluate different community music programmes' effectiveness and also as a starting point for designing the work itself. This paper traces the development of this approach to music making as a vehicle for change. Additionally, to highlight the practical application of such approaches, this paper also examines the implementation of SDT by the community music organisation Noise Solution. Pre-existing independent and peer-reviewed evidence cites multiple examples of statistically significant impacts on wellbeing for Noise Solution's intervention (Glenister, 2018). SDT would indicate that these wellbeing increases follow the fulfilment of psychological needs. This paper examines nine post-intervention interviews. Each, hour-long, thematically analysed semi-structured interview was conducted with stakeholders (participant's, their family and professional key workers). Results indicate that for this small sample of stakeholder's all three psychological needs identified within SDT were present. Feelings of **autonomy**, alongside high levels of **competency** and **relatedness**, were identified. This places Deci and Ryan's three psychological needs firmly within an SDT informed community music intervention, alongside additional data indicating statistically significant increases in wellbeing.

12F-108

The influence of teachers, parents and peers on student's motivation for learning and playing an instrument. A Self-Determination Theory Approach.

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The aim of this research was to examine the mechanisms behind children's and adolescent's motivation for learning an instrument. Self-determination theory (Deci & Ryan, 2017) served as the theoretical background: It assumes different forms of motivational regulations and organizes them on a continuum, ranging from autonomy to control. Satisfaction of the psychological basic needs for autonomy, competence and social relatedness support the development of autonomous forms of motivation. These Basic Needs are considered as mandatory not only with regard to SDT, they also play an essential role in the entire motivational research. Previous studies, particular in educational settings, mainly focused on teaching and learning in school, whereas learning outside of the school

setting is rarely been taken into account (e.g. Evans, McPherson & Davidson, 2013). In order to explain motivation when learning an instrument, aside from the support of basic needs in music lessons, an autonomous parental educational style and the attitudes of the peer group towards learning and playing a musical instrument are investigated. Data from a survey study (N=856 music students from Austria) were analyzed using structural equation modeling (SEM). The results demonstrate that, in addition to the learning environment (support of the basic needs), the peer group and the parental educational style can also explain a significant variance of motivation. The proposed models show a significant effect for the parental educational style in explaining controlled motivation, whereas the attitudes of peers concerning learning an instrument and the music lessons were essential factors for explaining autonomous motivation.

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12F-109

The predictive value of functional meaning of rewards for innovativeness and creativity: Two studies among artists and employees in Greece

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During the last decade, academics and practitioners alike have expressed the need for more research on how and under which conditions rewards in professional life explain motivation and organizational behaviors (Gupta & Shaw, 2014), especially in light of newly emerging practices in reward programs (e.g., bonuses, pay raises, stock ownership; pre-paid cash cards, vouchers). The emergence of such compensation plans is mainly based on the premise that employees will be more motivated to perform if organizations pay them more for work outcomes such as innovativeness (Delery & Roumpi, 2017; Milkovich et al., 2013; Thibault Landry, Forest, Zirgami, Houson, & Boucher, 2018). However, to this point, very little is known about the underlying psychological mechanisms and that help explain how and when workplace rewards explain employee work behavior and what is the role of motivation to this process. In the present research, we investigate, based on Self-Determination Theory, the impact of the functional meaning of rewards on individuals' motivation, innovative work behavior and creativity and hypothesize that the impact of using rewards varies based on the functional meaning these rewards take on. More precisely, we argue that whether rewards have a positive or negative effect on individuals' creativity and innovativeness depends on whether they are perceived as having an informative meaning, thus boosting sense of belonging and contributing to individuals' relatedness need satisfaction and whether functional meaning of rewards fit personal values.

Thus, two studies were conducted in Greece so as to investigate the importance of the framing and presentation of rewards for innovativeness and creativity. In the cross sectional study (N=265) it was found that the relation between functional meaning of rewards and innovativeness was moderated by the level of relatedness need satisfaction while the study among artists (N=66) showed that rewards framing compiled with personal aspirations, captured by Aspiration Index (Kasser & Ryan, 1996), hold a predictive power for artists' creativity captured with Consensual Assessment Technique (Amabile, 1983).

Both studies provide some additional insights in the existing literature in terms of the psychological mechanisms that explain the relation between rewards and the outcomes of innovativeness while practical implications associated with these results can be beneficial both for workplace and artistic contexts.

12F-110

Supporting students' basic needs during guided tours in a museum of art and cultural history

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Informal learning environments such as museums are often used with the aim of motivating students. This expectation is based i.a. on the situational characteristics of these learning environments such as the authenticity of the original objects or the openness of this learning setting, which allows and promotes individual and interactive learning. Guided tours are a frequently used instructional method during school class visits to museums of art and cultural history. They form an important mediation tool, which commonly offers a highly structured approach for students' engagement with the exhibited information. Yet, we only have limited information concerning the motivational effects of various instructional characteristics of guided tours.

Applying self-determination theory, we investigated the impact of two types of guided tours on basic psychological needs. One was a standard class visit tour, functioning as control group. For the treatment tour, we manipulated five separate (instructional) characteristics in order to achieve a strong focus on the individual student and a high level of active involvement. These characteristics refer to (a) initial query of students' interests (b) allowing students to select the exhibits for the guided tour (c) encouraging to express own ideas (d) allowing guide to refer to students' interests (e) actively involving students in the guided tour (students perception). From a theoretical point of view, the treatment tour should have a positive impact on the students' basic needs.

Regarding basic needs we distinguish between two facets of autonomy (self-determination and the match between a person's desires and goals and the requirements implied in the learning situation), competence and relatedness regarding the guide and the peers. The study took place in a museum of art and cultural history with 237 7th and 8th grade pupils from intermediate and high level secondary schools (average age 13.4 years).

Findings show that manipulation of the guided tours was in so far successful as the students had significantly different experiences when compared with the control group. Furthermore, the treatment tour had a significantly positive influence on the students' experience of autonomy and relatedness but not on competence. When looking at the treatment tour characteristics separately, only some did prove (directly) relevant for students' levels of basic needs.

Findings are discussed in terms of impulses for future research regarding instructional designs in the museum context as well as regarding relevance for museum practice in the sense of designing guided tours to support participants' motivational relevant experiences.

13A-111

From Worst to Best: The transformation of two elementary schools through autonomy, belonging, and competence

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In 2006 an elementary school teacher in Oregon was introduced to SDT in a workshop. Her second-grade classroom was a dysfunctional shambles of acting out, trauma affected children. Socio-economically, her school was the second-poorest in the entire state, so not surprisingly it had the worst disciplinary record in a district of 22 schools (highest number of referrals to office, greatest number of school suspensions).

She saw enough success in a trial year of an SDT-based classroom that a group of colleagues formed a book group, studied Self-Determination Theory, and strategized how to make the school a healthier, more productive place. Two years later teachers were doing their own professional development presentations, more colleagues joined in, and tangible successes could be seen. By the end of the fifth year the "worst" school in the district had become the school with the greatest improvement in achievement tests, and the greatest reduction in disciplinary problems; it had become the "best".

Consequently, another school had sunk to the bottom of the District's list; the District called in the principal from the first school, hoping for similar success. The principal invited the teacher to come help in a school with a very different dynamic: this faculty knew that outsiders were "sent in to fix them," and resistance was multifaceted. With gentle encouragement, non-coercive mentoring, and lots of explanatory rationale, within four years this second school was in full transformation, soon to be recognized as "the school to see" for outsiders wanting to visit a well-functioning elementary school. The faculty's Organizational Health Survey—an annual measure of collaboration, communication, morale, and job satisfaction that had been hovering around 30 on a scale of 1-100—was higher than District administrators had ever seen.

This paper, encouraged for submission by Richard Ryan and Shannon Hoefen for presentation on the practitioner day, will outline the blueprint used in these two schools, will map their progress, and will offer data on academic achievement and social growth, as well as the District's current efforts to expand Self Determination Theory into 10 other schools.

13A-112

Autonomy in Education: Perceptions from Pre-Service Teachers and Secondary School Students

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Demands for diversity in classroom and a noticeable output orientation in education possibly put (future) teachers into a dilemma: Can they simultaneously build up their lessons on individual needs of their students and obtain high-ranked educational achievements of the whole class? This contribution is based on Self-Determination Theory (SDT; Ryan & Deci, 2017; Su & Reeve, 2010) and presents the key findings of two quantitative questionnaire-based studies. The first study (SELL – **S**elf-determined **L**ife-long **L**earning) involves 364 students from Austrian secondary schools and aims to clarify the impact of perceived autonomy support and school-related pressure on school satisfaction and performance and the mediating effects of experiencing vitality, relatedness to teachers and perceived competence. The second study (BEAT – **B**e **A** Teacher) with 340 student teachers addresses the question how autonomy support at university and individual causality orientations interact with autonomous and structured teaching styles.

With regard to the first study (SELL), the majority of participants report moderate levels of autonomy support. A subsequent qualitative analysis provides deeper insights about what pressurizes students in educational contexts. Structural Equation Modeling indicates that the impact of perceived autonomy and school-related pressure on school satisfaction and the overall performance is mediated by feeling related to teachers as well as by experiencing vitality and competence in school (β between .35** and .78**).

In addition, the second study (BEAT) reveals that perceived autonomy support at university influences pre-service teacher students' learning regulation while the impact on their teaching styles is mediated by their causality orientation (β between .35** and .76**).

To summarize the results, analyzing students' perceptions of self-determination in education not only provides empirical support for the theoretical assumptions of SDT but they also allow us to better adjust training programs for teacher education. Findings imply that there are effective strategies for fostering self-determination in school (e.g., by fostering the perception of autonomy while decreasing perceived pressure) and that the support starts already at the level of pre-service teacher education.

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13A-113

The Effects of an Incentivized Climate on Autonomy, Relatedness, and Reading Achievement during the Middle Years: A Self-Determination Theory Perspective

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According to *relationships motivation theory* (RMT), an SDT mini-theory focused on the qualities of interpersonal relationships and their outcomes, controlling motivational techniques can detract from the sense of relatedness in the classroom, undermining student-teacher relationships and achievement (Ryan & Deci, 2017). The present study explored the central tenet of RMT by testing the effects of parental and teacher incentives on student motivation, emotional engagement, trust in teacher, and reading achievement in over 1800 students, grades four through eight, from 22 schools within a single charter district in the South Central United States. The study adopted a process model of the relations between context, children's inner resources, and academic achievement (Grolnick et al., 1991). The model assumes that social connections mediate the relationship between context variables and desired learning outcomes. By including collective teacher efficacy (CTE), the current study also connects SDT with recent educational research into student engagement and student trust in teacher. In each case, these student relatedness variables appear to be connected to the emotional states and confidence of teachers. Recent meta-analyses place CTE at the forefront of school resource that school leaders can leverage to improve student learning. Structural equation modeling indicated that low SES ($\beta = -0.16, p < 0.01$), teacher incentives ($\beta = 0.11, p < 0.001$), and controlled regulation ($\beta = -0.24, p < 0.001$) predicted reading achievement. As predicted, parental incentives had indirect negative effects on reading achievement through their direct effects on controlled regulation ($\beta = 0.22, p < 0.001$). Although the teachers' endorsement of controlling motivational techniques was unexpectedly associated with slight increases in achievement ($\beta = 0.11, p < 0.001$), parental incentives and teacher approaches predicted decreases in emotional engagement ($\beta = -0.20, p < 0.05$ and $\beta = -0.08, p < 0.001$, respectively), and trust ($\beta = -0.44, p < 0.001$ and $\beta = -0.17, p < 0.001$, respectively) in older students, suggesting that short-term academic gains from incentives may undermine long-term relationships. These differences also suggest that teachers used less controlling techniques when compared to the parents' use of external motivation. While collective teacher efficacy appeared to reduce perceptions of controlled regulation and improve student trust and achievement, these effects were highly susceptible to composition variables, most notably SES and gender. Corroborating the dangers of controlling motivation, the current study also highlights the potential of collective teacher efficacy to counter those effects, build student trust, and strengthen achievement.

13A-114

Changes in teachers' motivating style and students' academic motivation during a school year and between grades: the role of need satisfaction and frustration

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Various cross-sectional and longitudinal studies have shown that during the academic year and also throughout the school years, the quality of students' motivation to learn tends to decrease. According to Self-Determination Theory, this decrease might have a variety of cognitive, emotional, and behavioral consequences. While the potential consequences of this motivational decline have been well researched, the reasons for it are not yet fully understood. In this study we investigated changes in teachers' motivating style and the changes in students' need satisfaction that results from this change, as a potential explanation for students' motivational decline. Specifically, we asked whether the association between the changes in teachers' motivating styles and students' motivation to learn is mediated by the changes in the level of which students perceived their needs as satisfied or thwarted.

Four hundred and seventy-two seventh- and eighth-graders completed questionnaires at the beginning and the end of the academic school year. Using the Situations-in-School (SISQ-Education) questionnaire, students reported their perceptions of their teachers' motivating styles (autonomy support, structure, control, and chaos). Students also reported the levels at which their psychological needs were satisfied or frustrated and their type of motivation. The results of structural equation modeling suggested that the shifts (from the beginning of the year to its end) in students' perception of the teacher as autonomy-supportive and structuring, and the shifts in students' perception of the teacher as controlling and chaotic, were associated with students' changes in quality of motivation directly, and also indirectly via the level at which students experience their needs as satisfied or thwarted. Furthermore, performing multi-group analyses indicated that this mediation model is equivalent for seventh- and eighth-graders. The results of this study suggest that in order to reduce or prevent the drop in students' motivation to learn, attention should be paid to changes in their teachers' motivating styles.

13A-115

The role of motivation in training self-assessment skills with video modelling examples

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Introduction: Making accurate self-assessments of one's performance, is an important but difficult skill. Previous research showed that video-modeling examples can be used to improve students' problem-solving and self-assessment skills. In these videos, students watched another person (i.e., the model) demonstrate how to solve a problem. Subsequently, the model demonstrated how to assess one's performance by assigning one point for each correctly solved step on the problem-solving task. Although these videos were effective, large differences in learning gains were found, indicating that some students benefitted less from the self-assessment training than others. This study's aim is to examine whether individual differences in students' motivational profiles can explain why the self-assessment training is more effective for some students in terms of problem-solving and self-assessment accuracy relative to other students.

Method: 342 secondary school students first took a pretest consisting of 4 problem-solving (heredity problems on the laws of Mendel) and self-assessment tasks. Then, the training phase took place in which students watched an instruction and four modeling videos in which the problem-solving task and how to self-assess one's own performance was explained. After the training phase, participants filled out a motivation questionnaire and perceptions of invested mental effort. Then the posttest took place, consisting of 4 problem-solving and self-assessment tasks.

Results: Latent profile analysis resulted in four profiles. The *poor-quality profile* ($n = 37$) was characterized by moderate levels of external motivation and low levels of autonomous and introjected motivation, whereas the *good-quality profile* ($n = 30$) was characterized by high levels of autonomous motivation and moderate controlled motivation. Two moderate motivational profiles were identified. Students with the *moderately-positive profile* ($n = 134$), had significantly higher autonomous motivation and lower external motivation when compared to the *moderately-negative profile* students ($n = 141$). There were no differences among the four groups of students on the problem-solving and self-assessment pretest. Findings, however, showed that having a poor-quality profile was detrimental for posttest performance and self-assessment accuracy after training. Furthermore, students with a moderately negative and poor-quality profiles experienced the training phase as more effortful than students with a moderately positive or good quality profiles.

Conclusion: Overall, our results demonstrate that individual differences in students' motivational profiles can affect the extent to which students learn from watching video-modeling examples. It is therefore important to consider students' motivation for learning the content of the videos and examine whether students' motivation can be further promoted through interventions.

13B-116

Innovative course design in higher education: Two case studies based on the principles of self-determination theory

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Success in school is, in part, an issue of motivation. At times, students struggle to mobilize their effort for high-quality performance and persist at school activities. Adverse experiences such as these are common in higher education, especially in large classroom settings in which—all too often—students are passive recipients of course material rather than active constructors of knowledge and understanding. With the rise of technological capabilities in the classroom, it has become easier for teachers to develop innovative course designs that afford students opportunities to regulate their own behavior, to master new skills, and to collaborate with others. I will present an overview of and data on two case studies of innovative course design in higher education based on the principles of self-determination theory. In Case Study 1 (which began in 2015), I “flipped” a large introductory psychology course by presenting factual information relevant to course material through online modules on a weekly basis. This style of pedagogy was designed for both knowledge and understanding to be actively constructed (autonomy) and self-paced (competence).

On a weekly basis, students also met in small groups (relatedness) facilitated by a teaching assistant to discuss conceptual (competence) and personal (autonomy) understanding of course material. Per year since the inception of this innovative course design, 85% of the students have been satisfied with the course and 94% of the students have learned a great deal from the course. Of equal importance, student performance, course rating, and instructor rating have increased by 8.5%, 7.6%, and 5.8%, respectively. In Case Study 2 (which began in 2018), I “flipped” a mid-sized upper-level psychology course by presenting theoretical and applied information relevant to course material (self-determination theory) through lectures on a weekly (rather than twice per week) basis. On a weekly basis, students also met in small groups facilitated by a teaching assistant to discuss empirical articles relevant to that week’s lecture content. Empirical articles contained the Introduction, Method, and Results sections, and students were asked to write 400-word papers on the theoretical, practical, and personal implications that fill in the redacted Discussion sections. Since the inception of this innovative course design, student performance, course rating, and instructor rating have increased by 5.9%, 3.8%, and 4.2%, respectively. It is possible to apply self-determination theory to higher education in a way that is designed to promote satisfaction of basic psychological needs, with noticeable positive impacts on student performance and instructor evaluation.

13B-117

University students' academic motivation profiles: relationships with academic procrastination and life satisfaction

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In the self-determination theory different motivation types are defined. A person may have these types of motivation simultaneously at different levels and may display a variety of profiles based on such motivational characteristic. This study aimed to examine university students' motivation profiles that they exhibit depending on the combinations of academic motivation types defined in self-determination theory and to reveal the relationships between these profiles, academic procrastination and life satisfaction.

The sample of the study consists of 1700 university students. The data of the study was collected using “Academic Motivation Scale,” “Need Satisfaction Scale,” “Tuckman Procrastination Scale”, “Life Satisfaction Scale”. For the data analysis, there were used hierarchical and non-hierarchical cluster analysis methods to determine the academic motivation profiles.

The cluster analyses' results of research indicated that 33.8% of the students exhibit high (*intrinsic and extrinsic motivation levels are high, amotivation level is low*), 44.9% of the students exhibit medium (*intrinsic and extrinsic motivation levels are medium, amotivation level is below medium*) and 21.3% of the students exhibit low (*intrinsic and extrinsic motivation levels are low, amotivation level is high*) level of academic motivation profile. Results revealed that the students with high motivation profiles obtained higher levels of life satisfaction, whereas they obtained lower academic procrastination levels.

Consequently, it is seen that the students display three different motivation profiles, and these profiles have similar tendencies in respect of motivation but only differentiate in quantitative terms. The study indicated that intrinsic and extrinsic motivations' levels are related to both psychological and academic variables.

13B-118

Fostering intrinsic motivation in engineering education; a cluster analysis of engineering students' basic psychological needs.

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Introduction

Self Determination Theory (SDT) suggests that the satisfaction of the basic psychological needs contributes to students' intrinsic motivation as well as a deep approach to learning (Ryan and Deci, 2000; Baeten, Kyndt, Struyven, & Dochy, 2010). In our study, we used the SDT framework to evaluate and redesign a large basic course of History and Ethics for first year engineering students.

Methods

We conducted cluster analysis to understand how different combinations of students' satisfaction of autonomy and competence are related to intrinsic motivation, perception of learning, perceived value of the course and overall satisfaction with it. Questionnaires exploring all abovementioned variables were administered to the students at the end of the course. The sample consisted of 565 students. In addition, in depth interviews with 12 students were conducted using the SDT framework to explore students' perceptions of the learning environment and the factors they considered as supportive to their autonomy and competence. The qualitative data were analyzed thematically.

Results

Three clusters were derived based on students' satisfaction of autonomy and competence: a low, a medium and a high satisfaction cluster. Follow-up post hoc tests showed that these clusters differed significantly across all dependent variables. Students in the high satisfaction cluster, reported significantly higher intrinsic motivation, a transformative approach to learning, more appreciation and satisfaction with the course. The qualitative study also indicated that students value the possibility to formulate groups and choose the project theme as indicators of autonomy. Perceived competence was enhanced via structured feedback activities, sufficient time allocated to exercises, clarity of learning objectives and study material. Other important factors for students' intrinsic motivation suggested by the qualitative study was the perceived relevance and value of the course for students' professional identity as engineers.

Discussion

Our study confirms that satisfaction of students' perceived autonomy and competence plays an important role in their intrinsic motivation, approach to learning and course satisfaction. We will discuss in detail the findings of the cluster analysis and we will provide suggestions for educational changes in the learning environment that support students' basic psychological needs.

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13B-119

Intrinsic motivation, self-determination, personality resources and wellbeing in college and university students with disabilities

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Inclusive education using assistive/computer technologies, especially electronic/distance/online education could be considered as a condition for personal development in students with disability imposing special demands to their personality, self-determination skills and motivation for self-determined learning.

Designing the study we followed positive paradigm proposed by M. Csikszentmihalyi and M. Seligman, self-determination theory concepts (R.Ryan, K.Sheldon, Deci Weinmeyer) on subjective vitality, motivation and agency, approaches to wellbeing of E.Diener and C.Ryff. Also, we kept in mind ideas on coping, and its resources both social and personal, offered by R. Lazarus and Folkman, theory and methodology of special pedagogics and psychology cultural and historical psychology of L. Vygotsky and distance learning. This work was supported by Russian Foundation for Fundamental Studies, project 19-013-00904 . Research followed series of previous studies made in frames of similar methodology (Alexandrova Aysmontas, Lebedeva, Leontiev 2009-2017 – mainly in Russian).

The purposes of study: 1) assessing intrinsic motivation, selfdetermination, personality resources and wellbeing in both groups of disabled students compared with healthy ones, 2) specifying their contribution to effective coping with learning difficulties in both learning settings mentioned above.

Our studies was conducted at Moscow State University of Psychology & Education in 2009-2019, some based on longitudinal design. A several questionnaires was used to measure students' learning experiences and difficulties (Madriaga et al., 2010, etc.). Personality resources were measured by Subjective Vitality Scale (Ryan, Frederick, 1997); Hardiness Survey (Maddi, 2001); Generalized Self-efficacy Scale (Jerusalem & Schwarzer, 1981), and COPE (Carver & Sheier, 1981), Noetic orientations test (Leontiev, 1992), subjective wellbeing - using Satisfaction with life scale (Diener, Emmons, Larsen, Griffin, 1985) and Flow Short Scale (Engeser, Rheinberg, 2008), SSQ (Sarason & Sarason). We also applied Academic Motivation Scales (Gordeeva et al, 2014) based on AMS-C (Vallerand et al, 1992). 500 college and university students, including 228 with physical disability participated in the study, 115 of them of distance learning faculty.

In all studies close connection between social, personality resources in students with disabilities and effectiveness of their learning was shown. Moderating effect of personality resources in coping with learning challenges were found. Types of personality resources dynamics in students with disabilities came into focus. Role of intrinsic motivation, self-determined learning for students with disabilities, especially in conditions of distance learning were clarified. The data is calling for corresponding studies, held in different universities and various conditions of education for students with disabilities with emphasis on cross-cultural differences and similarities.

13B-119A

Longitudinal change in preservice teachers' motivating style

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Changing pre-service teachers' beliefs regarding pedagogy and disciplinary content is frequently studied. However, there is less literature focusing on changing pre-service teachers' beliefs regarding autonomy-supportive learning environments, save for Reeve's 1998 seminal paper. In this study, college students in a foundational teacher education course completed the Situations in School questionnaire (SIS; Aelterman, et al., 2018) as a pre- and post-assessment determining whether their endorsement of different motivational styles changed over the semester while being taught in an autonomy-supportive environment.

The 95 students were mainly second-year students, in elementary, secondary, and special education programs. They were enrolled in a required course where they learned about theories of motivation and learning and how to apply them in their teaching.

Students' perceptions of the classroom environment was assessed with the short Learning Climate Scale (Black & Deci, 2000). We assessed students' perceptions of how well the course met their basic psychological needs (BPNS; Deci, et al., 2001). We found the environment was seen as autonomy supportive (LCQ $M=5.61$, $SD=1.04$). Students felt their basic needs for autonomy, relatedness, and competence were met with a mean score of 5.0 ($SD=0.21$). Within this autonomy-supportive environment, the SIS scores did not make large moves across the semester, but using paired t-tests, we identified significant results and observable trends in the preferred directions. Both autonomy supportive factors increased slightly but not significantly. The endorsement of structure increased significantly on both factors (STR – guiding pre = 4.59, post = 4.69, $p < .05$; STR – clarifying pre = 4.02, post 4.60, $p < .000$). Control showed minimal change. One of the Chaos factors decreased significantly while the other stayed flat (CHA – abandoning pre = 4.16, post = 3.56, $p < .000$).

To explore the relationship between LCQ scores and SIS gains, we divided the students into three groups based on LCQ scores: high, medium, and low. We discovered the greatest level of change across nearly all factors was among "medium" students, except on Structure-Clarifying factor where the relationship was linear, with greater perception of an autonomy-supportive environment related to greater gain in endorsement of clarifying structure. These results demonstrate that learning about motivation within an autonomy-supportive environment may help increase endorsement of more positive motivational practices and that changes in belief may be related to the degree that students feel the environment is autonomy supportive.

13C-120

Conscientiousness, fair treatment, and extra role behaviors in the workplace. The mediating role of need satisfaction.

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Not only is conscientiousness a consistent predictor of job performance, conscientious employees are more likely to engage in positive extrarole workplace behaviors (i.e., organizational citizenship behaviors or OCB) and less likely to engage in negative workplace behaviors (i.e., counterproductive workplace behaviors or CWB). One possible explanation for this relationship is that those who are driven, organized, and persistent may be more likely to have their needs satisfied, increasing motivation to engage in positive workplace behaviors. We tested this model in a sample of undergraduate part-time workers ($N = 235$) and a separate sample of full-time workers ($N = 210$). In both samples, need satisfaction partially mediated the relationship between conscientiousness and workplace behaviors, both positive (OCB) and negative (CWB). We also found that need satisfaction mediated the relationship between conscientiousness and turnover intentions.

Regardless of personality however, how one is treated by their manager should also predict willingness to engage in OCBs and CWBs. Fair treatment should increase need satisfaction and lead to corresponding changes in OCB and CWB. In both samples, employees who reported being treated fairly by their manager, or high levels of interactional justice, also reported fewer CWBs and more OCBs. Need satisfaction mediated these relationships. Need satisfaction also predicted employee's willingness to be more proactive and problem solve, or a proactive personality. Results suggest that while conscientiousness alone is enough to predict OCB, CWB, and turnover intentions, these relationships are partially due to need satisfaction in the workplace.

Longitudinal Examination of Workers' Need Satisfaction Profiles and Their Implications: A Latent Transition Analysis

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This study examined workers' need satisfaction profiles while considering the within-person and within-sample over-time stability of these profiles. We also explored how these profiles related to workers' functioning and investigated the role of individual orientations in predicting profile membership. A sample of 1319 nurses completed all measures twice, over a three-month period. Latent profile analyses and latent transition analyses revealed four distinct need satisfaction profiles, which proved to be fully identical across measurement points: *Globally Dissatisfied*, *Normative*, *Moderately Satisfied*, and *Globally Satisfied* profiles. The standards dimension of perfectionism (i.e., high performance standards) predicted a higher likelihood of membership into the *Globally Satisfied* profile relative to all other profiles, and into the *Moderately Satisfied* profile relative to the *Globally Dissatisfied* and the *Normative* profiles. The discrepancy dimension of perfectionism (i.e., negative self-evaluation of performance and self-criticism) predicted a higher likelihood of membership into the *Globally Dissatisfied* profile relative to all other profiles and a higher likelihood of membership into the *Normative* profile relative to both the *Moderately Satisfied* and the *Globally Satisfied* profiles. The increasing structural resources dimension of job crafting predicted a higher likelihood of membership into the *Normative* profile relative to both the *Globally Satisfied* and the *Globally Dissatisfied* profiles. The increasing social resources dimension of job crafting predicted a lower likelihood of membership into the *Globally Dissatisfied* profile relative to all other profiles. The increasing challenging demands dimension of job crafting did not significantly predict likelihood of membership in any profile. Finally, the *Moderately Satisfied* profile was associated with the highest levels of vigor and job satisfaction, and the lowest levels of need for recovery, while the *Globally Dissatisfied* profile was associated with the most maladaptive functioning (i.e., low vigor and job satisfaction, and high need for recovery). Taken together, these results encourage organizations to make possible a balanced experience of need satisfaction (i.e., moderate-to-high levels of global need satisfaction coupled with moderate-to-high levels of specific need satisfaction) in order to allow for employee optimal functioning. Our results further show that perfectionism and job crafting, though they are somewhat associated with beneficial outcomes, do not necessarily lead -through need satisfaction- to the most optimal experience. We therefore invite employees, organizations, and practitioners to keep this limitation in mind when considering these traditionally valued individual orientations.

13C-122

Psychological Needs at Work and general life satisfaction, and the mediating role of Job Satisfaction

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Introduction: The use of function titles such as "Chief Happiness officer" makes people think that employers can affect the general happiness of their employees. But is that really so? If so, can employers influence the happiness of their employees with SDT?

Aim of the study: This study explores the relationship between Basic Psychological Needs at Work (BPNW) and general life satisfaction, via Job Satisfaction and takes the differences between types of work (self-employed, private sector, public sector) into account.

Methodology: A database of 3770 Belgians was applied. The BPNW were measured using a six-item BPNSNF (Basic Psychological Needs Satisfaction and Needs Frustration) inventory. General life satisfaction was measured using the Cantril Ladder. A one item question was applied for Job Satisfaction (scale from 0 to 10).

Three analyses were conducted among the different types of work. First, a linear regression between the BPNW and Job Satisfaction was conducted. In a second analysis, BPNW and Job Satisfaction were considered as independent variables in a linear regression analysis with the Cantril Ladder as dependent variable. Finally the sobel test assessed whether the relation between the BPNW and the Cantril Ladder is mediated by Job Satisfaction.

Results: Our analyses show that, regardless of the type of work, the BPNW are directly and positively related to Job Satisfaction (B between 1.19 and 1.50, $p < 0.001$) and general life satisfaction (B between 0.13 and 0.41, $p < 0.05$).

The sobel tests indicate that the relationship between BPNW and general life satisfaction is mediated by Job Satisfaction. The latter two variables are also positively related with each other (B between 0.32 and 0.35, $p < 0.001$). Preliminary results indicate that the general life satisfaction of self-employed workers seems to be more affected by their job satisfaction than other types of workers.

Promoting high quality motivation through active needs support: A preliminary evaluation of a self-determination theory-based management intervention program

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Abstract

Introduction: Managers need to self-motivate and constantly motivate others. What and how should they do to stay motivated and effectively motivate? This research aimed to answer the question with the investigation on the effectiveness of an intervention program developed under self-determination theory (SDT; Deci & Ryan, 1985; 2000). We expected that the intervention program helping to increase managers' autonomous motivation; improve managers' needs supportive behavior and needs satisfaction as well as decrease managers' needs thwarting behaviour and needs frustration.

Methods: A total of 22 managers (75% male; 80% with bachelor degree and up; Mean age = 47 yr, SD = 6.4 yr) in the target organization were divided into 2 groups, and then each group undertook the one-day intervention programme in different scheduled times. Repeated measurements were able to obtain from both groups at two times, one was two weeks before the intervention, and the other was six weeks after the intervention. At the same time, employees (N = 87; 81.6% male; mean age = 39 yr, SD = 10 yr) of the participating managers were also invited to fill out questionnaires, total 58 employees completed for both times (attrition of 30%).

Results: Repeated measures MANOVAs were conducted to examine how 1) the managers' self-reported motivation, needs satisfaction/frustration, and needs supportive/thwarting behavior; 2) employees' assessment of own motivation, needs satisfaction/frustration, and manager's needs supportive/thwarting behaviour changed. Significant changes were found in both managers' and employees' reports. Significant effects were followed by series univariate repeated ANOVAs. Compared to baseline measures, managers reported significantly lower level of controlled motivation, need thwarting behavior; needs frustration and higher level of needs satisfaction after the intervention. At the same time, their direct subordinates also reported significantly higher level of needs satisfaction and lower level of needs frustration as well as their manager demonstrating less needs-thwarting behaviour after managers gone through the intervention. The size of this training effect is at moderate level.

Discussion and Conclusion: SDT-based intervention was effective and provided solid evidence for future research to understand the dynamic of motivation at work.

Keywords: *Theory-based intervention; Change in Motivation;*

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My Needs May Not Be Your Needs - An Application of Self-Determination Theory

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What motivates people's behaviour and actions? That was the initiating question for a three-year research project taking a departure from Self-Determination Theory (SDT, see references). This by developing the three identified needs for competence, relatedness and autonomy into the specification of an inner polarity/dichotomy of each need. The result showed six basic needs that can be measured through the assessment tool of My Needs®. The research was possible due to a financial grant by the Swedish research catalysator Vinnova, known for bridging the gap between the sectors of academia and business through the financial support of innovative collaboration. In 2013 My Needs® was granted the Price of Innovation by Vinnova by being the first Swedish instrument that could access unconscious psychological needs. Since then the assessment tool has reached over a thousand corporate users, as such creating an empirical database available for analysis. The guiding theme behind this research has been a sociological curiosity why the theory of SDT was further developed into six new categories and its implications for leadership and processes of change in corporations. What can be learned from scrutinizing the available data material? What patterns can be discerned regarding individual motivations and needs and team management that are hidden for corporate leaders? What are the implications of understanding leadership and organizational change from an assessment tool that measures needs and motivation? The research for this paper will be based on the analysis of My Needs® data material, observations of facilitator workshops plus interviews with practitioners.

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13D-125

Basic psychological need satisfaction and frustration in the psychopathology of major depressive disorder: preliminary analyses

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Introduction

Particularly since the dimension of need frustration was formally incorporated into Basic Psychological Need Theory [BPNT], the theory holds great potential in understanding mechanisms of psychological ill-being. The validation of the German Basic Psychological Need Satisfaction and Frustration Scale [BPNSFS] contributes to a quickly growing literature by validating the scale in a rather heterogeneous sample and examining the incremental predictive validity of need frustration in relation to ill-being (Heissel et al., accepted). Results are in line with recent studies demonstrating a strong positive association between need frustration and depressive symptoms in the general population. Still, evidence in clinical samples is sparse. A specific aim of the SPeED-Study (Sport/Exercise Therapy and Psychotherapy for Depression) investigates how exercise therapy and psychotherapy influences participants' need frustration and need satisfaction (Heinzel et al., 2018).

The present inquiry investigates basic psychological need frustration in the psychopathology of Major Depressive Disorder [MDD] comparing the baseline data of the SPeED-Study (n=112) MDD outpatients to a matched healthy control group (n=221). We supposed that clinical depressed patients show a significant reduced score in basic need satisfaction (*hypothesis 1*) and a significant increased score in basic need frustration compared to non-depressed people (*hypothesis 2*).

Method

The matching was conducted 1 by 1 with regard to age, gender, educational status and income until the best match was achieved. The total of N=166 participants (55.4% female) show a mean age of 36.17 (*SD*=10.53; range=20–62). To test the hypotheses two-tailed *t*-tests for independent samples were conducted.

Results

Results of multiple *t*-test comparisons for independent samples (two-tailed) yielded significant differences for all six subscales of the BPNSFS (all *p*< .01) in the supposed direction.

Discussion

These are the first results that show substantial differences in need-based experiences between MDD outpatients and non-depressed. Longitudinal results of the SPeED study will examine effects of exercise therapy and psychotherapy on mental health and the underlying physiological and neurobiological mechanisms like cortisol, neurotrophins, neural activation changes (e.g. emotion-regulation) and the impact of health care professionals on these factors.

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13D-126

A peer-led, physical activity intervention for university students with depression: a quasi experiment

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More than 1 out of 10 university students per year were diagnosed with clinical depression, yet only one third of them sought help for the condition (Chung et al., 2011). Known alternative treatments for depression, such as exercise interventions grounded in the self-determination theory, can be effective, yet they are rarely implemented or tested on university campuses (e.g., McFadden, Fortier, & Guérin, 2017). The aim of the present study was to assess the effectiveness of a peer-supported, self-determined, physical activity (PA) intervention for university students with depression. The PA intervention was structured for self-determination by targeting the basic psychological needs of competence (realistic goal of two days per week of one hour of PA in a semi-structured setting), autonomy (self-selected intensity and type of PA), and relatedness (exercising with peer companion trained in emotional support). Thirteen students with depression completed the intervention over the course of 8-10 weeks and were then compared to a paired matched control group who received no intervention. Self-reported PA levels, psychological needs for PA, exercise self-efficacy, depression, and distress were assessed at pre and posttest. Utilizing a MANOVA, there was a statistically significant interaction effect found between group and time on the combined dependent variables, $F(4, 96) = 4.63, p = .008$; Wilks' lambda = .531, partial eta squared = .469 (large effect size). Visual interpretation of graphed mean differences support positive changes in the intervention group but not for the control group on all variables except exercise self-efficacy. Post hoc paired samples t-tests indicated statistically significant differences ($p < .01$) with large effect sizes for reductions in depression and distress levels for the intervention group, but not the control group. Large effect sizes despite not reaching statistical significance were found in PA levels and basic needs for PA for the intervention group, but not the control group. Overall, a peer-based, physical activity intervention structured for basic psychological needs fulfillment appears to be effective at decreasing depression and distress scores in university students. Discussion will include the potential for replication of the program on additional campuses.

13D-127

Basic psychological need satisfaction of adolescents with a visual impairment: effectiveness of a community-based mentoring program.

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Introduction: Psychosocial functioning of adolescents with a visual impairment can be negatively impacted due to vision related challenges experienced during the performance of daily living activities and participation in social activities. Within this randomized controlled trial, with a care-as-usual control group and two intervention-groups, the effectiveness of a mentoring program was investigated on improving psychosocial functioning of youth with a visual impairment. In addition, the potential positive effect of match similarity on the effectiveness of the program was tested by randomly assigning mentees to either a mentor with or without a visual impairment. Methods: A total of 76 adolescents (M age = 18 years, $SD = 2.0$, ranged between 15 and 22 years) and 36 mentors (M age = 30 years, $SD = 5.9$, ranged between 22 and 43 years), participated in the study. Baseline, post-test, and follow-up measurements were fitted to a multilevel growth model. Psychosocial functioning was assessed by measures of the three basic psychological needs (Chen et al., 2015), wellbeing, acceptance of the impairment, self-esteem, and loneliness. Results: Results showed that mentoring significantly improved autonomy satisfaction ($B = 0.15, S.E. = 0.07, 95\% CI = 0.003, 0.31, d = .44$) and competence satisfaction ($B = 0.19, S.E. = 0.08, 95\% CI = 0.02, 0.34, d = .55$). Mentoring had no effect on changes in relatedness satisfaction, wellbeing, acceptance of the impairment, self-esteem, and loneliness compared to the care-as-usual control group. No significant differences were found between mentees matched to mentors with or without a visual impairment for all outcomes.

Conclusion: Mentoring appears a promising intervention to improve satisfaction with the basic psychological needs for autonomy and competence satisfaction among young people with a visual disability. However, the unexpected absence of effects on concomitant outcomes like relatedness satisfaction, wellbeing, acceptance of the impairment, self-esteem, and loneliness warrant caution regarding the potential for mentoring to support an adaptive transition to adulthood. The pattern of results also raises questions regarding the role of basic psychological need satisfaction as a mechanism for change in psychosocial functioning.

13D-128

How can we intervene at a young age when children have mild to severe problems in social interactions? Effects of Topper Training (Kanjertaining)

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This presentation highlights the characteristics and effectiveness of Topper Training (Kanjertaining in Dutch). This is the most widely implemented intervention on social interactions and bullying in the Netherlands. It is a cognitive behavioural program that is directed at children and their social context: school, parents and peers. Children, teachers, and parents learn to solve conflicts in a positive solution oriented way, to reflect on their own behaviour and to take social responsibility.

Three settings: from education to mental health care: The program is given in three settings: 1) In primary and secondary schools, given by teachers in class. One out of three primary schools use this method as a universal prevention program to enhance a positive respectful school culture. 2) In disruptive school classes, given by psychologists, as an intensive compact version of the intervention. 3) In mental health care centers, given by psychologists, for children with emotional and/or behavioural problems and their parents.

Link to Self-Determination Theory: The concept of the Kanjer (Topper) is comparable to the view of Self-Determination Theory (SDT) where people have a natural tendency to express and develop themselves. Topper Training translates this into social settings.

The basic needs in SDT can be linked to the method and theoretical grounds of Topper Training: autonomy (Topper Training teaches "be yourself, make your own choices"), feeling of competence (by practicing social skills and increasing the feeling of control over one's life) and relatedness (exercises in interaction with others and trust in others).

Summary of research findings: Previous research into daily practice provided evidence of positive effects of Topper Training in a classroom setting (Vliek, Overbeek, & Orobio de Castro, 2015) and in a mental healthcare setting (Vliek, Overbeek, & Orobio de Castro, 2014). Both studies used a quasi-experimental design. In an additional study, we conducted a Randomized Controlled Trial in mental healthcare centres in 8-to-12 year-olds with mild to severe internalizing and/or externalizing problems. Ten sessions of 1,5 hour each resulted in significant positive effects on self-esteem, emotional problems, impact of the problems on life, and the feeling of being bullied. Teachers experienced a reduction in conduct problems. A recent study (forthcoming) shows that the amount of children being victimized is much lower in schools that have implemented Topper Training for at least 2 years than in control schools.

13D-129

A motivational pathway linking physical activity to body-related eating cues

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Introduction: Physical activity is associated with improved eating self-regulation, partly through self-determined motivations for physical activity (Mata et al., 2009). It has also been suggested that an intrinsically motivated eating regulation enhances the salience of body regulation cues (Satter, 2007). Based on the Hierarchical Model of Motivation, self-determined motivations to a particular behavior could be transferred to another behavior. The interaction between physical activity and markers of eating behavior on a motivational level has been proposed, but never fully tested. This study measured physical activity- and eating-specific self-determined motivations and explored the motivational spillover pathway linking physical activity to body-related markers of eating behavior. **Methods:** A total of 300 adults (age: 34.4±10.7yr; BMI: 23.2±3.4kg/m²) participated in a Portuguese online survey assessing moderate-vigorous physical activity levels, self-determined motivations for physical activity and eating behavior, and two body-related eating markers – Reliance on Hunger/Satiety Cues (RHSC) and Body-Food Choice Congruence (BFCC). Structural equation modeling was used to test the adjustment of two hypothetical models (i.e., RHSC and BFCC models) and the expected theoretical relations. **Results:** The proposed models showed a good fit (RHSC: $\chi^2 = 103.967$, $df = 42$, B-S $p = <.001$, SRMR = .054, NNFI = .963, CFI = .971, RMSEA = .070, 90% CI .053-.087; BFCC: $\chi^2 = 88.898$, $df = 33$, B-S $p = <.001$, SRMR = .043, NNFI = .970, CFI = .978, RMSEA = .075, 90% CI .057-.094).

Results from both models showed direct and positive links between physical activity and self-determined motivations for physical activity, direct and positive links between physical activity- and eating-specific self-determined motivations, and finally, direct and positive links between self-determined motivations to regulate eating and both reliance on hunger and satiety cues and body-food choice congruence. Additionally, path analysis demonstrated significant indirect effects between variables, which is suggestive of the existence of mediation processes.

Discussion & Conclusion: This study lends support to the existence of a motivational spillover between physical activity- and eating-specific self-determined motivations. It also suggests that these motivational mechanisms underlie the positive relationship between physical activity and a greater attunement to body-related signals: those that are more physically active, present higher self-determined motivations for physical activity and eating, and therefore eat in response to their hunger/satiety cues and select foods that improve their body functioning and health.

13E-130

Evaluating the efficacy of the How-to Parenting Program: Results from a randomized controlled trial (RCT)

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Self-Determination theory and research indicates that supporting children's autonomy is vital to fostering optimal child mental health. The parenting program "How to talk so kids will listen & listen so kids will talk" (or How-to Parenting Program; Faber & Mazlish, 1980) teaches the essence of AS. It stems from parenting groups led by the humanistic psychologist Haim Ginott (1922-1973) whose writings inspired the operational definition of AS. The present RCT assessed the efficacy of the How-to Parenting Program in improving parenting and child mental health. We predicted that the How-to Parenting Program would lead to higher parental AS and lower child mental health problems, compared to participants on a waiting-list (WL).

Parents of school-aged children ($N = 285$) were recruited in 15 grade schools, over three waves. The inclusion criterion was the capacity to communicate in French. Parents were randomly assigned to an experimental group (7 weekly sessions of 2.5 hours) or to a 1-year WL within their school (total of 30 groups). Parents (19% fathers) were between 24 and 67 years old ($M = 40.3$) while children (50% boys) were 3 to 12 years of age ($M = 6.5$). The manualized intervention was led by teams of two trained facilitators. Assessments took place prior to randomization (T1), one week post-intervention (T2) and at 6-month (T3) and 1-year (T4) follow-ups (attrition of 16%/15%/18% respectively). Parents rated the extent to which they used the program's autonomy-supportive skills and their autonomy-supportive attitude. They also rated children's internalized and externalized problems with the Child Behavior Checklist.

Multivariate multilevel analyses revealed significant time by group interactions. Compared to participants on the WL, parents who took part in the How-to Parenting Program showed greater improvements in AS skills and in their AS attitude at T2 through T4. Children whose parents took part in the program also showed greater improvements on externalized symptoms than children whose parents were on the WL at T2 whereas internalized symptoms decreased similarly among both experimental conditions. Importantly and similarly to a previous study (Mageau et al., 2018), improvements stabilized and persisted during the following year. This pattern of results will be discussed in light of the design and methods used. Transferring knowledge about AS to parents of the general population seems to be an effective way to prevent children's mental health problems.

13E-131

Students' well-being and motivation as consequence of parenting practices

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Introduction

Empirically, it was found that already a quite high number of children from the 29 economically most privileged countries (including Germany) showed low well-being. At the same time, students' well-being has been found to be a crucial determinant of a favorable academic development. Therefore, fostering students' well-being should be a main aim in education. However, before developing interventions the specific determinants of students' well-being need to be further investigated.

Theoretical Background

One of the most well-known theories postulating contextual determinants of well-being is Self-Determination Theory (SDT; Deci & Ryan, 2002). In SDT it is proposed that the fulfilling of three basic psychological needs (need for autonomy, competence, and relatedness) by relevant others significantly contributes to the development of well-being as well as autonomous motivation. Parents can be assumed to be the most relevant interaction partners of middle school students. Therefore, this study addresses the research question, which role the home context plays for middle school students' well-being and motivation. Moreover, it aimed at investigating this prediction from two different perspectives: student report and mother report.

Methods

This is an ongoing project conducted with a cross-sectional design. So far, 159 German students of grade five to eight (mean age: 12.27 years; 55.3 male) and 60 associated mothers (mean age: 44.95 years) voluntarily participated in the study. Maternal parenting behavior (autonomy support, competence support, relatedness, involvement) was assessed both with a student and a mother questionnaire. Additionally, students reported about their well-being, academic motivation, and emotion.

Results and Discussion

In order to answer the research question, multivariate regression analyses were conducted using the scales of maternal parenting behavior as independent variables predicting all different indicators of students' well-being, academic motivation and emotion (separately for both perspectives). The preliminary results of the study point to the crucial role of the (perceived) maternal parenting for students' well-being, motivation, and emotion. In this context, particularly the relatedness seems to be relevant indicating to put a focus on beneficial ways of communicating and interacting with the child which could be considered in future interventions for parents. Moreover, the findings suggest a methodological discussion indicating the necessity of an assessment from different perspectives. In our study, students' perception of their mother's behavior seem to play a more significant role for the development of their well-being, motivation, and emotion than mothers' reports.

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13E-132

Investigating the link between autonomy-supportive parenting practices and sport performance: A dyadic methodological approach to the study of young soccer players

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Parental autonomy support has been linked to numerous positive consequences for children. For instance, it has been shown that the more parents tend to generally adopt autonomy-supportive parenting practices, the more children are judged by their teachers as providing effort, as being autonomous and as being successful in school (Grolnick & Ryan, 1989). In sport specifically, few studies have examined the impact of parenting practices on the experience of young athletes, and those who did so (e.g. Gagné et al., 2003) examined exclusively the impact on athletes' phenomenological experience and not on their behaviors or performance. The present study proposes to address this issue by investigating the relationship between parenting practices and athletes' behaviors and performance using a dyadic methodological approach. Based on studies in the educational domain, it is hypothesized that the adoption of autonomy-supportive behaviors by parents would be positively related to athletes' autonomous functioning and performance, as rated by their coach. In total, 125 parents of young ($M_{age} = 9.53$, all boys) elite soccer players from a soccer academy in Canada and their coaches took part in this study. At the beginning of the season, parents reported the extent to which they tend to adopt autonomy-supportive and controlling behaviors at home. At the end of the season, coaches reported the extent to which they perceive each athlete as being autonomously motivated, as having improved on various aspects of the game (i.e. physically, technically, mentally and tactically) during the season and as performing better than his teammates. Results of multi-level analysis indicate that the adoption of an autonomy-supportive parenting style at home is positively associated with perceptions of the athlete as being autonomously motivated ($\gamma = .38, p = .012$) and as having improved his performance during the season ($\gamma = .17, p = .025$). In contrast, the adoption of a controlling parenting style was unrelated to coaches' perceptions of athletes' autonomous motivation and progress throughout the year. Both autonomy-supportive and controlling parenting practices did not seem to have an impact on whether the athlete performed better or not than his teammates. The methodological strengths (e.g. multiple informants, use of an independent observer, multiple indicators of performance) of this study as well as its implications for the parenting and sports psychology literature will be discussed.

13E-133

What parents should (not) do to reduce the chance of their child being a cyberbully or victim: The drawbacks of controlling and restrictive parenting style

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Cyberbullying and victimization are disturbing phenomena that are increasingly prevalent among youth all over the world. Research suggests that over half of Western adolescents and teens have been bullied online, and about the same number have engaged in cyberbullying. Employing Self-Determination Theory (SDT) and Parental Mediation Theory, we examined how general and cyber-specific parenting styles contribute to the chances of a child reporting having been a cyberbully and/or victim.

We assessed parents' general parenting style (that is, whether parents generally use "autonomy-supportive" or "psychologically controlling" strategies in their parenting), and their cyber-specific mediating style (whether the restrictions they use to regulate their children's online activities are applied in an autonomous, controlling, or inconsistent style).

Two hundred and seventeen seventh- and eighth-grade Israeli students reported whether their parents generally use "autonomy-supportive" or "psychologically controlling" strategies in their parenting, and the frequency and style with which they use restrictive mediation strategies while mediating internet. Participants were also asked to rate the frequency with which they performed or experienced cyberbullying and victimization.

The results of two independent regression models to investigate the antecedents for cyberbullying and victimization revealed that when parents are generally controlling and when they are applying their restrictive mediation strategies in an inconsistent style, their children have high chances of reporting being cyberbullies and cyber victims.

Moreover, multiple regression analyses revealed a moderating effect to controlling cyber-specific style on the relation between general controlling style and the chance of becoming a bully or a victim. Namely, parents who are generally controlling but use a less controlling style when mediating cyber further increase the risk of their children becoming aggressors or victims in cyberspace. This result suggests that although controlling style is not a recommended style when considering cyber risks, if parents use this style in their daily communication with their child, they should also use this style regarding their cyber mediation. Messages around cyber that contradict the messages the child is accustomed to receiving generally, can lead the child to "exploit" the relative freedom given in the cyber context and act irresponsibly.

Theoretical contributions to the knowledge on parenting style and parental mediation of media, as well as the practical implications of what parents should do and not do in order to reduce the chances of cyberbullying and victimization, are discussed.

Autonomy supportive scaffolding and perceived need support foster homework motivation and affectA. Moè¹, I. Katz², R. Cohen², M. Alesi³¹University of Padua, PADUA, Italy²Ben-Gurion University of the Negev, BEER-SHEVA, Israel³University of Palermo, PALERMO Italy

Homework refer to tasks assigned to students to be performed at home. Most children (and parents) do not like it and experience negative affect, and stress during homework (Katz, Buzukashvili, & Feingold, 2012). This can impact the child-parent relationship and cause further disengagement. So, there is an urgent need to find out ways for improving motivation and affect during homework. This research – framed within the SDT principles – examined the effects of a training to parents based on providing tools for being need supportive on parents' and children's motivation and affect. Study 1 involved 75 parent-child dyads (mostly 4th and 5th graders), study 2 118 parent-child dyads (4th and 5th graders), divided into trained (respectively 37 and 55 parents) and untrained. The trained parents attended four training sessions in consecutive weeks during which they were involved in group discussions aimed at shaping need supportive modalities, following the Reeve (2011) principles. Before and after the training all the parents and the children filled in questionnaires to assess autonomous and controlled motivation, engagement, self-efficacy, perceived need support, affect, and stress (only Study 2). Results of Study 1 showed that trained parents (but not untrained) decreased negative affect. The children whose parents did not attend the training sessions increased negative affect and decreased autonomous motivation, perceived need support, engagement and self-efficacy. Study 2 revealed that stress decreased in parents who attended the training sessions, while it increased in the untrained parents. The children of the trained parents perceived them as more need-supportive, and decreased stress. Moreover, trained parents, but not untrained, decreased controlled motivation and increased self-efficacy. The discussion focuses on the importance to support the supporter and outlines that sustaining parents' capabilities to nurture their children basic needs of competence, autonomy and relatedness following the SDT principles fosters children's motivations and affect with homework and makes parents and children less stressed.

ReferencesKatz, I., Buzukashvili, T., & Feingold, L. (2012). Homework stress: construct validation of a measure. *The Journal of Experimental Education*, 80, 405–421.Reeve, J. (2011). Why teachers adopt a controlling motivating style toward students and how they can become more autonomy supportive. *Educational Psychologist*, 44, 159–175.**Profiles of need satisfaction and frustration across competitive season of adolescent athletes in Intensive training settings: relationships with burnout and engagement**G. Martinent¹, A. Gareau², N. Lienhart¹, V. Nicaise¹, E. Guillet-Descas¹¹University of Claude Bernard Lyon 1 - University of Lyon, LYON, France²University of Ottawa, OTTAWA, Canada

SDT underscores the crucial role of the social-contextual environment in distinguishing experience of basic psychological need satisfaction (BPNS) and frustration (BPNF) (Martinent et al., 2015). Being involved in an intensive sport training center is certainly not an identical experience for all adolescent athletes and BPNS and BPNF are likely to evolve distinctively across athletes within the competitive season (Cece et al., 2018). Thus, this study aimed to (a) identify complex naturally-occurring combinations of BPNS and BPNF; (b) examine the issue of changes of such profiles across the competitive season; and (c) explore the relationships between these profiles with athlete burnout and engagement.

A sample of 359 adolescent athletes ($Age=16.1$; $SD=1.9$) involved in intensive training settings completed a series of self-reported questionnaire at the beginning, middle and end of the season. Data were analyzed using latent profile transition analyses (LPTA) and path analyses. LPTA results revealed three need profiles for each of the three measurement times: (a) high need satisfaction profile ($N=155, 152$ and 149 for T1, T2 and T3) with high scores of BPNS, moderate scores of BPNF for autonomy and low scores of BPNF for competence and relatedness; (b) moderate autonomy and competence needs profile ($N=148, 169$ and 153) with high scores of BPNS for relatedness, moderately high scores of BPNS and BPNF for competence, moderate scores of BPNS and BPNF for autonomy, and low scores of BPNF for relatedness; and (c) moderate need satisfaction and frustration profile ($N=56, 38$ and 57) with moderate scores of BPNS and BPNF. Athletes exhibited both changes and stability in their need profiles over time. Results of path analyses showed that membership of need profiles at T1, T2 and T3 significantly predicted scores of burnout and engagement at T3 controlling for their T1 scores. The need profile approach was proven useful in understanding the experience and the outcomes of BPNS and BPNF and has implications for psychological intervention.

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The roles of coaches, peers, and parents in high school athletes' motivational processes

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Introduction: Sport participation produces many psychosocial benefits, yet research evidence indicates increasing rates of athlete burnout and dropout during the high school years (Sabo & Veliz, 2016). It is therefore crucial to investigate the motivational processes that influence both the “brighter” and “darker” sides of high school athletic experience. Guided by self-determination theory (Deci & Ryan, 1985), the primary aim of this study was to test a series of hypothesized models for how positive and negative motivational climates created by coaches, peers, and parents contributed to basic psychological needs and ultimately motivational outcomes. The secondary aim was to compare the relative influence of the three social agents on satisfaction and frustration of basic psychological needs. **Methods:** Participants were 311 student athletes (204 boys, 107 girls; $M_{\text{age}} = 15.59$) across 12 sports, recruited from two high schools in the southwestern U.S. They completed validated survey measures of coach-, peer-, and parent-created motivational climates, psychological need satisfaction and frustration, sport motivation, subjective vitality, athlete burnout, and intention to drop out. Structural equation modeling was conducted to test hierarchical models of sport motivation in the sample.

Results: The fit indices for the measurement and structural models revealed that the models concerning either only the brighter or the darker side achieved the criteria for adequate fit (CFI and TLI > .90, RMSEA and SRMR < .08), whereas the comprehensive models with both the brighter and darker sides did not. The variance explained in the endogenous variables ranged from 8% to 87%—79% and 76% in subjective vitality, 83% and 87% in burnout, and 51% and 49% in dropout intention—within the respective “brighter” and “darker” side models. Most of the direct and indirect effects were consistent with the hypothesized relationships ($p < .05$), except that autonomy satisfaction did not predict motivation and that autonomy frustration had a positive direct effect on autonomous motivation. Comparing the roles of the three social agents, coach-created climates had significant effects on all need satisfaction and frustration, peer-created climates had significant effects only on relatedness satisfaction and competence frustration, and parent-created climates had significant effects on competence satisfaction, competence frustration, and relatedness frustration.

Discussion & Conclusion: Of the three socializing agents, coaches emerged as most important social agent in the pathways of both the “brighter” and “darker” sides of high school athletic experience. Specifically, empowering and disempowering climates created by coaches would greatly influence athletes' psychological need satisfaction and frustration, respectively.

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Autonomous vs controlled motivations predicting intention to compete in university sports competition

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Extending the theory of planned behaviour (TPB; Ajzen, 1991), this study aimed to examine how motivational constructs from the self-determination theory (SDT; Deci & Ryan, 1985) influence the intentions of university students to continue to compete in university sports. It was hypothesised that autonomous and controlled motivations predict intention either directly or indirectly through the mediators of attitude, subjective norm and perceived behavioural control (PBC). Participants (N=127) completed a self-report questionnaires that assessed their autonomous and controlled motivations, attitude, subjective norm, PBC, and intention to continue participating in university sports competition. Path analysis was conducted to analyse the relationships among the variables in the hypothesised model. All paths were in the expected directions as hypothesised. Attitude, subjective norm and PBC predicted intention to compete as expected in accordance to TPB. While autonomous motivation predicted attitude and subjective norm, controlled motivation predicted attitude only. Both autonomous and controlled motivations did not predict intention directly. The indirect effects of autonomous motivation via attitude and subjective norm on intention were significant. On the other hand, all specific indirect effects of controlled motivation via each of the three mediators on intention were non-significant. Results suggest the potential utility of the extended TPB model, and the importance of autonomous motivation in influencing students' intentions to continue to compete in university sports through their attitudes and subjective norms.

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Integrating attachment and the three-factor theory of anthropomorphism into self-determined need satisfaction with sport.

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Attachment theory is a regularly and increasingly applied theoretical construct for understanding whether and how individuals experience nonhuman relationships and derive support from such relationships (Keefer, Landau, & Sullivan, 2014). The three-factor theory of anthropomorphism (Epley, Waytz, & Cacioppo, 2007) posits individuals are motivated to view nonhumans agents as human because we: a) can only elicit agentic knowledge of humanness; b) gain effectance by imbuing predictable human nature onto otherwise unpredictable nonhumans, and; c) use nonhumans to satisfy a desire for affiliation. The three-factor theory is a useful framework for understanding why people seek support from nonhuman others. Athleophilia is a protologism of the Greek “*áthlima-*” meaning sport, and “*-philia*” meaning love, friendship, and mutual concern for or a disposition towards another to explore athletes’ experiences of meaningful affective connections with sport, excluding humans. This presentation discusses a three-study mixed-methods programme of research which explored whether, how, and why athletes experience athleophilic relationships. Linear regression (study 1) suggests attachment to, and the features of, athleophilic relationships enhance the predictive strength of wellbeing and relatedness. Interpretive phenomenological analysis (study 2) revealed athleophilic attachments offer an opportunity to satisfy socially unacceptable desires in a socially acceptable manner and can be so need supportive they alter interpersonal working models of attachment. Finally, experimental analysis (study 3) identified engaging with athleophilic partners offers (dis)similar support to other nonhuman forms of support. Cumulatively, the results of these studies suggest athleophilic relationships exist, are need supportive, and offer support in a distinctive manner to other nonhuman, and indeed human, relationships. This multi-theory perspective of relationships with sport broadens the scope of attachment theory, demonstrates the applicability of the three-factor theory of anthropomorphism within sporting contexts, and questions the ability of nonhuman support to be integrated into the social matrix of need supportive relationships in self-determination theory. It is argued the relatedness benefits derived from engagement in sport extend beyond interactions with other humans and future consideration of the impact provided by mutual athleophilic relationships with sport is required.

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Temporal ordering of motivation and burnout among adolescent athletes in intensive training settings: a cross-lag structural equation modelling approach

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Youth athletes in intensive training centres seem particularly vulnerable to burnout due to the high physical, psychological and social demands inherent in their situation (Isoard-Gautheur, et al., 2016). Targeting this intensive training context, studies have emphasised the role of motivational factors as potential athlete burnout antecedents. Nevertheless, the prevalence of correlational studies in the literature has prevented the exploration of temporal ordering between motivation and burnout whereas it is a critical issue not only for theorists but also for practitioners who try to prevent or minimise athlete burnout (Martinent et al., 2014). Thus, using self-determination theory as the theoretical framework, we conducted a longitudinal investigation of the temporal ordering between motivation and burnout among youth athletes in intensive training setting.

Data were collected from 94 adolescent athletes (36 girls, 58 boys; *M age* = 16.9 years old; *SD* = 1.0) in intensive training centres using a 7-month 2-wave design. Participants completed series of self-reported questionnaires designed to assess sport motivation and athlete burnout in the early-season phase (Time 1 - T1) and in the end-season phase (Time 2 - T2). Structural equation modelling of cross-lagged panel two-wave two-variable models was used to test the temporal ordering between sport motivation and athlete burnout. Results showed 11 significant paths leading from athlete burnout – physical exhaustion, reduced sense of accomplishment, emotional weariness – at T1 to amotivation, external regulation, identified regulation, integrated regulation, and intrinsic motivation at T2. In contrast, 6 significant paths leading from motivation at T1 (amotivation, external regulation and intrinsic motivation) to athlete burnout at T2 (physical exhaustion, reduced sense of accomplishment, emotional weariness) were identified. Because visual illustrations of the SDT have often placed sport motivation as an antecedent of athlete burnout, researchers have typically interpreted their findings as an indication that sport motivation significantly predicts athlete burnout (Martinent et al., 2014). Our results provided evidence that athlete burnout also predicts motivation over time.

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17A-140

Dimension of autonomy support: its influence on subjective vitality and self-regulated learning

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Various researches regarding the autonomy support in the frame of SDT have been published in last 30 years. Autonomy is a core concept (Ryan & Deci, 2006) and they raised important questions concerning the nature of autonomy and its limits. SDT views the issue of autonomy as a key to understanding the quality of behavioral regulation (Ryan & Deci, 2006), and vitality is vital for student learning particularly in school settings. Therefore, it would be important to differentiate not only with understanding the nature and consequences of autonomy support, but also in detailing what constitutes the construct of autonomy support, and how it can facilitate the self-regulated learning by subjective vitality in school context. Further, subjective vitality in this study was expanded to including academic vitality. The primary goal of this research was to validate the dimension of autonomy support including 3 sub-factors, autonomous will, autonomous choice, and autonomous behavior, and to examine the influence on self-regulated learning. The second goal of this research was to test a structural model among autonomy support, subjective vitality, and self-regulated learning perceived by elementary school students, and mediation effect subjective vitality between the measured variables. A total of 219 elementary school students participated. Descriptive, correlation and alpha coefficients, hierarchical regressions, CFA using SEM were performed. The results are as follows: first, CFA on autonomy support scale (Lee, 2018) and subjective vitality scale showed that fit indices of χ^2/df , CFI, TLI, and RMSEA were met the acceptable criteria. Cronbach's α for the scales were .928 and .951. Second, the results of the path model showed the good fit indices of χ^2/df , CFI, TLI, SRMR, and RMSEA. And, the results indicated that subjective vitality mediated the relation between autonomy support and self-regulated learning of elementary students. This study suggests understanding the constructs of autonomy support and academic vitality in school context is critical to understand student learning outcomes. The practical implication indicates the significance of encouraging students' support of autonomous will, choice, and behavior, and awakening the vitality that help promotes self-regulated learning.

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17A-141

Predicting children's motivation in Grade 1: the roles of perceived teacher structure, autonomy support and their interaction

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Introduction: Results among older children and adolescents suggest that teacher structure predicts autonomous (i.e., intrinsic and identified) motivation, particularly when it is done in an autonomy supportive manner (Vansteenkiste et al., 2012), whereas links with controlled (i.e., introjected and external) regulation are less clear (Guay, Roy, & Valois, 2017). Moreover, associations between teacher structure, alone or in combination with autonomy support, have not been investigated among Grade 1 children despite the fact that motivation close to school entry (and its determinants) may have enduring consequences for children's academic adjustment. The goal of this study is to document the roles of teacher structure, autonomy support and their interaction in the prediction of children's intrinsic motivation, identified regulation and external regulation in Grade 1.

Methods: Preliminary data from 67 students in Grade 1 from an on-going longitudinal study was used. Using interviews, children were asked to report on teacher autonomy support and structure as well as intrinsic motivation, identified regulation and external regulation.

Results: Controlling for child sex and age, results revealed that teacher structure, but not autonomy support, predicted children's intrinsic motivation, identified regulation and controlled regulation. For intrinsic motivation, there was also an interaction between structure and autonomy support, with structure being a stronger predictor of intrinsic motivation at high levels of autonomy support.

Discussion: Given that teacher structure is hypothesized to relate to greater autonomous motivation by supporting children's perception of competence, these results suggest that competency-based processes are central to children's motivation close to school entry. Consistent with other studies, autonomy support was also found to enhance the predictive role of structure in the case of intrinsic motivation. The relevance of structure for young learners will also be interpreted based on cognitive load theory.

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17A-142

Does gender moderates the effects of basic psychological needs supportive/thwarting teaching on motivational outcomes, needs satisfaction and behaviour?

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According to Deci and Ryan (2002), three universal and innate psychological needs motivate the self to initiate behavior: the need for competence, autonomy and relatedness. To actualize the potential of these needs, nurturing and support from the social environment is needed. Likewise, in the contexts of schools, teachers can create environments in which the active engagement and psychological growth of students are supported or thwarted. Much research has already demonstrated that autonomy support, structure and teacher involvement seem to be relevant to fulfil students' needs and to support motivation, self-regulation and engaged behaviour (Stroet, Opendakker & Minnaert, 2013). However, much less is known about the darker sides of teaching, namely needs thwarting teaching such as controlling behaviour, chaos in the classroom and teacher rejection and neglect. In addition, not much is known about the potential moderating role of student gender in the relation between supportive/thwarting teaching and the above mentioned student outcomes. In the few studies, addressing gender issues and effects of teaching/coaching (e.g. Hudges & Coplan, 2018), some evidence for a gender moderation effect is found, which often indicates the greater sensitivity of boys.

In this study, the effects of needs supportive teaching (autonomy support, structure, teacher involvement) and thwarting teaching (controlling instructional behaviour, chaos/inconsistency/uncertainty, neglect/rejection) on motivational outcomes, basic psychological needs satisfaction and behaviour are investigated and, in particular, whether gender moderates these effects. Participants are first-grade secondary education students and their math/English class teachers ($N_{\text{classes}}=40$; $N_{\text{students}}=572$). Questionnaires were used to tap students' perceptions of teaching characteristics and outcomes. Psychometric properties of the scales were sufficient to good (range: $\alpha=.61-.82$).

Multilevel modeling was applied. Results reveal that, in general, needs supportive teaching is beneficial and needs thwarting teaching is harmful. Furthermore, not much evidence exist for an overall moderating effect of gender on the effects of need supportive or thwarting teaching. However, with regard to particular teaching-student outcome combinations a gender moderating effect exists and in most cases, it indicates a higher sensitivity of boys for the effects of teaching. Findings highlight the importance of paying attention to both support and thwart dimensions in daily classrooms, also in relation to gender.

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Student's behavioral and emotional engagement and links with perceived support from teachers: Gender differences.

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Previous research indicates that student engagement is essential for learning and successful completion of education.

The level and quality of teacher support have been found to influence student engagement. One explanation for this is that support from teachers facilitates the fulfillment of basic needs, and, that this makes students more able to enjoy and invest in school work.

There is a gender gap in educational outcomes, which could possibly be explained by differences in engagement and how engagement is related to perceived teacher support. Such gender differences have received relatively little scientific attention (Stroet et. al, 2013).

This study examined gender differences in the levels and associations of student reported behavioral and emotional engagement with perceived emotional support, support for the structuring of learning activities, and, learning process support from teachers. Engagement was measured by the behavioral and emotional engagement dimensions of the scale "Engagement Versus Disaffection with Learning: Student Report version" (Skinner et. al, 2009). This measurement implement a motivational perspective on engagement and the emotional engagement dimensions has strong similarities with measurements of intrinsic motivation, whereas behavioural engagement assesses perceptions of effort invested in school work.

The sample consisted of 1,265 Grade 8 through 10 students from 66 secondary school classes. First, the results showed that girls reported slightly higher behavioral engagement than boys, whereas no difference in emotional engagement was found. Second, for teacher support, boys tended to respond slightly more positively. Third, perceptions of teacher support accounted for more variance in emotional than behavioural engagement, and also more variance in behavioural engagement among boys. Finally, structuring of learning activities showed a stronger association with behavioural engagement or effort among boys, whereas learning process support showed a stronger association with emotional engagement among girls. The results indicate that teacher support, especially support for the structuring of schoolwork, is more important for behavioural engagement among boys, whereas support for a deeper understand of learning tasks has greater potential for stimulating emotional engagement or intrinsic motivation among girls.

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doi:10.1016/j.edurev.2012.11.003

Need-supportive teaching practices and student need fulfillment in low socioeconomic elementary schools: the moderating effect of anxiety and academic achievement

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Children from disadvantaged families are more likely to experience an array of problems, including a higher risk of developing internalizing symptoms, such as anxiety symptoms, and lower academic achievement. To overcome the negative effects of poverty and favor academic success for the most vulnerable children, researchers and school professionals must find effective ways to support all students. The Self-Determination Theory (SDT) states that all humans have three basic psychological needs: competence, autonomy, and relatedness. Based on this theory, Connell and Wellborn's Self-System Model of Motivational Development (SSMMD; 1991) posits that teacher structure, autonomy support, and involvement positively contribute to students' perceptions of competence, autonomy, and relatedness. Few studies have tested this model and assessed whether vulnerable students benefit from these teaching practices. Still, the literature suggests that anxious and low-achieving students may benefit even more than their peers from a supportive classroom environment.

This study examined whether student anxiety and academic achievement moderated the associations between teaching practices and student self-perceptions. A sample of 424 students and 45 teachers from five elementary schools located in low socioeconomic status neighborhoods filled the same questionnaires on three occasions over two consecutive school years (T1-end of first year; T2-beginning of second year; T3-end of second year). Our results globally supported the application of the SSMMD with vulnerable students. Multilevel path analysis controlling for student characteristics and initial self-perceptions revealed that most disadvantaged students perceived themselves as competent and related to their teacher in highly structured and warm classrooms. However, no significant associations were found between teacher autonomy support and student perception of autonomy. This result could be explained by our measure of the concepts, or by the fact that students in the sample simply felt highly autonomous throughout the school year. Finally, cross-level interactions demonstrated that low-achieving anxious students ($b = .41, p < .001$) benefited more from teachers' structuring practices compared to their less anxious or higher-achieving peers. As anxious and low-achieving students tend to present lower levels of competence, being in a classroom where they feel in control and know what is expected from them seems to be helpful. This study supports the implementation of effective teacher training programs encouraging the use of structure and involvement with disadvantaged students.

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17B-145

Show me the money: Towards an economic model for cost-benefit analysis of employee engagement interventions

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Purpose The purpose of the present research was to reconcile various theoretical directions in employee engagement with Self-determination Theory as a unifying framework and introduce an inter-disciplinary employee engagement economics model based on SDT.

Design/Methodology/ Approach Two studies were conducted applying a T1/T2 intervention study design. Study 1 examined the causal relationship between an organizational intervention and employee engagement with $n=367$ employees from a European pharmaceuticals company using both survey and actual performance data. Study 1 results were used as input data for study 2 which tested the employee engagement economics model by calculating the pre-/post- economic value added and return on investment for the intervention.

Findings Study 1 results showed a significant positive impact of the Self-determination Theory-based intervention on both self-reported and actual employee engagement. Study 2 converted study findings into pre/post economic considerations putting an economic \$ value on achieved employee engagement gains and calculating a return on investment in relation to the cost incurred.

Implications The present results support Self-determination Theory as a unifying theory for employee engagement and the proposed employee engagement economics model as strategic decision making tool for planning and evaluating the economics of employee engagement interventions.

Originality/Value This is the first research to contribute an empirical economic model for employee engagement interventions to literature. It is based on the first reconciliation of engagement literature identifying Self-determination Theory as a unifying framework. Finally, for the first time, this work identifies subjective vitality as a measure for engagement and contributes a definition for disengagement to literature.

17B-146

Crafting the internalization of work motivation

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Introduction: Motivation which has been internalized with the self, becoming congruent with one's values or beliefs, is an important predictor of both wellbeing and work performance, particularly when tasks themselves are not intrinsically interesting. Despite the fact that motivation internalization is theoretically a proactive process we know nothing about how individuals operate as active agents in this process.

Methods: Through interviews with 39 employees in two non-profit organizations, focusing on critical incidents of internalization through identification, this paper provides insights about the nature of this process.

Findings: Following an initial evaluation, individuals undertake a process of self-reflection and cognitive reframing through which they internalize their motivation for work tasks. Internalization through identification was found to occur through three processes; focusing on prosocial, developmental, or opportunity-enhancing outcomes. Further insights about the recursive nature of internalization, and the active role of individuals in the process, serve to elaborate the theory of motivation internalization outlined within self-determination theory, and also the process of cognitive crafting, through which individuals actively shape the cognitive boundaries of their work.

Conclusion: This paper provides important theoretical elaboration about the process of motivation internalization, placing the individual as an active agent in this process. As well as theoretical development, this research has practical implications for how individuals can proactively internalize their own motivation.

17B-147

The impact of motivation on return to work after work disability: The Self-Determination Approach

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Work disability can be assessed in many ways. For a long time, a biomedical framework was used with focus on physiopathology and other biological approaches. In practice, this approach seemed to have shortcomings. For some cases, it is clear that the patient is not able to work (e.g. a roofer with a broken leg) or is prohibited to resume work (e.g. a bus driver with a driving ban after an epileptic seizure). But how can we explain the phenomenon that in two patients with similar job activities and a similar pathology, the first one **returns to work** and the other does not? This requires a shift from a biomedical to a biopsychological perspective. In psychology, research on motivation is on the rise. **The Self-Determination Theory (SDT)** has been developed in the past 40 years based on scientific research and has been applied in various fields: sports, relationships, education, teaching etc. Recently this theory has been introduced to the work context (Gagné & Deci, 2005; Sheldon, Turban, Brown, Barrick & Judge, 2003) and its usefulness has been proven (Van den Broeck, Vansteenkiste & De Witte, 2008). Research of the theory applied to the context of work disability is **scarce**. Preliminary data from the first phase of our research (cross-sectional questionnaire study) show us that the motivational dimensions of the SDT are also represented in work disability. Final data will be available by mid march 2019. Our longitudinal questionnaire study adds the dependent variable of time before return to work. Preliminary data will be available for the conference. In a second phase of the current study, a RCT will be performed comparing the consult as usual in the context of the social security physician and disability management to a consult that takes into account the basic psychological needs conform the Self-Determination Theory. This study will start in April 2019.

In short, work disability is a major societal problem in Belgium. Yet, today the evaluation of work disability is based on the medical knowledge and gut feeling of the social security physician. More specifically, motivation seems to be an important factor in work disability and return to work but is difficult to pin down. There is a need for evidence-based practice and scientific research on the topic of motivation. Complementary, there's a need for an evidence-based and hands-on inworkcoaching in the return to work process.

17B-148

Individual motivation among entrepreneurs in the creative industries: A self-determination perspective

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The challenging and insecure work conditions that come with working in the Creative Industries (henceforth, CI) and their effects on individuals' wellbeing raise questions as why people, of their own volition, become individual entrepreneurs (self-employed workers or one-person firms) in this environment, and how they stay motivated. We aim to shed light on the deep mechanisms that keep individuals motivated in this insecure environment. In line with SDT, we advance the central proposition that three complementary needs positively relate to someone's motivation to work in the CI: the needs for autonomy, competence and relatedness.

We collect data through a survey among entrepreneurs working in the Dutch CI and examine what motivates these professionals to work in an environment characterized by tough competition and uncertainty. Specifically, we analyse our respondents' self-perceived (creative and entrepreneurial) competences and needs (for autonomy and relatedness) in relation to their motivation to execute creative work. Particularly, in our analyses, we use and adjust three extant scales: the entrepreneurial self-efficacy scale commonly used in entrepreneurship studies, a scale measuring the needs for relatedness and autonomy derived from Sheldon and Bettencourt (2002), and the Sports Motivation Scale II adjusted to the CI context, originally developed by Pelletier et al. (2013).

Our results show that the need for competence is a consistent predictor of an individual's motivation to work in the CI. Furthermore, we find that although intrinsic motivation is high among entrepreneurs working in the CI, those who have a relatively high esteem of their creative capabilities do expect external rewards as well. We find no evidence for creatives' needs for autonomy and relatedness being intricately linked to their intrinsic motivation, which is in contrast with SDT. Our study suggests the existence of a trade-off between autonomy and commercial viability rather than one between intrinsic and extrinsic motivations. The present article contributes to existing research in three ways. We (1) provide further micro-level insights about the organization of creative production, we (2) provide a new application of SDT and, in so doing, (3) expand and refine the psychometric toolbox of this theory for the empirical setting of the Creative Industries.

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17B-149

Gratitude at Work: A Self-determination Theory Approach

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Purpose

A substantial body of research has found a positive link between gratitude and well-being in life settings. However, only a few cross-sectional studies have explored gratitude at work. Therefore, we tested the longitudinal link between gratitude and several measures of well-being and attitudes in the workplace. In addition, we explored the mediational role played by the satisfaction of the basic psychological needs for autonomy, competence and relatedness – as postulated by the Self-determination theory – in the mentioned links.

Design/Methodology

We assessed a large sample of Chilean workers (Study 1; $N = 1841$) using SEM and a three-wave cross-lagged design with three months between each wave.

Results

First, we found that gratitude prospectively predicts higher work satisfaction and engagement as well as lower burnout and job insecurity. Second, our results also show that need satisfaction mediates the mentioned links.

Limitations

We used self-report measures.

Research/Practical Implications

We showed that gratitude is a key life orientation that may help increasing need satisfaction, which in turn may lead to higher engagement and work satisfaction as well as to lower burnout and job insecurity. This process would start a vicious circle for employee's well-being.

Originality/Value

We show for the first time that (1) gratitude prospectively predicts several job outcomes over time (2) need satisfaction mediates the mentioned process.

17C-150

A qualitative study of motivation among overweight adolescents after participating in a physical activity intervention

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Overweight and obese adolescents are reported to be less physically active and fit compared to their leaner peers. Self-determined motivation for physical activity (PA) and exercise has been found to be positively associated with PA in adolescents. According to Self-determination theory (SDT), motivation is multidimensional and can be understood as running along a continuum, from controlled to autonomous forms. Autonomous regulation of behaviour is held to be more stable and enduring in addition to having more positive effects on well-being than controlled regulation. PA interventions grounded in SDT show promise. However, research has mainly studied motivation using questionnaires. There is a call for qualitative studies investigating motivation for PA as expressed by the participants.

The aim of the present study was to explore how participation in a 12 weeks internet-based PA intervention called "Young & Active", influenced the participants' short-term and long-term motivation. Inputs from SDT, coupled with principles from motivational interviewing (MI), were used to support motivation through tailored written counseling in addition to automated feedback on progression.

Altogether 21 adolescents aged 13-14 years participated in two qualitative research interviews, the first immediately after the intervention and the second 9-12 months later. The adolescents were recruited from the "Young & Active" intervention group. Data were analysed using qualitative content analysis. SDT was applied as a theoretical and explanatory framework.

The adolescents' remarks reflected moves between different forms of motivation along the motivational continuum as described by SDT. Analysis revealed four main thematic groups: 1) Reinforcement of a habit 2) Promotion of competence and enjoyment 3) Boost of temporary change 4) Reinforcement of adverse habits. Adolescents in the first group described PA as being a natural part of their lives while the second group went from being inactive to increasingly physically active during the intervention. Both groups described themselves as physically active at the second interview. The third group also increased their PA level during the intervention. However, their motivation for participation was mainly externally regulated and their routines collapsed as the intervention ended. Adolescents in the fourth group did not like PA at all. Some attempted to become more physically active, but resigned, primarily due to lack of support in their environment. This study provide valuable insights into the diversity in motivation quality between adolescents following a PA intervention informed by SDT and MI.

17C-151

A controlled test of autonomy support training in a weight loss program for couples

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Introduction. Given the interdependence of weight in couples, weight loss outcomes might be improved by facilitating an interpersonal environment that supports sustained behavior change. According to Self Determination Theory (SDT), greater autonomous self-regulation of behavior and subsequently better treatment outcomes are observed in autonomy-supportive environments in which choice is supported and criticism and control are minimized. The current research tested a couples weight loss intervention designed to facilitate the autonomy supportive behavior of spouses.

Methods. Project TEAMS (Talking about Eating, Activity, and Mutual Support) was a randomized controlled trial testing a couples-based intervention, grounded in SDT, designed to train spouses to provide autonomy support for each other's eating and physical activity behavior. Sixty-four couples were randomized to either 6 months of treatment based on SDT or to 6 months of a standard behavioral intervention. Couples attended weekly group sessions for 6 months, assessed at 0, 3, 6, and 12 months.

Results. The participants achieved substantial weight loss over the six-month intervention. Autonomy support was strongly associated with greater weight loss while more directive support from partners was not. Both baseline autonomy support and increases in autonomy support over the course of the study showed this association. Change in autonomy support was positively associated with greater autonomous self-regulation and greater perceived competence. The autonomy support intervention did not produce a significant difference in the type or quality of supportive behavior that couples provided to one another. However, the results show that couples with lower baseline autonomy support appeared to gain the most from the intervention at follow-up, suggesting that this type of intervention may work better with those who need it more, and probably exerts its effect over time, rather than immediately.

Discussion. This study provides an important test of the benefits of approaching weight management as a couples health issue. Clearly the manner of couples' support is vitally important. Autonomy support highly predicts behavior change, but more directive forms of support, do not appear to provide similar positive benefits. Therefore, finding ways to improve the delivery of autonomy support for crucial health behaviors remains a fundamentally important goal for any intervention strategy.

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17C-152

Experienced relatedness in an eHealth counselling intervention for adults with type 2 diabetes

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Introduction eHealth interventions are promoted worldwide and are expected to hold a great potential in future health care for people with chronic diseases. The increasing prevalence of type 2 diabetes (T2DM) and the complexity of diabetes self-management demonstrate the need for innovative and effective ways to deliver self-management support for this patient group. To respond to this, we developed and conducted a pilot trial of an eHealth counselling intervention for adults with T2DM based on the guided self-determination program (eGSD). However, like many other eHealth interventions, we experienced a high dropout rate. To inform further development of the current as well as similar interventions, the aim of this study was to explore how both nurses and patients experienced that the intervention affected their relatedness and consequently motivation for intervention-participation.

Methods The method for data-collection was qualitative in-depth interviews with all participants in the intervention: 12 who dropped out, 10 who completed, as well as 4 nurses conducting the intervention. All 26 transcribed interviews were analyzed using qualitative content analysis.

Results The findings indicate that both patients and nurses experienced that some aspects of the eGSD with written communication facilitated communication and a reciprocal understanding in the relationship. However, both participants who dropped out of the intervention, participants who completed the intervention, as well as nurses, clearly expressed preferring a combination of written communication in eHealth and regular in-person meetings, as this facilitates clearing up possible misunderstandings and allows for "calibration" of the relationship. In-person meetings was experienced as necessary to maintain motivation for intervention participation.

Discussion & Conclusion Interpreted through the lens of SDT, communicating asynchronously in writing appears to render difficult supporting relatedness for *some* patients, as digital communication facilitates less experience of support from and connection with the nurse. All participants (patients and nurses) involved in the eGSD underlined the importance of in-person meetings. Even though communication and working towards mutual understanding, collaboration and problem solving are key-aspects of the counselling intervention, it appears the eHealth version did not facilitate this potential. A "blended" version of the eGSD seems necessary to realize its full potential on the nurse-patient relatedness. Written asynchronous communication should ideally complement rather than replace verbal communication. Thus, the current eGSD intervention demands several adjustments related to content and process, as well as technological solution, before evaluation and implementation in health care would be feasible.

17C-153

The impact of severe asthma on patient autonomy

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Introduction

As a key construct of Self Determination Theory (SDT), autonomy lies at the heart of healthcare guidelines which emphasise patient-centeredness, shared decision-making and self-management. Whilst clinical intervention studies have examined autonomy and tested its efficacy, the construct has not been utilised to analyse people's personal experiences of living with a chronic condition and the role that it plays in their day-to-day lives. Increasing recognition of the importance of supporting patient autonomy, combined with the paucity of exploratory studies of patients' experiences of living with severe asthma, highlight the need for research in this area. Thus, our aim was to examine the role of autonomy in patient's narratives about their experiences of living with and managing severe asthma.

Methods

Qualitative research methods were used to conduct in-depth, semi-structured interviews. Participants were included if they were ≥18 years old and diagnosed with severe asthma by a respiratory physician. A maximum variation sampling frame was used to recruit participants across a range of ethnicities, sociodemographic backgrounds, and from rural and remote areas. Interviews were video and/or audio recorded, transcribed and thematically analysed through the SDT lens of autonomy.

Results

A total of 36 participants participated in face-to-face interviews, lasting 1.5 - 4 hours. Findings revealed that living with severe asthma affects physical and mental well-being, relationships and quality of life. Autonomy was enacted and challenged in a range of situations, such as interactions with healthcare providers, maintaining employment, managing symptoms and threats to self-identity. Two themes were discerned from the analysis: 1) the desire to live an 'unconstrained' life: participants valued shared decision making, desired to maintain employment, 'pushed through' illness, and resisted efforts by others to constrain their daily lives; and 2) efforts to preserve self-identity: participants sought to maintain their valued roles and identities, and to strive for 'normality' in the face of a long-term and debilitating illness.

Conclusion

Using SDT's construct of autonomy as a lens allowed us to question assumptions made within the biomedical model about people's experiences of living with severe asthma and their associated behaviours. Our findings highlight that severe asthma disrupts the sense of wholeness of self; this triggered autonomous actions to preserve or reconstruct participants' identities as a means to re-orientating their lives. Understanding the role of autonomy in patient self-management has the potential to support the development of optimal chronic disease self-management practices.

17C-154

Using self-determination theory to understand vocational education and training students' motivation for physical activity and healthy eating

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Introduction

Insufficient physical activity and unhealthy dietary habits are a threat for Vocational Education and Training (VET) students, as this behavior may lead to lower academic performance and increase the risk of major non-communicable disease and sick-leave in later life. Given these public health risks theory-based interventions that enhance a healthy lifestyle among VET students are urgently needed. One theoretical perspective that appears useful for understanding various motivational issues in health behavior change is self-determination theory (SDT). The purpose of the present study was to examine whether amotivation, controlling and self-determined types of motivation could predict VET students' physical activity and dietary behavior.

Methods

Eight hundred and ten VET students (303 males, 507 females) aged 16-33 (mean 17.8, SD 1.9) from three VET schools took part in the study. The self-administered online questionnaire included questions on socio-demographic factors, health behaviors and self-regulation¹ for regular exercise and eating a healthy diet. Logistic regression, controlling for age, sex and body-mass index, was used to assess how well SDT constructs predicted students who met the Dutch physical activity recommendations or Dutch dietary guidelines and students who did not.

Results

In general, the participants had very low amotivation and controlled regulation and moderate self-determined motivation for regular exercise as well as for eating a healthy diet. Achieving the Dutch physical activity guideline was associated with controlled regulation (OR 1.4) and amotivation (OR 0.7). Meeting the Dutch dietary guideline for fruit consumption and not meeting the guideline for snack consumption were both associated with autonomous regulation (OR 1.5 respectively OR 0.5).

Discussion & Conclusion

VET students show different forms of behavioral regulation for physical activity and dietary behaviors. More autonomous forms of behavioral regulation are positively associated with healthy eating whereas controlled motivation is positively associated with physical activity. This may suggest that VET students might respond positively to social pressures to be physically active. Therefore, interventions grounded in SDT should take care to include strategies that enhance more autonomous forms of behavioral regulation as well as controlled regulation in VET students.

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17D-155

Specifying the active components of self-determination theory-based change interventions in health contexts: an expert consensus study

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Introduction: While self-determination theory-based interventions have been effective in changing health behaviour, the unique components (e.g. techniques) of these interventions have not been isolated. The absence of a classification of intervention components from the theory hinders intervention description and identification of the components responsible for behaviour change. The aim of this study was to identify, define, and classify the distinct individual components of SDT-based health interventions that are more likely to influence the key mechanisms of action underlying motivation and behavior change, according to SDT.

Methods: Candidate Motivation and Behaviour Change Techniques (MBCTs) were initially identified through literature review of self-determination theory interventions, instruments and expert nomination. Formal descriptions and associations with the most closely-related psychological need satisfaction constructs were provided by the study team. A panel of eighteen (11 male, 7 female) international SDT leading experts participated in three expert-consensus rounds. First round consisted of open feedback. In rounds 2 and 3, experts were asked to rate (1) the specificity of each MBCT in impacting on a primary need – autonomy, relatedness or competence, (2) uniqueness in relation to other MBCTs, and (3) essentiality in a SDT-based intervention. Frequencies and modes of responses were calculated for each MBCT. Intraclass correlation coefficient was calculated across expert's ratings on the MBCTs. Redundancies of the final MBCTs against techniques from previous taxonomies of behaviour change techniques was also checked.

Results: Based on the consensus rounds, a final classification of 21 motivation and behaviour change techniques (MBCTs) was produced, organized by the three needs – autonomy (e.g. Provide a meaningful rationale), relatedness (e.g. Show unconditional regard) and competence (e.g. assist in setting optimal challenge). Most MBCTs were considered to target their primary need, and considered essential or important components of a SDT intervention. The large majority of MBCTs we considered to be overlapping with other MBCTs. ICC showed good consensus on ratings across experts (ICC=.784 to .929).

Discussion: This classification system is the first formal attempt to systematize self-determination theory intervention techniques. We expect it will enhance consistency in descriptions of, and facilitate better synthesis of evidence for, self-determination theory-based interventions in health contexts. In this presentation we will address the full methods and results from this work, and discuss the usefulness and challenges when applying this classification system to the design, report and critical appraisal of SDT-based behavior change interventions.

17D-156

Autonomy-supportive dental treatment, oral health-related eudaimonic well-being, and oral health: A randomized clinical trial

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Objective: We tested the hypotheses that a dental intervention designed to promote dental-care competence in an autonomy-supportive way, relative to standard care, would positively predict patients' perceived autonomy support from dental professionals, increases in eudaimonic well-being (i.e., both personal growth and purposeful behavior goals), and improved oral health (i.e., reduced dental bacterial plaque on tooth surface) over 5.5 months. We also tested a self-determination theory model with the intervention positively predicting perceived autonomy support, which in turn would predict increases in eudaimonic well-being, leading to improved oral health.

Design: A randomized two-group experiment was conducted at a dental clinic with 138 patients ($M_{age} = 23.31$ yr., $SD = 3.5$). Variables were measured before and right after the intervention and 5.5 months later.

Results: Overall, the experiment and hypothesized process models received strong support. The effect sizes were large for perceived autonomy support, change in personal growth, and change in dental plaque, whereas the effect size for purposeful behavior was moderate. The measurement and structural models for the SDT process model received good fit.

Conclusions: The current field experiment extends previous knowledge by showing that promoting patient dental-care competence in an autonomy-supportive way strongly improves oral health through patients' eudaimonic well-being.

17D-157

Counselors' views on autonomy support in counseling for prenatal anomaly screening

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Introduction

Given the strong views regarding patients' autonomy, obstetric care providers search for ways to facilitate resilience and self-regulation in their clients. Autonomy-supportive care respects the client's choices, even if they differ from the preferences of the care provider or conventional healthcare options.¹ In the context of prenatal anomaly screening, this is considered even more crucial. Here pregnant women face the moral choice whether to opt for anomaly screening that informs her about possible anomalies in her unborn child, and to bear the consequences of her choices. Earlier research shows that counselors hardly provide autonomy support during counseling in practice.² It is however unknown if counselors endorse the importance of autonomy support in counseling. Therefore we explored counselors' views on 'good' counseling for prenatal anomaly screening and the extent to which these views are autonomy-supportive.

Methods

In February 2017, an online cross-sectional survey, containing open- and closed ended questions, was sent to all ~3000 Dutch prenatal counselors, most being midwives. In total, 1568 (52%) counselors completed the questionnaire. We performed secondary analyzes to explore the extent to which counselors endorse the three basic psychological needs that facilitate client autonomy as described by Self Determination Theory; competence, autonomy, and (peer-)relatedness. We coded and labeled the open answers to allow statistical analysis.

Results

According to 1187 (74%) counselors, improving parents' *competence* through education is essential for prenatal counseling to facilitate an autonomous informed-choice. Non-directiveness was relevant according to 1058 counselors (66%) to *support clients' autonomy*. Furthermore, 143 (9%) counselors emphasized *peer-relatedness* between expectant parents, and 62 (4%) counselors stated deep-listening to be important to get to know and understand clients' values.

Discussion & Conclusion

Consistent with other research, results suggest that counselors views on 'good' counseling are not fully autonomy supportive. Therefore, policy makers and educator will need to offer counselors specialized education. Such education should address the pillars of SDT to facilitate awareness that mainly improving parents' *competence* through health education does not fully support informed choices. Furthermore, training should enable counselors to support *autonomy* and attend *relatedness* to facilitate clients' self-regulation.

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17D-158

Towards a fine-grained understanding of motivating and demotivating interactions in chronic care counseling

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Background. The trend towards more active involvement of patients in the management of their chronic condition requires professionals to interact in a way that facilitates patients' autonomy and motivation. A self-assessment tool that measures simultaneously motivating and demotivating interaction styles in counselling chronic ill patients, is not available.

Objectives. Grounded in the Self-Determination Theory, this study aimed to develop and validate a self-reporting tool that captures healthcare professionals' motivating (i.e., autonomy-support and structure) versus demotivating (i.e., control and chaos) interaction styles while supporting patients towards self-management.

Methods. The Situations In Self-management support – HealthCare Professionals (SIS-HCP) was developed throughout a five-phased psychometric validation study with (1) construct defining, grounded in SDT, (2) development of the vignette-based questionnaire, (3) ecological validation and piloting, (4) psychometric evaluation (round 1) by multidimensional scaling analysis, and (5) psychometric evaluation (round 2) by internal and construct validity, and reliability testing procedures in 5 independent samples (total N=1133).

Results. Multidimensional scaling analysis revealed a two-dimensionality within the scale, with motivating, relative to demotivating counselling; and high, relative to low directiveness representing the two axes. Four styles could be distinguished: autonomy-support (rather motivating and non-directive), structure (rather motivating & directive), control (rather demotivating & directive) and chaos (rather demotivating & non-directive) within self-management support. These styles were situated along a circumplex. The SIS-HCP demonstrated good construct validity, and high internal consistency and test-retest reliability. More fine-grained subareas were indicated along the circumplex.

Conclusion. The SIS-HCP is a vignette-based tool. The SIS-HCP allows to explore, in a conjunct way, which motivating (i.e., autonomy-support and structure) and demotivating (i.e., control and chaos) styles healthcare professionals use when counselling patients living with a chronic illness. The SIS-HCP might trigger professionals' awareness on their counselling styles and how they provide ownership to the patient. The SIS-HCP represents an interesting addition to existing instruments which were only able to measure what professionals do in the task domains of self-management support. The tool can be used as a reflective tool for professionals and for tailored training.

Autonomy support, basic needs, motivation and emotional consequences in older patients: Role of causality orientations

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Causality orientations theory, a mini-theory of Self-Determination Theory (SDT, Ryan & Deci, 2002) defines causality orientations as personality factors and refers to propensities to organize behavior by orienting toward interests, values, and supports for them in the interpersonal context. Literature reports an interactional link between motivation, behavior, and experience in a particular situation and suggests that motivation, behavior, and experience are dependent on both the social context and the internal resources of the individual referring to causality orientations. Souesme, Martinent, and Ferrand (2016) showed that the perceived autonomy support by older patients hospitalized in after-care and rehabilitation services (AC-RS) influenced the presence of depressive symptoms and apathy through the basic needs satisfaction. In the continuity of this work, the purpose of this study was to better understand the role of causality orientations and their interactions with the AC-RS environment on basic needs satisfaction, motivation for exercise and emotional consequences. One hundred and forty-six people aged 65 and over (109 women, 37 men, age = 81.26 ± 7.75) hospitalized in six AC-RS in the *Région Centre-Val de Loire* (France) completed a set of validated questionnaires measuring causality orientations, interpersonal behaviors of healthcare professionals, basic needs satisfaction, motivation for exercise, boredom, apathy, positive and negative affects and sociodemographic variables. Our results indicated that patients with an autonomy causality orientation perceived interpersonal behaviors of healthcare professionals as autonomy supportive, satisfied their basic needs and to set up an autonomous motivation leading to positive emotional consequences (positive affects). In contrast, an impersonal causality orientation seemed to influence the perception of interpersonal behaviors of healthcare professionals as controlling. Basic needs satisfaction was lower and motivation for exercise directed towards the control or the amotivation leading to the adoption of negative emotional consequences (boredom and negative affects). Our results are part of the desire to take into account intra-individual factors and show that the causality orientations then appear as extremely important elements impacting the motivation of older patients.

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Perceptions of teachers' interpersonal styles and experiences in Hong Kong secondary school physical education students: The role of need satisfaction and need frustration

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Introduction: This study examined the associations among students' perceptions of their teachers' autonomy-supportive and controlling interpersonal styles, need satisfaction and need frustration, and experiences in physical education classes.

Methods: A sample of secondary school students (n=671) in Hong Kong was invited to participate in this study. Structural equational modelling was conducted to examine the relationships amongst the variables.

Results: Moderate negative relationship between perceived autonomy-supportive teaching behaviors and controlling teaching behaviors was revealed. It was found that the relationships between students' perceptions of autonomy-supportive teaching behaviors and positive experiences (subjective vitality, effort) were primarily mediated by need satisfaction, whereas the relationships between perceived controlling teaching behaviors and negative experiences (negative affect, lack of concentration, worry) were primarily mediated by need frustration. Need satisfaction mediated the relationship between autonomy-supportive teaching behaviors and students' effort input. Specific mediation effect of need satisfaction and need frustration on relationships between teachers' interpersonal styles and students' experiences was examined.

Discussion and conclusion: The results of the study are consistent with previous studies in physical education class setting and provide support for the application of SDT in Hong Kong secondary school students.

Autonomy support, motivation, basic psychological needs and pro and antisocial behaviors in physical education classes: a mixed methods study

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(Introduction) Autonomy support in physical education classes is associated with support for choice, healthier environment and greater perception of internal locus of causality. In this sense, the objective of this study was to verify the effect of autonomy support on the levels of self-determined motivation, basic psychological needs and pro and antisocial behaviors in physical education classes. **(Methods)** A total of 45 students, aged 13.4, from a public school in the São Paulo State, Brazil, were divided into 2 different groups (Control Group (CG) and Intervention Group (IG)). 18 students composed the CG (13 men and 05 women) 24 students the IG (15 men and 09 women). All the students answered at the beginning (T1) and at the end of the program (T2) to 3 different instruments (BPNPES, PLOCQ, QAE), participated in a semi-structured interview and were observed through a script. After T1, for 10 weeks the IG teacher sought to give greater freedom of choice and autonomy to students in class. **(Results)** There was a decrease in IG in three factors, with high effects sizes: external motivation introjected ($t_{(23)}=3.18$, $p=0.004$, $d=0.66$), external extrinsic motivation ($t_{(23)}=2.78$, $p=0.011$, $d=0.90$) and amotivation ($t_{(23)}=2.67$, $p=0.014$, $d=0.80$). In the CG, no significant change was observed in the variables studied. We also explored the relative delta from T2 to T1 among the measured variables, noting that only in the amotivation variable there was a statistically significant difference between CG and IG after the intervention ($t_{(40)}=2.06$, $p=0.004$; $d=0.63$). In the semi-structured interviews, IG students reported greater involvement with classes, greater perception of autonomy, competence and improvement in social relations, with a decrease in antisocial behaviors, also verified by observation. **(Discussion and Conclusion)** Autonomy support for the given to IG students during classrooms seems to have promoted an increase in the perception of motivation, promotion of basic psychological needs and improvement of the pro-social behaviors; however, the 10-week intervention period may have been a limiting factor in the internalization of this type of behavior.

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Development of positive emotions in physical education in association with motivation: A person-centered approach

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Introduction: A major goal in Physical Education (PE) is to inspire to a lifelong active lifestyle. Students' involvement and learning in PE offers the potential for engaging a broader audience, reaching all adolescents in their physical, social, affective, and cognitive development. However, the benefits are dependent on how PE is presented and thus experienced by students (Bailey et al., 2009). The aim of the current study was to explore whether emotional variation in PE relates to satisfaction of psychological needs and quality of motivation.

Method: In this longitudinal study, PE students were followed with questionnaires once a year during secondary school (T1, T2, T3) ($N = 1681$). Latent class growth analysis (LCGA) were performed to explore for different trajectories of positive emotions in PE (Jung & Wickrama, 2008). Thereafter, the BCH approach were conducted to explore for differences between the trajectories on the distal outcomes basic psychological needs and quality of motivation.

Results: The LCGA revealed a three-class solution: The largest class ($n = 762$) reported high levels of positive emotions over the three years. The second largest class ($n = 191$) reported low levels of positive emotions over the three years, and the smallest class ($n = 121$) reported a decrease in positive emotions over the three years. Further, the results revealed an association between the intensity of positive emotions, satisfaction of basic psychological needs, and autonomous motivation as expected from SDT-theory.

Discussion: As a result of taking a person-centered approach to positive emotions in PE, multiple dynamics appeared, which deepened our understanding of the process and function of emotions. Students had different emotional reactions to PE, and there were identifiable patterns of change and stability over the three years. These patterns fell nicely into variations in need satisfaction and autonomous regulations. Nevertheless, the results of positive emotions in relation to controlled regulation were inconsistent. The findings emphasized the importance of identifying individual variety, something that is often missing in statistical analyses on education in general and in PE in particular.

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17E-164

Move for well-being in schools - evaluation of a SDT-based intervention

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Background :

The intervention is based on the Self-Determination Theory and targets physical education, in-class activity and recess. Using a cluster-randomized design, 24 Danish schools were randomized to either intervention or control. Study population included 3.136 students aged 10-13 years at baseline. Student survey was carried out prior to intervention and after 9 months and complemented by ten semi-structured focus-group interviews.

Results: A total of 2797 students were included in the quantitative analyses. Physical self-perception and self-worth increased between baseline and follow-up, but there was no significant intervention effect. Exploratory analyses showed a tendency to a more positive intervention effect for groups with lower baseline values. The qualitative analyses showed that the students' sense of relatedness was fundamental and influenced their sense of competence and autonomy. Changing the physical activity climate to focus on competence development instead of competition was challenging, but resulted in positive experiences, especially for students with limited motivation.

Discussion: It is a challenge to motivate the least active students to school-based physical activities. The current study center extensively on this group, by focusing on the social climate generated by teachers, and by tailoring activities which ensure positive experiences for all and by involving the students in decision making. A socially inclusive environment was found to be crucial to students' well-being at school and influenced the sense of competence and autonomy in physical activities.

Conclusion: The findings from the current study support the basic principles of SDT, and point to some practical challenges in implementing such an intervention in a Danish school setting. Building physical self-worth may be an important mediating factor to improve physical activity levels for all children, but is dependent on a positive and supportive social climate.

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19A-165

Investigating the motivational and psychosocial dynamics of dysregulated video gaming: Evidence from a SDT-based cohort study

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The American Psychiatric Association (APA) and World Health Organization (WHO) have called for research investigating the clinical relevance of dysregulated video game play. A growing number of exploratory studies apply self-determination theory to probe the psychological dynamics of problematic gaming, but little is known about these dynamics in adolescents, the targets of most concerns, or the extent to which dysregulated gaming, in turn, affects functioning. Our study of British adolescents and their caregivers adopted a confirmatory lens to test the extent basic psychological need satisfactions and frustrations underlie dysfunctional gaming behavior. Results in line with preregistered sampling and data analysis plans indicated the frustrations, but not the absence of satisfactions, of psychological needs predicted both adolescents' dysregulated gaming and psychosocial functioning. Discussion focuses on the clinical significance of gaming dysregulation and advantages of transparent scientific practices for research informed by APA and WHO guidance.

Adolescents and caregivers completed the following self-report measures as part of a larger study conducted to survey the online lives and behaviors of British youth conducted in March 2018. On the basis of an a priori power analysis and the extent literature (Ferguson, 2009), a sample size of $n= 600$ was required for a sensitive test of our research questions ($1-\beta= 0.99$). Because six in ten teens play the types of games which have given rise to the greatest concerns our target sample size was set to 1,000.

Findings demonstrated that daily psychological need frustration consistently related to dysregulated gaming over and above variance accounted for by need satisfaction. Further, they showed need frustration was strongly associated with both externalizing and internalizing problems whereas dysregulated gaming accounted for a practically insignificant share of variability. Conclusions are discussed with respect to the value of complimenting rich theory with transparent scientific practices. Further they cover how we can further investigate the important role that experiences of need frustration as a robust predictor of both adolescent's dysregulated gaming and psychosocial functioning and conceptualize clinically significant effects at the boundary of SDT and clinical research.

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19A-166

Improving Student Outcomes Through the Use of Online Mentoring

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Introduction. When students feel isolated or neglected by their schools, their desire to succeed academically is limited. By connecting with a teacher or other school mentors, students' academic motivation increases. The online application Relate2Motivate fosters mentoring relationships between students and knowledgeable adults at their school. It uses a feedback loop where students are given prompts about imagining possible future selves and obstacles they might encounter. The mentor responds by acknowledging the student's answer, providing change-oriented feedback, and sharing their own personal story of a similar situation.

Methods. Relate2Motivate was piloted at a private residential high school for students from backgrounds of poverty. This experimental design study included 52 students and 11 adult mentors (teachers, counselors, and support staff). Once adult volunteers were recruited, students were solicited from that adult's class or caseload. In the first phase of analysis, quantitative and qualitative data was collected during the intervention. Additional qualitative data was collected afterwards to clarify initial findings.

Results. Students' perceived competence was significantly correlated to achievement ($r_s = .24, p = .08$). The relationship between competence and achievement was greater for those who completed the intervention ($r_s = .49, p = .007$). Self-regulation was positively influenced by participation in the program. These scores had a strong positive Pearson's correlation of .77, which was significant at the .01 level, indicating that these scores increased over the course of the intervention. Qualitative analysis highlighted the program's ability to improve students' awareness of strategies for success and improve their relationships with teachers. Additionally, teachers indicated increased job satisfaction.

Discussion. Students in the pilot study felt better equipped with problem-solving strategies, which could lead to improved motivation. The results highlighted five key principles for designing virtual systems to support mentorship: (1) accessibility, (2) timeliness, (3) effective feedback, (4) fostering relationships, and (5) using data to improve the process. Its effectiveness and the promising evaluation of it can serve to show how and why interventions dealing with students from backgrounds of poverty -- especially ones promoting and using positive mentoring relationships -- can be effective in improving postsecondary success indicators.

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19A-167

Science writing in the blogosphere as a tool to promote autonomous motivation in biology education

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We sought to establish a collaborative learning environment for our first-year university cell biology course that would be sufficiently challenging to warrant team effort and turn students into autonomous learners. We chose team-based science-writing blogs, a choice grounded in the Self Determination Theory, which posits that a sense of autonomy, competence and relatedness are essential to perform a task in an autonomously motivated fashion. Through surveys, including the Intrinsic Motivation Inventory (IMI) for quantitative data and some open-ended questions to collect qualitative data, we assessed how students perceived the blog project. As far as the qualitative data is concerned, we have collected student comments over a period of 4 years, during which 140 of the 143 students participated. Qualitative data revealed that students felt useful because their knowledge served other people and they were given the opportunity to organize and construct a lasting document. Moreover, students reported the pleasure of sharing ideas with peers and with laymen and of working together. A quantitative analysis based on the intrinsic-motivation inventory revealed that students experienced science-writing on the web as an intrinsically motivating learning task. On a scale of 1-7, students recognized and appreciated the choices they were given (6.6). They had a high level of perceived competence (5.6) and experienced a great sense of relatedness (6.7), i.e. relating with others and working together. They enjoyed the task (6.2), found it valuable (6.2) and made a tremendous effort (6.6). Students only experienced a moderate pressure (2.9). We conclude that web-based learning triggers motivation to learn autonomously and discuss how team scaffolding activities and task authenticity play important roles in this process.

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19A-168

From struggling readers to YouTube experts-elementary students on a journey toward self-determination in a 'new literacies' world.

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This paper will present first-year results of an after-school intervention in a rural school district of the southern United States which focused on attracting reluctant readers to the world of books using the appeal of YouTube in performances akin to reader's theatre, a research-based approach to increasing reading fluency and comprehension (Young & Nageldinger, 2014). Leveraging the allure of starring in a YouTube video to attract the students, Everyday Readers was designed to address the three tenets of competence, autonomy, and relatedness within self-determination theory (Deci & Ryan, 2000). Competence was increased through program focus on reading fluency and close reading practices, autonomy was embedded throughout the decision-making and creation processes, and relatedness was fostered not only through connections with the texts themselves, but also with the other 'YouTubers' on the project, and those supporters who attended the video release party.

Students were invited to participate in the afterschool program based on their most recent performance on the school's standardized reading assessment, with priority given to students scoring at or below the 25th percentile—those that would historically be categorized as *struggling readers*. In a school district where only 29% of third graders were scoring as 'proficient' when the afterschool program began, Everyday Readers was consistently full with a waiting list. Throughout the intervention, students were involved in the decision-making regarding which award-winning picture books to feature, scripts were co-authored between teachers and students to create student commentaries, and repeated readings of the text focused on accuracy, rate and prosody formed the basis of daily performance rehearsals. The teachers also engaged students in close reading requiring higher-order thinking and discussion. Once videos were complete, the local library hosted a YouTube release party where students, families, teachers, and interested community members watched the performances on the big screen and then mingled with the actors and directors of the production.

Results of Year 1 have been promising, with significant rise in both individual reading attitudes toward academic and recreational reading, as well as reading achievement on the year-end standardized assessment. Issues of implementation, scalability, and future directions are discussed.

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19A-169

Perceived novelty is not enough: the effect of need-support in m-learning on internalization and achievement

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Traditionally, biology students learning to identify species employ a textbook. To identify a species, the students answer 8-10 dichotomous questions that are structured hierarchically. This process requires solid content knowledge. As an alternative, a mobile learning tool (m-learning) has been developed to facilitate the identification process. In the m-learning tool, the identification process is dynamic, meaning that the students can choose which question to start with. The m-learning tool provides effectance-relevant feedback on the identification process and contains lively and drawn pictures. Moreover, the interface is intuitive with the ability to save observations and exclude geographically remote species. Previous research comparing the m-learning tool with the traditional textbook has found that the m-learning tool enhances intrinsic motivation and achievement. It is argued that the m-learning tool, relative to the textbook, provides need-support, and thus increasing motivation and achievement. However, few studies have assessed the impact of perceived novelty in different tools on sustained motivation (internalization) and achievement. That is, does novelty in the m-learning tool drive these effects? The present paper helps to close this gap. Novelty in m-learning tools is an inevitable aspect of technology. For instance, research suggest that novelty in technology is related to engagement and persistence in usage. Furthermore, novel technologies are perceived as more interesting, appealing, and aesthetic pleasing and thus increasing attention and content learning. However, once accustomed to the technology, the novelty of the technology wanes of whereby decreasing the motivation for the technology and the usage of it. The present study investigates the novelty effect in three identification tools on internalization and achievement. Sixty-nine biology students were randomized to one of three conditions; a traditional textbook condition, a digital version of the textbook, and a m-learning condition. We hypothesized that both the m-learning tool and the digital textbook would be perceived as more novel than a traditional textbook, however, only the m-learning tool with need-supportive features would enhance autonomous motivation, internalization, and achievement, over and above the effect of novelty. Results show that both the m-learning tool and the digital textbook were perceived as more novel than the traditional textbook. However, results from two path-analytical models show that the m-learning tool predicts autonomous motivation and need-satisfaction, over and above the effect of novelty. The results are important for how m-learning tools are designed for education, and especially in identification of species, in order to facilitate internalization and achievement.

19B-170

How autonomy-supportive are nudges? A preliminary study under the lens of self-determination theory.

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Nudges, as introduced by Cass Sunstein and Richard Thaler, are rapidly becoming the new orthodoxy in law and public policy with many governments all over the world using nudges as regulatory tools. Commonly described as interventions that steer people in particular directions but that also allow them to go their own way, they are considered by their proponents to have a generally neutral effect on autonomy. This appears to be the most attractive characteristic of nudges, as they promise to produce positive effects on personal well-being, as well as social welfare, by helping individuals to make better decisions for themselves and others.

Our study is the first to test the promise of nudges to respect personal autonomy under the prism of Self-Determination Theory, a motivational theory which posits that autonomy is a basic psychological need. We focus on a specific type of nudge, defaults, and test it within the context of making a choice among a hypothetical set of insurance programs for post-graduate students. One hundred and thirty-nine university students participated in the study. Results show that the experienced Internal Perceived Locus of Causality (I-PLOC) is negatively affected by defaults when the number of options is low but there is no effect when it is high. In other words, people are less likely to view themselves as the origin of their choices when defaults are in place and when options are manageable. The experienced I-PLOC has a positive effect on self-regulation and vitality, partially mediated by perceived competence. We suggest that when even mild manipulations show an undermining effect on autonomy, the so-called 'libertarian paternalistic' interventions should be evaluated on the basis of their effect on basic need satisfaction, self-regulation and vitality, all of which are basic constituents of autonomy as self-authorship. Possibly, other interventions may be more autonomy supportive, even those that are classified within the traditional legal paternalistic toolkit.

19B-171

The link between parenting and well-being across development in an educational context and as reported throughout the years

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To what extent does maternal and paternal autonomy support enhance well-being across the major transitions of high school? We tested the degree to which perceived autonomy supportive parenting facilitated positive changes in self-esteem and life satisfaction and buffered against negative changes in depressive symptoms and school related burnout in three Finnish longitudinal studies, each with a measurement point before and after a major transition (middle school, $N_1 = 760$, 55.7% girls; high school, $N_2 = 214$, 51.9% girls; post high school, $N_3 = 858$, 47.8% girls). Results showed that perceived parental autonomy support was negatively related to depressive symptoms and positively related to self-esteem. The findings for the effects on depressive symptoms were replicated across all three transitions, while effects on self-esteem were only found for the high school and post high school transitions. Moreover, evidence of co-regulation was found for depressive symptoms. Depressive symptoms before the transition were found to decrease autonomy support after the transition for both the high school and post high school transitions. Maternal and paternal autonomy support was of equal importance. Importantly, the effects on depressive symptoms increased as children developed, suggesting the continual importance of parents throughout high school and into emerging adulthood.

To further explore these findings, we conducted a meta-analysis on the link between different parenting styles (i.e., autonomy support, psychological control, provision of independence, and involvement) and well-being. We will present the preliminary findings of this meta-analysis and examine the extent to which the link between parenting and well-being is moderated by study characteristics such as developmental stage, measurement approach, and demographics.

19B-172

The relative impact of teachers' lesson-specific autonomy support on students' real-time motivation

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Student motivation can differ from one lesson to another, potentially because teachers apply distinct instructional strategies in different lessons. That is, teachers might not be able to design all lessons in an autonomy-supportive way, e.g., to consistently provide choices between assignments. There also might be domain-specific differences in the degree to which autonomy support can be realized: It might be easier to stimulate students' interest through letting them work with appealing texts when learning a foreign language, whereas nurturing interest might be harder to be put into practice in a domain such as mathematics. The present study focused on the variations in three aspects of students' real-time motivation (intrinsic, introjected motivation, and amotivation). Moreover, it was investigated how different strategies of teachers' autonomy-support were associated with the three aspects of student motivation. Concerning autonomy support, providing choices, fostering relevance, acknowledging students' negative emotions, and stimulating interest were measured.

To investigate domain-specific differences in teachers' use of autonomy support, the study was conducted in two domains (German as a second language and mathematics), using a repeated measurement design with a pre-test in which 202 Dutch students (91 girls, 104 boys; $Mage = 13.80$, $SD\ age = 0.67$) from 9 classes were surveyed about their state motivation across three weeks at the end of each German and mathematics lesson via the online tool Limesurvey. All constructs were assessed with single-item measures. To analyze the hierarchical data structure (time-specific state measures nested within students), multilevel models were applied to investigate the associations.

The results revealed significant variations in students' state intrinsic motivation, introjected motivation and amotivation. In both domains, intrinsic motivation was predicted positively by providing choices, fostering relevance, and stimulating interest. Concerning introjected motivation, fostering relevance, acknowledging negative emotions, and stimulating interest had a positive effect in German, whereas only acknowledging negative emotions and stimulating interest positively predicted introjected motivation in mathematics. By comparison, stimulating interest had a negative effect on students' amotivation in German and providing choices a negative effect on students' amotivation in mathematics.

Overall, the results showed that autonomy support had positive associations with autonomous and controlled forms of student real-time motivation and seems to be able to reduce students' state amotivation. Thereby, teachers' autonomy-supportive strategies were somewhat differentially associated with students' introjected motivation and amotivation in the two subjects. The results suggest that students benefit most if teachers aim to apply a variety of autonomy-supportive strategies.

19B-173

Drawing upon previous experience: Autonomy support and control in novice coaches

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Introduction: In examining coaching behaviors, autonomy supportive and controlling behaviors have been highlighted as instrumental in the psychological development of athletes. Both Mageau and Vallerand (2003) and Bartholomew and colleagues (2009) have outlined autonomy supportive and controlling behaviors within the coaching context. Considering these within coach development, previous research has indicated that novice coaches rely more heavily on previous athletic experiences than formal coach training, which could contain a variety of learned autonomy supportive and controlling behaviors. The purpose of this study was to elicit examples of autonomy supportive and controlling behaviors within a novice coaches' athletic experience and determine if these behaviors transfer to their current experience as coaches.

Methods: Fifteen novice coaches enrolled in coaching education courses at a large Southeastern University were interviewed about their previous experience as athletes and as current youth sport coaches. These experiences were organized using the seven autonomy support coaching behaviors and the six controlling coaching behaviors identified in the literature. Participants first described their experiences and interactions with their coaches and then were asked what their typical coaching behaviors would look like. They were then given the definitions of autonomy supportive and controlling behaviors and asked to identify any other examples in their experiences.

Results: Participants could recall interactions with coaches during their athletic experiences which were coded as being autonomy supportive or controlling. Controlling behaviors seemed to be more impactful on participants' decisions in their own coaching experiences. In reporting about current or future coaching, participants indicated that they would engage in more autonomy supportive behaviors. When asked about their knowledge of the behaviors, most, if not all, participants were unaware of the terminology.

Discussion & Conclusion: The results indicate that participants were able to report examples of autonomy support and controlling behaviors in their own previous experiences as athletes, but were not able to classify them as autonomy supportive or controlling. In essence, their negative experiences were more tied to controlling behaviors they experienced, while positive experiences seemed to be more tied to autonomy supportive behaviors of their previous coaches. Further, while participants did seem to learn from their previous coaches' controlling behaviors, in that they do not promote a healthy motivational environment, some identified this method to be the only option in certain cases. This indicates a potential perpetuation of controlling behaviors that could produce negative sport experiences for future athletes.

19B-174

Relationships between parental behavior profiles, athletes' motivation, and basic psychological needs

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Parents play a crucial role in an athlete's development. However, the support provided by parents can have a positive influence on the athlete's development but also a negative influence. The majority of previous studies have investigated the relationships between one parental behavior in the sports context and various variables of athletes without differentiating parents. Meanwhile, some empirical studies and SDT have shown the interest of studying a set of behaviors (Holt & Knight, 2014) while differentiating father and mother (Knight, Berrow, & Harwood, 2017). The purpose of this study was to determine whether there was a relationship between parental behavior profiles at the beginning of the season and athletes' motivation, satisfaction, and frustration of basic psychological needs (BPN) scores, at the end of the season.

A two-wave design was used. At the beginning of the season, 226 athletes completed questionnaires, which measure mother's and father's behaviors separately: directive behaviors, active involvement, praise and understanding, and pressure. At the end of the season, athletes realized the sport motivation, satisfaction, and frustration of basic psychological needs questionnaires.

Latent profile transition analysis showed three parental behavior profiles at the beginning of the season. The parental behaviors profile A characterized 60% of the parents (moderate scores for all mother's and father's behaviors), it was identified as the appropriate profile based on athletes' psychological outcomes. In contrast, 40% correspond to inappropriate profiles. The results showed that 20% of athletes perceived their parents into the profile B (moderate scores for praise and understanding of both mother and father and high scores for the others mother's and father's behaviors) and 20% into the profile C (moderate scores for all mother's behaviors and low scores for all father's behaviors). Indeed, athletes who perceived a profile A reported higher scores for the satisfaction of BPN for competence and relatedness and lower scores for controlled motivation and frustration of BPN for autonomy.

This study used an alternative methodology to identify the most appropriate parental behaviors for their child's motivational outcomes. Results highlighted that it seems necessary to simultaneously consider a wide variety of parental behaviors and make a clear distinction must be made between the mother's and father's behaviors.

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19C-175

'All of man's misfortune comes from one thing, which is not knowing how to sit quietly in a room': How do we fix that?

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Introduction: As the world becomes interconnected and individuals gain easy access to social interactions through different forms of social media, the ability to take time for solitude becomes more difficult (Wilson et al., 2014). This topic has started to gain more attention partly because most people find solitude intolerable and often try to avoid it. Up to date, there is not a theoretical framework to understand what factors reliably predict people's ability to be alone with themselves. In this program of research, we used the self-determination theory framework to look at autonomy as an important ingredient for resilience in solitude.

Method: We conducted two pre-registered experiments (Study 1: N = 250; Study 2: N = 352), in which participants were given instructions to spend time alone in the lab for 15 minutes. In Study 1, participants were randomized into 3 conditions: one received a controlling instruction, one received an autonomy supportive instruction, and one received a neutral instruction. In Study 2, we only included only the controlling and autonomy supportive instructions conditions. After 15 minutes of sitting alone, the participants reported their experience with solitude.

Besides self-reported measures, an interesting component was added to these experiments. Mimicking the free-choice paradigm adopted from Deci's (1971) study, participants were given the opportunity to later sit alone with themselves or engage in a boring task: sorting pencils into boxes. This alternative, boring task served as a measure of how much participants would prefer doing anything else rather than spending more time with themselves.

Results: In both studies, those who received autonomy supportive instructions reported greater autonomy support from the experimenter, compared to the neutral instruction and the controlling instruction. Autonomy supportive instructions led the participants to anticipate more enjoyment from solitude and see greater value in sitting alone with themselves prior to the experience. When given the choice between a boring activity or sitting alone with oneself, those who received controlling instructions engaged more with the boring activity, compared to those who received autonomy supportive instruction. Further investigation showed that there was a significant positive correlation between the amount of pencils sorted into boxes for those in the autonomy supportive condition but this correlation was not significant in the controlling condition. This suggested that for those who felt controlled and pressured to be in solitude, their engagement with the pencil-sorting task was more of a diversion from spending time alone with themselves.

19C-176

Towards a more refined insight in the critical motivating features of choice: An experimental study among recreational rope skippers

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Introduction: The question whether choice is a motivation and engagement-enhancing practice is a much debated subject. Theoretically, meta-analytic evidence in the educational domain showed that choice provision yields multiple benefits in general, but also identified instances in which choice was detrimental (Patall, Cooper, & Robinson, 2010). Within the context of youth sports, experimental studies regarding the (de)motivating effects of choice are very scarce. From an applied point of view, some coaches advocate the use of choice as fostering engagement, whereas others advice against it as they deem it too time-consuming and may come with a loss of control over the training or competition. As such, coaches are found to use participative strategies, such as choice provision, to a lesser extent compared with other presumed motivating strategies (Delrue et al., 2018).

Method: In order to begin filling this gap in the literature, the present experimental field study examined whether different types of choice (i.e. action choice, low-contrast option choice, and high contrast option choice) impact on rope skippers' ($n = 159$; $M_{age} = 17.17$; $SD_{age} = 8.43$) engagement and intended perseverance.

Results: Offering choice regarding the type of exercises (i.e., *option choice*) yielded mixed results, with this type of choice causing a clear engagement and perseverance-enhancing effect compared to a no choice control group in case the offered options differed clearly from one another (i.e., *high contrast option choice*), while no benefits were observed in case choice options leaned closely to one another (i.e., *low contrast option choice*). Athletes' involvement in the order of exercises during a training session (i.e., *action choice*) tended to enhance athletes' engagement, but not their intentional perseverance, compared to a no choice control group. Finally, all experimentally offered choices yielded a positive effect on autonomy need satisfaction, which, in turn related to athlete engagement and perseverance, an effect that was mainly irrespective of rope-skippers' dispositional indecisiveness.

Discussion and conclusion: Although all types of choices enhanced rope skippers' autonomy-satisfaction, only high contrast option choice also increased their training engagement and intended perseverance, with action choice showing a clear trend towards being engagement enhancing. As high contrast option choice also comes with a loss of control of training content, the current study's findings predominantly advocate using action choices more frequently in the context of sports, while also stressing the merits of sparingly providing high contrast option choices in order to spur athlete engagement.

19C-177

The simultaneous impact of basic psychological needs and rewards on intrinsic motivation and performance.

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Introduction: The purpose of the present studies was to verify the influence of the basic psychological needs on intrinsic motivation and performance in the presence of external rewards. The results of metaanalysis suggest that it is worth to verify the influence of factors which support both intrinsic and extrinsic motivation at the same time, as these types of motivations may influence different types of performance (qualitative vs quantitative). Moreover, it is worth to verify the conditions when (and if) extrinsic motivation undermines intrinsic motivation (Cerasoli, Nicklin, & Ford, 2014). In study one the influence of needs of competence and relatedness on intrinsic motivation was examined, in the presence of engagement-contingent rewards. In study 2 the influence of three basic psychological needs and performance-contingent rewards was verified on intrinsic motivation and performance.

Methods: In study 1 two needs were manipulated in 2 (competence supported or not) x 2 (relatedness supported or not) factor design. Participants were folding origami figures in exchange for small incentives. The number of figures folded was the measure of intrinsic motivation. In study 2 three basic psychological needs and external rewards were manipulated in 2 (needs supported or frustrated) x 2 (reward vs no reward) factor design. Participants were playing game Boggle, the score in the game and intrinsic motivation were examined as depended variables. In both studies the manipulation of needs was conducted by different forms of instruction given (Sheldon & Filak, 2008).

Results: The results of study 1 showed positive direct effect of competence on performance and indirect positive effect of relatedness on performance through intrinsic motivation. Study 2 showed positive main effects of both reward and satisfaction of needs on performance. In the groups with frustrated needs there was no effect of external reward on intrinsic motivation, in the group with supported basic psychological needs the intrinsic motivation was higher in the group with no reward.

Discussion: The results show that it is worth to study simultaneous impact of factors which may enhance intrinsic and extrinsic motivation to see their impact on performance.

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19C-179

Benefits of psychological detachment from work: Does autonomous work motivation play a role?

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Introduction: Empirical research has shown that psychological detachment from work during off-job time is beneficial for various aspects of employees' well-being and job performance. However, it is uncertain whether psychological detachment is equally important to all employees (Sonnentag, 2012). In this study, we examine the association among autonomous work motivation, psychological detachment from work, and employee outcomes. The main purpose was to examine whether psychological detachment is less important for employees who experience autonomous motivation for their job.

Method: The hypotheses were tested in two different samples of knowledge-intensive firms in Norway. Latent Profile Analyses was used when exploring for and identifying different subgroups within the sample based on the participants (employees) responses to the variables detachment, and respectively identified regulation and intrinsic regulation (Berlin, Williams, & Parra 2013). Further, the BCH method was used to explore for possible differences between the classes on distal outcomes.

Results: In both studies, two distinct different classes were found: "Lower involvement employees" (Low-IE; higher detachment and lower autonomous regulations) and "Higher involvement employees" (High-IE; lower detachment and higher autonomous regulations). Further, the results revealed differences between these classes, showing that the High-IE were significantly higher on positive affect, life satisfaction, work effort, work quality and significantly lower on emotional exhaustion compared to the Low-IE.

Discussion & Conclusion: These results indicate that being low in detachment from work does not seem to be "harmful" when combined with higher levels of autonomous motivation. The study contributes to knowledge about the importance and benefits of unwinding from work for employees with different motivational profiles.

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19D-180

Does the flame burn out amongst GPs holding the torch high? A panel survey and cluster randomized field experiment on the effect of external regulation on burnout amongst intrinsically motivated GPs

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Introduction: Burnout among general practitioners (GPs) is a common problem. Evidence from other fields shows that burnout is less likely among intrinsically motivated employees. Employees with high intrinsic motivation have a fundamental need for competence and autonomy in their work and must perceive their behaviour as being self-determined to maintain well-being. Organisations and policy makers should therefore be cautious when applying coercive controls such as monitoring, as this may negatively affect the well-being of the employees – particularly those holding the torch high in their field, i.e. those with a high intrinsic motivation. Nevertheless, the health care sector has been exposed to various regulatory systems in later years, such as appraisal and revalidation systems, accreditation schemes, report cards and certification.

Aim: We investigate whether intrinsically motivated GPs are less burned out than their colleagues, and whether highly intrinsically motivated GPs are more likely to burn out when exposed to external regulation in the form of mandatory accreditation.

Method: General practices in Denmark were cluster randomized to accreditation in 2016, 2017 or 2018. We measure GPs' intrinsic motivation and burnout levels one and two years into the accreditation process. We use a balanced panel of GPs (n=846) to estimate mixed effects multilevel ordered logit models.

Results: Preliminary results show that GPs with high intrinsic motivation are less burned out than their colleagues. However, burnout significantly increases for the most intrinsically motivated GPs when they are accredited. This effect is not found among GPs with lower levels of intrinsic motivation.

Preliminary conclusions: We conclude that being intrinsically motivated may protect against burnout in general but that it can also reinforce burnout when exposed to external regulation.

19D-181

Volunteering to listen on a massive online mental health support platform: New Listeners' motivation is associated with their support style, persistence, and well-being

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Introduction. Online mental health platforms are facilitating the recruitment and training of peer volunteers to deliver social support on a massive scale, reaching millions of people every day. Yet little is known about why millions of laypersons volunteer, often anonymously, to take on this difficult work and how it affects them. This study describes the demographics, motivations, and wellbeing of volunteers on 7 Cups of Tea ("7 Cups"), one of the largest peer-to-peer support platforms in the world. **Methods.** Newly trained "Listeners" received emailed invitations from 7 Cups administrators to participate in an online survey with two sessions two weeks apart. Among 117 individuals who returned both surveys, we assessed autonomous motivations for volunteering using four items from the pro-social self-regulation questionnaire (Ryan & Connell, 1989). We further assessed support giving styles (empathic and directive), Listeners' persistence (chats completed over two weeks, intent to continue volunteering), and wellbeing (affect, flourishing, loneliness, secondary traumatic stress). **Results.** Listeners were largely young and female (median age 23; 74% women). The results showed that Listeners reported highly autonomous motivation (M=6.3 on a 7-point scale) relative to controlled motivation (M=2.35). Furthermore, autonomous self-regulation predicted greater interest in continuing to volunteer ($r=.25, p=.008$), whereas controlled self-regulation was associated with more secondary traumatic stress ($r=.32, p=.001$). Finally, those whose motivation for helping was more controlled, also acted more controlling themselves, in the sense that they gave relatively more directive support (more prescribing solutions, less empathic listening; $r=.28, p=.02$). Giving relatively directive support also mediated the positive relation between Listeners' controlled motivation and secondary trauma. **Discussion & Conclusion.** These findings replicate prior SDT research in more general helping contexts (Weinstein & Ryan, 2010), associating greater wellbeing benefits for helpers with more autonomous motivations. Extending this work, our findings suggest one reason helpers with more controlled motivation may benefit less involves their tendency to help in more controlling ways (i.e., giving more directive support). This work also has novel, applied implications for an important mental health context. The impact of massive online mental health platforms is undergirded by the sustainability of their large volunteer workforce. Our findings suggest that platform administrators could take more steps to protect this resource by supporting Listeners' autonomous motivation, both in recruitment and training. Follow-up research currently underway will investigate how small incentives (e.g., course credit) may inadvertently undermine some Listeners' autonomous motivation, persistence, and well-being.

Maternal experiences of guilt and shame: The self-determination theory perspective

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Previous literature has linked maternal guilt and shame with a failure to meet social expectations of intensive motherhood (Liss, Schiffrin, & Rizzo, 2013). However, very few studies directly examined how mothers themselves experience and internalize social expectations of "good mothering" (Joussemet, Landry, & Koestner, 2008) and how do these expectations give rise to maternal experiences of shame and guilt.

Using self-determination theory as a guiding framework, the current study examined the moderating roles of maternal guilt and shame in the relationship between mothers' basic psychological needs and maternal psychological distress and parenting behavior.

The study included 171 mothers of children aged 3-8 years. Results demonstrated that mothers' psychological needs satisfaction was associated with decreased maternal guilt and shame and with increased autonomy supportive parenting. In contrast, need frustration was associated with increased maternal guilt and controlling parenting. Maternal guilt and shame moderated the relationship between need frustration and controlling parenting, while only shame moderated the relationship between need satisfaction and autonomy-supportive parenting. Mothers' psychological needs experiences and their parenting style were not related among mothers who reported high levels of shame and guilt. These findings underscore the importance of psychological needs experiences for both mother's psychological well-being and for their ability to provide a supporting environment for their children.

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A circumplex approach to autonomy support and structure in educational settings with implications for Cognitive Load Theory

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Self-determination theory research has long had an interest in the role of perceived autonomy in educational settings. In research on school classrooms, the construct of structure has been introduced alongside autonomy support, and has found that autonomy support and structure jointly predict student motivation and engagement. These areas have implications for Cognitive Load Theory, a theory of instruction prominent in educational psychology. According to CLT, working memory is very limited. Thus, instruction that imposes high levels of extraneous cognitive load is detrimental to learning. We hypothesize that it is also detrimental to motivation, and conversely, when extraneous cognitive load is minimised and autonomy is supported, learning and motivation are enhanced. We were particularly interested in the multidimensional nature of these phenomena—that is, variance explained at the between-student and between-classroom levels.

We examined these ideas in a sample of 1,287 students in 88 classrooms across 4 high schools in Australia. First, like previous research with students in Belgium, we found a dimensional structure in the Situations in Schools questionnaire, which uses ecologically-valid vignettes to identify two characteristic dimensions of teaching—autonomy support (vs. control), and structure (vs. chaos). Second, we replicated findings from CLT literature, showing that when teachers use strategies designed to reduce extraneous cognitive load on students, their students report lower extraneous cognitive load, better motivation, higher levels of engagement, and more learning—with both between-student and between-classroom effects. Finally, we examined the potential interactive effects between motivation and cognitive load theory. Extraneous cognitive load was associated with poorer quality motivation, higher amotivation, lower engagement, and less learning. Teachers' use of load-reduction strategies was successful in reducing cognitive load, and was associated with higher quality motivation, lower amotivation, higher engagement, and more learning.

These results suggest theoretical advances in both SDT and CLT and elucidate the well-established association between autonomy support and structure and their benefits for students. Structure enhances motivation in the classroom because it communicates how students can engage in social environment with clear expectations about behaviour and what they may learn. The present results suggest that load-reduction instruction is a manifestation of structure, and that structure is also effective because it reduces extraneous cognitive load. In other words, teachers who use load-reduction strategies (in combination with autonomy support) effectively communicate the schematic structure of the material to students who do not yet have such schematic structures in their long-term memory, making learning more effective and more enjoyable.

Fostering 21st Century Skills by Teaching Science Outside the Classroom: Students' Perceived Relevance of Contents and Basic Psychological Needs Satisfaction

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The development of 21st century skills in or rather through science teaching is on the agenda of many national and international school reforms. Herby, autonomous learning and practical relevance of science class have been identified as important features of so-called 21st century classrooms and education outside the classroom (EOtC) has been described as one way providing such "enriched classroom" settings. In this article, we explore the relative importance of the four basic psychological needs (BPN) within self-determination theory (SDT), "perceived autonomy support", "perceived competence support", "student-teacher relatedness" and "student-student relatedness", for the perceived relevance of the taught content in science class (PRC) in secondary school. We apply the same measures in normal and EOtC science classes, both in a short-term cross-sectional within-subject design study (A) and in a longitudinal between-subject design study (B). In order to account for the theoretical and empirical non-independence of the four BPN-explanatory variables, we use Bayesian ridge regression techniques. Our findings suggest that PRC in EOtC contexts is perceived higher than in normal classroom settings, both in the short-term, cross-sectional within-subjects design ($d = 0.332, s = 0.068, (95\%): 0.198; 0.466$) as well as in the long-term, longitudinal, between-subjects design ($d = 1.422, s = 0.104, CI(95\%): 1.215; 1.623$). This can be best explained by the degree of the students perceived autonomy support. In the cross-sectional design, this holds true for both teaching contexts, normal ($d = 0.332, s = 0.068, CI(95\%): 0.198; 0.466$) and EOtC ($d = 0.525, s = 0.100, CI(95\%): 0.328; 0.723$). In the longitudinal design, the relative importance of autonomy support can only be deemed statistically credible in the EOtC context ($d = 0.563, s = 0.209, CI(95\%): 0.153; 0.967$). Perceived competence support and relatedness have no relative importance in the EOtC context suggesting that science EOtC is less contingent on teacher-reliant or peer-related basic needs satisfaction. We can conclude that science teaching in EOtC fosters 21st century skills through less teacher-centration and more flexible, autonomous and collaborative settings.

Impact of a mindfulness-based intervention on autonomy in elementary school students: Results from a randomized cluster trial.

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Background: According to Ryan and Deci (2000), mindfulness could lead to optimal self-regulation by allowing individuals to be in touch with their basic psychological needs. As such, mindfulness is hypothesized to lead to more realistic appraisals of the three basic psychological needs for competence, autonomy and relatedness, which in turn leads people to either benefit from high levels of need satisfaction or help them make the appropriate changes to improve need satisfaction. An increasing amount of research has supported this proposition (e.g., Levesque & Brown, 2007), and mindfulness-based interventions (MBIs) have shown promise to foster greater basic psychological need satisfaction in elementary school students.

Objective: The goal of the present study was to evaluate the impact of a MBI on the satisfaction of the basic psychological need of autonomy in elementary school students in regular classrooms. In order to do so, a randomized cluster trial with an active intervention control group was implemented to document and compare the progression of the basic psychological need of autonomy in participants pre-to-post intervention and at follow-up.

Method: Third grade elementary school students (N= 65) in four classrooms took part in this study and were randomly attributed to either an experimental or an active cognitive-behavioral therapy (CBT) control group.

Results: Mixed ANOVAs revealed a significant interaction between time and group (Wilks Lambda = .84, $F(1, 63) = 12.11, p = .001, \text{partial } \eta^2 = .16$). Descriptive statistics showed that while participants in the MBI experimental group reported higher autonomy scores from pre-intervention (M=4.2) to follow-up (M=4.6), participants from the CBT control group reported lower autonomy scores from pre-intervention (M=4.4) to follow-up (M=4.1). Independent t-tests further indicated significant differences between both groups at follow-up ($t_{63} = -2.29, p = .03$), but not at pretest, with participants from the MBI experimental group showing higher levels of autonomy when compared to participants in the CBT control group. **Conclusion:** Results suggest that the MBI was more useful to increase self-perceived autonomy than the CBT intervention. These results tend to confirm the positive impact of mindfulness training on basic psychological need satisfaction in elementary school students. Further research comparing the effectiveness of MBIs to other types of school-based interventions to foster autonomy is warranted.

19E-187

Self-Determination Theory, Causal Agency, and the Self-Determination of Adolescents with Disabilities

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Research on the application of the self-determination construct to the education of students with disabilities will be presented using SDT and Causal Agency Theory as theoretical frameworks to understand how young people with disabilities become causal agents in their lives and engage in self-determined action. The presentation will report on a study exploring the relationships between agentic engagement, motivation, and basic needs satisfaction and frustration and causal agency and volitional and agentic action. That will be followed by a synthesis of recent intervention research promoting the causal agency and self-determination of youth with disabilities.

References:

Shogren, K.A., Raley, S., Wehmeyer, M.L., Grandfield, E.M., Jones, J., & Shaw, L. (in press). Exploring the relationship among basic psychological needs satisfaction and frustration, agentic engagement, motivation, and self-determination in adolescents with disabilities. *Advances in Neurodevelopmental Disorders*.

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19E-188

Theorising the mutual benefits of autonomy supportive teaching to teachers and learners

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Introduction: Underpinned by the self-determination theory (SDT), autonomy-supportive teaching (AST) is able to elicit the volitional resources of learners that can help learners learn with genuine interest. While an increasing amount of literature has been identified to address the benefits of AST, relatively less has been discussed regarding teachers who are autonomy support givers. Situated in a competitive educational environment in the twenty-first century, many teachers are struggling between a teaching style that is more teacher-controlled to one that is more autonomy supportive due to the urge of academic success in schools. This paper investigates teachers' traits of adopting AST and the satisfaction gained from the practice of such a style. It supplements a high-level rationale to conceptualise AST.

Methods: The investigation begins by content analysis of selected empirical studies of different cultures regarding the practice of AST, including a study completed in Hong Kong. Theoretical mapping is then conducted to consolidate the findings, based on these focuses:

What are the motives and behaviours of teachers in carrying out AST?

What are the theories that can explain teachers' traits that underlie AST?

What do teachers benefit from practicing AST?

Discussion on Findings: Teachers saw providing autonomy support to students as a great satisfaction. They worked to enhance students' perception of available support. They practiced a variety of scaffolding instructions, focusing on cultivating learners' self-regulation and capacity of reflection. As much as they wanted their students to become productive learners, they strived to enhance students' well-being.

Two key theories explain the above findings. First, social support in health psychology addresses the salient psychological processes of how teachers' empathic concerns for helping students can exert a generating effect as they prove their competence and drive their creative behaviours. It is conceptualised as the 'psychic reward' of teaching in the education literature. The social support theory also endorses autonomy (coping) and competence (self-esteem) as the outcome expectations. Second, autonomy-supportive teachers are described as teachers who ascribe humanness to students, they see students as persons who deserve of help instead of exercising control to them. The findings are constructed into a framework to address the mutual benefits of AST on learners and teachers.

Implications: Teachers are important figures from whom students could expect nurturance. Teaching is an emotional profession and teacher training should be renewed and strengthened in areas related to psychological processes of human beings, interpersonal communication, and metacognitive teaching.

Abstracts Poster presentations

P-001

Authentic leadership and basic psychological needs: a mediation analysis

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Introduction

Little research has examined leadership development during adolescence. However, the sparse empirical research on youth leadership emphasizes the relationship between leadership development and positive outcomes (Komives & Dugan, 2014). Recently – the interplay between need satisfaction and authentic leadership was examined in adulthood. Cross-level interactions demonstrated theoretical congruence between authentic leadership theory and self-determination theory (SDT; Leroy, Anseel, Gardner, & Sels, 2015). Building upon this epistemological foundation, the present research applies SDT as a guiding framework to examine the relationship between adolescents' authentic leadership (AL) and basic psychological needs (BPNs). The study aimed to explore: (a) theoretically derived hypotheses about the relationships between adolescents' self-perceptions of leadership development (SPLD), life satisfaction (LS), BPNs, and AL; (b) the mediational role of BPNs.

Methods

Data was collected from three counties in western New York. 109 students completed the following instruments: BPNs ($\alpha = .895$); LS ($\alpha = .844$); SPLD ($\alpha = .903$); and AL ($\alpha = .834$). Students were also given instruments assessing for leadership involvement ($\alpha = .485$) and leadership skills learned ($\alpha = .704$).

Results

All bivariate correlations performed were statistically significant ($p < .001$) ranging from weak moderate ($r = .323$) to strong ($r = .658$) associations with AL (*Shapiro-Wilks*, $p = .401$). In predicting AL scores, three hierarchical regression models, controlling for leadership involvement and leadership skills learned, examined the mediational role of BPNs. The third model examining the variance explained by LS, adolescents' SPLD, and BPNs significantly predicted adolescent's AL scores, Adjusted $R^2 = .476$, $F(5, 100) = 20.075$, $p < .001$. The *F*-test was significant and accounted for 47.6% of the variance contributing to AL scores. LS and SPLD failed to significantly predict variance when BPNs were entered into the model, $\beta = .530$, $t(100) = 5.279$, $p < .001$.

Discussion & Conclusion

The BPNs of adolescents predicted the greatest increase in AL. Importantly, BPNs mediated the unique variance explained by LS and adolescents' SPLD. This suggests that BPNs emerged as the optimal predictor of AL. These findings offer insight into the optimal psychological conditions for promoting the development of authenticity and well-being in the next generation of leaders.

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P-002

Introducing Avoidance and Neediness as Two Dispositional Reactions to Chronic Developmental Need Frustration.

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The present research introduces avoidance and neediness of basic needs, which respectively consist in the chronic excessive inhibition of need-seeking attitudes and behavior, and the chronic excessive seeking of need satisfaction. We validated the Dispositional Reactions to Need Frustration scale (DRNF) to assess these two constructs. Confirmatory factor analyses revealed that avoidance and neediness were adequately modeled as two separate latent factors and that they were distinct from need satisfaction and need frustration latent factors. Furthermore, avoidance and neediness were both uniquely associated with psychological symptoms, interpersonal problems, low eudaimonic well-being over and above need satisfaction, need frustration, need valuation, need desire, attachment, and Big-V traits in three samples. This suggests that avoidance and neediness are distinct suboptimal dispositions which each have unique and independent negative effects. Finally, two longitudinal studies (one short- and one long-term) showed that both avoidance and neediness predicted increased psychological symptoms over a three-month period. However, only avoidance predicted increased psychological symptoms and interpersonal problems over a two-year period. These results suggest that avoidance may be more deleterious over time than neediness.

P-003

Understanding the Relation between Needs Satisfaction, Needs Frustration, and Perfectionism Across Domains

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Recent research indicates that different types of perfectionism are differentially related with the frustration of basic psychological needs (autonomy, competence, and relatedness), demonstrating that self-critical perfectionism is often associated with needs frustration, while personal standards perfectionism is often not associated with needs frustration (e.g. Mallinson & Hill, 2011). However, current research only examines these relations in specific domains, and it remains unknown as to whether these findings apply across all domains. The main purpose of this investigation was to examine whether perfectionism is present in domains in which the individuals' needs are not met. Thus, the current study examined how needs frustration and needs satisfaction relates to self-critical perfectionism and personal standards perfectionism at the domain-specific levels. Five-hundred and eighty undergraduate students completed measures of their perfectionism, needs satisfaction, and frustration across four self-selected important life domains, resulting in ratings for 2320 domains. Using multilevel analyses, results suggest that needs frustration was positively associated with self-critical perfectionism in all domains, $\beta = .30, p < .001, 95\% \text{ CI } [.26, .34]$, but was unrelated to personal standards perfectionism, $\beta = -.00, p = .825, 95\% \text{ CI } [-.05, .04]$. Conversely, needs satisfaction was positively associated with personal standards perfectionism in all domains, $\beta = .25, p < .001, 95\% \text{ CI } [.21, .30]$, but was unrelated to self-critical perfectionism, $\beta = -.01, p = .646, 95\% \text{ CI } [-.06, .03]$. The present study reveals that self-critical perfectionism may only be present in domains in which an individual's needs are not met, and that personal standards perfectionism may only be present in domains in which an individual's needs are fulfilled. More research is needed to determine directionality and causality.

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P-004

Eudaimonic well-being : Comparing Self-determination theory's conceptualization and the Ryff's model of psychological well-being

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Psychological well-being has been defined, from a eudaimonic approach, in terms of individuals' optimal functioning resulting from personal fulfillment of their full potential. Two conceptualizations of eudaimonic well-being have been proposed. The first one, psychological well-being (PWB; Ryff, 2013), conceives well-being as a multidimensional construct composed of six components: having a purpose in life (purpose), accepting oneself (self-acceptance), growing and flourishing (growth), having autonomy (autonomy), having positive relationships with others (relations), and mastering one's environment (mastery). The second conceptualization is tied to self-determination theory (SDT; Ryan & Deci, 2017) and views Ryff's dimensions of autonomy, relations, and mastery as manifestations of fulfillment of autonomy, relatedness, and competence needs, which will contribute to individuals' well-being. SDT also proposed the concept of vitality, a dimension of well-being that represents the energy available in the self. A sample of 434 university students (81% women), completed an online questionnaire that included measures of the satisfaction of their needs for autonomy, competence, and relatedness, as well as measures of psychological well-being (i.e., vitality, and Ryff's purpose, self-acceptance, and growth) and sociodemographic information. Using structural equation modeling with Mplus, confirmatory factor analysis was performed to empirically validate the two models of eudaimonic well-being. Model 1 assessed PWB as a second-order factor composed of Ryff's dimensions of purpose, self-acceptance, and growth and vitality and another second-order factor composed of autonomy, competence and relatedness. Model 2 assessed PWB as a second-order factor composed of all of Ryff's proposed dimensions, including psychological needs, to which vitality was added. Models' fit indices showed both models to provide adequate fits to the data. These results indicate that autonomy and mastery can be seen as components of PWB as well as a separated concept. According to our sample, autonomy and mastery are as good of a fit in a model where they are included as components of PWB as in a model where they are separated concepts. Unexpectedly, relatedness satisfaction loaded weakly on second order factors for both models and this finding could not be attributed to the measurement adequacy of the relatedness scale. Results are discussed with respect to their implications for theories and research on eudaimonic well-being.

P-005

Supportive Parenting Buffers the Effects of Parental Criticism on Daily Difficult Emotions in Emerging Adults

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Family environment, including parenting factors, have long been thought to contribute to psychological development in children and emerging adults (EAs). Because a large majority of EAs reside with their parents (Statistics Canada, 2011) and rely on them for emotional and financial support (The Clark University Poll of Parents of Emerging Adults, 2013), parenting is an important contextual factor that impacts psychological functioning in EA. Parental criticism is one aspect of family functioning that has consistently predicted poor clinical outcomes for EAs experiencing a wide range of mental health concerns (Kwon et al., 2006; Schlosser et al., 2010). Research to date has focused mainly on the distal effects of parental criticism on behaviors and mental health outcomes. To better understand the proximal impact of parental criticism and parenting style on daily life, the current study uses daily diary methodology to examine the influence of daily parent and EA interactions on day-to-day fluctuations in EA's emotional experience. Participants were 138 EAs (83% female; 18-22 years old, $Age = 19.8$, $SD = 1.4$) who interacted with parents on 57.1% of reporting days and reported on multidimensional aspects of supportive parenting (e.g. emotional, practical, socializing, financial, listening to EA talk about daily events) and perceptions of parenting (e.g. the degree to which their parents displayed autonomy support, involvement, warmth). For 30 days, participants reported on their experience receiving criticism from a parent and various difficult daily emotions (e.g. anger, disgust, feeling tense, sad). Hierarchical Linear Modelling revealed significant within-person associations between daily reports of criticism from parents and difficult emotions ($p < 0.001$). Autonomy supportive parenting was found to significantly moderate this relationship ($p < 0.048$), particularly between daily reports of criticism from parents and daily experiences of anger ($p < 0.002$). Multidimensional parental support was found to significantly moderate the relationship between criticism and specific difficult emotions: anger ($p < 0.006$), disgust ($p < 0.016$), feeling tense ($p < 0.018$). Findings suggest that on days EAs perceived greater criticism from parents, EAs experienced more difficult emotions, although greater supportive parenting (autonomy supportive and multidimensional support) buffered this effect. These results suggest that daily parent-child interactions influence EA mood, but these effects are buffered in the context of supportive relationships in general. Interventions may focus on educating parents about the effects of parental criticism on EA daily mood and the importance of consistent supportive parenting practices to reduce the impact of parental criticism on negative mood in EAs.

P-006

Motivational resources of intrinsic and extrinsic values: The critical role of satisfaction of basic psychological needs

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SDT argues *not all values are created equal*; pursuing one type of values over the other is more beneficial to human functioning at an individual level as well as at a societal level because of their associations to basic psychological needs (BPN). The study empirically tested the organismic theory on values, which claims that need satisfaction and frustration are not only the predictor but also the outcome of intrinsic and extrinsic values (Kasser, Koestner, & Lekes, 2002). It longitudinally examined how intrinsic and extrinsic values develop in children within a parenting context by testing three pathways: (1) a direct transmission (mother's values predicting children's values); (2) an indirect transmission (parenting style predicting children's values); and (3) a value origination (parenting style predicting children's need experience, which in turn predicts children's values). We hypothesized in support of the value origination claim.

233 mother-child dyads completed an online survey across three waves for 1 year. Majority of the child participants at T1 were in Grade 5 and 6. Structural equation modeling was conducted on two separate models of intrinsic and extrinsic values. Measurement invariance was also tested and demographic covariates were statistically controlled for.

Intrinsic value (IV) model yielded an adequate fit, $\chi^2(193) = 305.62$, $p < .001$; $RMSEA = .050$ (.039, .061); $CFI = .95$; $SRMR = .07$. The only significant predictor of change in IV at T3 was T2 need satisfaction ($\beta = .29$, $p = .026$), even after controlling for the stability coefficient, Mother's IV and T1 supportive parenting style.

Extrinsic value (EV) model also yielded an adequate fit, $\chi^2(194) = 296.00$, $p < .001$; $RMSEA = .048$ (.036, .058); $CFI = .96$; $SRMR = .05$. Mother's EV ($\beta = .15$, $p = .047$) was the only significant predictors of a change in EV at T3, even after controlling for the stability coefficients.

The results suggest different developmental pathways for each type of values. IVs seem to "emerge" from satisfaction of BPN, while EVs develop merely by mirroring value messages endorsed by mothers. Taken altogether, it is important to provide need-supportive contexts in which *self* is energized to orient itself in the direction of intrinsic values, an important component of *eudaimonia*.

Kasser, T., Koestner, R., & Lekes, N. (2002). Early family experiences and adult values: A 26-year, prospective longitudinal study. *Personality and social psychology bulletin*, 28(6), 826-835.

P-007

Sources of meaning: The role of volunteers' need satisfaction for meaning in life

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This study investigates how need satisfaction during volunteer work relates to meaning in life. We distinguish between autonomy, competence and relatedness needs and predict these to account for independent variance in the volunteers' meaning in life. The sample consisted of 166 voluntary workers from a faith-based volunteer organization in Norway, representing a response rate of 58 percent. The volunteers completed need valuation and need satisfaction measures (Chen et al, 2015), both related to their voluntary work as well as their paid work, as all of the respondents were permanently employed outside the volunteer organization. In addition, meaning in life questionnaire was included in the survey (Sørensen et al., 2019).

The results indicate that satisfaction of the need for relatedness is the primary predictor of meaning in life.

Regression analyses show that satisfaction of the need for relatedness, both during volunteer work and during paid work, contribute with unique variance to meaning in life. Practically, satisfaction of the needs, and especially the need for relatedness seems to be of importance and a source of meaning. Thus, the ability to listen, to acknowledge others' perspectives and to develop a sense of connectedness seem important for volunteer managers as well as managers in organizations with paid workers. We discuss theoretical implications as well as avenues for future research.

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P-008

Examining the Role of Need Fulfillment in Influencing University Language Students' Decisions to Continue Language Study

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A 2006 report from the Modern Languages Association (MLA) found evidence of a recent downward trend in world language (WL) enrollments in U.S. universities. In ten years, the number of WL enrollments per 100 students has fallen from 9.1 in 2006 to 7.5 in 2016. For these reasons, it is important to explore what can be done to recruit and retain more WL learners in order to better advocate for postsecondary WL programs. The purpose of this quantitative study was to determine the role of basic need fulfillment at the WL program-level in influencing students' decisions to enroll in another WL course in the next semester even when it was not required of them. Participants included 188 students who were enrolled in an elementary 1, elementary 2, or intermediate 1 WL course at the time of the study. Results indicated significant differences between continuing and non-continuing students, in that continuing students indicated higher levels of autonomy, competence, and relatedness fulfillment from their language classes, as well as higher levels of intrinsic motivation for language learning. Results from a path analysis indicated that competence fulfillment significantly predicted students' intrinsic motivation for WL learning, which further predicted their intention to continue language study in the next semester. The findings suggest that WL programs can retain more of their novice-level students by specifically targeting the development of their feelings of competence and intrinsic motivation.

P-008A

Motivation in medical school: Exploring psychosocial factors that influence student well-being, perceived stress, and coping.

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Background: Medical school is challenging and significantly impacts student well-being. Unfortunately, the onus of wellness is placed heavily on the student without reciprocal effort from programs to address elements within the learning environment that support or hinder learner self-determination and well-being.

Purpose: We explored student basic psychological need satisfaction in the learning environment and its influence on perceived stress, coping, and well-being, and how mindfulness and resilience contribute. Our hypotheses were: 1. higher need satisfaction would relate to increased well-being and coping, and reduced perceived stress, and need frustration the opposite; 2. mindfulness and resilience would bolster or dampen the effect of need satisfaction/frustration on stress and coping, respectively.

Methods: All 400 medical undergraduate students from our institution were invited to complete online surveys. Data was collected on perceived need satisfaction/frustration, stress, coping, mindfulness, resilience, and well-being – over the past year.

Results: ANOVA revealed students in years two and four perceived their learning climate as the least autonomy supportive. Sex differences were found in basic psychological need satisfaction/frustration, resilience, mindfulness, perceived stress, and coping – again, years 2 and 4. Linear regression showed that basic psychological need frustration was associated with higher perceived stress, $F_{(1, 186)} = 276.49$, and poorer coping, $F_{(1, 181)} = 81.67$, accounting for 60% and 30% of the variances, respectively (all p 's < .001). Mindfulness and resilience dampened this effect, $F_{(3, 184)} = 146.29$, $p < .001$, increasing the variance to 71%. Conversely, basic psychological need satisfaction was associated with lower perceived stress, $F_{(1, 187)} = 189.01$, and better coping, $F_{(1, 183)} = 45.07$, explaining 50% and 20% of the variances, respectively (all p 's < .001). Mindfulness and resilience strengthened this effect, $F_{(3, 185)} = 102.91$, $p < .001$, and increased the explained variance to 63%. Structural equation modelling revealed two well-fitting models, in which student psychological need satisfaction related to increased well-being ($p = 0.237$, $CFI = 0.998$, $RMSEA = 0.052$); accounting for resilience ($p = 0.369$, $CFI = 0.999$, $RMSEA = 0.018$).

Conclusions: Instructor autonomy support influences medical student well-being, but learner mindfulness and resilience are important contributors. Though focus is often on transition years, second and fourth year may represent vulnerable periods for students – especially females, whom may be at risk for increased stress. Learning environments that support the psychological needs of medical students support their resilience and well-being, and are beneficial for coping with stress.

P-009

Meta-Analysis of Psychological Need Frustration on Health-Related Outcomes

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Introduction: Grounded in self-determination theory (SDT), we conducted a meta-analysis to examine the associations of psychological need frustration and health-related outcomes (mental, physical, behavioral and social domains).

Methods: A combination of SDT-related keywords was identified for literature search (e.g. competence, autonomy, relatedness, need thwarting or need frustration). Outcomes related to work motivation and turnover, competitive sports engagement, and intentions to sports and physical education were excluded. Searches were conducted using databases such as EBSCO, SCOPUS, OVID, PsycINFO, PsycARTICLES, and MEDLINE. Messages were posted on SDT electronic mailing lists (i.e. LISTSERV) for finding any unpublished information. Other than the strengths of associations among variables, we also examined the potential moderation effects of age, gender, types of studies and study design.

Results: 47 independent datasets were included from journal articles (number of studies $k = 43$), unpublished manuscripts/datasets ($k = 3$), and paper under review ($k=1$). The main results revealed that psychological need frustration was moderately correlated with positive mental outcomes ($r = -.473$, 95% CI [-0.433, -0.512]), positive physical outcomes ($r = -.419$, 95% CI [-0.346, -0.493]), positive social outcome ($r = -.561$, 95% CI [-0.451, -0.671]), and weakly with positive behavioral outcomes ($r = -.141$, 95% CI [0.043, -0.325]). Moderator effects were found for age on positive mental outcomes ($r = -.457$, 95% CI [-0.400, -0.513] for under or at 18; $r = -.486$, 95% CI [-0.432, -0.539] for above 18), and positive physical outcomes ($r = -.471$, 95% CI [-0.366, -0.575] for above 18). For study type, moderation effect was found in positive mental outcomes ($r = -.477$, 95% CI [-0.434, -0.519] on journal articles). For study design, moderation effect was found in positive mental outcomes ($r = -.468$, 95% CI [-0.425, -0.511] on cross-sectional studies). No moderation effect was found on gender in four health-related domains.

Discussion and Conclusion: The present study provides evidences on the negative impacts of psychological need frustration on health-related outcomes. Further studies are recommended in other disciplines for examining its impact.

P-010

The British Identity Study: Autonomy Support While Discussing Negative Aspects of Identity Improves Well-Being by Reducing Defensiveness

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Discussing identity, especially with an outgroup member, can be distressing. This study examines the impact of autonomy support, or encouragement for authentic self-expression, on well-being during such an interaction and the mechanisms underlying this effect. Undergraduates in the UK (N=83) were interviewed about their British identity in an autonomy-supportive or neutral manner by an American experimenter. Participants also completed measures of state well-being and defensiveness, among others. Results confirmed our hypotheses, indicating that participants in the autonomy-supportive condition reported greater well-being than those in the neutral condition (total effect, $b=.30$, $p<.05$) and that this effect was mediated by defensiveness (indirect effect, $b=.33$, $p<.05$). We tested this against the alternative mediator, feelings of closeness with the experimenter; closeness alone was a significant mediator, but dropped to non-significance when competing with defensiveness in a multiple mediation model. These results suggest that autonomy support impacts well-being by reducing defensiveness during the interview.

P-011

Assessing autonomy in kindergarten children

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Background: The essence of autonomous existence is authenticity and self-determination. Assessing the level of autonomy in young children is complex because the existing instruments for measuring autonomy in adolescents and adults do not necessarily reflect autonomy in young children. The existing measures are not appropriate for two reasons: firstly, because autonomous qualities, like other personal qualities (such as personality traits) are manifested differently at different ages; and Secondly, because young children have limited ability to reflectively self-report.

In this study we developed and validated instruments to assess the autonomy of kindergarten children (aged four to six). Specifically, we developed new and adapted existing appropriate instruments to assess self-determination, authenticity, creativity and agentic-engagement as they all considered proxies of autonomy.

Method: Participants were 161 kindergarten students (76 males, 85 females) from seven public kindergartens in Israel. Students were individually interviewed in a quiet place in the kindergarten by a trained interviewer.

Instruments: We defined *Authenticity* as children self-knowledge regarding his/her interests and activity styles. Children were presented with pictures describing activities that are usually available in kindergarten which they were asked to sort twice in terms of interest in the activity and preferred style (individually/in a group). The level of self-knowledge was calculated according to the congruence between the Childs statements about his/her preferences in the first and second measurements.

Students' self-determination was assessed by a projective instrument to assess relative autonomous motivation (Katz & Cohen, 2014).

Agentic-engagement was assessed with a new instrument based on the description of behaviors that represents agentic engagement. Participants were presented with three dilemma scenarios from kindergarten life and four possible responses behaviors for each dilemma, that fall on a continuum from the most agentic to the least agentic. They were asked to rate their tendency to use each of the four possible responses.

Students' creativity was measured by the Test for Creative Thinking-Drawing Production (TCT-DP: Jellen & Urban, 1987). This is a paper-and-pencil instrument that asks respondents to complete an incomplete drawing showing six distinct figural fragments placed in a square frame.

Results: High positive correlations between all the measured variables were obtained. Namely, children who reported high self-knowledge also reported high self-determination, high agentic engagement, and high creativity, indicating the construct validity of the instruments. A high positive correlation between all these measures and the kindergarten teachers reports on students cognitive, emotional and behavioral adjustment highlight the external validity of the instruments.

P-012

The Impact of Environmental Threat on Children's Perceptions of Maternal Controlling Practices and Motivations: An Experimental Study

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Controlling parenting impair the quality of children's motivations by promoting external and introjected regulations as well as amotivation. In turn, these motivations have been associated with reduced skill learning and less effective self-regulation in important areas of children's development. Unfortunately, research shows that even parents who aim to support their children's autonomy are not immune to the pressures prompting controlling practices (Robichaud et al., 2018). In order to nurture children's optimal development, it is thus essential to unravel the risk factors leading to these suboptimal practices, with the ultimate goal of developing effective interventions to prevent them. Past studies looking at the antecedents of controlling parenting have documented a positive association between parents' controlling practices and their perceptions of the environment as threatening the future of their children (i.e., perception of the environment as worrying, competitive, harsh, resource-scarce, and unstable; Gurland & Grolnick, 2005). Yet, the causal impact of environmental threat on controlling practices has yet to be investigated. To fill this gap, the present study relies on an experimental design to test the impact of mothers' perceptions of environmental threat on children's perceptions of maternal controlling practices during a guided-learning task as well as on their own motivations toward that task.

Method. A total of 101 mother-child dyads participated in this study (children's M_{age} = 10.20 years; 49 boys). We first manipulated mothers' perceptions of environmental threat through journalistic reports, and subsequently asked them to help their children complete a task situated in children's zone of proximal development. Children's perceptions of their mothers' parenting practices during the task were then assessed in addition to their level of autonomous and controlled motivations and amotivation.

Results. Structural equation modeling showed that mothers in the threat condition were perceived by their children as more controlling than those in the control condition. These perceptions in turn predicted higher levels of controlled motivations and amotivation. A bootstrap analysis also revealed significant indirect links from environmental threat to children's controlled motivations and amotivation, through perceived maternal controlling practices.

Conclusions. These results suggest that when parents perceive threats, they are more likely to be controlling, which in turn negatively affects children's motivations. Showing these relations with an experimental design provides evidence that the impact of environmental threat on controlling parenting may be causal in nature. These results are crucial because they show that becoming controlling may be an automatic, but counterproductive, parental reaction to perceived threat.

P-013

Toward Non-Evaluative Positive Feedback: The Impact of Different Types of Compliments on Children's Self-Esteem

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Past research has attempted to demystify how parents can support their children's self-esteem. Current literature suggests that compliments can be a powerful tool for achieving this goal. Yet, its use can be risky with certain types of compliments having detrimental impacts on children (e.g., controlling compliments decrease intrinsic motivation; Ryan, 1982). Unfortunately, although research has offered clear definitions regarding the types of compliments that can have negative impacts, few studies have focused on optimal ways for parents to congratulate their children. To fill this gap, we focused on four types of compliments operationalized as positive in the documentation (Dweck 2007): descriptive, process-oriented, result-oriented and comparative feedback. These types of compliments vary in the intensity of the evaluation they imply and thus are likely to vary in the amount of control they convey. The aim of the first study was to examine the links between these types of compliments and children's self-esteem using both mothers and children as informants. The second study included an experimental design that compared the situational impacts of compliments that specifically target the product of children's efforts (descriptive, result-oriented, and comparative). In both studies, it was expected that less evaluative compliments (e.g., descriptive) would be associated with more positive outcomes than evaluative ones (e.g., comparative). A total of 65 mother-child dyads (children's M_{age} = 10.20; 31 boys) participated. For the first study, mothers evaluated how they typically compliment their children, while children reported their self-esteem. For the second study, children were invited to participate in a creative activity with the experimenter. Placed in one of three experimental conditions, they either received descriptive, result-oriented or comparative compliments (equivalent number of compliments per condition). After the activity, children reported their perceived competence at the task (our indicator of situational self-esteem). Results from the correlational study showed that descriptive compliments were positively linked with children's self-esteem, while process-oriented compliments were negatively linked with children's self-esteem. No significant effect was observed for result-oriented and comparative compliments. Results from the experimental study revealed that girls felt more competent when given descriptive compliments than result-oriented ones, and that children reporting lower self-esteem felt more competent when giving descriptive or comparative compliments than result-oriented ones. Together, these findings suggest that when parents wish to underline their children's accomplishments, some compliments may be more effective than others in promoting self-esteem. While comparative, result-oriented and process-oriented compliments may at times be problematic, descriptive compliments seems particularly beneficial.

P-014

Latent profiles of parental academic conditional negative and positive regard and their impact on students' motivation and well-being

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Parental academic conditional regard is a socialization strategy in which parents provide more (conditional positive regard, CPR) or less (conditional negative regard, CNR) appreciation for their child depending upon the child's academic achievement (Roth et al., 2009). As a psychologically controlling behavior conditional regard undermines children's basic psychological needs resulting in impaired motivation and adjustment. While variable-centered studies have shown that CNR and CPR reflect distinct dimensions of conditional regard, no research to date has taken a person-centered approach to examine within-person combinations of CNR and CPR. Therefore, we examined whether different profiles of CNR and CPR exist and whether membership in these profiles predicts differences in motivation and adjustment.

We conducted confirmatory latent profile analyses using Mplus. We analyzed data from a student sample of fifths to tenths graders ($N=3891$; $Age=13.12$, $SDage=1.73$) reporting on their current perception of CNR and CPR as well as on motivation and adjustment measures (achievement goals, self-esteem level and contingency, need satisfaction, depressive symptoms). We then validated the results of the latent profile solution in two further samples of university freshmen ($N=662$) and parents ($N=770$) who reported retrospectively on their experienced CNR and CPR during their childhood.

Results supported a 4-cluster over a 2- or 3-cluster solution in the student sample: no-CR (low CNR and CPR; 57.0%), only-CPR (low CNR and high CPR; 28.6%), CR (high CNR and CPR; 12.9%), only-CNR (high CNR and low CPR; 1.5%). The 4-cluster solution was replicated robustly in the other two samples. Students in the CR and the only-CNR group scored less favorably than students in the no-CR and only-CPR group on all outcomes. Students in the no-CR and only-CPR group differed in only a few respects: students in the only-CPR group reported a higher satisfaction of the need for competence and a stronger approach-motivation, but also a more contingent self-esteem and a stronger avoidance-motivation. Thus, students in the only-CPR group displayed a mixed pattern of outcomes compared to students in the no-CPR group.

All theoretically possible profiles were supported by the data with meaningful group size differences. It can be noted that all groups who report the experience of CNR show the least functional outcomes. However, experiencing only CPR in comparison to no conditional regard is associated with benefits and costs at the same time. It is discussed, which processes could account for the different effects of CNR and CPR leading to different outcomes between the groups.

P-015

Developmental trajectories of career decision-making motivations from high school to university and the predicting role of mothers' self-reported values.

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This longitudinal study aimed to identify youths' developmental patterns of career decision-making motivations (CDMM) for vocational activities (e.g. seeking information and identifying options on careers and school programs) and to predict membership in trajectories using their mothers' self-reported values. Previous research showed that youths' CDMM are related to perceived parental support (e.g. Guay et al., 2003). Values contribute to motivated behaviors, since they serve as guiding principles in people's lives and are associated with behaviors such as helping others (e.g. Sagiv et al., 2017). Therefore, values promoted by mothers are expected to predict the development of youths' CDMM.

The sample was stratified to be representative of youths in the province of Quebec, Canada. It included 466 youths (55% girls) who completed the Career Decision-Making Autonomy Scale (Guay, 2005) each year for six years, starting from their third year of secondary school (Time 1) until their first year of university (or last year of a 3-year technical college training; Time 6). Youths' mothers completed the Portrait Value Questionnaire (Schwartz et al., 2001) at Time 1 ($N = 360$). Intrinsic values were assessed with self-transcendence and openness to change subscales whereas extrinsic values were assessed with conservation and self-enhancement subscales.

To estimate longitudinal changes for each type of CDMM, growth mixture modeling with linear, quadratic, and cubic estimates was conducted with Mplus (version 8.1, Muthen & Muthen, 2018). Membership probabilities for each type of motivation were used for multinomial logistic regressions to determine whether mothers' self-reported values could predict youths' membership in trajectories of CDMM, while controlling for gender, grades, and sociofamilial adversity.

A two-group solution was obtained for intrinsic motivation (high trajectory = 69 %; low trajectory = 31 %), identified regulation (high = 90 %; low = 10 %), introjected regulation (high = 41 %; low = 59 %) and external regulation (high = 19 %; low = 81 %). Intrinsic and extrinsic values predicted membership in several trajectories of CDMM.

These findings suggest that youths' reasons for engaging in vocational decision-making are varied and that their developmental patterns over a 6-year period are heterogeneous. Moreover, the most positive trajectories (high intrinsic, low introjected) were predicted by mothers' intrinsic values (self-transcendence) while more negative trajectories (high introjected, high external regulated) were predicted by mothers' valuing of extrinsic values (self-enhancement) and low valuing of intrinsic values (self-transcendence). This study is the first to link CDMM to mothers' self-reported values.

P-016

Internal and External Parental Control: Associations with Children's Symptomatology and Self-Related and Relational Outcomes

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According to Self-Determination Theory (SDT), controlling parenting pressures children towards specific behaviors, which undermines their need for autonomy (Grolnick & Ryan, 1989). Controlling parenting, expressed in both a covert (psychological control) and overt (harsh control) manner, has been related to negative child outcomes including anxiety, depression, and externalizing behaviors. Following Soenens and Vansteenkiste's (2010) conceptualization, this study used an SDT framework to further examine different types of controlling parenting, including internal (guilt induction and love-withdrawal) and external (yelling/demanding and punishment/privileges) control. We examined whether these types of parenting could be measured as separate constructs and whether they showed unique relations with children's internalizing and externalizing symptoms, self-regulation, attachment, and self-worth. Finally, we examined whether attachment and self-regulation mediated relations between controlling parenting and child symptoms.

Participants were a diverse sample of 117 5th and 6th graders. Students reported on controlling parenting, anxiety, depression, externalizing behaviors, self-regulation, attachment, and self-worth.

Confirmatory factor analysis indicated that guilt induction, love withdrawal, yelling/demanding, and punishment/privileges could be measured separately. The model showed good fit, $\chi^2(67) = 94.86$, CFI = .97, RMSEA = .06. The four control variables were all highly related ($r_s = .4-.6$), and therefore were not combined into two higher order factors of internal and external control.

Results revealed that all types of control were significantly related to children's symptoms, self-regulation, and attachment. Regression analyses showed that guilt induction was uniquely associated with higher child depression ($t = 2.27$, $p < .05$, $\beta = .28$) and anxiety ($t = 2.35$, $p < .05$, $\beta = .29$). None of the control measures uniquely predicted child externalizing. Use of punishment/privileges uniquely predicted children's less autonomous self-regulation ($t = -2.56$, $p < .05$, $\beta = -.36$). Guilt induction ($t = -3.24$, $p < .01$, $\beta = -.32$) and yelling/demanding ($t = -1.97$, $p = .05$, $\beta = -.27$) negatively predicted children's attachment.

Attachment mediated the positive relations between guilt induction and love withdrawal, and child anxiety and depression. Attachment also mediated the positive relation between yelling/demanding and child externalizing, while self-regulation mediated the positive relation between punishment/privileges and child externalizing.

Results revealed that these four types of controlling parenting could be measured as unique constructs. Specific methods of controllingness uniquely predicted child outcomes, indicating the importance of differentiating further into the various types of behaviors parents display. Mediation analyses highlighted the important role of attachment and self-regulation in understanding how controlling parenting relates to children's adjustment.

P-017

Maternal achievement-oriented conditional regard with toddlers as a predictor of preschoolers' and elementary-school children's poor mastery motivation: a longitudinal study

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The present research focuses on the potential effects of mothers' early use of the practice of achievement-oriented parental conditional regard (PCR): Providing more affection when their child is successful or works hard at learning new knowledge and skills and less affection when they don't (Assor et al., 2004). Past studies have shown that achievement-oriented PCR is associated with stressful coping with challenges. However, these studies used concurrent designs and none was conducted in the first years of life. The present study addresses both limitations. The study included three waves. First, 104 mothers of 18 months-old toddlers reported on their use of achievement-oriented PCR. Then, when children were 54 months-old, they were administered a puzzle task including one solvable puzzle, then three unsolvable puzzles, and then again a solvable puzzle. Additionally, mothers completed at home scales assessing their child's negative reactions to failure and positive coping with challenge (Morgan et al., 2007). When children were 96 months-old (second grade), they were administered a similar mastery task, including solvable and unsolvable mazes and an interview. In addition, their teachers rated them on mastery motivation and general adjustment scales.

Children coping with difficulties while working on the mastery tasks was video-taped at both 54 months and 96 months. Presently we only coded and analyzed the mastery tasks' data of the 54 months old children. Specifically, we coded for two types of composite indicators of poor mastery behaviors - behavioral and emotional – based partly on a coding system developed by Smiley and Dweck (1994). Scores on the two composite-indicators were significantly higher on the unsolvable puzzles compared to the solvable puzzles, thus supporting their validity. Based on median splits on the behavioral and emotional task-based scores, we created three groups: helpless (high scores on both indicators), mastery oriented (low scores on both indicators), and a medium group (inconsistent scores). A similar procedure was used to create three groups based on mother-reports. ANOVAs on task-based and mother-based classifications showed that the groups classified as helpless-oriented had significantly higher scores than the groups classified as mastery-oriented on maternal achievement-oriented PCR. Presently, we are analyzing data obtained with the 96-months old children, and preliminary results from these analysis will also be presented. The findings so far suggest that mothers' use of achievement-oriented PCR with toddlers may be regarded as an early risk factor that may merit special attention in early intervention and parent-guidance programs.

P-018

When need satisfaction matters: the buffering role of general need satisfaction in the relation between parental identity and parental burnout

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Every parent agrees with the curious paradox that parenting is at the same time energy-consuming and energy-giving. For most parents there is a good balance between the two, but for some parents the balance leans chronically to the wrong side. These parents are at risk for parental burnout. Symptoms are an overwhelming exhaustion related to one's parental role, emotional distancing from their children and loss of accomplishment (Mikolajczak et al., 2018). Having a more mature identity is found to lead to better personal well-being (Marcia, 2002). Less is known about the impact of parental identity in particular on the well-being of parents.

The present study aimed to examine the impact of parental identity on parental burnout. Further, we want to investigate the role of general need satisfaction and frustration on parental burnout. Can need satisfaction in other domains than parenting play a buffering role to diminish parental burnout symptoms?

The participants were 453 parents (166 fathers and 287 mothers) with an age ranging from 18 to 59 years (mean age = 36.37; SD = 8.11). They completed questionnaires on parental burnout, basic psychological needs and parental identity. Almost 10% of the parents reported that they experience serious symptoms of parental burnout on a weekly base, 4% even on a daily base.

Preliminary results suggest that parents who have a committed parental identity experience less feelings of parental burnout ($\beta = -.23, p < .001$). On the other hand, parents who ruminate more about their role as a parent, more often experience feelings of parental burnout ($\beta = .48, p < .001$). However, when parents experience more general need satisfaction, it buffers the detrimental effect of rumination on parental burnout.

The data will be analyzed further in the upcoming months, which will lead to more findings and conclusions that will be presented at the conference. The results of this study underscore the impact of parental identity on the experience of burnout in the parental role. Furthermore, the results underline the important role of general psychological need satisfaction in life. These findings can inform prevention and intervention practices to improve parents' well-being.

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P-019

The structural relationships between parent-child relationship, self-esteem, and school adjustment of middle school students in Korea

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Introduction

Early adolescents experienced rapid and diverse changes in physical, psychological, emotional, and social aspects. As they spent the most time in school, they would have difficulty adjusting at school and achieving academic performance. Students with secure parent-child relationship tended to adjust well at school (Lim, & Lee, 2007). It had also been reported that self-esteem played a role to improve the level of school adjustment (Lim & Lee, 2017). This study was to explore the structural relationships between parent-child relationship, self-esteem, and school adjustment and also examine the differences among the parent-child relationship, self-esteem, and school adjustment according to the level of academic achievement.

Methods

Using the fourth year data of the Gyeonggi Education Panel Study(GEPS), responses of 2,529 first graders in Korea's middle schools were analyzed using SPSS and AMOS statistical programs. Measures were the parent-child relationship, self-esteem, school adjustment and academic achievement in this study. Academic achievement was used by summing up the T scores of Korean, English, and mathematics performances. All variables were rated on a 5-point Likert-type scale ranging from 1(not at all like me) to 5(very much like me) and Cronbach's alphas were acceptable. The structural equation was used to identify whether parent-child relationship and self-esteem affected school adjustment. In addition, independent t-tests were used to verify whether there were differences in each variable depending on the level of student's academic achievement.

Results

Results showed that the secure parent-child relationship positively affected self-esteem, and school adjustment, whereas the neglected parent-child relationship negatively affected self-esteem, and school adjustment. The examination of the structural equation model showed that the model fit was acceptable(i.e., CFI, NFI, and TLI were greater than .90, SRMR was smaller than .06). Comparing the mean differences between groups divided by the level of academic achievement, there were statistically significant differences in all variables.

Discussion & Conclusion

This study suggests that 1st year Korean middle school students who have secure relationship with their parents have self-esteem and school adjustment. To ensure students' stable school adjustment, parents should have secure relationship with their children, and schools need to make educational intervention that can help them create a positive self-esteem. * References will be provided upon requests

P-020

The mediating role of cognitive appraisals in the relationship between passion and emotions

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The existing literature on the concept of passion (Vallerand, 2015) reveals that harmonious passion leads to more positive emotions than obsessive passion, whereas the opposite result is obtained with negative emotions. The purpose of this research was to evaluate the role of cognitive appraisals as mediators of passion-emotion relationships. This hypothesis implies that harmonious passion is linked to a challenge appraisal that, in turn, is associated with positive emotions. On the other hand, obsessive passion is expected to be linked to a threat appraisal that, in turn, is associated with negative emotions. In Study 1, 227 participants engaged in different sports completed an online questionnaire about their passion for their specific sport, cognitive appraisals in important games, and emotions experienced while playing their sport. Results of a structural equation modeling analysis and an indirect effect test provided support for the proposed sequence involving passion, cognitive appraisals, and emotions. In Study 2, 155 athletes completed questionnaires before and after a competitive game. Results of analyses conducted separately in the success and failure conditions supported the hypothesized sequence in the case of defeat during a match for both types of passion, and in the case of victory for harmonious passion only. Obsessive passion was indeed not linked to threat appraisal among victorious athletes. Conclusions: These results suggest that both types of passion trigger different cognitive appraisals that lead to the corresponding emotions. Future research is needed to replicate these findings and to better understand the role of passion and cognitive appraisals in emotions experienced in the realm of sports.

P-021

Emotional challenges along the doctoral journey: Self-determination theory in higher education.

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Every doctoral journey is an emotional rollercoaster alternating contentment, relief, hope, interest, with stress, anxiety and frustration. Students who embark on this adventure enrich themselves personally and professionally. They are also very likely to develop mental health problems or to give up.

The aim of our longitudinal mixed-method research is to investigate significant emotional events experienced by doctoral students from a medium-sized Swiss university, and to understand what affects their wellbeing, and sustain or hinder their motivation. During three weeks, distributed between October 2016 and January 2017, 26 volunteers reported 256 events with the Geneva Appraisal Questionnaire (Scherer, 2001). The data was statistically described, and content analyzed with the mini-theories of the SDT (Ryan & Deci, 2017). The most facilitating and impeding events of the period were further examined in an in-depth individual follow-up interview. The results encompass case studies of 26 major events (from 11 students).

Facilitating events (13) (e.g. conference attending, supervisor feedback, writing) sustained the needs of competence and autonomy (enhancing well-being) and were connected to intrinsic motivations. Students could legitimate themselves and their research, assess their progress or produce new knowledge. Relations to others appeared as consolidating elements. The kind of events selected by the students varies according to the stage of the research. Their perception of an autonomy supportive context (or not) affects their perception of the guidance as trustworthy and/or of their competence.

Impeding events (13) were mainly disappointing social interactions (e.g. feedback, discussions with peers, doctoral colloquium), which thwarted the basic needs (decreasing well-being). Such events highlight a confrontation between the students' own values and aspirations and those they perceive in their context, often impacting their projection into an academic career. They also concern situations of helplessness.

Those major events could symbolize thresholds in the process of "posture" building as a researcher, which is closely entangled in identity development. On this path, intrinsic motivations and aspirations, as well as the meaning of the doctorate itself, work as inner compass. Affiliation and trust from proximal context seem to be the seedbed facilitating those processes.

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P-022

Welcome to the dark side: regulation of negative emotions and the integration of negative memories as contributing factors to well-being and emotional functioning.

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Past research has shown that reactivations of memories of negative events can greatly decrease well-being over time, as well as increase emotional dysfunctioning. However, some individuals have experienced many negative events in their lives but still display a high level of well-being. Would it thus be possible for negative memories to also positively influence people's sense of well-being? What are the individual differences that enable people to gain well-being from their negative memories, and how? Based on recent SDT research on emotion regulation (Roth et al., 2014) and on the integration of past experiences into the self (Weinstein, Deci, & Ryan, 2011), we proposed that certain emotion regulation strategies can alter the way negative memories influence well-being over time, by facilitating their coherent integration into the self. In turn, we expected coherent integration of negative memories to further facilitate adaptive emotion regulation strategies over time. A total of 303 participants took part in this longitudinal study. At Phase 1, they completed measures of emotion regulation and well-being. Three emotion regulation styles were assessed, (1) integrative emotion regulation, a more adaptive emotion regulation style characterized by openness, interest, and tolerance towards new emotional situation, (2) dysregulation, a lack of capacity to adequately and effectively regulate negative emotions, and by an emotional overflow when facing new negative experiences, and (3) controlling regulation, a strong desire to hide, ignore, and suppress any negative emotion. Three months later, at Phase 2, participants described the memory of the most negative event they experienced since Phase 1. They also completed a measure of acceptance of the event, a marker of adaptive memory integration, as well as a measure of intrusions, a marker of poor memory integration. One month later, at Phase 3, participants completed the well-being measures again, and another month later, at Phase 4, their emotion regulation was reassessed. Results from a path analysis revealed that integrative regulation positively predicted memory acceptance, which in turn led to increases in well-being and integrative regulation over time. Contrariwise, dysregulation positively predicted memory intrusion, which in turn led to decreases in well-being over time. Thus, the way people regulate their negative emotions can act as an important individual difference influencing how they coherently or poorly integrate negative memories into their self, which can in return alter well-being and emotion regulation capacity over time.

P-023

Adolescents as active managers of their own psychological needs: a cross-sectional and longitudinal study about the role of need-crafting in adolescence.

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Current literature shows quite impressive evidence for broad effects of the three psychological needs developed central to the self-determination theory: autonomy (i.e., the experience of psychological freedom and authenticity), relatedness (i.e., the experience of love, care and reciprocity in interpersonal relationships) and competence (i.e., the experience of personal efficacy in developing talents and meeting challenges). While satisfaction of these needs is assumed to be essential for individuals' well-being and their psychosocial development, need frustration is linked to forestall development and increases the risk for psychopathologies. This perspective looks mainly to the needs as input for individual's well-being and adjustment. Completing this needs-as-input perspective, psychological needs can also function as motivational forces driving people to contribute actively their own growth and well-being. According to this needs-as-motives perspective, people are motivated to manage their own psychological needs. This study focuses on the concept of need-crafting in this active self-management. It contains that people attempt to maximize chances that need satisfaction can occur. **Study 1.** A cross-sectional questionnaire study in 174 youth between the ages 16 and 20 will clarify the new developed concept of need crafting. First, we hypothesize need crafting is related to more psychosocial well- and less ill-being. This relationship is expected to be mediated by need satisfaction.

Study 2. In a second study, we investigate in a 3-months longitudinal study in 80 youth between the ages 17 and 19 the concept of need crafting. We expect adolescents' who used more need crafting at the first measurement, will experience more well- and less ill-being 3 months later. **Conclusion.** Evidence for this hypotheses will have important theoretical and practical consequences for both the knowledge of psychological needs and prevention programs. The presented results are a first phase of a large scale prevention project targeting self-management in adolescence.

P-024

Integrative and dysregulated emotion regulation differentially predicts autonomous and controlled prosocial behavior

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Previous research has shown positive relations between integrative emotion regulation (IER) and prosocial behavior, and no relation between emotional dysregulation and prosocial behavior. However, even dysregulated individuals enact prosocial behaviors from time to time. According to self-determination theory, people's reasons for performing prosocial behaviors are aligned on a continuum of autonomy and control. We hypothesized that because people who habitually use IER are likely to effectively process negative emotions arise in them in the presence of another's needs and empathize with him or her, they are also likely to offer help for autonomous reasons. On the contrary, we hypothesized that because dysregulated individuals are likely to experience personal distress in the presence of another's needs, they are also likely to offer help for controlled reasons. In Study 1, 153 participants filled in questionnaires assessing their emotion regulation styles as well-as their autonomous and controlled reasons for prosocial behaviors. The results demonstrated that IER and dysregulation differentially predicted autonomous and controlled prosocial behaviors, respectively. In study 2, 239 participants filled in questionnaires assessing their emotion regulation styles, as well as their habitual empathy (taking perspective, empathic concern and personal distress). Then participants viewed a short film in which an Eritrean refugee testifies on his experiences. Then participants were asked to rate their reasons for offering prosocial behavior for that particular person. The results demonstrated that habitual IER predicted autonomous reasons for offering help mediated by perspective taking and empathic concern, while dysregulation predicted controlled prosocial behavior, mediated by personal distress. These studies support the assumptions that IER is an adaptive emotion regulation strategy, linked with empathy and optimal prosocial behavior, while dysregulation is a maladaptive strategy.

P-025

Integrative emotion regulation and suppression are differentially related to personal goal attainment

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Recent research is showing that the process of personal goal pursuit is affected by the type emotion regulation styles individuals use. For example, it has been found that emotional suppression undermines the attainment of personal goals. According to SDT, integrative emotion regulation (IER) involves receptive awareness of emotions, and the ability to use these emotions in the regulation of behavior. This longitudinal study examined for the first time whether IER is related with increased personal goal pursuit. 100 participants filled in questionnaires describing their personal goals, emotion regulation styles, and their feelings about the goals (goal-related effort, perceived competence, anxiety and frustration) at four time points. The results of Time 1 showed that habitual IER was related to greater willingness to invest efforts in attaining the goal, and to greater perceived competence for attaining it, while habitual suppression was not related to these variables. At Time 2, actual use of IER was related to both increased goal-related anxiety and efforts invested at attaining the goals. Actual use of suppression was related to goal-related anxiety and frustration and negatively related to perceived competence. At Time 3 and Time 4, actual use of IER was no longer related to goal-related anxiety, but was positively related to effort and perceived competence. The relations were stronger in Time 4, relative to Time 3. Emotional suppression was mildly related to anxiety and frustration, but not to effort and perceived competence. The results suggest that, although people who use IER report greater willingness to pursue goals, this strategy might be costly and emotionally demanding at the short term. However, at the longer term, such individuals benefit and experience greater success in attaining their goals. On the other hand, emotional suppression is related with short term anxiety and frustration, which are maintained through the goal attainment process, and is not related to goal attainment.

P-026

Two dimensions of emotional integration and their relation to well-being

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Past research has found that taking an interest in one's own negative emotional experiences (integrative emotion regulation; IER) results in adaptive functioning (Roth et al., 2014). Conceptually, IER involves two dimensions: (1) paying receptive attention to the emotional experience; (2) taking an interest in and exploring the emotional experience, considering other aspects of the self, such as goals, values and needs (Ryan, Deci, Grolnick, La Guardia, 2006). However, researchers have focused only on the second dimension (Roth et al., 2014), not examining both at the same time and considering possible interrelations. Our study took a step in this direction by measuring the two dimensions of IER and examining their outcomes.

We hypothesized that the first component of IER, receptive attention, may allow the second aspect, exploration and integration, and this, in turn, may predict well-being. To test this hypothesis, we validated a measure distinguishing between the two components and tested their relations with different variables of ill-being and well-being. Three hundred and four participants (48.7% female), randomly sampled by a large Israeli survey company (IPANEL), responded to self-report online questionnaires. The results supported the mediational hypothesis. The theoretical and practical implications of these results are discussed.

Keywords:

Integrative emotion regulation, emotion regulation

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P-027

Financial rewards and intrinsic motivation - a self-determination perspective

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The concepts of motivation and rewards have been at the centre of organisational studies for several decades and yet interest in motivation research is as pronounced as ever. The questions of how to effectively motivate employees and which rewards to administer under which circumstances are still largely left unanswered by studies yielding inconsistent findings. An important gap in the rewards literature is that prior research has generally failed to consider the specific organisational and individual-level factors that play a role in the motivation process, thus limiting our understanding of the circumstances when behaviour is not in line with incentives. This study aims to address this knowledge gap by examining the specific conditions in which performance-contingent financial incentives will have a positive (vs negative) impact on employee intrinsic motivation. Drawing on the self-determination theory (SDT), this study examines the impact of performance-contingent rewards on basic need satisfaction and intrinsic motivation at work, and considers the moderating role of intrinsic job characteristics, managerial autonomy support and autonomy causality orientations in the process.

Data was collected through online surveys and respondents were recruited primarily through Qualtrics opt-in research panels. The final sample consists of 823 individuals working in different industries and occupations in the UK, 256 of whom reported receiving some form of performance-related pay at work. The proposed conceptual model is tested by means of Structural Equation Modelling. The results are discussed in relation to the importance of studying incentive effects 'in context' i.e., in connection with other key aspects of organisational reality. Specifically, the study discusses the role of socio-contextual factors (such as managerial support and job characteristics) and individual-level factors (such as autonomy causality orientations) in moderating the relationship between performance-contingent rewards and employee intrinsic motivation. In doing so, this study builds on previous SDT literature (Kuvaas et al, 2016; Olafsen et al, 2015) to advance an in-depth understanding of the conditions in which intrinsic motivation is supported vs hindered by external interventions.

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P-028

The undermining of scholars' intrinsic work motivation by performance-contingent reward expectancy and pressure to perform: evidence from two countries

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Drawing on cognitive evaluation theory (CET), the purpose of this research is to examine the effects of performance-contingent reward expectancy and performance pressure on scholars' intrinsic motivation in the context of academic work. The study also investigates whether a reward system induced deterioration of work meaningfulness moderates the relationship between performance pressure and intrinsic motivation, and whether control by pay mediates the effect of performance-contingent reward expectancy on intrinsic motivation. Two cross-sectional survey studies conducted in Finland and Sweden are used to examine the relationships mentioned above. In study 1, it is hypothesized that both expected performance-contingent reward attainment, as well as expected reward nonattainment, will be negatively related to intrinsic motivation. Likewise, it is hypothesized that performance pressure will be negatively related to intrinsic motivation, and that experienced deterioration of work meaningfulness strengthens the negative relationship between performance pressure and intrinsic motivation. In study 2, it is further examined whether the effect of a performance-contingent reward on intrinsic motivation will be mediated by experienced control by pay. The data of study 1 was collected from 12 faculties at three multidisciplinary Finnish universities. (N= 672). The data of study 2 will be collected from 16 faculties at four Swedish multidisciplinary universities in mid-January 2019. Data is analyzed using structural equation modeling.

The results of study 1 show that expected attainment of a performance-contingent reward was not associated with intrinsic motivation, while expected nonattainment of the reward was negatively associated with intrinsic motivation. Additionally, the results indicate a negative relation between performance pressure and intrinsic motivation, moderated by perceived deterioration of work meaningfulness as hypothesized. Study 2 is expected to replicate the findings of study 1. Additionally, it is expected that study 2 will demonstrate a negative relationship between expected reward attainment and intrinsic motivation.

Overall, the present research will contribute to CET and work motivation research by extending our knowledge of how performance-contingent reward expectancy and pressure to perform affect intrinsic motivation in the context of scientific work. By simultaneously examining the effects of expected performance-contingent reward attainment and nonattainment as well as performance pressure, this research highlights the potential overall negative effect that use of a reward system can have on intrinsic work motivation. Moreover, by exploring the role of potential moderating and mediating variables, this study will deepen our understanding of the undermining effect.

Keywords: intrinsic motivation, undermining effect, performance-contingent rewards, academic work, meaningfulness of work

P-029

The upward spiral of autonomy: motivation, support & affect

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Autonomy support across settings (i.e. school, healthcare) has been shown to lead to improvements in autonomous motivation and well-being over time. To our knowledge, there has yet to be research to examine whether autonomous individuals find more autonomy support from family, peers and partners. The current research proposes that there is a bidirectional relation between autonomy support and autonomous motivation, such that autonomy support predicts increases in autonomous motivation, and autonomous motivation predicts receiving more perceived autonomy support from others. Additionally, we believe that this reciprocal additive pattern of autonomous motivation and autonomy support leads to increases in positive affect overtime. Undergraduate students (N = 934) were followed across 5 time-points from September to April during an academic school year. Participants completed surveys on goal motivation (at Time 1, 3, 5), perceived autonomy support for their goals (at Time 2 & 4) and positive affect (at each time point). A cross-lagged structural equation model was created using MPlus software.

Autonomous goal motivation predicted increased perceived autonomy support ($b=.117[.072,.162]$, $p<.001$) and autonomy support predicted increased autonomous motivation ($b=.105[.063,.147]$, $p<.001$) across the school year. To determine whether both pathways lead to increased well-being over the school year, a test of both indirect pathways was conducted. Results showed that both mediational pathways were significant. Autonomy support mediated the relation between autonomous motivation and increased positive affect ($b=.018[.006,.030]$, $p=.003$), and autonomous motivation mediated the relation between autonomy support and increased positive affect ($b=.017[.006,.029]$, $p=.003$). In conclusion, autonomy can create an upward spiral, such that experiencing autonomous motivation or receiving autonomy support from others can lead to more of both and each mediation pathway resulted in increased positive affect over time. These findings highlight the power of autonomy for improving motivation, support and well-being. This provides further evidence that both personal and interpersonal experiences of autonomy can be key factors for improving well-being. The hypotheses and analytical plans were preregistered on OSF, and they can be found at

https://osf.io/ufhwz/?view_only=490fa3d4a3934511b2ff11ed73e2661f along with the analytical output.

P-030

When adolescents "walk the talk": How adolescents' intrinsic and extrinsic value enactment relate to their short-term well-being and risk-taking

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Self-determination theory (SDT) makes the distinction between intrinsic values, such as intimate relationships, personal growth and community feeling, and extrinsic values, such as wealth, beauty and fame (Kasser & Ryan, 1996). The prioritization of intrinsic over extrinsic values has been shown to enhance well-being and lead to fewer risk-taking behaviors, as intrinsic values are thought to allow the direct satisfaction of the three basic psychological needs. Recently, Sheldon and Krieger (2014) have found that value enactment, compared to value importance, may be an even stronger predictor of well-being.

Focusing on value enactment, this study examines the links between adolescents' intrinsic and extrinsic values, well-being, as well as their risk-taking behaviors, using structural equation modeling (SEM). A sample of 647 adolescents (57.1% girls), aged between 14 and 17 years old ($M = 15.5$), have completed an online questionnaire assessing their intrinsic and extrinsic value enactment, their well-being (assessed with their life satisfaction, vitality, meaning in life, and positive affect), and their risk-taking behaviors.

The SEM-based model, controlling for gender and age, showed that adolescents' well-being was positively associated with both their intrinsic ($B = 0.38, p = .001$) and their extrinsic values ($B = 0.13, p = .008$). While adolescents' risk-taking behaviors were not related to their intrinsic values ($B = -0.03, p = .531$), they were positively related to their extrinsic values ($B = 0.17, p = .001$).

These results highlight the importance of intrinsic value enactment for adolescents' well-being. They also suggest that extrinsic value enactment in and of itself doesn't appear to be a threat to adolescents' well-being. However, our results show that extrinsic value enactment is associated with greater risk-taking. It is possible that adolescents who believe that feelings of safety, love, and self-esteem can be attained through external signs of success, such as popularity, are more willing to engage in risky behavior, like alcohol consumption, in order to "fit in" with their peers. Implications of these findings will be further discussed.

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P-031

Perfectionism, Goal-Related Autonomy, Poor Goal Progress and Depressive Symptoms: A Self-Determination Theory Analysis

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Introduction: The existence of two major dimensions of perfectionism: personal standards perfectionism (PS) and self-critical perfectionism (SC) is widely accepted. Several recent studies have demonstrated that the two forms of perfectionism are associated with goal progress in opposite ways. SC perfectionism has been reliably associated with making significantly less progress at one's goals, whereas PS perfectionism has been associated with making greater progress on the same goals. We recently proposed that self-determination theory (SDT) offers a theoretical framework by which to understand how perfectionism impacts goal selection and pursuit (Moore et al., 2018). In the present investigation, two studies adopted an SDT perspective to further our understanding of the role of perfectionism in goal pursuit and explore whether poor goal progress is associated with depressive symptoms.

Methods: In the first study, 1330 students participated in a 5-wave, year-long longitudinal study of personal goals. In the second study, 224 community adults participated in a 3-wave four month longitudinal study of New Year goals. In both studies, participants were asked to generate 2 or 3 specific goals that they planned on pursuing throughout the duration of the study. Perfectionism, goal progress, motivation, and depressive symptoms were assessed throughout the course of the study.

Results: Across both studies, results suggest that SC perfectionism was significantly negatively associated with individuals' goal progress, and that this effect can be explained by differences in autonomous goal motivation. In contrast, PS perfectionism was significantly positively associated with individuals' goal progress, although similarly it was mediated by autonomous motivation. With regards to depression, a significant relationship between SC perfectionism and subsequent depressive symptoms was also found in both samples. Interestingly, this relationship was partially explained by the amount of goal progress made.

Discussion & Conclusion

The present investigation supports the heuristic value of adopting an SDT perspective to understand the relations of perfectionism to both goal progress and depressive symptoms. This work highlights the role of autonomous motivation in mediating the relationship between SC and PS perfectionism and later goal progress. In addition, it builds upon previous work that has found a relationship between SC and depressive symptoms, by identifying poor goal progress as a partial mediator. Future directions include examining the role of need satisfaction in these relationships and investigating other aspects of health functioning in SC perfectionists who are struggling to make progress on their goals.

P-032

Mastery goals, enjoyment and achievement among low SES Peruvian youth: A moderated mediation model including autonomous and controlled reasons for endorsing mastery goals

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Background. It is a crucial issue that low socioeconomic status (SES) youth obtain lower levels of achievement, especially in math, than higher SES students, even though the former enjoy learning as well. Empirical evidence shows inconsistencies regarding the relation between enjoyment and achievement. As a consequence, the control-value theory of achievement emotions has been partially accepted, as it defines enjoyment as the mediator of mastery goals and academic achievement. In order to focus on these aspects the goal-complex model of achievement goals is used, namely autonomous and controlled reasons underlying mastery goals.

Aims. The present research explored if the mediation between mastery goals and math achievement through enjoyment is moderated by low SES students' autonomous and controlled reasons underlying mastery goals.

Sample. 171 Peruvian students participated in the study (53% girls, mean age = 15.48). They lived in a poor urban-marginal district in Lima.

Results. Math grades were predicted by mastery goals only for students with high levels of autonomous mastery goals, and by enjoyment only for students with high levels of autonomous mastery goals and low controlled mastery goals. A mediation of mastery goals and math grades through enjoyment was found only for students with high levels of autonomous and low levels of controlled mastery goals.

Conclusion. This study finds that teachers should foster students to pursue autonomous mastery goals and avoid controlled reasons so as the students could be mastery oriented, enjoy learning and achieve high results in math. It proposes that the achievement distances between low SES and higher SES students could be reduced taking into account adaptive achievement goals.

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P-034

Interest development - The interplay of POI and OIT

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Inside the person-object approach of interest (POI), interest is a specific person-object relationship and the development of interest depends on the ongoing interactions between the environment (object of action) and the person. In order to characterize an interest-oriented action in more detail, (1) a cognitive aspect, (2) an emotional aspect and a value orientation are mentioned in the conceptual framework by Krapp and colleagues (Hidi & Renninger, 2011). Building on the aforementioned work prior collaborations and emerging theories on the development of interest, Hidi and Renninger (2011) propose a four-phase model of interest development which suggests that situational as well as individual interest can each be subdivided into two phases. This model acknowledges the affective and cognitive processes involved in interest development, and additionally suggests that situational interest (triggered and maintained) supports and provides a basis for the development of individual interest (emerging and well-developed). In the scientific research literature, empirical studies focus either on situational or individual interest. However, there is little empirical knowledge about what happens “in between”—in fact, how interest develops over time, from its emergent, tentative initial manifestations to more stable and sustained forms of engagement.

A necessary precondition for developing an interest is the first contact with the object of interest, which can occur in various different ways. Repeated engagements may cause the development of a subjectively significant relationship and trigger of an internalization process. However, precise measurements that can distinguish among the phases of interest have not yet been developed. “Constructing such measures is difficult because of the changing and individual nature of the relation among affect, value, and knowledge that is the presumed basis of movement between phases of interest” (Renninger & Hidi, 2011). We propose that the central mechanism that is responsible for the development of amounts of the three components of interest is internalization, as mentioned in the self-determination theory (particularly: Organismic Integration Theory; Deci & Ryan, 1985). In order to empirically test this hypothesis we developed an instrument (Situational and Individual Interest Instrument, SINDI) which measures the degree of internalization for three components of interest separately. During the presentation we will discuss chances, limitations, and recommendations for future research.

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P-035

Association between Physical Activity Motivation Profiles and Physical Activity in Short-Term Weight Loss Maintainers

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Background

Weight loss maintenance remains an elusive goal of current obesity treatments. Successful long-term maintainers report high levels of physical activity (PA). While higher levels of autonomous exercise motivation at treatment's baseline are reported to be associated with 3 years successful weight loss, the evidence is scarce about maintainers' motivational profiles and how they are associated with actual PA levels. The aim of this study was to analyze how PA motivational profiles are associated with PA in short-term weight loss maintainers.

Methods

The study was conducted with 845 adults' weight loss maintainers (5% of weight loss/last 12 months; Mage = 43.9±12.4; 68.5% Females) with complete PA data resulting from a larger data set of 1555, as part of the European Union H2020 funded NoHoW project; a large multicentre (UK, Denmark and Portugal) trial targeting weight loss maintenance using a digital behavior change intervention, based on Self-Determination Theory, and Emotional and Behavioural Regulation.

At baseline, participants completed online questionnaires comprising the BREQ-3 measuring PA autonomous (A) and controlled (C) motivations (Cid et al, 2018). PA was assessed by 1) objective measures of daily steps, and minutes spent in Light, Moderate and Vigorous PA (7 days), using the FitBit Charge 2 activity tracker, and 2) Activity Choice Index (ACI) questionnaire, assessing volitional decisions regarding PA opportunities (Mullen et al, 2016). A cluster analysis was conducted to identify profiles of A vs C motivation that were compared through an ANCOVA in their levels of PA associated with each cluster, controlling for gender, age and country.

Results

Four profiles of motivation were identified: HighA-HighC, HighA-LowC, LowA-LowC and AverageA-AverageC. Results showed that HighA-HighC and HighA-LowC presented higher levels daily steps (>10.000, $F=13.06$, $p<.001$, $n2=.048$) and minutes of Vigorous PA (~30 minutes, $F=14.16$, $p<.001$, $n2=.051$). Moderate PA was higher in the HighA-HighC ($F=2.92$, $p=.033$, $n2=.011$) when compared to the LowA-LowC and AverageA-AverageC. HighA-LowC presented the higher scores of ACI ($F=25.83$, $p<.001$, $n2=.085$).

Discussion

High levels of PA are reported from both HighA-HighC and HighA-LowC profiles, suggesting that these groups might use sustained engagement in PA behaviors to maintain weight. Nevertheless, the ACI, which may represent a deeper level of internalization of PA decisions, was higher in the HighA-LowC, suggesting a treatment focus on developing this profile. Further studies should investigate if more profound internalization of PA, or other clusters of motivational profiles, are key to sustain PA levels and long-term weight loss management.

P-036

'Life ain't a pony farm': examining the effectiveness of different self-motivating strategies when facing boring activities.

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When people perform activities that are intrinsically motivating, activities are experienced as interesting and enjoyable. However, many activities in daily life are experienced as mandatory and boring (e.g. doing dishes, ordering wardrobe, etc.) rather than as intrinsically motivating. An important, yet understudied, question is how people still motivate themselves when faced with such boring activities. According to Self-Determination Theory, people have the inherent tendency to proactively seek for activities that are personally relevant and enjoyable. Thus, when encountering dull activities people are likely to use motivational strategies aimed at increasing the personal relevance and value of such activities.

The current research aimed to assess different motivational strategies, some of which are more autonomous in nature and some of which are more controlled in nature, used by people to deal with boring activities. A sample of early and late adolescents ($N=340$) completed a newly developed questionnaire measuring their motivation, motivational strategies and experiences in performing a boring activity. An example item for autonomous (identified) self-motivation is: "I try to motivate myself for the dull activity by attempting to seek for the reason why this activity could be useful for me". In a subsequent lab experiment, we examined the effectiveness of these motivational strategies by providing 170 participants (Mage = 19.28; 73% girls) a boring computer task. First, we examined whether the motivational strategy could be activated experimentally by presenting a video of a peer explain his/her motivational strategy in performing the task before participants started the same computer task. Next, we measured participants' motivation, motivational strategy and experience at different time occasions (i.e. before, two times during and after the task). Because the data collection was finished only recently, the data have not yet been analysed. But hey, life ain't no pony farm, so please remain patient until I show the first results in my presentation.

P-037

Impact of a mindfulness-based intervention on well-being and self-determination in elementary school students

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Background: According to Hodgins & Knee (2002), mindfulness is thought to help create a vivid perception of reality without distortion or avoidance, resulting in the ability to “encounter experience without being threatened or defending against it”. Mindfulness has been previously found to improve indicators of mental health (e.g. symptoms of depression, anxiety and inattention) in children (Malboeuf-Hurtubise et al., 2016). In turn, these improvements have been related to higher satisfaction of the three basic psychological needs for autonomy, competence and relatedness (Hodgins & Knee, 2002). The purpose of this study was to evaluate the impact of a Mindfulness-Based Intervention (MBI) on elementary school children’s mental health. **Method:** Third-grade elementary students (N=65) were randomized into two groups and exposed to either a MBI or cognitive behavioral therapy (CBT). The impact of both interventions on anxiety, attention, depression and hyperactivity was measured through teacher-reported data at pre-intervention, post-intervention (8 weeks), and follow-up (1 month). **Results:** Looking at between-subject differences across time, results from mixed ANOVAs indicated a significant interaction between time and group for inattention ($p = .001$, partial $\eta^2 = .105$) and hyperactivity symptoms ($p = .009$, partial $\eta^2 = .073$) from pre-intervention to follow-up. Descriptive statistics showed that while participants in the MBI group showed decreased inattention and hyperactivity symptoms from pre-intervention to follow-up, scores from participants in the CBT group remained unchanged throughout time. Repeated-measures ANOVAs further indicated significant changes in scores from participants in the MBI group for attention ($p = .0002$, partial $\eta^2 = .254$), and hyperactivity ($p = .001$, partial $\eta^2 = .217$). Significant differences were also found for depression over time in both groups ($p = .015$, partial $\eta^2 = .066$). Post-hoc analyses showed that for both groups, scores were significantly higher at follow-up ($p = >.001$), when compared to pre-intervention scores. **Conclusion:** The MBI had a greater effect on improving attention and hyperactivity when compared to CBT in this sample, and both interventions had a similar positive effect on depressive symptoms. MBIs could therefore represent a better solution to foster greater self-determination and increase need satisfaction in elementary school students. Future research assessing the direct impact of MBIs and CBT on need satisfaction is needed.

P-038

Big-fish-little-pond effect on self-concept: The moderating role of a classroom environment supporting basic psychological needs

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According to the big-fish-little-pond effect (BFLPE; Marsh & Parker, 1984), students compare their own academic performance with the academic performance of their peers in order to develop their self-concept in a specific school subject. The BFLPE states that when students’ performance is below the class-average achievement, they tend to negatively assess their own abilities and develop a more negative self-concept. Because self-concept predicts many positive outcomes including achievement (Guay et al., 2003), it is important to identify factors specific to the classroom environment that could moderate the BFLPE. Among these factors, the pedagogical practices elicited by teachers might play a central role. According to SDT, pedagogical practices that nurture students’ basic psychological needs (BPNs) could limit their tendency to compare their performance with that of their peers and, therefore, reduce the negative effect of class-average achievement on students’ self-concept (the BFLPE). The purpose of this study is to test this hypothesis. Fifty-three elementary school teachers and 648 of their students participated in a one-year quasi-experimental study. Participants were assigned either to the experimental group (31 teachers, 412 students) or the control group (22 teachers, 236 students). Teachers in the experimental group received the CASIS professional development program, which consisted of a two-day workshop in which they learned how to use five pedagogical practices intended to nurture students’ BPNs. Students’ achievement and writing self-concept (WSC) was assessed at the beginning (Time 1) and at the end (Time 2) of the school year. As expected, results from regression analyses show that at Time 1 (before the administration of CASIS), the class-average achievement has a negative effect on students’ WSC in both groups whereas at Time 2 (after the administration of CASIS), this effect is no longer significant for students in the experimental group. Thus, the BFLPE seems to fade during the school year but only for students whose teacher adopt pedagogical practices supportive of their BPNs. The implications of these findings for research and practice are discussed.

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P-039

The complex interplay of parental involvement and an authentic inner compass in explaining high school students' study choice decision making

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At the end of secondary education, students face important choices, such as choosing to embark on higher education studies. Such decision making can be challenging, with some students being indecisive or feeling pressured in a certain direction. Other students complete these decision-making tasks with ease, displaying engagement in the choice process, exploring and arriving at a solid commitment with a study choice and a future plan well-aligned with personal values and interests. Because students' quality of motivation for these plans determine their attainment of and satisfaction with future goals, it is important to identify these decision-making processes' determinants.

The present study addresses the unique and interactive role of high-school students' identity and parental involvement, as a personal and contextual resource for study-choice tasks and motivation for future plans. More specifically, we expect that need-supportive parental involvement in decision-making and a well-developed inner compass (i.e. a sense of being in touch with authentic goals, values and preferences) will positively contribute to this process. Conversely, a more controlling type of parental involvement or even uninvolvement and a poorly developed inner compass are expected to relate to poor quality of motivation and less engagement in study-choice tasks. A sample of 202 Belgian high school students (30.2% boys; $M_{age} = 18.06$ years; $M_{grade} = 12^{th}$) in different academic tracks completed a variety of self-report questionnaires. Results from multiple regressions analysis show that an authentic inner compass uniquely contributes to having more autonomous ($\beta = .286$) and less controlling ($\beta = -.160$) reasons for future plans and various dimensions of the study-choice process (e.g. exploration of the self, $\beta = .207$). Further, need-supportive parental involvement has unique association to some of the study-choice tasks (e.g. exploration in depth), with paternal need supportive involvement being particularly strongly related to these tasks. Controlling parental involvement and uninvolvement were generally related negatively to engagement in the study-choice tasks.

Moreover, some evidence for interactions between students' inner compass and parents' involvement were obtained, indicating that an authentic internal compass mitigates some of the detrimental effects of a controlling and uninvolved parental style on study-choice tasks and motivation for future plans. In one cases a sensitization effect was found, where students with a well-developed internal compass seemed to benefit more from need-supportive paternal involvement. Overall, the findings suggest that high school students' decision-making about the future is shaped by a complex interplay between personal identity and parental involvement.

P-040

It's getting interesting: Increasing autonomous motivation in music lessons in autonomy-supportive and controlling contexts

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This study tested the hypothesis that there would be an increase in autonomous motivation in the course of the execution of an activity that is initiated by another person. Executing an activity potentially offers possibilities for the self to relate to the activity depending on how need satisfying and how much in congruence with ones goals, values, preferences etc. it is experienced. Autonomy supportive contexts foster the experience of activities as need satisfying. Hence executing an activity in autonomy supportive contexts might increase autonomous motivation. Similarly, cognitive dissonance theory predicts that executing an action when there is choice might lead to an increase in autonomous motivation in service of an unconflicted, efficient execution of that action (Harmon-Jones, Harmon-Jones & Levy, 2015). Thus, both theories predict that, under autonomy-supportive conditions, autonomous motivation is stronger during the execution of a task compared to before the execution of the task. To test this hypothesis, $N = 172$ fifth- to seventh-graders' reasons for performing rhythm exercises during music lessons were assessed before, during and after the execution of this task. The experimenter instructed students either in an autonomy-supportive style (e.g., providing a rationale) or a controlling style (e.g., no rationale). Reasons were categorized in a coding system that allowed the calculation of an index of relative autonomous motivation. In line with self-determination theory, students in the autonomy-supportive condition were more autonomously motivated than students in the controlling condition before, during, and after the execution of the rhythm exercises, experienced more flow, and were more interested in continuing with this activity. As was expected, the students' autonomous motivation was stronger during the execution of the activity than before the execution. Unexpectedly, this was the case not only in the autonomy-supportive condition but also in the controlling condition. It is discussed whether this unexpected result can be explained by the students' experiencing competence to such an extent that autonomous motivation got stronger during the action despite the controlling contexts. For practical implications these results are interesting because they confirm evidence that autonomy-supportive contexts help students to be more autonomously motivated, support optimal functioning, and foster students' interest. Furthermore, the findings indicate that executing an action might be beneficial for fostering autonomous motivation. Finally, the results might also be relevant for considerations regarding research design because the measured impact of motivation might depend on when motivation is assessed.

P-041

Experiences and motivation of ethnic minority students in medical education: a qualitative study

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Introduction With the patient population becoming increasingly diverse, in order to ensure equitable healthcare ethnic minority groups should be adequately represented in the medical workforce. Unfortunately, medical students from ethnic minorities underperform compared to the majority group¹; The reasons for which are not fully understood. Ethnic minority students underrepresented in medicine experience barriers in competing successfully for residency programs and entering academic careers. Non-Western minority students exhibit higher autonomous motivation (acting out of true interest or personal endorsement) than Dutch students.² In light of this, their underperformance is even more difficult to understand. We hypothesize that ethnic minority students experience factors at different moments in the medical curriculum that influence their motivation at that moment (situational motivation) and for medical study in general (contextual motivation). The aim of this study was to explore how educational experiences play a role in the motivation and performance of ethnic minorities.

Methods All medical students from ethnic minorities, enrolled at VUmc School of Medical Sciences were invited to participate in this qualitative study. Focus groups conducted using an interview guide between December 2016 and May 2017. The focus groups were audiotaped and transcribed verbatim. Data were coded and analyzed using thematic analysis with SDT as a theoretical framework. Three researchers coded the interviews independently. Discrepancies were discussed until consensus was reached.

Results Six focus groups were conducted. In total 26 ethnic minority students (8 male, 18 female) participated in this study. The focus groups varied in size from 3 to 6 students; this was acceptable because of the sensitive topic of the study. The following themes were identified: the role of autonomy in the formation of motivation including their own study choice and the role of family, interactions/othering in practice in which hierarchy played a role, interactions/othering in the learning environment like standing up for yourself, influences on academic performance like the role of family, and intersection of culture and gender like being the other based on ethnicity.

Discussion & Conclusion Ethnic minority experienced multiple factors influencing their motivation and academic performance, like 'being the other' because of ethnic background. Relatedness was very important in their experiences/interactions in the learning and practical environment. Moreover, students' experiences at a particular moment could demotivate them (situational motivation), but in the longer term they learn to cope with this and continue to be autonomously motivated for their education and their goal to become a doctor (contextual motivation).

P-042

The school-subject-specificity hypothesis: a test in physical education and by gender-typed activities

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Introduction

The school-subject-specificity hypothesis was developed by Chanal and Guay (2015) to explain why autonomous motivation (AM) was more differentiated across school subjects than controlled motivation (CM). These authors examined the different types of students' motivation at two hierarchical levels simultaneously: at the situational (i.e., motivation for various school subjects) and contextual (i.e., motivation towards school) levels. They demonstrated that the regulation types were not equally specific to the situational level in which they were assessed. Specifically, they found that AM was more school-subject-specific than CM.

The aim of this study was to extend the school-subject-specificity hypothesis in the physical education (PE) domain and to evaluate individual differences in the level of specificity of the regulations. Specifically, we suggested that the gender-typed nature of the physical activities and the students' gender or sex could moderate the level of specificity of the regulations. We considered PE at the higher hierarchical level and three activities practiced during these courses at the lower level: a masculine activity (soccer), a feminine activity (gymnastics), and a neutral activity (athletics). PE being considered as a masculine domain, we postulated that the feminine activity should be more specific than the neutral or masculine activities. Secondly, we hypothesized a difference in the level of specificity for the gender-typed activities depending on the students' gender or sex.

Methods

Eighty-three students from secondary school (age range 12-15) answered an online questionnaire assessing their self-determined motivation in PE, soccer, athletics and gymnastics (C-RAI; Sheldon et al., 2017) as well as their gender (CSRI; Clement-guillot & Fontayne, 2011).

Results

In line with the school-subject-specificity hypothesis, results showed that AM was more specific than CM. Indeed, shared variance at the specific level for AM items was higher than for CM items. Contrary to our predictions, results demonstrated that soccer was more specific than athletics or gymnastics. Finally, as expected, gymnastics was more specific for masculine students than for feminine students and also more specific for boys than for girls.

Discussion

This study confirmed the school-subject-specificity hypothesis in the PE domain and demonstrated that the individual characteristics (gender and sex) moderated the specificity. Contrary to our hypothesis, soccer was found to be more specific than athletics or gymnastics. This result could be explained by the fact that soccer is considered more as an extra-curricular sport rather than an activity practiced during PE.

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P-043

The relationship between teachers' experience of work pressure and their performing of professional learning activities: an explanation through basic need frustration and controlled motivation

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Because of ongoing educational changes in many countries, teachers are required to continuously learn and develop. To do so, they need to perform professional learning activities (e.g., read literature and participate in courses). At the same time, teachers experience work pressure from their primary tasks (e.g., preparing and teaching lessons and grading students' work). The relationship between work pressure and teachers' performing of professional learning activities is not clear from current research. Some studies find positive effects, while others report zero or negative relationships. An explanation for these mixed findings could be that only moderate work pressure creates a concern for professional learning, because learning can help to alleviate the negative consequences of work pressure. This implies a curvilinear relationship between experienced work pressure and teachers' performing of professional learning activities. It is hypothesized that this relationship can be explained through basic need frustration and controlled motivations. That is, work pressure can cause teachers to experience controlled motivations (i.e., feel pressured) to improve their circumstances through learning. This relationship could, in turn, be explained through basic need frustration. However, when work pressure becomes too high, basic need frustration could become too high and teachers become concerned with their wellbeing instead of learning (Jansen in de Wal, van den Beemt, Martens, & den Brok, 2018).

In this study, these expectations are evaluated employing data collected at three occasions among 2359 (t1), 678 (t2), and 536 (t3) secondary school teachers from the Netherlands. Analyses of a complete measurement model show factorial validity and longitudinal metric measurement invariance of our measures of work pressure, basic need frustration, controlled motivations and learning frequency, $\chi^2(8106) = 13546.49$, $p < .001$; CFI = .91; TLI = .90; RMSEA = .02; SRMR = .05. The latent zero-order correlations between all constructs derived from this model are in line with our hypotheses. At the time of the conference, longitudinal panel models will have been evaluated that further test whether basic need frustration and controlled motivations mediate the (quadratic) relationship between work pressure and teachers' performing of professional learning activities over time.

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P-044

Experimentation in biology lessons with a high and a low degree of freedom: Effects on motivation and learning

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For science experiments in schools, recipe-style tasks are often used. They provide a low degree of freedom in experimenting, thereby diminishing students' autonomy. Using prompts during experimentation might facilitate a higher degree of freedom. Prompts give instructional guidance by offering hints and allowing students to work on a task autonomously (Ge & Land, 2003) with an appropriate degree of support. Accordingly, tasks supported by prompts may more easily correspond with students' skills and consequently they might increase their perceived competence. Perceived autonomy and perceived competence are regarded as predictors for intrinsic motivation (Ryan & Deci, 2017). Our research question focusses on how a high degree of freedom supported by prompts during experimentation affects motivation and achievement.

In the quasi-experimental study (n=151) students in grades 5 and 6 were randomly assigned to two treatment conditions: recipe-style experimentation with no freedom (F-group) and experimentation with a high degree of freedom and supported by prompts (F+group). Students in the F+group might perceive more choices than students in the F-group. As the students, depending on their difficulties with the experiment could choose prompts their perceived competence might be supported as well.

The results of the ANOVAs showed that the students did not benefit from higher degrees of freedom during experimentation in their basic need satisfaction (subscale 'competence' of the BPNS), their motivation (subscales 'perceived choice', 'perceived competence' and 'interest/enjoyment' of the IMI) and the knowledge gain. Only in the subscale 'autonomy' (BPNS) did the students of the A⁺-group achieve significant higher scores than the A⁻-group. Summarizing, for young students, experimenting with strong guidance seems to be more beneficial than a higher degree of freedom and using prompts. The fulfilment of the need for competence (BPNS) as well as the perceived competence (IMI) were lower in the F⁺-group than in the F⁻-group. Thus, these students did not seem to be able to cope with the demands of a higher degree of freedom. Presumably, it is necessary to improve the students' competence, e.g. by gradually increasing the degree of autonomy in experimenting, in order to enable students to perceive themselves as competent.

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P-045

Multi-Players Induction Teams (MITs) - SDT-based communities of beginning teachers in Israel's Negev region, the PROTEACH model, from theory to practice

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The presentation will introduce the PROTEACH project, an SDT-based international intervention aimed at enhancing beginning teachers' optimal integration into schools.

The partners in the project are six colleges of education in Israel (Beit Berl, Gordon, Sakhnin, Kaye, Kibbutzim, and Talpiot), and four European universities (University of Bucharest, University of Salzburg, Tallin University, and University of Exeter). The project operates in collaboration with MOFET Institute and the Israel Ministry of Education. The team from Kaye College will present three interventions employing the MIT model in the Jewish and Bedouin sectors: two high school-based interventions, and a locality-based intervention (whole town). We will present the model, its theoretical foundation, intervention principles, including principles for forming partnerships and working in different cultures. We will also present the findings obtained following the interventions.

The theoretical basis of the intervention program led by Kaye Induction Unit is Self-Determination Theory (Deci & Ryan, 2000). Each intervention was accompanied by a qualitative study. The research genre was an instrumental case study. The research question was: What are the contributions and effects of the MIT model, particularly in aspects of promoting teachers' integration into the school, satisfying teachers' needs, and the program's effects on school culture?

Participants included interns, beginning teachers, teacher-mentors, management staff and policymakers (7-8 participants per group every year in each location). Research tools included: in-depth semi-structured interviews, observations, focus groups, participant outcomes and journals, and protocols.

The results obtained in the various locations indicate a sense of need satisfaction among the participants, a high level of autonomous motivation for teaching, and sense of self-actualization. In organizational terms, the findings show that the schools have developed optimal absorption model, and created an induction culture that has become part of the school's culture. It is patently evident in all the schools that aspects of autonomy support led to proactivity and new initiatives by beginning teachers, which had a powerful effect on the entire school. The effects were also evident in teaching and learning processes in the classrooms, reflecting enhancement of autonomy-supportive teaching.

These findings have implications pertaining to building partnerships and creating an SDT-based culture of absorption in schools, as well as to advancing teaching quality and autonomous motivation for teaching at the entry stage to the education system.

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P-046

The unique effects of intelligence and psychological resources in predicting students' achievement and well-being: An examination of the generalisation of effects to gifted students

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Transition to secondary school involves major challenges to adolescents' motivation, well-being, and performance. This is also the case for gifted students, some at risk for ill-being and underachievement during this transition, despite high cognitive ability. To better understand this transition, we addressed the role of mindsets and motivation. We investigated whether associations between these concepts and students' adjustment would apply also to gifted students. Innovative is that we examined the intra-individual growth in achievement and well-being. On the basis of Dweck's (1999) theory and research, we expected that an entity mindset (i.e., an implicit belief that intelligence cannot be changed) would affect well-being and achievement negatively. Following failure and setbacks (inevitable in the transition to secondary education), students with an entity mindset make more pessimistic attributions, like attributing failure to a stable lack of intelligence. Regarding Self-Determination Theory (Ryan & Deci, 2017), quality of motivation was expected to be a key resource fostering adjustment in the transition to secondary education, with autonomous motivation yielding positive associations with adjustment and controlled motivation yielding negative associations.

We relied on data from the SiBO-project, a longitudinal dataset (N=2499, 48,9% female) of Flemish students where specifically investigated the transition from sixth to seventh grade. At both waves, students filled out questionnaires tapping into mindsets, motivation, and well-being at school. Achievement was assessed using standardized tests for mathematics. Intelligence was assessed using the SPM and the CIT-3-4-R with students scoring above 90th percentile being identified as gifted (n=191).

The data were analyzed using latent change modelling, thereby examining whether motivation and mindsets would predict intra-individual change in students' achievement and academic well-being across the transition to secondary education. We controlled for gender, age, SES, and intelligence. In an additional analysis, we performed multi-group analysis to compare effects among gifted and regular students. Even when controlling for intelligence, results indicate that higher initial levels and intra-individual increases in autonomous motivation were predictive of increases in both math and well-being. The initial level of controlled motivation was negatively predictive of increases in math and both the initial and intra-individual increases in controlled motivation were predictive of decreases in well-being. No effects of entity mindsets were found. There was little evidence that associations differed between gifted and regular students, indicating the generalizing effects across students' cognitive ability. Although gifted students face unique challenges, their quality of motivation and mindsets appeared to be equally important for their adjustment.

P-047

Is Intrinsic Regulation the Most Ideal for Promoting Foreign Language Learning?

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In Japan, it is believed that it is important to motivate students intrinsically. For this reason, several studies have been conducted to explore how to promote their intrinsic motivation on their learning English by using the framework of Self-determination theory (SDT; Ryan & Deci, 2017), and indicated the importance of intrinsic regulation on learning English. However, because intrinsic regulation does not include the sense of purpose (e.g., learning English to be able to use it in the future career), it does not mean that learners who are intrinsically regulated are the learners who have a plan to use English in the future. In other words, it does not always true that intrinsic regulation is the ideal for promoting foreign language learning. Based on Bakhtin's dialogue theory (Bakhtin, 1981), estrangement of something that have become a custom will bring people a new point of view to internalize it. That is, it is difficult to achieve identified regulation unless there is a chance to experience a sense of estrangement. Therefore, introducing Bakhtin's theory into SDT, it can be concluded that identified regulation might be more effective on promoting foreign language learning than intrinsic regulation.

P-048

Do self-conscious emotions impact students in exceptional education differently? Contrasting associations between shame, guilt and academic amotivation

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Do self-conscious emotions impact students in exceptional education differently? Contrasting associations between shame, guilt and academic amotivation

Dispositional shame has been associated positively, and guilt negatively, to school amotivation outcomes. Research on the relations between self-conscious emotions and academic amotivation has primarily used mainstream student samples. The goal of the current project was to examine differences in associations between shame, guilt and the following four academic amotivation outcomes: lack of educational values, lack of ability beliefs, lack of effort beliefs, and unappealing characteristics of school tasks, across two groups of high school students. High school students from grades 10-12 from mainstream programs (N=200) and from exceptional education programs (i.e., students with learning difficulties; N=181) completed questionnaires that included measures of shame and guilt (The Test Of Self-Conscious Affect for Adolescents), and amotivation dimensions (The Academic Amotivation Inventory). It was hypothesized that for both groups shame would be associated positively, and guilt negatively, with amotivation subtypes. It was also expected that associations would differ between students of the two programs. Results largely confirmed hypotheses. For both groups, associations between shame and amotivation outcome subtypes were positive and significant for lack of educational values, low ability beliefs, and low effort beliefs. These associations were of higher magnitude in the exceptional education group. For both mainstream and exceptionality groups, negative associations were obtained between guilt and lack of educational values, as well as guilt and low ability beliefs. However, these associations were higher in the mainstream groups. These findings suggest that shame plays a more important role in amotivation for students in exceptional education, while guilt has a larger role in influencing academic amotivation in mainstream students. Results are discussed in terms of their implications for future fundamental research and applied education programs that aim to understand and to address academic motivation problems for students in both mainstream and exceptional education programs.

P-049

Self-determination theory and developmental literacy: a conversation between the literature

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Self-determination theory states that humans have three basic psychological needs to be motivated, feelings of competence, autonomy, and relatedness (Ryan & Deci, 2017). For students in the U.S. in developmental literacy courses at the college level, there has not been much research looking at their levels of needs fulfillment. What is known is that competence and interest are important to their success in college and personal growth as literate people (Alexander, 2014). Additionally, current understandings and attitudes toward how to address the needs of these students could be approached differently and more holistically using self-determination theory. This study involves an in-depth critical analysis of the existing literature of both self-determination theory in education and postsecondary developmental literacy practices and measurements to advocate for a newer approach of research and teaching that addresses needs fulfillment, as opposed to talking about them as deficient in some way. Alexander (2014) proposes a lifelong developmental of reading approach to literacy education that emphasizes a move towards competence as being purposeful and driven by motivational factors. However, current ways of placement assessment for college literacy courses do not. Even the existing affective measures that some institutions may use are often lacking in understanding motivation as a human need that can be fulfilled by teachers. Instead the onus is placed on the student to become intrinsically motivated through sheer will. Results of the review of the literature show that there are more connections than may seem obvious, but that there is a need for further research that specifically ties self-determination theory and college level developmental literacy issues. A conversation between scholars, and creation of new scholars, that can collaborate or work in both worlds is necessary to improve the educational experiences of students in developmental literacy courses. Self-determination theory is an approach that can and has worked in improving classrooms and helping students personally grow. Self-determination theory and Alexander's (2014) model of lifelong development of reading serve as a larger framework that together give instructors and research a holistic view of many of the factors needed to help students. Feelings of competence, autonomy, and relatedness are necessary to motivate students to work through difficult literacy tasks, improve on their competence, and become intrinsically motivated. Through sharing this research, it is hoped that more interest and work in this area will result, as well as connections that benefit students are established.

P-050

Promoting Intercultural Communication: Focusing on Attitudes toward Intercultural Communication and Motivation

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The current social climate in Japan demands of school education to bring up 'global human resources,' who can communicate with those who have different cultural background and values in English. This kind of communication is called intercultural communication (IC) and in IC, inference plays an important role. So, it is required that people have abilities to infer what others want to convey (but it's not denoted explicitly) based on their cultural background in IC. Therefore, it is necessary to promote the use of inferential strategy while using English to encourage IC. To promote the use of inferential strategy, it is of great importance to develop an intervention to make students more tolerant toward IC, or at least, less refusing because students who are not tolerant toward IC seem to have difficulties with making inference. Intervening their motivation is also important because the effect of intervention in students' attitudes may differ depending on their motivation.

Therefore, there is necessity to develop the intervention in students' attitudes toward IC with concerning of regulation style of motivation using Self-Determination Theory (Ryan & Deci, 2017). However, there is no research investigated discussed above. Then, in this research, I will devise the effective ways to promote the use of inferential strategy depending on students' characteristics.

This research is composed of three studies. Firstly, I will develop the scale of inferential strategy (Study 1), and I will examine how students' attitudes toward IC (a refusing tendency toward IC and a tolerant tendency toward IC) will have an effect on the use of inferential strategy and analyze the relationship between students' attitudes and the use of inferential strategy by latent profile analysis (Wang, Morin, Ryan, & Liu, 2016), and compare it depending on students' motivational profiles (Study 2), and finally, I will conduct intervention experiment to make students more tolerant toward IC or less refusing, depending on their regulation style and attitudes (Study 3).

Through these three studies, it will be revealed that the effective ways to promote the use of inferential strategy so that students can participate in IC and can be global human resources.

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P-051

The relationship between students' perceived autonomy support, perceived structure, and challenge-seeking: Mediating role of autonomy and competence need satisfaction

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According to self-determination theory, perceived autonomy-support and structure are related to the basic psychological needs for autonomy, competence, and relatedness. Although many studies have examined the relation between perceived autonomy-support, structure, and the total score of need satisfaction (e.g. Aelterman, Vansteenkiste, Van Keer, & Haerens, 2016), a few studies focused on the mediating role of each need separately in the relation between autonomy-support, structure, and educational outcomes. Even though SDT suggests that when students experience a well-structured class, they feel competent in class activities, only a few studies have examined the relation between perceived structure and competence need satisfaction (for an exception see Mouratidis, Vansteenkiste, Michou, & Lens, 2013). The current prospective study was conducted as a part of a three-year longitudinal project and investigated the mediating role of autonomy and competence need satisfaction in the relation between perceived autonomy-support, structure and challenge-seeking. Participants were 2,216 high school students (26.8% male; $M_{age}=16.11$, $SD=0.35$). The result of our path analysis, in which students' courses (i.e., Math or Turkish language) and grades were included as covariates, showed that Time 1 (T1) perceived autonomy-support and structure positively predicted Time 2 (T2) challenge-seeking through T1 satisfaction of the need for autonomy and competence. We also tested a gender invariance model and the results of that model showed that the path linking perceived structure with competence need satisfaction was marginally significant only among males. The results showed the importance of both autonomy-support and structure for promoting students challenge-seeking behaviors as they seem to be translated to autonomy need satisfaction and, in some cases, to competence need satisfaction as well.

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P-052

Short form scale to assess situational motivation in educational setting

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Introduction: According to the hierarchical model of intrinsic and extrinsic motivation (Vallerand, 1997), situational motivation can be defined as a state of motivation experienced at a specific point in time. The study of intra-individual variability in situational motivation is of particular interest since it could account for perseverance in a specific task. To the best of our knowledge, no study has yet investigated the dynamic of situational motivation in an educational setting. The pre-requirement to study fluctuations in situational motivation in a french academic context is to validate a relevant short-form scale in french language. Therefore, the aim of the present study is to validate this short form scale and test it with young students.

Method: First, the situational motivation scale (SIMS; Guay, Vallerand & Blanchard, 2000) was reduced from sixteen to eight items (N = 557, M_{age} = 14.12, SD = 1.45). Among the eight selected items, only four items were finally selected to constitute the SIMS4 since they guaranteed the better satisfactory construction and concomitant validity (N = 240, M_{age} = 17.79, SD = 3.82). The predictive validity of the SIMS4 was tested with a third sample (N = 157, M_{age} = 19.44, SD = 0.92). The SIMS4 was finally used to assess situational motivation in a french educational setting (N = 40, M_{age} = 15.05, SD = 0.615), three times per lesson (before, at the middle at the end of) during five days.

Results: Analyses revealed the psychometric qualities of the SIMS4 scale were excellent [$\chi^2(df = 9, N = 157) = 11.12, p < .05$; AGFI = .92; CFI = .99; NNFI = .97; RMSEA = .039]. These absolute adjustment indices indicated that empirical data adjust well with the theoretical model. Results in the educational context highlighted intra and inter individual differences in situational motivation.

Discussion & conclusion: The SIMS4 seems to account for intra and inter individual variability in situational motivation. This study constitutes a first step toward a deeper comprehension of motivational fluctuations involved in different types of situations.

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Keywords: Self-determination theory, situational motivation, scale development, intra-individual variability

P-053

Promoting agentic engagement and self-determination in Tomer Elementary School in Beer Sheva, Israel: Model of academy-field partnership, from theory to practice

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One of the challenges facing SDT is implementation of its principles. (Kaplan, Assor, Feinberg, & Tal, 2008). Studies have indicated the applicability of SDT in educational intervention studies (Assor, Feinberg, Kanat-Maymon, & Kaplan, 2017). We shall present a school intervention model demonstrating academy-field partnership.

Tomer School belongs to a network of SDT-based schools led by The Center for Motivation and Self-Determination at Kaye Academic College of Education. The first years of the intervention were devoted to learning the theory's principles and constructing a need-supportive environment. In the past three years the school has chosen to focus on Reeve's (2013) theory, central to which is the concept of "agentic engagement". An outlook and a range of tools were developed at the school that enable students to be agentic and promote a need-supportive environment for themselves. Additionally, a heutagogical approach promoting self-determination and autonomous motivation is being assimilated at the school. The poster will present the school intervention program: process, methods developed, and a qualitative phenomenological study that examined the process and its outcomes.

Method: The study included semi-structured, in-depth interviews with 10 teachers, 10 students, the school principal, and the leading team (five teachers). Content analysis yielded central themes. The findings indicate that the teachers have undergone a process of internalizing SDT principles, they employ its theoretical language to describe a range of practices supporting students' self-determination, and creation of a need-supportive environment in the classroom. Additionally, the teachers provide examples of how they promote and support their students' agentic engagement. They describe the change processes experienced by teachers and students alike. The interviews with students also indicate a proactive approach to learning and to their social life. The students describe the change in the school, and the opportunities provided to them to express their needs and desires.

The program demonstrate how a theory can be transformed into a living theory that affects students and teachers alike. The presentation will include descriptions of the principles and tools developed, which enable a bridging between theory and practice.

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Keywords: Psychological needs, agentic-engagement, intervention program

P-054

Investigating Parental Styles Related to Self-Regulation and Treatment Adherence in Chronic Pediatric Headache Over Time

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Introduction: Headache is the most prevalent chronic pain complaint in pediatric populations and is related to decreased quality of life (Powers et al., 2003). While treatment adherence (e.g., medication compliance, lifestyle modification) is associated with improved functional outcomes (Simons et al., 2010), little evidence has explored how parents might facilitate children maintaining treatment behaviors. Self-Determination Theory (SDT) suggests that children move toward greater self-regulation through the process of internalization (i.e., movement from external/introjected, or *controlled* regulation, towards more identified, or *autonomous* regulation). Parents' autonomy support (vs. control) is hypothesized to relate to children's self-regulation as it satisfies the need for autonomy. This study explores the degree to which parental autonomy support relates to self-regulation of treatment behaviors and adherence in pediatric chronic pain over time.

Methods: Participants were 58 children and adolescents (ages 10-17 years; 74.1% female; 77.6% Caucasian) who underwent multidisciplinary evaluation at a tertiary headache clinic, and their mothers. Data were collected at two time points. In Phase One, mothers and children completed questionnaires at their follow-up appointment, during which the neurologist evaluated children's adherence to treatment recommendations provided at the initial appointment. Participants were then followed six months later (Phase 2) and emailed questionnaires through an online platform. Data from 26 mother-child dyads have been collected in Phase 2, with data collection ongoing.

Results: In Phase One, simultaneous regressions showed that children's report of mothers' control marginally significantly predicted children's use of controlled regulation of health behaviors ($t(53) = 1.64, \beta = 0.26, p < .10$), positively predicted children's psychological reactance ($t(53) = 4.12, \beta = 0.59, p < .001$), and negatively predicted children's lifestyle adherence as rated by the physician ($t(53) = -2.91, \beta = -0.39, p < .01$) when controlling for child age, gender, mothers' education, and functional disability. In Phase Two, cross-lagged lagged structural equation models will explore associations among parenting, children's self-regulation, and adherence over time. Specifically, we will explore whether Phase One parenting variables (e.g., parental autonomy support and control) predict Phase Two variables of children's self-regulation, and vice versa. Phase Two analyses will be presented at the conference.

Discussion/Conclusion: Study findings provide insight into how parent-child interactions relate to symptom management and treatment outcomes in pediatric chronic illness concurrently, and possibly over time. Results may inform the creation of a parenting intervention to help parents of children with chronic pain apply facilitative motivational principles to treatment planning.

P-055

Diabetes self-management in the everyday life of patients: A qualitative study from a self-determination theory perspective

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Background and Purpose: Diabetes (Type 1 and 2) is a major health issue for many patients affecting their everyday quality of life. Adherence to recommended daily self-care behavior schedules is a vital component of effective self-management of diabetes and maintaining an optimal level of quality of life. However, self-care behaviors may also mean a considerable amount of burden and limits for patients. Self-Determination Theory (SDT), more specifically, the theory of basic psychological needs provides a general framework for understanding these experiences. Within this framework, this qualitative study explores how adults with diabetes construct their experiences of autonomy during everyday diabetes self-management.

Method: In the frame of a broader research program on diabetes self-management, a sample of adult Hungarian patients (15 women; 5 men) with diabetes was approached with semi-structured interviews. The interviews were subjected to qualitative, Grounded Theory analysis to elicit themes from participants' responses with respect to their experiences of autonomy.

Results: Grounded Theory analysis elicited 3 main themes: *autonomy supporting situations, struggle for autonomy in relationships* and *overcoming vulnerability*. Participants found it challenging to construct the frames of their autonomy in places and situations other than their homes. They also articulated a range of interpersonal processes how they struggled for maintaining an acceptable level of autonomy in close relationships. Finally, participants expressed several aspects of their vulnerability while requiring external support to increase their competence.

Conclusion: Initial analysis of the interviews of diabetes patients provided several themes of struggle for autonomous daily life even in face of a chronic illness. Results also suggest specific forms of autonomy support that may help patients to maintain an optimal level of self-worth and integrity in their self-care. Special emphasis on communication skills and support for increasing self-management competence seems also vital for an autonomous everyday living.

P-056

Examining a model of employee diversity motivation: A person-centered approach to understanding organisational diversity and inclusion success.

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Despite dedicating significant resources to implementing best-practice advice, many organisations are still struggling to reach their diversity and inclusion goals. Furthermore, the empirical conclusions drawn surrounding diversity practice effectiveness consistently vary across studies and levels of analysis (Nishii, Khattab, Shemla & Paluch, 2018). Arguably, differences in employee motivation to engage with diversity and inclusion practices may underpin these inconsistencies. Drawing upon recent SDT research, and considering the societal relevance of diversity and inclusion, it is argued that employees may simultaneously endorse multiple reasons for engaging and display distinct profiles of motivational tendencies (e.g. Howard, Gagne, Morin & Van Den Broeck, 2016). Importantly, certain situational factors may predict/influence employee diversity motivation profiles and in turn, motivation profiles may impact employee attitudes and behaviours resulting in practice success.

To explore the existence of diversity motivation profiles, an online survey was administered via Prolific Academic to 587 (228 males, 359 females) participants, who were currently employed and over the age of 18. An international sample of participants were asked to complete a short, 10-minute survey consisting of adapted, previously validated measures. Diversity motivation profiles were examined using the rigorous statistical analysis method, latent profile analysis.

As predicted, and consistent with previous findings on motivation profiles at work (Howard, Gagne, Morin & Van Den Broeck, 2016), four diversity motivation profiles were identified. The profiles included an Amotivated Profile, a Predominantly Autonomous Profile, a Highly Motivated Profile, and a Balanced Profile. A number of factors were also found to predict certain profiles including employee perceptions of the organisational intent behind diversity and inclusion practices, and scepticism. Finally, certain diversity motivation profiles in turn predicted organisational inclusive behaviours, organisational citizenship behaviours, as well as perceptions of inclusivity, cohesiveness, and climate.

Combined, these preliminary findings suggest that when employees perceive the organisation's intent behind diversity and inclusion practices as authentic, and as stemming from internal commitment over external obligation, they show greater levels of autonomous diversity motivation, which translates into inclusive behaviour. This research extends on, and validates the person-centered conceptualisation of motivation profiles, and provides important practical insights for organisations implementing diversity and inclusion practices.

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P-057

Contingency of self-worth and knowledge sharing motivation at workplace

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As an important business resource, many companies and managers encourage their employees to share their knowledge within their organizations, and many researchers have attempted to clarify the antecedents of employees' knowledge-sharing behavior. Wang and Noe (2010) noted that employees' self-evaluation is an important antecedent of knowledge sharing and recommended analyzing the relationship between organization-based self-esteem (OBSE) and knowledge-sharing. While Mukahi (2015) showed that OBSE enhances knowledge-sharing behavior through intrinsic knowledge-sharing motivation, few studies have examined the relationship between OBSE and knowledge-sharing.

Even though self-esteem is an antecedent of knowledge-sharing behavior, it is said that self-esteem has negative impacts as well as positive impacts on human behavior (e.g., Baumeister et al., 2003). Crocker and Wolfe (2001) proposed the concept of contingencies of self-worth as "a domain or category of outcome on which a person has staked his or her self-esteem" (p. 594), meaning that contingencies of self-worth determine the impact of self-esteem. Additionally, contingencies based on internal domains have more positive impacts on individual self-esteem and behavior than do contingencies based on external domains (Crocker et al., 2003; Vonk and Smit, 2012).

Based on the discussions about contingencies of self-worth, it is possible that internal contingencies have positive impacts on intrinsic or self-determined knowledge-sharing motivation in organizations. However, no previous studies have analyzed the relationship between contingencies of self-worth, and knowledge-sharing motivation in the workplace based on self-determination theory. Therefore, this study aims to clarify the effects of workplace contingencies of self-worth on knowledge-sharing motivation.

The survey was commissioned to an online panel survey company. The sample was selected from a Japanese panel of employees working at a business corporation comprising more than 10 employees who are engaged in knowledge work.

In terms of the measure of workplace contingencies of self-worth, an original scale was developed based on a general contingencies' study (Crocker et al., 2003). Analyzing by factor analysis, three factors were revealed; "superiority," "relationships" and "non-work." In terms of the measure of knowledge-sharing motivation, an original scale was developed based on self-determination theory. Analyzing by factor analysis, four factors were revealed; "external regulation," "introjected regulation," "identified regulation" and "intrinsic regulation." The data was analyzed using the multiple regression analysis. The results show that, while superiority has significant positive impacts on external and introjected regulations, relationships has significant positive impacts on identified and intrinsic regulations. Furthermore, non-work had little impacts on the four regulations.

P-058

Crafting a work environment that supports intrapreneurial behavior: on the role of employee autonomous motivation and intrapreneurial intentions

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Creating supportive work environments, which favor innovation and the development of new projects, are positively associated with intrapreneurial behaviors of employees, an important competitive factor for the survival of organizations. Referring to the act of behaving like entrepreneurs while working as an employee, intrapreneurial behaviors and the psychosocial factors that contribute to their favor remain unclear. In the light of intrapreneurship, job crafting and SDT-based research, we propose a model in which employee autonomous motivation is related to intrapreneurship behaviors through two explanatory mechanisms (perceived organizational support and intrapreneurial intentions). This study was conducted among 179 employees. Results of regression analysis provided support for the proposed model. Findings suggest that employees' autonomous motivation (acting with volition) has a favorable impact on their perception of organizational support, thereby affecting their intrapreneurial intentions and behaviors. These results will enable managers to identify contextual and motivational levers on which it is possible to act to develop, maintain and improve intrapreneurship, a guarantee of added value and insurance of firm's durability.

P-059

Serving with fairness, integrity, diligence and impartiality: The importance of supervisory autonomy support and values for prejudice reduction in policing

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Diversity antagonism is evident in both subtle and blatant prejudiced attitudes. Drawing on self-determination theory (SDT) and value congruence theory, we investigate in policing whether an *autonomy-supportive* approach by supervisors is associated with more positive follower attitudes towards members of the public from minority ethnic and religious groups.

The Policing Code of Ethics (2014) is a professional code of practice for the policing profession in England and Wales. Police officers and staff embrace its values to guide their judgements and decision-making, and to act with impartiality and in a non-discriminatory manner. Its values also highlight the importance of reducing bias and prejudice in policing. Furthermore, prejudice and bias have been recognised as a barrier to effective engagement with communities and as a threat to police legitimacy.

SDT argues that people are best motivated to change their attitudes and behaviours when they receive support for their need for autonomy and feel choiceful, volitional, and understood. In psychotherapy research, it has been posited that therapist *authenticity* is crucial for support to be effective for behavior change, and so autonomy support may be enhanced if the agent communicating behaviour change is seen to be authentic. Autonomy-supportive communications would not be seen as authentic if the motivator is not seen to also hold the values of *selflessness, honesty, openness, respect* and *integrity*, which are key to the policing Code of Ethics. We thus also investigated whether perceived supervisory authenticity operationalized as *individual-Code of Ethics (I-CoE) values congruence* moderates the relationship between autonomy support and follower diversity antagonism. We hypothesised that when supervisor I-CoE values congruence is higher, the relationship between autonomy support and diversity antagonism is stronger.

Using data from 2,239 (44.1% response rate) police officers and staff in an English police force, supervisory autonomy support negatively related to follower diversity antagonism, but only when there was high congruency between follower perceptions of their supervisor's internal values and those of the Code of Ethics. As expected, when followers felt pressurised to improve their attitudes and behaviour this was associated with higher levels of diversity antagonism. Follower I-CoE values congruence was associated with lower levels of diversity antagonism, while emotional exhaustion was related to more negative attitudes towards members of the public from minority ethnic and religious groups.

Our findings have important implications for reduction of bias and prejudice in policing and contribute to theory through demonstrating the criticality of authenticity in autonomy support provision.

P-060

Parental (de)motivating behaviors in youth sports: a latent profile analysis approach

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Within youth sports, parents often play a key role in athletes' sport participation, as they introduce children to certain sports and parental involvement is often necessary or desired. As such, research within the domain of youth sports increasingly addresses the role of parental behavior in youth athletes' sport experiences. Although parents' autonomy-supportive and controlling involvement has received prior attention, these behaviors do not happen in isolation from other practices. Instead, parents may combine various need-supportive (autonomy-support, structure, warmth) and need-thwarting (control, chaos, coldness) practices, a topic which, by our knowledge, has not been addressed before. Specifically, we sought to examine different patterns of parental need-supportive and need-thwarting behaviors and to link the obtained parenting profiles to athletes' (mal)adjustment in their sport club. Grounded in Self-Determination Theory (Ryan & Deci, 2017), the current multi-informant cross-sectional study attempts to identify latent profiles representing (de)motivating behaviors of youth athletes' parents and to model potential outcomes of profile membership. A sample of 205 athlete-parent dyads (athletes 56.4% male, $M_{age}= 14.69$, $SD= 2.24$, 57.8% team sports; parents 40.6% male, $M_{age}= 46.21$, $SD= 5.34$) reported on parental behavior (i.e., autonomy-support, control, structure, chaos, warmth, coldness). Additionally, athletes reported about their competition anxiety, motivation and (dis)engagement regarding their sport participation. Latent profile analysis will be used to distinguish profiles on parental (de)motivating behaviors, whereby we will make the comparison between both athlete and parent reports. Furthermore, we will examine how profiles can be linked to differences in athlete outcomes. The results will be processed and analyzed in January, allowing to present and discuss the conclusions at the Self-Determination Theory Conference 2019. This multi-informant study will be the first to explore the prevalence and potential outcomes of parental behavior profiles in youth sports.

P-061

Passion, behavioural regulation and well-being in adapted sport

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Introduction: Sports psychology in the last years have received considerable advances with multi-theoretical approaches. Grounded on the Dualistic Model of Passion (DMP) and Self-Determination Theory, this study aimed to i) analyze the hypothetical causal relations between these two models on the well-being of adapted sport athletes, and ii) to analyze the mediating role of behavioral regulations in passion/well-being hypothesized relation.

Method: 143 elite sport adapted athletes in Portuguese competitions (36 female; 107 males), with ages comprised between 15 and 59 years old ($M=29.21$; $SD=10.45$) were enrolled in this study. For data collection, the Portuguese versions of the Passion Scale (PS), the Behavioral Regulation in Sport Questionnaire (BRSQ), the Positive and Negative Affective Schedule (PANAS) and the Satisfaction With Life Scale (SWLS) were used. Hypothetical models were tested using SEM techniques with AMOS V. 22.0, and multiple mediation procedures were developed with SPSS PROCESS macro V. 3.1.

Results: Study main results present a trend where harmonious passion and obsessive passion have direct and significant effects with self-determined motivation, and negative direct effects with non-self-determined motivation (significant only for harmonious passion). On other hand, self-determined motivation presented direct and significant effects with satisfaction with life and positive activation, and non-self-determined motivation presented a positive and significant effect with negative activation, and a negative and significant effect with positive activation. Path analysis was suggestive of mediation effects, particularly explained by self-determined composite variable. Multiple mediation model analysis supported these suggestions and presented significant total indirect effects in the harmonious and obsessive passion models (except in the obsessive – life satisfaction model).

Discussion and Conclusion: The main results tends to suggest that both constructs of the DMP are well-being predictors through behavioral regulations. In more practical terms, it seems that the passion perceived by adapted sport athletes is a positive predictor of autonomous motivation, which can influence the levels of subjective well-being in these athletes, both from a cognitive (satisfaction with life) and emotional point of view (positive affects).

Keywords: Dualist Model of Passion, Self-Determination Theory, Motivation, Adapted Sport, wellbeing

P-062

Examining the motivational determinants of enjoyment and the intention to continue of persistent competitive swimmers

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Introduction: The present study examines the links between AGT and SDT in a motivational sequence proposed by Mageau and Vallerand (2003), in order to understand enjoyment and intentions to continue in swimming athletes: motivational climate (task versus ego-involving) → BPNs (autonomy, competence and relatedness) → types of motivation (self-determined and non-self-determined motivation) → consequences (enjoyment and intention to continue). We also propose to analyze the invariance of this model across gender, age-groups and years of experience to determine the stability of the model for different sub-groups of swimmers.

Method: 799 federated swimmers (450 males, 349 females) aged between 12 and 22 years ($M=16.65$, $SD=2.83$) participated in this study. For data collection, the Portuguese versions of Motivational Climate Sport Youth Scale, Basic Psychological Needs in Sport Scale, Behavioral Regulation Sport Questionnaire and Physical Activity Enjoyment Scale were used. Intentions to continue in sport were assessed through three specific items. SEM was used to analyze the hypothesized models, and multi-group analysis was performed between genders. AMOS V. 23.0 was used for these procedures.

Results: The results support the adequacy of the final model (task-involving climate, basic psychological needs, self-determined motivation, enjoyment and intentions to continue) in explaining swimmers persistence over a period of six years and their intention to persist one more year. Additionally, the final model revealed to be invariant between gender and level of experience, as well as across age-groups.

Discussion & Conclusion: The results shown in the present study lead to the conclusions that when coaches create a task-involving climate is conducive to the satisfaction of basic needs satisfaction. This, in turn, is more likely to lead to more self-determined motivations, more enjoyment and more intention to continue the practice of one's sport. More importantly, as suggested by AGT and SDT, this is likely to happen whatever the athletes' gender, their age or level of experience.

Keywords: Motivational Climate; Basic Psychological Needs; Self-Determined Motivation; Achievement Goal Theory, Swimming.

P-063

The effects of other-referenced achievement goals and motivational context on the self-efficacy, hope, and hopelessness of novice participants in a table football competition

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Integrating tenets of self-determination theory and the hierarchical model of achievement motivation (Vansteenkiste, Lens, Elliot, Soenens, & Mouratidis, 2014), the current experiment tested the effects of other-based achievement goal adoption under different motivational contexts on the psychological and emotional functioning of participants in a competitive table football game. A 2 (autonomy-supportive/controlling context) x 2 (other-approach/other-avoidance goal) design was employed. Following ethical approval, 152 novice participants ($M_{age}=19.74$; $SD=3.08$) were randomly assigned to one of the four experimental conditions to play in a 5 minute table football match. Participants entered the laboratory in groups of six, and were divided into two teams. Unknown to the participants, one member of each team was a trained confederate acting out the role of the team manager. Prior to the game, the team managers delivered a team talk used to induce the goal manipulations under either an autonomy-support or controlling manner. Participants then completed pre-game self-report measures of self-efficacy, and hope. At the end of the game, participants responded to a measure of hopelessness. Using a series of 2 (autonomy-supportive/controlling context) x 2 (other-approach/other-avoidance goal) ANOVAs, no significant interactions emerged for any of our outcomes. However, the findings did reveal a significant main effect of motivational context on self-efficacy ($p < .05$). More specifically, participants operating within an autonomy-supportive environment, reported significantly higher levels of self-efficacy prior to the contest than those entering it under a controlling motivational context. Furthermore, the results also revealed a significant main effect of the motivational context on hopelessness ($p < .001$). That is, participants reported significantly higher levels of hopelessness following their match when they had performed in the contest under a controlling team manager compared to their counterparts managed under an autonomy-supportive environment. Finally, there were no significant main goal effects. Although our preliminary findings call into question the proposed integrated model of motivation within an applied sporting situation, they do demonstrate the importance of considering the motivational context underpinning other-based goal pursuit towards enhancing psychological functioning.

P-064

Teachers' autonomy support and structure and their relationship to students' achievement emotions: A cross-sectional study of lower track secondary school physical education

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Positive emotions are an essential element of personal well-being and positively relate to learning-motivation, self-regulatory efforts and performance. Physical activity (PA) enjoyment, as one of the most important affective consequences of physical education (PE), has been an important factor in increasing PA in PE and leisure time among children and adolescents. Therefore, it is essential for students to experience positive emotions during PA. However, research has shown that PA enjoyment decreases significantly from 4th to 6th grade. Hence, teaching strategies that promote positive emotions are needed.

The control-value theory (CVT) of achievement emotions provides an appropriate framework for analyzing emotions experienced in achievement and academic settings. The CVT assumes that perceived control and values are of crucial importance in the arousal of emotions. Following self-determination-theory an autonomy supportive classroom atmosphere increases self-sufficiency and structuring the learning process increases the experience of competency. Hence, student engagement and intrinsic motivation likely increases, and the arousal of positive emotions is supported. Therefore, autonomy support and structure are important environment variables in PE settings. The present cross sectional study gains an overview of student emotions in PE at lower secondary school level. We want to examine whether an autonomy supportive and structured teaching style influences students' emotions in PE.

Emotions will be measured using the AEQ, in addition perceived *control* and *value* appraisals will be inquired. *Autonomy support* will be measured with the MD-PASS-PE, *structure* by using the TASCQ. Items will be selected, translated and adapted to PE context by January 2019. In a preliminary study with 120 students from four lower track secondary schools ("middle schools"), the questionnaire items will be validated. Item and scale analyses alongside confirmatory factor analyses will be conducted to examine reliability and factor structure. In a next step, the main study will be conducted in participating middle schools (40 classes) and data will be collected at the beginning (Oct. 2019) and the end (July 2020) of a school year. Afterwards the data will be analyzed with analyses of variance, multilevel regression analyses and structural equation modelling.

An interplay between autonomy support and structure is expected. Furthermore, an effect of need-supportive teaching on students' appraisals is expected which partly mediates the effect on students' emotions. First results of the preliminary study will be presented at the SDT conference.

P-065

Onward, upward and the journey through: perceptions of education from african-american and latina women

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This qualitative study focused on the college experiences of African-American and Latina women attending a predominately White institution. In the discussion of college retention, persistence, and motivation the research primarily focuses on intrinsic factors, those internal factors that impact student success. The purpose of the study was to explore the messages African-American and Latina undergraduate women received prior to attending college. Semi-structured interviews were conducted with 13 participants. The data was coded using the core tenants of the self-determination theory, extrinsic and intrinsic factors. The research found extrinsic factors provided the primary source of motivation to persist in college.

P-066A

Application of the basic psychological needs satisfaction and frustration scale for examining part-time student employees perceived work environment

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A recent study has indicated that approximately 78% of part-time undergraduate students were employed while pursuing their education (McFarland et al., 2017). Unfortunately, the number of students employed on collegiate campuses are unknown at this time. According to research, maintaining the motivation of employees is vital for elevating a workers job satisfaction which leads to increased productivity (Rocchi et al., 2017). Although this evidence exists for full-time employees, little is known about the motivation of part-time workers such as those employed in campus settings (Astin, 1999; Allan et al., 2016). In order to examine student-employee motivation, this study utilized the Basic Psychological Needs Satisfaction and Frustration at work scale which measures an individual's autonomy, competence, and relatedness in the work place (Rocchi et al., 2017). The questionnaire was administered to part-time student employees in a collegiate setting that held positions in campus recreation, residence halls, and the student union. This produced a response of 256 completed questionnaires. Linear regression results showed there was a significant finding for each of the three dependent variables: Autonomy Satisfaction (AS), Competence Satisfaction (CS), and Relatedness Satisfaction (RS). Of the eleven independent variables entered into the equation, only job task importance was found to be a significant predictor of AS ($F_{1,242} = 67.089, p < .001$). For the CS, both the empathy of the supervisor and inspires employees measures were shown to be significant predictors were found ($F_{2,244} = 16.715, p < .001$). On the other hand, job task performance and personal growth were significant predictors of RS ($F_{2,243} = 34.283, p < .001$). While it is important to understand what work features significantly predict AS, CS, and RS; it is deemed just as valuable to know what work features thwarts the autonomy, competence, and relatedness needs. Similar to the regression analysis used above, the ten work features were entered into the linear regression analysis to determine what might significant predict Autonomy Frustration (AF), Competence Frustration (CF), and Relatedness Frustration (RF). Regression showed that for AF, the only significant predictor was job task importance ($F_{1,243} = 49.627, p < .001$). For the CF, the only significant predictor variable was age ($F_{1,245} = 7.708, p < .006$). Likewise, for the RF, the only significant predictor variable was empathy of supervisor ($F_{1,244} = 29.553, p < .001$). Based on the regression results, it is recommended that supervisors of student employees who work on campus can benefit most from a work environment that emphasizes job task importance, empathy, inspirational, and personal growth.

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P-067

Relationships among basic psychological need satisfaction and frustration in school, academic resilience, and psychological wellbeing perceived by college students

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Research on happiness, subjective or psychological well-being have indicated that the satisfaction of the basic psychological needs is related to indicators of wellness (Vansteenkiste & Ryan, 2013). Therefore, promoting individuals' SWB would be a central importance in higher education. According to evidences from BPN literature, need satisfaction predicts well-being, optimal functioning, natural growth tendency, and internalization of values (e.g., DeHaan, et al., 2016). However, when basic psychological needs are obstructed, people develop a number of coping strategies to accommodate the experience of need frustration. Therefore, it is predicted that resilience could function as mediating role between basic psychological need satisfaction and frustration and psychological wellbeing of college students. In this context, the purpose of this study was to examine how basic psychological need satisfaction and frustration (BPNSF) in school and academic resilience influence to psychological wellbeing perceived by college students. In this study, the participants were a total 836 freshmen and sophomore students from A and D University. BPNSFS (Chen, et al. 2015) was modified into school setting and have validated in this study. Descriptive, correlational, and reliability analyses of measured variables were performed. To test the hypothesized model of the study, we used SPSS 25.0 and AMOS 22. As Hu and Bentler's (1999) recommended, multiple fit indices were utilized including chi-square statistic, Comparative Fit Index (CFI) > .90, Tucker Lewis Index (TLI) > .90, Root Mean Square error of approximation (RMSEA) < .08, Standardized Root Mean Square Residual (SRMR) < .08. As results, first, it appeared that there were statistically significant positive correlations among the perceived basic psychological need satisfaction and frustration in school academic resilience, and psychological wellbeing. Second, the model fit criteria of TLI, CFI, RMSEA, SRMR, and χ^2 value were satisfied. It also showed that academic resilience (cognitive, emotional, perform) had a mediation effect on path between BPNS and subjective well-being.

Keywords basic psychological need satisfaction and frustration in school, academic resilience, psychological wellbeing

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P-068

The satisfaction of basic psychological needs and adolescents' impulsivity: the primacy of autonomy and its support

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Introduction: Impulsivity has been linked to several problematic behaviors during adolescence. Self-determination theory proposes that human beings have a natural tendency towards psychological growth and well-being but that individual differences that can be observed in such optimal development depend on the degree to which three basic psychological needs (BPN), namely autonomy, relatedness, and competence, are satisfied. Studies reveal that BPN satisfaction during childhood is associated with optimal parenting, which is composed of three key dimensions: autonomy support (AS), structure, and affiliation (Grolnick, Deci & Ryan, 1997). In the present study, we investigate how BPN satisfaction relates to adolescents' impulsivity and how AS, structure, and affiliation from both parents are related to those needs. We also explored whether parenting is related to adolescents' impulsivity, via BPN satisfaction. Methods: A total of 270 adolescents (*Age* = 15.5) completed an online questionnaire assessing their impulsivity (Morey, 2007), their BPN satisfaction, and their perception of their mothers' and fathers' AS, affiliation and structure. Two multiples linear regressions were conducted, prior to a mediation analysis. Results: In the first regression, satisfaction of the need for autonomy was found to have a significant negative association with impulsivity ($\beta = -.21$, $p = .019$), over and above parental education and the satisfaction of competence and relatedness ($R^2 = .09$). In the regression predicting adolescents' sense of autonomy satisfaction, mothers' AS showed a significant positive association ($\beta = .27$, $p = .003$), over and above parental education and other parenting dimensions from both mothers and fathers ($R^2 = .29$). Lastly, an exploratory mediation analysis was conducted using Process to test whether maternal AS had an indirect effect on adolescents' impulsivity through autonomy satisfaction. A significant indirect effect suggests that maternal AS was associated with less adolescent impulsivity, via its association with adolescent's higher sense of autonomy, $\beta = -.13$, 95% BCa CI [-0.206, -0.047]. Conclusion: This study suggests that perceived AS, especially from mothers, has a strong positive association with adolescents' satisfaction of their need for autonomy and that the satisfaction of this need for autonomy is negatively associated with adolescents' impulsivity. Having the belief to be the causal agent of one's own life and acting in harmony with one's integrated self seems to have an important role in adolescents' behavioral self-regulation. The potentially protective role of autonomy and autonomy support could be further studied in prospective, longitudinal studies with adolescents and both of their parents.

P-069

Adolescents' inner-compass as a buffer against involvement in risk behavior: The roles of facilitating parental practices and resistance to peer-pressure

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Adolescents' attraction and involvement in risk-behaviors rises significantly with the transition to junior high school (Walsh, et al., 2010). Their susceptibility to peer-pressure (Dishion & McMahon, 1998) and the normative increase in adolescents' attraction to risk-taking behaviors (Steinberg, 2010) play a role and Therefore, it appears to be a time when it is crucial to identify resilience factors that help adolescents to cope with such pressures.

The present study focuses on the construct of "the authentic inner-compass" (AIC; Assor, 2017; 2012), that is rooted in Self-Determination Theory (SDT; Ryan & Deci, 2017). According to Assor (2017) and Soenens et al (2016), the AIC is an important resilience resource, which is likely to enhance resistance to peer pressure, and in turn reduce early adolescents' involvement in risk-behavior. Assor (2017) posits that the formation of AIC is enhanced by two parental practices, which so far were examined only by several studies (e.g, Assor, 2017; Brambilla et.al, 2015): **(1) Fostering inner valuing (FIV)** and **(2) Inherent value demonstration (IVD)**

we hypothesized that IVD and FIV would predict adolescents' feelings of having a firm and authentic IC, which would predict resistance to negative peer-pressures and low involvement in risk-behaviors. Moreover, we expected that the effects of perceived parenting, AIC, and resistance to peer-pressure would be observed also when controlling for the effects of past involvement in risk-behavior.

519 Israeli 7th and 8th graders (59.9% females) completed self-report questionnaires at two time-points. On November/December 2016 they completed a scale assessing involvement in risk-behavior (adapted from Kakiyama et al. [2010]). On March/April 2017 they completed the same risk-involvement measure, and in addition scales assessing AIC, FIV, and IVD (Assor, 2017; Brambilla et al., 2015), and resistance to peer-pressure (Steinberg and

Monahan's [2009]).

Structural Equation Modeling supported the hypothesized model. FIV and IVD predicted AIC, which in turn predicted decreased involvement in risk-behaviors. Mediation analyses (using PROCESS; Hayes, 2012) indicated that peer-pressure resistance partly mediated the effect of AIC and IVD on risk-behavior, while controlling for the effects of T1 risk—involvement.

These results suggest that having an AIC can be viewed as a resilience resource that may help adolescents to cope with serious pressures and risks. Discussion would focus on theoretical and practical implications. Further longitudinal analyzes will be presented in the poster.

P-070

Teacher's (De)motivating Teaching Style is Like a Tree, Students' Perceptions Like a Shadow

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Need-supportive teaching is considered to be an important instrument for teachers to promote students' motivation. Teachers can promote students' basic psychological needs for autonomy, competence, and relatedness by providing autonomy support, structure, and involvement. Teachers who use control, chaos, or coldness are thwarting students' basic psychological needs.

In most studies, students' perceptions are used as an indicator of teachers' teaching styles. Until now, it remains unclear to what extent those perceptions of students are a proper depiction of teachers' actual style. Moreover, there is no consensus about the influence of students' general impression of a teacher on students' situational perceptions of received need support. Students' perceptions (i.e., survey response) are the shadow of the tree "teachers' teaching style". But how accurate is our image of the shadow?

The current study is an attempt to contribute to the discussion on students' perceptions of need-supportive teaching. This is done by studying students' perceptions in an ecological valid manner. Students ($N = 234$) were asked to describe a recent situation in which they interacted with their teacher. Students were helped to describe the situation in more detail by the use of guiding questions. Subsequently, students were asked for their perceptions of the teachers' teaching style in the described situation.

The researchers coded the situation that students had described on the presence of indicators of teachers' need-supportive or need-thwarting style (present/ not present) The interrater agreement was good (94.05%). The student perceptions were compared to the coded dimensions using a person-centered approach. Students were clustered into three groups based on their perceptions of their teachers' teaching style. Cluster 1 was an ambiguous group with both high perceptions on the need-supportive and need-thwarting styles. In Cluster 2 students scored low on need-supportive teaching and average to high on need-thwarting teaching. Students in Cluster 3 had high scores on need-supportive teaching and low scores on need-thwarting. Those patterns corresponded to the coded scores by the researchers.

Our results indicate that students' survey responses matched the observable teacher behaviors in the described situation only on the aggregated level of need-supportive and need-thwarting styles. No differences among the dimensions could be distinguished (e.g., in an autonomy supportive situation, student's perception of autonomy support was not higher than structure).

This study indicates that students' perceptions are not an accurate image of teachers' actual style. Probably students general impression (positive or negative) is more important than the actual teacher behaviors.

P-071

A longitudinal examination of psychological need satisfaction and thwarting among female incoming college students.

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The transition from high school to college presents many young adults with new opportunities as well as challenges. From a Self-Determination Theory (SDT) perspective, it seems likely that as students move out of their family environment and into the college atmosphere, they experience more autonomy to make a variety of decisions without parental supervision or influence, including class attendance, what and how much they will eat and drink, and how their time is spent. On the other hand, such a significant life shift may be accompanied by changes in interpersonal relationships, including opportunities to develop new relationships or receiving less support from family and existing friendships. Moreover, the increased academic rigor of college courses may pose a threat to some students' sense of competence, while for others provide a sense of validation and belonging. Given the known association between need satisfaction and well-being/positive outcomes (as well as the association between need thwarting and ill-being/negative outcomes; Ryan & Deci, 2017), examination of need satisfaction/thwarting among incoming female college freshmen may provide useful insights into the struggles (e.g., weight gain, mental health concerns) that have been identified among college students. However, there is little longitudinal data on what typically occurs regarding the three SDT basic psychological needs over the course of the freshman year. In this study, 81 freshmen women living in the residence halls were assessed during their first week at college, at 8 weeks,

and 6 months later. Basic psychological need satisfaction and frustration were assessed at each time point, along with a number of other psychosocial and health behaviors, including BMI, negative affect, binge eating, and endorsement of healthy eating. After 8 weeks, participants showed significant increases in autonomy frustration ($p=.009$; $\eta_p^2=.08$) and competence frustration ($p=.02$; $\eta_p^2=.06$), which were maintained 6 months later. Competence satisfaction decreased at 8 weeks ($p=.008$; $\eta_p^2=.08$). There were no changes in relationship need satisfaction or frustration, nor changes in autonomy satisfaction. Cross lag analyses suggest that basic psychological need satisfaction and frustration were related to healthy eating and negative affect, respectively, and these appeared to be reciprocal in nature. Contrary to previous research, need frustration did not predict binge eating (e.g., Boone et al., 2014) or changes in BMI. However, diet specific need frustration was associated with decreases in self-efficacy to regulate eating and increases in binge eating. Implications and future directions will be discussed.

P-072

Motivation in physical education and intention to practice sport in the future: A self-determination theory approach

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Introduction: The Self-Determination Theory (SDT) is among the most popular and contemporary socio-cognitive approaches to human motivation, being applied in the last decades in several domains, such as sport, exercise and physical education. Additionally, Achievement Goal Theory (AGT) has presented evidence of the contextual factors that may influence student's behavior. The main purpose of this study was to analyze the relation between the motivational climate induced by the teacher in the classroom, the Basic Psychological Needs (BPN) of students, the behavioral regulation, the evaluation score in Physical Education (PE), and their intentions to practice sport/physical activity outside of school.

Method: In this study participated 618 students between 6th and 9th years, of both genders (290 female; 328 male) with ages comprised between 10 and 18 years ($M=13.3$; $SD=1.7$). For data collection, the Portuguese versions of Learning and Performance Orientations in Physical Education Classes Questionnaire (LAPOPECQ), the Basic Psychological Needs in Exercise Scale (BPNEsp), the Perceived Locus of Causality (PLOCp) were used. Intentions for the practice of sport/physical activity outside of school were assessed through a single item. SEM were used to analyze the hypothesized models, and multi-group analysis was performed between genders. AMOS V. 22.0 was used for these procedures.

Results: After modification indices and model adjustments analysis, a final model emerged (learning climate > BPN > autonomous motivation > intentions/PE grade. Results interpretation seems to indicate that i) the BPN are influenced by motivational climate (i.e., learning climate), ii) the individuals' motivation is influenced by the satisfaction of three basic psychological needs (i.e., particularly competence), and iii) the motivational regulations have direct and significant effects with intention to practice sports outside school and physical education grades. Additionally, these model presented gender invariance.

Discussion & Conclusion: The main results showed that a climate oriented for learning has a positive impact on basic psychological needs satisfaction of students. However, only the competence satisfaction has a significant positive relationship with autonomous motivation of students, which in turn has a significant positive relationship with the score on PE, as well as for the intentions to practice sport/physical activity outside of school in the future. The multi-theory approach used in the present work may suggest new forms of studying and interpretation of PE classes' dynamics.

Keywords: Self-Determination Theory, Motivation, Motivational Climate, Physical Activity, Physical Education

P-073

Can individual differences in achieving balanced need satisfaction affect retirement adjustment?

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Research has demonstrated that individuals with balanced need satisfaction are more likely to experience optimum well-being than those with the same sum score but greater variability in need satisfaction (Sheldon & Niemiec, 2006). Although the mechanisms behind achieving balanced need satisfaction remain unclear, it has been suggested that unmet needs invoke a corresponding motivation to deliberately engage in behaviours aiming to satisfy those needs. Recent research has evidenced that individual differences and personality traits might moderate the 'needs as motives' effect, and influence an ability to recognise and satisfy deprived needs (Thomas & Oliver, under review). Individual differences in the ability to recognise and satisfy unmet needs might explain variations in achieving balanced need satisfaction in similar social contexts and diverse reactions to the same life experiences.

One such example of this is during life transition such as retirement. Although research has demonstrated that personality traits affect adjustment to retirement and ageing, the underlying mechanisms of how individual differences might alter the interpretations of retirement experiences remain unclear. As such, the current study aims to explore if the ability to recognise and desire to satisfy an unmet need are moderated by personality traits in retired adults.

One hundred and ten participants completed measures of personality (BFI-10, NPI-16, and HSNS), well-being (WEMWBS) and six SDT-informed vignette scenarios systematically describing need supportive or thwarting experience in a context relevant to retired adults. Participants responded to each vignette on a 1 (*Not at all*) to 7 (*Very strongly*) Likert-scale regarding their felt need satisfaction (e.g., cared for by family and friends [need satisfaction], feeling forced to follow the recommended plan [need frustration]) and subsequent need seeking behaviour (e.g., seek support from other members of the club [need seeking], follow the recommended plan set by the instructor [need avoidance]). In addition, participants' actual leisure time behaviours and associated need satisfaction were assessed.

Data from the ongoing project will be presented (N = 110). It is expected that extraversion and conscientiousness will be associated with perceiving need satisfaction, need seeking behaviours (hypothetical and actual behaviour), and greater well-being. Neuroticism and covert narcissism will be associated with perceiving need frustration, need avoiding responses, and lower well-being.

Understanding how personality traits affect an ability to recognise and satisfy an unmet need among retired adults can potentially help moderate possible negative factors associated with retirement or ageing through achieving balanced need satisfaction.

P-074

A factor structure of basic psychological needs satisfaction: Applying a bifactor-ESEM framework

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Given the important role of the satisfaction of basic psychological needs (BPNS) across various domains, the current study investigated the structure of adolescents' ratings of the BPNS for autonomy, competence, and relatedness using the bifactor exploratory structural equation modeling (Bifactor-ESEM) framework. As a further test of the validity of this representation of the BPNS structure, we also assessed the associations of the BPN factors with measures of anxiety for the negative evaluation, positive relations with peer relationship quality, and academic engagement.

Using a sample of 582 7th and 8th grade students who completed the Korean version of the Basic Psychological Needs Scale, the results demonstrated the superiority of a Bifactor-ESEM representation of BPNS ratings when compared to alternative representations of the data (first-order and bifactor confirmatory factor analyses, and first-order ESEM); $\chi^2=249.613$, $df=87$, CFI=.942, TLI=.898, RMSEA=.057. It demonstrated the importance of relying on measurement models providing a way to achieve a proper disaggregation of adolescents' global levels of needs satisfaction relative to the satisfaction of their more specific needs for autonomy, competence, and relatedness. A G-Factor (direct estimate of global levels of basic psychological needs satisfaction) was defined by strong and positive loadings from all items ($\lambda=.23$ to $.71$, $\lambda_m=.52$; $p<0.01$), while cross-loadings remained small ($|\lambda|=.01$ to 0.36 , $\lambda_m=.10$). This study further investigated the effects of the resulting G- and S-factors on social and academic outcomes through the addition of additional covariates (i.e., anxiety for the negative evaluation, positive relations with peer relationship quality, and academic engagement) to the final Bifactor-ESEM solution; $\chi^2=370.448$, $df=129$, CFI=.929, TLI=.884, RMSEA=.057. The results revealed that G-factor positively predicted peer relationship quality ($\beta=.49$) and academic engagement ($\beta=.40$), and negatively predicted anxiety for the negative evaluation ($\beta=-.15$). The results also showed a well-differentiated pattern of associations between the S-factors and the outcome measures once the variance explained by the G-factor was taken into account. The competence S-Factor positively predicted peer relationship quality ($\beta=.26$), whereas the relatedness S-factor negatively predicted academic competence ($\beta=-.20$) and anxiety for the negative evaluation ($\beta=-.21$). The autonomy S-factor negatively predicted the anxiety for the negative evaluation ($\beta=-.37$). In contrast, it is interesting to note that academic engagement was predicted only by G-factor ($\beta=.40$), suggesting that key determinants of students' academic engagement was their global levels of BPNS and that the specific factors representing various types of BPNS over and above this global factor did not explain additional variance in academic engagement.

P-075

Preliminary validation of basic psychological needs satisfaction for weight loss maintenance scale

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Introduction: Research has shown that weight loss is difficult to maintain over time. Sustained engagement in energy-balanced related behaviours is a key influencing factor. Self-Determination Theory proposes that the satisfaction of Basic Psychological Needs (BPN) predicts adaptive behaviour and well-being which contribute to sustained behaviour change. There are scales to assess BPN in a variety of human development contexts but none have been developed to specifically address Weight Loss Maintenance (WLM). The aim of this study was to examine the factorial validity and reliability of a Basic Psychological Needs Satisfaction for Weight-loss Maintenance Scale (BPNSWMS).

Methods: The BPNSWMS was administered to 1555 adults' weight loss maintainers (M age= 44; SD= 11.9; 68.5% Females), as part of a large multicentre H2020 funded trial (Portugal, United Kingdom and Denmark) targeting WLM through digital technologies - NoHoW project. BPNSWMS were developed following the procedures of Ng and co-workers (1) and were adapted for a WLM context from the BPN satisfaction in Sport (2). The adaptations were made by a panel of specialists in psychology and psychometrics, obesity and behaviour change. The scale comprises 12 items that assess the satisfaction of BPN concerning WLM efforts. The factorial validity (Confirmatory Factor Analysis), and internal consistency (Cronbach's alpha) of the BPNSWMS was assessed.

Results: The scale factorial model presented reasonable fit to the data: $\chi^2(51) = 508,590$, $p < .001$; Root Mean Square Error of Approximation (RMSEA; $< .10$) = .076; Comparative Fit Index (CFI; $> .90$) = .951; Goodness of Fit Index (GFI; $> .90$) = .947. Good internal consistency reliability was achieved for all subscales (all subscales $\alpha > .78$).

Conclusions: The BPNSWMS presents good fit indices and promising validity to assess BPN satisfaction related to WLM efforts. The scale may be useful to assess the effectiveness of motivational interventions in WLM settings. The demand for scales optimized for cost and time efficient digital intervention recommends further analysis that will involve a cross-cultural comparison of this measure in the 3 NoHoW participating countries and test group invariance across gender.

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P-076

An examination of unhealthy weight control behaviors and need satisfaction and frustration in college students.

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Transitioning into college is associated with many lifestyle changes for young adults, with considerable attention having been directed toward examining weight gain during this time. Although some weight gain may be expected as a part of normal maturation, students who experience large amounts of weight gain, loss, or fluctuation may demonstrate unhealthy eating behaviors and poorer self-regulation. Moreover, weight change appears to be differentially associated with body dissatisfaction and negative eating attitudes for females. The present study examined unhealthy weight control behaviors and weight maintenance or change (gain of 5+ lbs in the past year, loss of 5+ lbs in the past year, or both) in a stratified random sample of U.S. college students (N = 879, 56.3% females). Participants were also queried about body dissatisfaction, healthy body weight motivation (autonomous, introjected, and external), and psychological need satisfaction and frustration. Overall, female students reported more unhealthy weight control behaviors ($p < .001$), body dissatisfaction ($p < .001$), introjected ($p < .01$) and external ($p < .001$) regulation, competence frustration ($p < .01$), relatedness satisfaction ($p < .001$), and less autonomous ($p < .01$) and competence ($p < .001$) satisfaction. Female students noted more eating specific need frustration than males ($p < .001$). For female (vs. male) students, unhealthy weight control behaviors were more consistently associated with lower need satisfaction ($r_s = -.21$ to $-.32$ vs. $-.09$ to $-.18$), higher need frustration ($r_s = .23$ to $.37$ vs. $.13$ to $.18$), higher eating specific need frustration ($r_s .31$ vs. $.16$), and more controlling weight regulations (introjected: $.19$ vs. $.03$, external: $.23$ vs. $.12$). Students were examined based upon their weight maintenance (22%), weight loss (19%), weight gain (35%), and weight fluctuation (23%) over the past year. Although there were no significant ($p > .05$) differences in categorization, some different patterns did emerge within the groups for females and males. For females, the weight maintenance group had significantly lower ($p_s < .05$) body mass index, body dissatisfaction, unhealthy weight control behaviors, and autonomy, relatedness, and competence frustration, and higher autonomy and competence support.

For males, these patterns were less evident or absent. For both females and males, the weight maintenance group demonstrated less eating specific need frustration ($ps < .001$). The findings suggest that females experience more body dissatisfaction and unhealthy weight control behaviors, and that having psychological needs satisfied, and not frustrated, may potentially facilitate healthier weight maintenance among students.

P-076A

Need satisfaction during the transition to secondary school and its implications in later education: A latent transition analysis

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Decreases in motivation, adjustment, and academic performance associated with transitioning from elementary to secondary or intermediate school during early adolescence have been consistently documented for at least three decades. These findings have been theoretically explained as the result of a misfit between students' psychological needs and the characteristics of the traditional educational environment they encounter as they start secondary or intermediate school (Eccles & Roeser, 2009). As a result, students' needs are not properly met, undermining their motivation, performance, and persistence. Although this person-environment mismatch hypothesis is commonly used to explain losses in motivation and performance, psychological needs satisfaction has not been directly empirically examined during this school transition.

To address this gap and following SDT (Ryan & Deci, 2017), the present study examined the satisfaction of relatedness, competence, and autonomy needs of 639 early adolescents in the last year of elementary school (grade 6) and the first year of secondary school (grade 7), as well as their motivation, adjustment, and grades in grade 10.

Latent profile analysis revealed four distinct needs satisfaction profiles, which proved identical in characteristics and similar in prevalence across grades six and seven. About half of the students belonged to a Globally High satisfaction profile, about a fifth to a Reduced Competence profile, about a sixth to a Reduced Autonomy profile, and less than a tenth belonged to a profile with generally Low Satisfaction. Latent transition analysis showed that membership to the Globally High and Reduced Competence profiles was very stable, membership to the Reduced Autonomy profile was moderately stable, and membership to the Low Satisfaction profile showed low stability.

Overall, belonging to the Low Satisfaction profile was associated with lower academic motivation, school adjustment, grades, and persistence compared to belonging to profiles characterized by high levels of satisfaction in at least two psychological needs (Reduced Competence, Reduced Autonomy, and Globally Satisfied). Although the Globally High profile was associated with higher levels of functioning compared to Low Satisfaction, reduced satisfaction of one need (i.e. Reduced Competence and Reduced Autonomy) did not consistently lead to comparatively reduced functioning. The implications of these findings are discussed.

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P-077

Between self-determination and heteronomy. Motivational attitudes of music students in the Sultanate of Oman

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Oman's current leader, Sultan Qaboos strongly promotes and encourages cultural – and particularly musical – development: Oman has a splendid opera house, numerous military bands, traditional music ensembles and a symphonic orchestra. Music education is offered in schools and since 2008, interested students have the opportunity to attain a Bachelor degree in music offered at the Department of Music & Musicology at the Sultan Qaboos University (SQU) in Muscat. However, although the dissemination of European cultural assets is supported by many, the promotion, appreciation and study of (Western) music and musical culture are often frowned upon by a large part of the Omani society, stemming from the long-standing controversy that surrounds music in the Islamic society. These circumstances not only have a considerable effect on students' motivational attitudes towards their studies, but also pose pedagogical challenges for instrumental teachers.

This study aims to shed light on the motivational attitudes of Omani music students from the theoretical perspective of Self-Determination Theory and is guided by following principal research questions: Which motivational attitudes are characteristic among Omani students with regards to the pursuit of a university degree in music? Which motivational attitudes are characteristic among Omani music students towards instrumental practice?

A questionnaire was composed, utilising validated measures from existing research, including scales inquiring into the students' motivation to study (AMS-C 28) and to practice (SRQ-A), their perceived competence (PCS), autonomy support (LCQ) as well as satisfaction of basic psychological needs (BPNS) in the study context. The data collection was conducted in May 2017, surveying the entire population of registered students in the Department of Music & Musicology at SQU (N=95).

Results show that although Omani students attend college rather for extrinsic reasons, their motivation to practice their instruments is nevertheless characterised by more self-determined forms of regulation, displaying high scores on intrinsic motivation and identified regulation. However, irregular response patterns suggest that the motivational attitudes of Omani music students cannot be fully explained by the dimensions of psychometric measures validated mostly in Western cultural and social contexts. Presumably, various cultural and social circumstances represent relevant aspects, which need to be considered while interpreting the results, in order to provide an integrated, holistic description. Hence, a subsequent qualitative research phase (semi-structured interviews) is scheduled for early 2019.

This poster presentation will display and discuss the results of the questionnaire study in relation to some initial findings from the interviews.

P-078

'I like it!' Exploring Danish schoolteachers' motivation for integrating classroom-based physical activity: a self-determination perspective. Results from a mixed methods study.

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Introduction

It is well established that physical activity (PA) is beneficial for both mental and physical health as well as cognition and academic performance for children and young people. Research has also found that schools are optimal settings for promoting healthy and active behaviour among this target group. Schools are therefore increasingly called upon to implement different forms of PA during school days. A viable component of many school-based initiatives is *Classroom-Based Physical Activity* (CBPA) putting teachers at centre stage as facilitators. Generally, teachers have a positive view of PA. However, little is known about their motivation for using PA in their daily practice. In Denmark, it is mandatory to integrate, on average, 45 minutes of PA during school days. The aim of this study is to explore teachers' motivation for integrating CBPA from a self-determination perspective (SDT).

Methods

The study uses a sequential explanatory mixed methods approach. The *Work Task Motivation Scale for Teachers* (WTMST), which is an SDT-based scale, measured teachers' level of motivation. Through semi-structured in-depth interviews, primarily guided by the SDT principles *competence*, *autonomy* and *relatedness*, teachers' motivation for using CBPA was explored. Descriptive analysis was used to explore the quantitative data, and deductive thematic analysis was used for the qualitative data. The study included Danish schoolteachers across subjects, year, age, experience, and gender.

Results

206 teachers answered the survey. Nine teachers, showing different levels of motivation, were interviewed. The descriptive analysis revealed that teachers scored high on autonomous/intrinsic types of motivation for using CBPA (e.g. because CBPA is perceived as enjoyable, interesting and important) and low on controlled/external types of motivation (e.g. CBPA is used to avoid feelings of guilt or because it is demanded). Thematic analysis confirmed teachers' interest in and willingness to integrate CBPA. In line with SDT, the analysis also revealed that: 1) a sense of *teaching autonomy* being able to freely choose and organise CBPA; 2) course participation relevant for CBPA as a way of *building competence*; and 3) teacher collaboration focusing on *collegial support*, all positively influenced teachers' motivation for integrating CBPA.

Discussion and Conclusion

The findings from this study pinpoint key motivational drivers for teachers in the integrating of CBPA. Such findings can help frame new research questions and inform stakeholders, such as school management, decision-makers and subject advisers, on innovative ways to foster teachers' motivation.

P-079

Phonological factors can adversely affect feelings of autonomy and engagement amongst Japanese learners of English

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Emerging research suggests that some groups of learners are more advantaged than others when it comes to learning English. That is, that some learners have to overcome greater difficulties than others, and concurrent with these greater difficulties is an aversion to engage. Why for example do Swedish learners pick up English with seeming ease, while learners from Spain or Japan struggle? While cultural explanations are often proffered, an overlooked and yet more simple explanation is phonological interference. That is, phonological factors affect learners' perceptions of difficulty, and thereby influence motivation.

All other factors being equal, learners who have stress-timed native languages, for example Swedes, or Norwegians, have far more success learning English than learners coming from syllable-timed, or mora-timed linguistic backgrounds.

The phonologies of human language vary considerably. English is a stress-timed language and has a regular rhythm pattern. Salient syllables tend to occur at regular intervals, and this tendency results in function words being phonologically reduced to accommodate the regular spacing of syllable prominence. This stress-timed rhythm governs many of the suprasegmental phonological features, such as vowel reduction and elision, that are common in English.

However, syllable-timed languages such as Korean, where the time needed to pronounce each syllable is roughly equal, and mora-timed languages, such as Japanese, where the time needed to pronounce each mora is roughly equal, are phonologically distinct from English. These languages lack many of the common suprasegmental phonological features found in English. This lack of understanding can seriously impede the development of listening comprehension skills. And these underdeveloped listening skills result in learner being less inclined to engage with the language.

This poster presents research which suggests that, in particular, Japanese learners not only need to overcome difficulties with the phonology of English, but they also need to overcome feelings of inadequacy in order to more actively engage with the language. Learners with a decreased sense of competence are more likely to experience decreased feelings of autonomy in class. They may also withdraw from communicative activities with classmates, thus creating need-thwarting situations. Given the importance of need satisfaction for motivation, engagement, and learning achievement, we suggest pedagogical interventions which specifically help students overcome their difficulties comprehending natural, stress-timed English, and which concurrently enhance need satisfaction.

P-080

Perceived conditional regard, stress and couple satisfaction

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Introduction: This research is examining the relationship between perceived conditional negative regard (Kanat-Maymon, Roth, Assor & Raizer, 2016) and couple satisfaction, as well as how stress mediates this link in new-parents couples. Interestingly, while autonomy need-thwarting has been shown to be influenced by stress within parent-child relationships, this link has never been studied in couple's relationship. We propose that parents with higher perceived conditional negative regard will predict less couple satisfaction, and that this association will be explained by individual's stress levels.

Method: Participants: In this preliminary study, primiparous couples ($N=80$; 95% mothers) were recruited to complete an online survey, which included the "Perceived Stress Scale", the "Perceived conditional negative regard" and the "Revised-Dyadic Adjustment Scale".

Results: A mediation analysis with Process (Hayes, 2017) was conducted, which conveyed that stress was a partial mediator to the relationship between perceived negative conditional regard and couple satisfaction. Both the direct ($\beta = -.422$, 95% CI [-.623 to -.221]) and the indirect effect were significant ($\beta = -.077$, 95% CI [-.178 to -.008]).

Discussion: The results indicate that parents who perceived more conditional negative regard from their partner are less satisfied in their relationship, and that this link is partially explained by the level of parental stress. This signifies that perceived conditional negative regard increases parental stress, and that the inverse relationship between perceived conditional regard and couple satisfaction is partially due to this increase in parental stress.

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P-081

Child's temperament influence on perceived autonomy need support and thwarting in primiparous parents

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Introduction. Bidirectional influences characterize all family interactions. While the influence of parent's relationship quality on children functioning is well documented in the developmental literature, children's influence on parental relationship quality is often overlooked, especially with young children. The transition to parenthood requires an important dyadic reorganization and is often associated with decreased couple satisfaction. This preliminary study aims to document the influence of children temperament on perceived partner's autonomy need-support. Children negative affectivity is expected to decrease perceived partner's autonomy need-support and increase perceived partner' autonomy need-thwarting.

Method. In this preliminary study, a total of 80 primiparous parents (95% mothers) of a 6-month-olds completed an online survey, which included the *Infant-Behavior-Questionnaire-Revised* and the *Interpersonal-Behaviours-Questionnaire*.

Results. While controlling for covariates (i.e. fatigue, family income and level of education), a linear regression reveals that 6-month-olds' negative affectivity predicts the parent's perceived autonomy need support ($\beta = -.246, p < .044$) and thwarting ($\beta = .254, p < .038$) by their partner.

Conclusion. The results indicate that 6-month-olds' negative affectivity can be taxing on their parent's perceived quality of their relationship. It lessens the perception of autonomy need-support, while it increases the perception of autonomy need-thwarting in the couple's relationship. In order to protect couple relationship quality through this important family life cycle, clinical implications include interventions aimed towards increasing autonomy need support for parents with children presenting a difficult temperament.

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P-082

The Effects of Autonomy on Everyday Creativity and the Mediating Role of Vitality: Between-person Variation and Within-person Fluctuation

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Two studies were conducted to investigate the facilitating effects of autonomy on everyday creativity and the mediating role of vitality at the trait level (between-person variation) and day-to-day motivation-affect level (within-person fluctuation). The results of study 1 (N = 216) showed that trait autonomy positively predicted everyday creativity measured by a subjective scale and a more objective scale, and that trait vitality played a mediating role in this relationship. In study 2, 152 university students took part in our experience-sampling study and provided daily reports of their activities of doing tasks (little-c) and attending courses (mini-c). A total of 1521 and 1244 valid responses were obtained for their motivation and emotion experience in attending classes and doing after-class activities, respectively. HLM analysis results revealed that the autonomy in motivation for attending courses and doing after-class tasks positively predicted the creativity manifested in these activities, with assessments of creativity from both the participants and independent raters. And state vitality played a mediating role in this relationship when typical emotion episodes were controlled. We discussed how these results may inform our understanding of human organism development at the general personality level and how it unfolds in the day-to-day motivation-affect dynamics.

P-083

Basic psychological needs of physicians at different career stages

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Introduction: Physician burnout and professional satisfaction vary by career stage and impact quality of patient care.¹ While satisfaction of the basic psychological needs – autonomy, competence, and relatedness – is thought to be equally important, frustration of individual needs of physicians at specific career stages may help explain the reported trends in physician burnout and professional satisfaction.¹ This study was designed to examine trends in the satisfaction of physicians' basic psychological needs along the career continuum.

Methods: Quantitative data were collected from practicing physicians in Canada using an online survey (n=202). The survey contained measures of basic psychological needs in the workplace and demographic questions. Descriptive summary statistics and multivariate analysis of variance were performed. Means were plotted to examine trends in the data.

Results: Overall, satisfaction of each psychological need showed an upward trend along physician career continuum. Irrespective of the career stage, physicians' needs for autonomy and relatedness were satisfied the most and the least, respectively ($p < 0.001$). Early-career physicians reported the lowest satisfaction of the need for competence whereas mid-career physicians reported the lowest satisfaction of the need for relatedness, reflecting the increased burnout prevalence in early and mid-career physicians.¹ Late-career physicians in this study had the highest satisfaction of all three psychological needs, reflecting the published trends of late-career physicians as being the most professionally satisfied and feeling the least burnt out.¹

Discussion & Conclusion: Early and middle career is a particularly challenging time for physicians,¹ with professional loneliness being on the rise.² The latter speaks to the finding that the need for relatedness was satisfied the least among the physicians in this study, and in particularly among mid-career physicians. Efforts to support physicians' basic psychological needs in the workplace need to be tailored by career stage to enhance physicians' professional satisfaction and protect them from burnout, ultimately adding to the quality of patient care.

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P-084

Orientations to well-being and the good life: beliefs about well-being in a sample of young Italian adults.

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Recent research on well-being is expanding its focus from the experience of well-being to its cognitive representation (McMahan et al., 2016) and the ways it is pursued (Huta & Ryan, 2010). Questions about the relationship between well-being representation and pursuit are still open, however such literature has highlighted how both conceptions and behavior can impact quantity and quality of experienced well-being, underlining relevance of cultural components.

Moving from these premises, the present study aims at expanding this research in the Italian cultural context by exploring components of conceptions of well-being and their relationship with experienced well-being.

Participants are 210 young Italian adults aged 19-34 (mean age 24,5; 44% male, 56% female). They completed a survey which included a measure for conceptions of well-being (Beliefs About Well-Being Scale; BWBS), measures of experienced well-being (Psychological Well-Being Scale, Positive and Negative Affect Schedule, Satisfaction With Life Scale) and ill-being (General Health Questionnaire).

Results show differences related to socio-anagraphic variables in importance attributed to hedonic and eudaimonic dimensions. Interestingly, the hedonic dimension of Absence of Negative Experiences shows negative relationships with psychological well-being and no relationship with measures of subjective well-being, differently from all other dimensions considered, which show a positive relationship with both kind of outcomes.

In an open ended question, participants were also invited to add any dimension they considered essential for well-being which was not included in the BWBS and 37% of participants did. Analysis of their responses show many other dimensions are comprised in their well-being conception, referring to life domains and psychological components.

Overall findings suggest the need to deepen our understanding of well-being conceptions, in order to highlight universal and cultural-specific components, adapting instruments consequently. This will in turn allow for robust research on links between conceptions of well-being, behavior towards its achievement and experienced well-being. Results also lead to consider the peculiar role and placement of the hedonic belief that well-being involves absence of negative experiences, a component of well-being conception that is often overlooked.

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P-085

Child Competence as a Predictor of Mothers' Controlling Practices

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In the guided learning domain of socialization (Grusec & Davidov, 2014), studies examining the antecedents of controlling parenting have shown that situations suggesting a lack of competence in children trigger controlling parenting practices (Dumont et al., 2014). However, a stringent test of this relation remains to be conducted. The objective of this research was thus to test the relation between children's competence in a task and maternal controlling practices during mother-child interactions while addressing the limitations of past research. First, rather than focusing on academic achievement, we evaluated child competence using an unfamiliar and standardized measure, the WISC-IV's block design. Second, we assessed parental practices during a task that was calibrated to represent an optimal challenge for each child. This allowed us to create an equivalent guided learning interaction for each mother-child dyad. Lastly, we included mothers' controlling parenting style and their perceptions of their child's academic skills as covariates.

A total of 101 mother-child dyads (*M* age = 10.21 years) participated in this study. During a single home visit, we first invited mothers to report their preconceptions of their children's academic skills. Meanwhile, children accompanied the experimenter and were asked to complete the WISC-IV's block design. The experimenter coded children's competence in the task and determined the block image that constituted an optimal challenge. Mothers then joined their children and assisted them with the block design, starting with that optimally challenging image. Interactions were filmed and coded to assess mothers' controlling practices. Favoring a multi-informant approach, we also asked children to report their perceptions of their mother's controlling practices during the task. Finally, mothers reported their general controlling parenting style.

Controlling for the covariates, structural equation modeling revealed that children's initial lack of competence in a task predicted higher levels of coded maternal controlling practices during the mother-child interaction involving that task, which in turn were positively linked to children's perceptions of their mother's controlling practices. A bootstrap analysis also confirmed that the indirect link from children's competence to perceived controlling practices through coded maternal controlling practices was significant. The present research strengthens the idea that child competence could be an important determinant of parental practices in the guided learning domain. Whereas academic achievement had been previously related to controlling practices, this study reveals that a similar effect can be observed using a standardized form of competence, during tasks that are optimally challenging and when controlling for key covariates.

P-086

What leads mothers to support (or frustrate) the psychological needs of their young children? the role of motivation and parental identity characteristics

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Many studies within Self-Determination Theory conducted on school-aged children suggest that parental support for a child's psychological needs promotes natural growth of motivation and functioning. In contrast, parents who frustrate or do not support their child's psychological needs undermine the natural motivational tendency, which results in maladjustment and low emotional well-being.

While parenting is crucial in the pre-school years in which cognitive and emotional abilities develop, a surprisingly low number of studies has been conducted using Self-Determination Theory on the role of the parents in children this age. In addition, very little research under this theory dealt with the parent him/herself and with what leads him/her to adopt a supporting or controlling parenting style.

In this study, I deepen the understanding of the factors that lead mothers to behave towards their young children in a way that supports their psychological needs.

250 mothers of pre-school children (aged three to six) completed a questionnaire assessing their parenting style, motivation in parenthood, experience of need satisfaction and frustration, and their "parental identity role" (in view of Berzonsky's socio cognitive model).

The results of a structural equation modeling indicated two primary paths. Firstly, mothers' sense of need satisfaction is positively associated with autonomous motivational and informational parental identity style, which are positively associated with mothers' tendency to use need supportive style. Secondly, mothers' experience of need frustration is associated with controlled motivational and diffuse-avoidant parental identity style, which are associated with mothers' tendency to use need-thwarting style.

The results of this study may shed additional light on the factors that lead mothers to behave towards their young children in a way that supports their psychological needs. Beyond the theoretical importance, the results may suggest that family therapists and maternal counselors should adopt a holistic approach that views the psychological bestowal and functioning of the mother as a product of the wider social context.

P-087

Parental involvement and children's academic motivation and achievement: The roles of parent style, children's affect, and parents' motivation for involvement

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Parental involvement in children's schooling is related to children's academic motivation and achievement (Hill & Tyson, 2009). While many studies have investigated the quantity (i.e., level, amount) of parental involvement in children's schooling, fewer studies have considered how the style of involvement and children's affect toward parents' involvement (i.e., whether they like or dislike the involvement) may play a role in its effects. To examine the style of involvement, we use a Self-Determination Theory framework (SDT; Ryan & Deci, 2017), which suggests that autonomy supportive parenting helps build children's motivational resources, including autonomous self-regulation and perceived competence. Regarding children's affect toward involvement, if children feel more positively about the involvement and want their parents to be involved, they are more likely to benefit motivationally from the involvement. Further, little is known about how parents' motivation to become involved relates to parents' involvement quantity and style as well as children's affect toward involvement. Although there is some support that parents' autonomous motivation to be involved is positively related to their level of involvement, no studies have examined the relation between parents' motivation for involvement and the style of involvement or children's affect toward involvement.

The current study uses an SDT framework to identify, a) how parental involvement quantity, parental involvement style, and children's affect toward involvement relate to children's academic motivation and achievement as well as, b) how parents' motivation to become involved is associated with these variables. Three dimensions of involvement quantity are considered: school (i.e., activities at children's schools), personal (i.e., interest and communication regarding children's schooling), and cognitive/intellectual (i.e., engagement in cognitively stimulating activities outside of school).

Data collection has begun and will be available by the conference. Participants will be approximately 200 fourth, fifth, and sixth grade children, recruited through public elementary schools, and their parents. Children will complete questionnaires on their parents' involvement quantity and style as well as their own motivation and affect toward involvement, while parents complete questionnaires on their involvement quantity, motivation for involvement, and children's grades.

Regression analyses and structural equation models will be conducted to explore relations among study variables. Study results may inform schools and educational policy makers on how to appropriately motivate parents to become involved as well as how to help parents to be involved in their child's schooling in a manner that will be most beneficial for children's academic motivation and achievement.

P-088

Spouses' prenatal autonomous motivation to have a child as a predictor of postpartum parental adjustment

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The postpartum period brings many changes in a family's life, and it requires both parents to go through major adjustment processes. Drawing on the Self-Determination Theory of motivation, it is well known that autonomously motivated people are more adaptive over time, with studies indicating that autonomous motivation is linked to better adjustment in fields of learning, organizational change, etc. However, academic literature is deficient in the understanding of autonomous motivation to have a child as a predictor of early parental adjustment.

To the best of our knowledge, only one study (Gauthier, Guay, Senecal, & Pierce, 2010) examined the connection between mothers' prenatal motivation to have children and postpartum adjustment (i.e. depression). In the current study, we took a family approach by examining prenatal motivation and postpartum adjustment within a dyadic perspective, as the decision to have a child is typically made in the context of a dyadic relationship. It was hypothesized that prenatal autonomous motivation to have a child will predict better postpartum adjustment. Participants' motivations (N=90 couples) were measured prenatally (10-40 weeks pregnancy, $M=31.4$, $SD=5.31$) using the Motivation to Have a Child Scale ($\alpha=0.81$). Parental adjustment was measured 10-24 weeks postpartum ($M=15.6$, $SD=2.79$), including life satisfaction (SWLS, $\alpha=0.89$), depression (CESD, $\alpha=0.89$) and Parenting Sense of Competence Scale ($\alpha=0.78$).

The data were analyzed using the Actor-Partner Interdependence Model (APIM). Based on preliminary analysis, we controlled for gender and high-risk pregnancy due to their covariance with adjustment. Additionally, in order to strengthen the causality, we controlled for the participants' prenatal depression and life satisfaction, as we predicted the motivation's effects on their subsequent postpartum adjustment.

Dyadic analyses showed that autonomous prenatal motivation significantly predicted high levels of life satisfaction and parental competence, as well as low levels of depression. Moreover, the data show a partner effect, suggesting that a partner's motivation predicted own level of depression. Importantly, these findings were equivalent across genders.

In conclusion, this study has sought to shed light on motivations for having children and their effects on parental adjustment by examining the motivational process from pregnancy until shortly after birth. The results underscore the importance of autonomous motivation and suggest that this motivation is a strength factor for parents facing a challenging period in their lives.

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P-089

Preliminary links between parental basic psychological needs satisfaction and coparenting relationship quality during the transition to parenthood.

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The transition to parenthood is a salient period characterized by the emergence of the coparenting relationship, defined as the quality of coordination between parents in their new roles and new parenting responsibilities, which together ensures the well-being of their child and family (Feinberg et al., 2012). This is a significant subject of study, as the coparenting relationship has been shown to better explain family adaptation than the marital relationship and to contribute uniquely to child development. The theoretical framework of self-determination theory may provide a deeper understanding of the mechanisms that underlie coparenting by considering its quality, as defined by the satisfaction and/or thwarting of basic psychological needs (Rocchi et al., 2017).

Although need-supportive/thwarting behaviours have been investigated in various dyadic contexts, to our knowledge, no study has yet examined their associations with coparenting. It seems however that theoretically, the satisfaction of a coparent's basic needs may have an effect on their perception of their coparenting relationship quality. For instance, the satisfaction of the need for autonomy could promote the endorsement of the partner's parental contributions, while the thwarting of the need for competence could promote coparenting undermining.

Therefore, this preliminary study's objective was to examine whether the quality of the coparenting relationship is associated with perceiving one's partner as satisfying and/or thwarting one's basic needs during this period. Primiparous two-parent families ($N_{mothers}=80; N_{fathers}=43$) of 6-month-olds completed online questionnaires, including the *Interpersonal Behaviors Questionnaire* and *Coparenting Relationship Scale*.

The results indicated that each parents' coparenting quality was negatively associated ($r=-.39, p=.01$). Specifically, coparenting quality was robustly associated with all need-supportive ($r_{mothers}=.74, p=.00; r_{fathers}=.66, p=.00$) and all need-thwarting ($r_{mothers}=-.69, p=.00; r_{fathers}=-.39, p=.02$) behaviours. Some significant differences were noted between parents with regards to specific needs on subscales. Coparenting undermining was related to competence-support for fathers ($r_{fathers}=-.46, p=.00; ns. mothers$) in contrast to autonomy-thwarting for mothers ($r_{mothers}=.51, p=.00; ns. fathers$). Endorsement of the partner's parenting was related to need-support ($r_{Autonomy}=.45, r_{Competence}=.38 \& r_{Relatedness}=.51, ps<.00$) and need-thwarting ($r_{Autonomy}=-.42, r_{Competence}=-.29 \& r_{Relatedness}=-.35, ps<.00$) behaviours for mothers, yet exclusively related to competence-support for fathers ($r_{fathers}=.50, p=.00$).

These preliminary results suggest that one's perception of their partner's support/thwarting of their basic needs is associated with the quality of coparenting during the transition to parenthood. They also suggest an innovative perspective in the mechanisms explaining the variability in parents' perceptions of their coparenting relationship.

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P-090

Consequences of adolescents' coping responses to psychologically controlling parenting: an examination of within and between effects

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Abundant research has shown that psychologically controlling parenting has detrimental effects on adolescents' psychosocial development because it thwarts adolescents' psychological needs. Although the negative effects of psychologically controlling parenting are well-established, the active and agentic way adolescents cope with such autonomy-suppressing parenting is much less understood. The goal of this study is to gain insight in the consequences of adolescents' coping responses when confronted with psychologically controlling parenting. Specifically, we distinguish between three coping strategies, two of which are considered non-autonomous and rather detrimental coping strategies (oppositional defiance and compulsive compliance) and one of which is considered a more autonomous and constructive coping strategy (negotiation).

We considered two different possible roles of these coping strategies. A first possibility is that coping strategies mediate the relationship between psychologically controlling parenting and adolescents' psychosocial maladjustment. In this case, a psychologically controlling style would elicit more detrimental and less constructive coping strategies that, in turn, affect adolescents' outcomes. A second possibility is that coping strategies play a moderating role in the relationship between psychologically controlling parenting and adolescents' outcomes. Coping strategies would then affect the degree to which psychologically controlling parenting results in externalizing and internalizing problems, with detrimental strategies exacerbating effects of psychologically controlling parenting and with constructive strategies attenuating these effects. To examine these questions in a dynamic level, psychologically controlling parenting, adolescents' coping responses and internalizing and externalizing problems were assessed in a longitudinal design.

Data was gathered from 198 adolescents (mean age at T1 = 14.89 years, range = 13 to 17 years). The adolescents reported two times on their experiences of psychologically controlling parenting, use of coping responses and internalizing and externalizing problems. Using a multilevel model, the data was analyzed at both a between- and within-person level.

Preliminary results show that psychologically controlling parenting is related to more internalizing and externalizing problems in adolescents at both the between- and within-person level of analysis. Regarding the role of the coping responses, we found evidence that oppositional defiance plays a mediating role in the relation between psychologically controlling parenting and adolescents' maladjustment, thereby explaining the detrimental effects of such parenting. Second, we found evidence for moderation, such that oppositional defiance and compulsive compliance play a exacerbating role and negotiation plays a buffering role in the relation between psychologically controlling parenting and adolescents' maladjustment.

P-091

Preliminary psychometric properties of a brief measure to assess food parenting practices of structure, control and autonomy support in young children

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INTRODUCTION: The Home Self-Administered Tool for Environmental Assessment of Activity and Diet (HomeSTEAD) survey captures 24 food parenting practices organized in three higher-order constructs: structure, control and autonomy support. With a total of 86 items, this measure is too long to use in clinical and research settings. Therefore, this study aims to: a) develop a short form of this measure, in light of the Self-determination Theory, and b) test its psychometric properties in the age group of 3-6 years old.

METHODS: Participants were 108 parents/caregivers (92.6% were mothers) of children aged between 3 to 6 years old (51.9% were girls). Parents were recruited in two separated contexts: a) in a health care center (n = 37), invited by family doctors during child consultations and b) online (n = 71), invited by children's kindergarten parent's associations (n = 7). To find a short version of the HomeSTEAD Survey we selected items that, based on previous evidence on Self-determination Theory, were theoretically expected to be more related to dimensions of control, structure and autonomy support (22 out of the 86 items). Parents answered a self-report questionnaire, evaluating sociodemographic data and food parenting practices. We performed exploratory factor analysis to test dimensionality of the selected items and calculated internal consistency coefficients of each subscale. We performed confirmatory factor analysis to test the model fit.

Results: Exploratory factor analysis identified three factors. Cronbach's alpha ranged from 0.709 to 0.828. Each subscale showed a global goodness of fit (TLI > .90; CFI > .90; $\chi^2/df < 2.0$ and RMSEA = .06).

CONCLUSION: Preliminary analysis support the use of the brief version of the HomeSTEAD Survey to evaluate food parenting practices related to structure, control and autonomy support. Futures studies should replicate factorial validity in a larger sample and additionally explore the construct validity.

P-093

Testing the bidirectional relation between vocational indecision and academic motivation

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Vocational indecision (VI) refers to the inability to formulate a professional and assorted academic plan, and to make consequent choices. It has many negative implications for youths' educational trajectories and its causes can be social (i.e., school-related or linked to the socioeconomic context) or psychological (i.e., cognitive, motivational). This study focuses on the motivational factors underlying VI. Self-determination theory (SDT) distinguishes among three types of motivation that vary on their respective autonomy level. Autonomous motivations (i.e., engaging in tasks because of the pleasure intrinsic to them or their importance) are associated to high levels of perceived autonomy and predict positive academic consequences like academic success, adjustment, and vocational development. Controlled motivations (i.e., engaging in tasks to decrease internal or external pressures) are associated to low levels of perceived autonomy, and predict neutral or negative consequences like academic underachievement or dropout. Finally, amotivation (i.e., lack of motivation in task involvement), which is characterized by lack of perceived autonomy, is associated with even more negative consequences than controlled motivations. In the field of vocational decision-making, there is no consensus regarding the relationship between vocational motivation (i.e., motivation for engaging in vocational activities) and VI. Specifically, while some studies argue that the more autonomously motivated students are, the less undecided they will be (Brown & Lent, 2005), others concluded that it is the difficulties in making a vocational decision that explain students' motivational deficits (Guay et al., 2017). However, these studies did not examine VI in relation to academic motivation – the motivation toward one's studies. This motivation is the principal predictor of youths' educational trajectories, because it encompasses all academic aspects, including vocational decision-making. The present study thus aimed to investigate the longitudinal bidirectional relations between VI and academic motivations. The study included 374 secondary school students (55% girls) who, each year over a 4-year period, filled out a questionnaire assessing VI and academic motivations (autonomous and controlled motivations as well as amotivation). Three cross-lag models were tested between VI with each type of motivation. Results suggest that VI does not predict students' motivations for school, but rather the opposite. Specifically, autonomous motivation, but also controlled motivation, predicted lower levels of VI, while amotivation predicted heightened VI. These results are discussed in light of the literature on vocational development in school and their applied implications.

P-094

Thriving through adversity: the role of passion and emotions in partial and full resilience

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We examined the role of passion (Vallerand, 2015) in resilience inside and outside one's passionate activity through positive and negative affect (Broaden-and-build theory; Fredrickson, 1998). Data were collected from undergraduate students (Study 1 $n = 91$; Study 2 $n = 110$) during (Study 1) and after (Study 2) a stressful situation (end of semester) associated with participants' passion for their university studies. Results indicated that our model had a satisfactory fit to the data (Study 1 CFI = .999; TLI = .998; RMSEA = .01; Study 2 CFI = .970; TLI = .90; RMSEA = .06). Harmonious (HP) and obsessive passion (OP) positively predicted resilience (performance) in one's studies as well as in life in general through positive emotions during and after (only HP) the stressful situation. Moreover, OP negatively predicted resilience in one's studies as well as in life in general (Study 2) through negative emotions during and after the stressful event. In sum, whereas both HP and OP lead to partial resilience, only HP fosters full resilience where the stressful event leads to increases in performance over time. Furthermore, such resilience effects take place through positive emotions and are undermined through negative emotions during the stressful event.

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P-095

Quality of interpersonal relationship with colleagues and employee well- and ill-being: the role of occupational commitment and autonomous motivation

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With its focus on the socio-contextual factors that influence human functioning, SDT (Deci & Ryan, 2000) provides a useful framework for understanding the motivational mechanisms that are responsible for well- and ill-being. Although research to date generally establishes a positive association between quality of interpersonal relationships and employee motivation, the conditions under which this association can be strengthened or weakened are largely unknown. In this study, we focus on occupational commitment which reflects employees' emotional attachment, involvement, and identification with the occupation (Meyer, Allen, & Smith, 1993). More precisely, we suggest that occupational commitment moderates the effects of quality relationships with colleagues on autonomous motivation, which is the mechanism responsible for ill- and well-being at work (exhaustion and vitality). Data were collected through a survey administered to 308 nurses in the province of Québec, Canada. Results from moderated mediation analyses support the hypothesis suggesting that quality of relationships acted upon autonomous motivation, which in turn predicted employees' psychological health at work (i.e., less emotional exhaustion, more vitality), more strongly for employees with low occupational commitment. The theoretical and practical implications will be discussed in the light of SDT as well as employee commitment research.

P-096

Autonomy support from specific work referents, autonomous motivation, and affective organizational and occupational commitment

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Staff turnover is a major issue for the Canadian health care system and that of other countries. In a time of projected nurse shortage, it is crucial to examine the psychosocial factors that favor long-term affective commitment to the nursing profession and health organizations. A recent study (Fernet et al., 2017) stresses the importance of facilitating autonomous motivation in new nurses as it is associated with less intentions to quit the organization and occupation through target-specific affective commitment. The goal of the present study was twofold: to shed light on the antecedents of nurses' autonomous motivation (perception of autonomy support from distinct referents: nurses' supervisor, coworkers, and doctors), and to examine the mediating role of autonomous motivation in the relation between autonomy support from specific referents and affective organizational and occupational commitment. The study was conducted among 657 nurses. Using Mplus, SEM analyses indicated that all referents (supervisor: $\beta = .17$; coworkers: $\beta = .29$; doctors: $\beta = .16$) contribute to nurses' autonomous motivation which in turn relates to both organizational ($\beta = .27$) and occupational ($\beta = .58$) affective commitment. Theoretical and practical implications will be discussed.

P-096A

To divert or not: I have the power

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Handling of Mentally Disordered Offenders (MDOs) in the light of the decision to divert can be affected by the attitudes of the police officer. Diversion of MDOs is one of the best ways used globally to protect offenders with mental impairment, however, this area has been neglected within Ghana. To make this decision, there are various intrapsychic forces, the law, and other forms of socialization and perceptions of MDOs that influence the decision to divert. The Self – Determination Theory (SDT) can be linked to this decision process by explaining that police officers will make the decision to divert because they empathize with the MDOs and will form positive attitudes so that they can be integrated into the society. The SDT makes room for the influence of the social context which can support the autonomy of the police officer or not. With the availability of the law, the police officer feels “safe” within the legal context to divert a MDO. Under the recent law on diversion in Ghana, there are deliberate processes which are more effortful, explicit and consciously controlled which allow the police officer to work within a certain framework, thus, it creates the feeling and the image of being a competent police officer. On the other hand, a poor decision making which creates the thought and image of incompetency can potentially lead to dire consequences such as civil liability, unrest, injury, and death of the MDO. It is in view of this that the current study was conducted to examine the psychosocial predictors of police officers' intentions to divert MDOs using 379 police officers within the Accra Region of the Ghana Police Service. Through purposive and convenient sampling techniques in a cross – sectional survey, the participants responded to measures of their psychosocial intentions toward MDOs. The findings of the study indicated attitudes toward mental illness significantly and positively predicted the decision to divert when age and education were controlled. This implied that police officers were more prepared to act as social service agents and held neither punitive nor isolationist views. Knowledge of the legislation concerning diversion positively and significantly predicted the decision to divert. This suggested that the decision to divert could not be based on the discretionary prowess of the police officer, thus, there is a need for continuous education and training.

P-097

Validation of the motives of recreational runners scale - mors

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Introduction: The motivation of marathoners' scale (MOMS) was developed and validated to measure motives in marathon runners, albeit without a clear theoretical background (Masters, 1993). The original 56 items was used to establish a new factorial structure according to self-determination (SDT) theory tenets (Zachs, 2015). In order to study the motivational processes underlying the running phenomena observed in several countries, this study sought to validate an SDT-based, short version of MOMS to measure motives for recreational running.

Methods: As part of a national recreational running phone survey, 115 runners answered to a MOMS short-version, with item adjustments to recreational running conducted by experts. Exploratory factor analysis was performed to test factorial solutions for the data. The newly developed scale comprises 12 items that assesses six motives for engaging in recreational running: health, psychological coping, affiliation, weight management, social comparison, and goal achievement. A subsequent confirmatory factor analysis was performed on another sample of 406 recreational runners. Cronbach's alpha was used to evaluate internal consistency. External validity was analysed by using exercise behavioural regulations and goal content questionnaires.

Results: The scale adjustment presented a good fit: $\chi^2(39) = 123.70, p < .001$; RMSEA ($< .10$) = .073; CFI ($> .90$) = .95; GFI ($> .90$) = .95. Good internal consistency was achieved for all subscales ($> .77$) except for weight management ($= .67$). MORS items, when compared to Goal Content for Exercise Questionnaire, showed face validity, and its subscales were overall associated with exercise behaviour regulations as postulated by SDT.

Conclusion: The newly hypothesized model for MORS presented good fit to a second independent data set, suggesting the plausibility of using an SDT framework to this questionnaire. Such a scale may be helpful for future studies due to its broader scope of application with recreational runner and its suitability to theory-based interventions. Scale reduction reduces administration time, useful to its use in both face-to-face and digital questionnaires. Further improvements will be discussed.

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P-098

Commitment oriented HR practices, work engagement and innovative work behaviour among civil society employees: mediation by intrinsic work goals

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Research on the relation between work goals and outcomes for the employee and organisation has found evidence for a positive relation between intrinsic work goals and beneficial outcomes. However, not much is known about the relation between HR practices and work goals. HR practices are various and can be discerned in different types by their underlying focus. Commitment oriented HR practices focus on strengthening the long term relation between the employer and employee and the employee's commitment to the organisation, through job security, continuous training, job rotation and autonomy, involvement, etc. Productivity oriented HR practices have a main focus on improving the productivity and performance of the organisation and employees, through performance management, pay by performance, etc. (Lepak & Snell, 2002). Vansteenkiste, Niemiec and Soenens (2010) found evidence that a need supportive work context is positively related to intrinsic goals and negatively to extrinsic goals. An autonomy supportive context is also related to beneficial outcomes. Thus HR practices that are autonomy supportive, or in a broader sense need supportive, (i.e. commitment oriented HR practices), may promote intrinsic work goals among employees and therefore yield more beneficial outcomes (i.e. work engagement, innovative work behaviour) than productivity oriented HR practices. More specifically, we expect to find commitment oriented HR practices to be positively related with intrinsic work goals and beneficial outcomes. We expect to find negative relation between productivity oriented HR practices and intrinsic work goals and beneficial outcomes. In addition we expect that intrinsic work goals mediate the relation between commitment oriented HR practices and beneficial outcomes. Given that civil society employees stand out for their intrinsic work goals, the importance of an appropriate HR strategy to promote these goals is high in this sector. We conducted a linked employer-employee survey fifteen Flemish civil society organisations with at least twenty employees. HR practices are measured in the employer survey, while work goals and outcomes (work engagement and innovative work behaviour) are measured at the employee level. Hypotheses are tested with multi-level regression analysis and Hayes' procedure for mediation. Preliminary analysis suggests that both HR orientations are present in the sample and that the framework is fruitful. This study contributes to a better understanding of the role of HR practices from an SDT perspective. The specific sample of Flemish civil society organisations and the unique characteristics of this sector might not allow generalising these findings.

P-099

What would you like to do before you die? exploring bucket list goals from a self-determination theory perspective.

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Is there anything you would like to do before you die? Bucket lists are a compilation of experience-based goals that one aims to accomplish before they "kick the bucket." The concept of bucket lists can be traced to a popular 2006 Hollywood film starring Jack Nicholson and Morgan Freeman that inspired many people to construct their own personal bucket lists. To our knowledge, the present study is the first to conduct research on the pursuit of bucket list goals. We conducted a 3-wave, online, prospective study of 241 community adults that examined personality, motivation, and well-being factors that may be associated with making a bucket list. Our results revealed that 32% of participants reported that they had made a bucket list. Moreover, making a bucket list was significantly more common among women than men (39% vs. 23%) and among older individuals (24% for those under 40, 44% for those over 40). Deciding to make a bucket list was associated with higher levels of life satisfaction and with intrinsic, rather than extrinsic, life aspirations. In addition, bucket-listing was associated with a socially mature profile of Big 5 traits characterized by high agreeableness and high conscientiousness. Among the 78 participants who had a bucket list, the primary motivation for their bucket list was intrinsic, meaning they were pursuing their bucket list goals out of interest and for enjoyment, rather than for extrinsic or controlled reasons, meaning they were pursuing their bucket list because they "should". Moreover, having higher levels of intrinsic motivation for one's bucket list was in turn associated with enhanced positive affect over the 4 months of the study. Our results suggest that making a bucket list of important goals one wants to experience in one's life reflects healthy and adaptive functioning from both a personality and motivational perspective.

P-100

The Causal Effect of Instructional Goal on Motivating Style

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The purpose of the present study was to investigate whether the changing of a teachers' intrinsic vs. extrinsic instructional goal produces a subsequent change their motivating style and students' learning. Self-Determination Theory (SDT; Ryan & Deci, 2017) differentiates the quality of goal functioning into intrinsic vs. extrinsic goals. In education context, teachers aspiring for intrinsic instructional goals seek to promote students' personal growth and relationship growth, while teachers aspiring for extrinsic instructional goals seek to promote students' high-test scores and assured academic success (Jang, 2017). Which instructional goal teachers pursue is educationally important because it determines the beneficial vs. harmful quality of teachers' classroom motivating style (Bartholomew et al., 2011; Cheon et al., 2014; Bartholomew et al., 2018; Jang, Kim, & Reeve, 2016). Study 1 was a lab experimental study with 195 college students in Seoul, Korea. and three experimental conditions—*intrinsic instructional goal*, *extrinsic instructional goal*, and a *no-goal control group*. One- triad participants were randomly assigned into either teachers and student role. Teacher-participants received an instructional goal manipulation and then taught a pair of student-participants during a teaching episode. Then students-participants took a free-choice session, performance test, and a follow-up performance after 10-days later. One-Way ANOVA showed that teachers in the intrinsic instructional goal condition more applied an autonomy-supportive motivating style whereas teachers in an extrinsic instructional goal condition more applied a controlling motivating style.

Study2 was designed to replicate and extend the findings from Study 1. Using an experimentally-designed longitudinal intervention study conducted in a classroom context. Participants were 28 K-12 teachers and their students (N=560) in Bulacan, Philippines and randomly assigned into one of the experimental conditions. Repeated-measured ANOVA showed that manipulation was successful in teacher level. Teachers in intrinsic instructional goal intervention program (IIGIP) showed more autonomy-supportive style and less controlling than in control group teachers. In addition, students of intervention group teachers showed better class engagement than in students of control group teachers. In mediational path test model, condition predicted independently T2 intrinsic instructional goal and T2 autonomy support after controlling T1 intrinsic instructional goal and T1 autonomy support. The present study discussed the significance of findings.

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P-101

Evaluating the relative autonomy continuum in two samples of german biology students

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Introduction

Currently, various test-instruments exist that assess the relative autonomy continuum proclaimed by self-determination theory (SDT). According to SDT, four regulation types, external, introjected, identified, and intrinsic can be allocated to this continuum regarding the experienced degree of self-determination. This study evaluates the dimensionality of this continuum in context of biology learning in two separate studies (sample 1: $n=530$, $M_{age}=12.01\pm 1.08$, $R_{grades}=5-7$, 49% female; sample 2: $n=923$, $M_{age}=13.86\pm 0.92$, $R_{grades}=7-9$, 51% female). To assess the regulation types of students sample 1 used the *Self-Regulatory Questionnaire Academic* (SRQ-A) sample 2 the *Scale of Motivational Regulation in Learning* (SMR-L). Psychometric properties and validity of the scales were evaluated based on Sheldon and colleagues (2017).

Results

Sample 1

Explorative factor analysis (EFA) and hierarchical cluster analysis (HCA) revealed the regulation types as four distinct factors ($KMO=.840$; 59.05% cumulated variance). Confirmatory factor analysis (CFA) showed an acceptable fit of a four factor model ($\chi^2=194.76$ (98), $p<.001$, normed $\chi^2=1.99$, $CFI=.951$, $RMSEA=.045$ [.036, .054]). In Multidimensional scaling (MDS) the sequence of subscales in polar coordinates (using atan2 function) did match up with the theoretical predictions but the subscale identified did not place in line with theory.

Sample 2

EFA and HCA revealed three distinct factors ($KMO=.855$; 62.64% cumulated variance). Items of the identified and intrinsic subscales loaded on the same factor. Yet, CFA showed a better fit for a four-factor model ($\chi^2=224.99$ (59), $p<.001$, normed $\chi^2=3.81$, $CFI=.956$, $RMSEA=.056$ [.049, .063]) than the three-factor model. In MDS the sequence of subscales showed a fit regarding the theoretical predictions again with the exception of the subscale identified.

Discussion & Conclusion

The four-factor structure of both questionnaires could be confirmed in the CFAs. However, in MDS the identified subscale did not position itself in line with theory. In sample 1 the subscale showed convincing results in the psychometric examination yet failed in its position in the MDS. In sample 2 it was psychometrically closely related to the intrinsic scale. These findings may be attributed to the test-instruments or students' age.

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P-102

Translation and validation of the perceived locus of causality questionnaire (PLOCQ) in a sample of German physical education students.

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Although the importance of physical activity for health is well-documented, studies report decreases in physical activity during early adolescence. This decreasing trend parallels declines in fun and enjoyment (i.e., intrinsic motivation) in compulsory physical education (PE). The Perceived Locus of Causality questionnaire (PLOCQ; Goudas, Biddle & Fox, 1994) is one of the most commonly used questionnaires to assess motivation in PE classes. Despite the frequent use of the PLOCQ, no German version of the PLOCQ currently exists. Furthermore, given the shortage of SDT-based research that includes a measure of integrated regulation, there is a need to evaluate items designed to measure integrated regulation. Consequently, the overall aim of this study was to translate and validate a German version of the PLOCQ that includes a measure of integrated regulation.

The sample consisted of 223 students ($n = 111$ girls; mean age = 15.70, $SD = 1.48$) from different German secondary schools. After translation and back translation of the PLOCQ, four items relating to integrated regulation from the German version of the Behavioral Regulation in Sports Questionnaire (BRSQ; Lonsdale et al., 2008) were added. In order to evaluate the psychometric properties, internal consistencies and a confirmatory factor analysis were completed using IBM SPSS Statistic 25 and IBM SPSS Amos 25. To determine the scale's construct validity, task and ego orientations in sports and subscales of the intrinsic motivation questionnaire (enjoyment, perceived competence, perceived choice, pressure) were correlated with the PLOCQ's factors.

The analysis provided support for the six factor and 24 item model ($\chi^2(237) = 441.384$, $p < .001$, $CMIN/DF = 1.862$, $CFI = .927$, $TLI = .915$, $SRMR = .087$, $RMSEA = .071$). Alpha values for all subscales were good and inter-correlations among the subscales were all consistent. Analysis of construct validity showed that the more autonomous forms of regulation were positively correlated to enjoyment, perceived competence, perceived choice and task orientation. Correlations were also found between the more controlled forms of regulation and ego orientation and pressure.

Measuring different types of behavioral regulations allows future research to obtain a deeper insight into the reasons why students participate in PE. Overall, this study showed that the PLOCQ-G has good psychometric properties and can be used for assessing motivation in German PE.

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P-103

Interplay of motivation and self-regulation throughout the development of elite athletes

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Recent interest in motivation research has emphasized that the psychology of human behavior can be investigated in terms of basic processes of motivation and cognition. Early cognitive theories treated motivation as a unitary entity, that is, these theories solely investigated the amount or strength of motivation. However, the organismic integration theory suggested that different types and sources of motivation influence the quality and dynamics of behavior. When motivation is seen as more or less self-determined, it reflects behavior driven by degrees of sentiments of fun and enjoyment, volition, self- or other-imposed pressure, or external control. In elite sport settings, athletes are subject to external forces that do not necessarily correspond with their inherent drives (Gustafsson et al., 2017). However, athletes may develop cognitive competencies to cope with external forces, when planning, monitoring, and reflecting on their high-level achievements (Bartulovic et al., 2017). In the current study, interactions between motivation and self-regulation competencies as athletes develop from novice to elite levels were investigated. Interviews were conducted with five female Olympic and World Championship medallists. Interview data was analyzed thematically. Findings suggest that athletes' motivation and self-regulation competencies were interchangeably and asynchronously associated.

Chronologically, four themes emerged: 1) Motivational shifts evoked planning and self-control competencies, 2) The external control constrained athletes' self-regulation, 3) Self-control and reflection in extrinsically driven athletes, and 4) Elite athletes' multidimensional motivation and self-regulation profile. In early years, the competitive nature of sport activities evoked external forms of motivation and started to overshadow athletes' innate, intrinsic motivation. Consequently, athletes were challenged to develop and use self-regulation competencies, particularly planning and self-control. Noteworthy, athletes did not report using self-reflection competencies even at the elite level, possibly due to the external pressure they experienced. However, the elite athletes' increased sport specific self-confidence contributed to further refinement of self-regulation competencies and integrated motivational regulations. Study findings emphasize that motivation and cognitive processes are dynamically interrelated in athletes' ongoing elite level development. Thus, self-regulation awareness and training may enhance athletes' self-determined motivation, leading to a further development of self-regulation competencies, and eventually contributing to elite level performances.

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P-104

How are you motivated? Instructional strategies and motivation in higher education.

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In education, abundant research on teaching, learning and motivation has been conducted, however, in higher education studies on student motivation in relation to the use of instructional strategies are rare. Our study is conducted on a teacher trainer college for primary education, and has a twofold aim. First, we want to increase our insight of the dynamics of student motivation in higher education. Secondly, by means of an intervention we want to map how the use of instruction strategies influences the motivation of students. We obtain our data by taking motivation questionnaires at a distal and proximal level and setting up a video feedback intervention in which we coach teachers trainer in applying three instruction strategies giving space, providing structure and using scaffolding. Data analyses are conducted both on a macroscopic level, i.e. analyzing the outcomes of students' motivation questionnaires as on a microscopic level, i.e. analyzing how teachers apply the strategies during class and how engaged students seem to be at the same period of time.

Keywords: Curious Minds, Instruction Strategies, Video Feedback Coaching, Student Motivation, Higher Education, Co-Construction, Interaction, Student focused teaching

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P-105

Teacher motivation and team teaching Personality and need satisfaction as predictors of teacher motivation in team teaching settings

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With the implementation of the “New Middle Schools” in Austria in 2008, team teaching became compulsory for the three main subjects German as mother language, English as foreign language and mathematics. Team teaching means two or more teachers educate a group or a whole class of students, mostly at the same time.

There are studies which investigate teacher collaboration and motivation in schools (e.g. Drossel, 2015) or which focus on co-teaching in inclusive classrooms. There is a lack of research concerning the quality of teacher motivation in team teaching in regular classrooms. No study can be found which explores the conditions of self-determined motivation in team teaching. Therefore, we investigate which personal and environmental aspects are associated with the motivational regulation of teachers in team teaching settings.

The theoretical basis of the study are the ‘Big Five’ personality model and self-determination theory (SDT, Deci & Ryan, 2017). SDT assumes different forms of motivational regulations and organizes them on a continuum, ranging from autonomy to control. Satisfaction of the psychological basic needs for autonomy, competence and social relatedness support the development of autonomous forms of motivation. Daniels (2017) for example, names autonomy as one of the most important motivating factors for Middle School teachers. Furthermore, it is assumed that personality factors directly and indirectly predict autonomous and controlled forms of motivation in team teaching situations.

Structural equation modelling (N=400) shows that the personality factors openness, extraversion and agreeableness play an important role in predicting intrinsic motivation as well as the perceived support of the three basic needs. Fit indices support a model in which the three basic needs act as a mediator between personality and intrinsic motivation. Mainly extraversion and agreeableness are essential preconditions for both the satisfaction of basic needs as well as for intrinsic motivation in team teaching situations. The tested models fail to explain controlled forms of motivational regulation. Variance analyses also suggest a significant difference between teacher motivations from educators who had the autonomy to choose their team member. Another significant difference was found within the academic status of teachers (university degree vs. university college of education).

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P-106

Social and contextual factors affecting honours students’ needs and preferences for autonomy support.

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Introduction: Honours programmes are increasingly implemented to satisfy talented and high-achieving students’ needs. Honours students seem to have other needs for autonomy support than regular students. To improve supervision and teaching, we investigated which social and contextual factors affect honours students’ needs for autonomy support and how.

Methods: We performed six focus groups with (para and bio)medical students (n=34) from extracurricular honours programmes of different universities to explore their needs for autonomy support. The focus group discussions were audio recorded, transcribed verbatim and analysed using qualitative thematic analysis.

Results: Students described three types of support: social support (e.g. student-teacher or student community relation), support concerning the content of the honours programme (asking questions; giving feedback), and organizational support (facilitating meetings; providing course information/materials). The focus groups revealed two types of autonomy, namely in creating content and regarding the process. Four factors affected their needs for autonomy support: amount of autonomy perceived in the regular programme, phase of education, time allocated to tasks or projects and support from the honours community.

Discussion & Conclusion: Teachers in honours programmes should take the phase of education, the time frame of a task and the amounts of autonomy and autonomy support provided in the regular programme into account when tailoring their education to students’ needs and recognize the value of social support. The three types of autonomy support we identified – content, social and organizational support relate to the three basic psychological needs defined in the Self-Determination Theory (Deci and Ryan 1985) – experiencing autonomy (i.e. a sense of volition), relatedness (i.e. feeling close and connected) and competence (i.e. feeling effective and masterful) – which are theorized to be essential for intrinsic motivation. *Social support* aligns with students’ needs for relatedness, *support regarding content* with students’ needs for competence and autonomy on content, and *organizational support* with students’ needs for autonomy in the process. This correspondence strengthens our findings and suggests that teachers should strive for adequate learning conditions by satisfying students’ basic needs (Deci and Ryan 2000). Deci EL, Ryan RM. 1985. Intrinsic motivation and self-determination in human behavior. New York (NY): Plenum. Deci EL, Ryan RM. 2000. The “what” and “why” of goal pursuits: Human needs and the self-determination of behavior. *Psychol Inq* 11:227–268.

P-107

Adolescents with special educational needs: The role of autonomy support and self-determined motivation in job search behaviors

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Students with special education needs face challenges throughout their school years. In Quebec, many of them follow the Work-Oriented Training Path (WOTP), which prepares them for their school-to-work transition. In their last year, these students receive a practical training regarding job search behaviors to help them to develop competencies to find a job. It is therefore crucial to examine what can support positive job search behaviors in this understudied population. This study aims to investigate the role of four sources of perceived autonomy support (mother, father, teacher, and friends) and autonomous motivation toward job search to predict effort, intensity, strategies, and self-regulation during job search.

182 students, aged between 15 and 21 (mean age=16.98), participated in this study (65,7% boys;34,3% girls). They completed a questionnaire in their classroom at the end of their last year in the WOTP. We distributed the questionnaire in a paper format and for some participants with language difficulties in an electronic format. Two series of regression analyses were performed. The first examined whether the four sources of perceived autonomy support predict positively autonomous motivation toward job search. Results indicated that only perceived autonomy support from the father ($\beta=.25$, $p\check{E}=.01$) was positively associated with job search autonomous motivation. None of the perceived autonomy support sources significantly predicted controlled motivation. The second regression series examined if autonomous and controlled motivations toward job search predicted the four job search behaviors: effort, intensity, strategies, and self-regulation. Results indicate that autonomous motivation is positively associated with job search effort ($\beta=.38$, $p\check{E}=.001$), intensity ($\beta=.44$, $p\check{E}=.001$), exploratory strategy ($\beta=.52$, $p\check{E}=.001$), and self-regulation ($\beta=.48$, $p\check{E}=.001$). Controlled motivation was positively associated with the haphazard job search strategy ($\beta=.32$, $p\check{E}=.001$).

As evidenced in previous studies (see references), the autonomy support provided by the father is important in fostering an autonomous motivation toward job search which in turn supports effort, intensity, exploratory strategy, and self-regulation during job search. Therefore, father supporting the autonomy of their adolescent with special education needs remains important to enable them to develop positive job search behaviors.

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P-108

Learning and teaching motivation - Empirical investigation of students and teachers motivational interdependencies in German biology classes

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According to self-determination theory, the perception of self-determination is an essential precondition for sustainable, non-alienated and effective learning processes (Ryan & Deci, 2017). In school, teachers should therefore provide a setting that supports students' self-determined learning, e.g. by fostering the satisfaction of the basic needs for autonomy, competence, and relatedness (Ryan & Deci, 2017). At the same time, the teachers' motivation is an essential determinant for instructional quality, need-supportive behavior and due to this, students' educational outcomes (Deci & Ryan, 2017). Nevertheless, the teaching profession is characterized by many different vocational pressure experiences (Martinek, 2018). While pressure is supposed to have a negative impact on teachers and students' motivation, basic need satisfaction contributes to a favorable quality of motivation (Martinek, 2018; Ryan & Deci, 2017). Due to the outstanding importance of motivation, we examined students' and teachers' motivational (pre)conditions and relationships in context of biology teaching and learning.

Therefore, we conducted a cross-sectional study, in which the work-related basic need satisfaction (Cronbach's $\alpha_{students}=.73-.80$, $\alpha_{teachers}=.83-.87$), perceived pressure ($\alpha_{students}=.84$, $\alpha_{teachers}=.96$), and quality of motivation ($\alpha_{students}=.64-.85$, $\alpha_{teachers}=.64-.76$) were investigated. Four hundred and fifty-three students ($M_{age}=14.29\pm 1.01$ years; 51% female) and 72 teachers ($M_{age}=42.55 \pm 10.95$ years; 67% female) participated in our study. We conducted multiple linear regression analyses for the teachers and students separately using the three basic needs and the perceived pressure as predictors of their motivational quality.

The students-model explains 43% of the variability in students' motivational quality in biology classes ($R^2=.43$; $F(4,446)=80.06$; $p<.001$). The perception of autonomy (standardized $\beta=.26$, $p<.001$), competence ($\beta=.25$, $p<.001$), and relatedness ($\beta=.10$, $p<.05$) are significant positive predictors of students' motivational quality. In contrast, students' perceived pressure was found to be a significant negative predictor ($\beta=-.23$, $p<.001$).

The teachers-model explains 21% of the variability found ($R^2=.21$; $F(4,67)=4.44$; $p<.01$). The perceived pressure is a significant predictor of teachers' motivational quality ($\beta=-.43$, $p<.01$) whereas the satisfaction of the basic needs for autonomy ($\beta=-.06$, $p=.676$), competence ($\beta=-.16$, $p=.266$), and relatedness ($\beta=-.07$, $p<.05$) could not be confirmed as predictors. While the results of the students' regression model are in line with theory, those of the teachers' sample are contradictory.

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P-109

Perceived teacher support and intentions to quit from upper secondary school: The mediating role of emotional engagement and boredom

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Introduction: Dropout from upper secondary education is a pervasive challenge in many Western countries, also in Norway. Lack of graduation represents a major risk for being not in employment, training or education. Still, little research has been conducted to thoroughly explore the potential embedded in the learning environment in upper secondary school, to motivate students to persist (Lillejord et al., 2015).

The main aim of this study is to examine how three aspects of perceived teacher support may be associated with intentions to quit from school. The three aspects of support are assumed to represent support according to students' basic psychological needs (Niemiec & Ryan, 2009): The *need for relatedness* is assumed to be facilitated by emotional support, the *need for autonomy* by autonomy granting, and the *need for competence* by feedback quality. The hypothesized relationships between teacher support and intentions to quit are investigated in a model where emotional engagement and boredom are mechanisms through which the aspects of teacher support work.

Methods: Self-reports and register data from 1379 upper secondary students in Norway (*M* age 16.4, *SD* 0.88, 52 % boys), analyzed in SEM. Aspects of teacher support were treated as independent variables, emotional engagement and boredom as mediators, and intentions to quit as dependent variable. Model adjusted for GPA, gender, immigrant background, and study track.

Results: Approximately 13% of the variance in intentions to quit was explained by the teacher-support variables, after controlling for well-established risk factors. Emotional support was the most central aspect, revealed by both indirect ($\beta = -.12^{**}$) and direct ($\beta = -.12^{**}$) associations with intentions to quit. Feedback quality and autonomy granting showed weak indirect associations. Boredom was an important factor associated with intentions to quit ($\beta = .41^{**}$).

Conclusion: Findings indicate that covered aspects of teacher support can play significant roles in a potential dropout process, and that emotional engagement and boredom are plausible mechanisms. The demonstrated association between boredom and intentions to quit requests further examinations of antecedents of boredom, as the current teacher support variables explain some (23%), but far from the main share of variance in boredom. Lillejord, S., Halvorsrud, K., Ruud, E., . . . Manger, T. (2015). Dropout from upper secondary education: A systematic review. Oslo: Kunnskapscenter for utdanning

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P-110

Types of reading support from teachers, parents and peers that predict changes in reading motivation among 4th to 6th graders: a systematic literature review

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To succeed at school, students must have good reading abilities. While most educational models point toward cognitive and metacognitive skills to increase reading comprehension, recent studies indicate that motivation also plays a key role. Consequently, studying social factors that may support reading motivation represents an interesting research avenue. We therefore conducted a systematic review of the literature to address the following question: Which types of reading support provided by teachers, parents, or peers predict motivational changes in reading among students in grades 4 to 6?

Following the procedure proposed by Boland, Gemma, and Dickson (2017) and restricting our sample to peer-reviewed articles published between 1998 and 2018, we identified 6265 research papers from electronic databases. From these, we selected all papers focused on 4th to 6th graders with normative development, using reading supports (from either teachers, parents, or peers) as independent variable(s) and reading motivation as the dependent variable, and having at least two waves of data. At the end of the selection process, only 16 studies were eligible for data extraction.

Our synthesis indicates that: **(1) reading reward systems** (3 papers) do not contribute to increase reading motivation, regardless of the nature of the support (e.g., points or gifts); **(2) reading support that fosters psychological needs** (6 papers) generally contribute to positive motivational changes in reading; **(3) reading strategies instruction** (5 papers) does not generally contribute to an increase in reading motivation unless it is combined with another intervention (e.g., same-age tutoring); and **(4) use of specific didactic tools** (2 papers) could contribute to increase reading motivation, but the data available on these tools are insufficient to draw definitive conclusions.

The ineffectiveness of many types of support (e.g., rewards or strategy instruction without integration of other interventions) to foster reading motivation suggests that other factors might predict the motivational changes among grade 4 to 6 students. Indeed, it appears that types of reading support taking into account psychological needs are generally more effective to produce changes in reading motivation. Self-determination theory (Ryan & Deci, 2017) is therefore a promising theoretical framework for developing interventions supporting students' reading motivation. Boland, A., Gemma, C., & Dickson, R. (2017). *Doing a Systematic Review. A Student Guide* (2nd ed.). Los Angeles: Sage Publications.

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P-111

How Finnish-Inspired Teaching Methods and the Self-Determination Theory Helped Improve Content Learning and Problem-Solving Skills in an American High School Biology Classroom

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Introduction

Optimal learning environments are difficult to design for students in heterogeneous American classrooms. That being said, between 2013-2015 Finnish-inspired teaching methods were used to teach high school biology students in a southern California classroom and the results were promising. In 2015-2016, a formal research project was conducted to test and document these results.

Methods

Ninety-nine students, aged 15-16 years old, participated in this study. The biology lessons focused on offering students autonomy, competence, and relatedness in their learning experiences. There were no pacing guides and the students were given time to learn, to wonder, to make choices and to make mistakes. The Self-Determination Theory was implemented during learning phases as well as end-of-unit assessments. Student assessments titled, "Three-Level Challenges," were given based upon OECD PISA Summary Descriptions for the Six Levels of Proficiency in Science[1] and written with increasing levels of difficulty to align with student needs. Students were asked to choose the Challenge that was a little more difficult than they were used to solving and the teacher helped them, if needed. A Level 1 solution would earn students basic proficiency, for example, Level 2 earned an above proficiency rating, and a Level 3 solution earned a mark for advanced proficiency. Results Students often chose to solve more than one Level even though the assignment was to solve only one. Sometimes students were motivated to solve two or more Challenges. Student feedback consistently showed a strong correlation between the students' ability to choose the appropriate Challenge and motivation to work on problems that directly aligned with their next step of intellectual growth. Discussion & Conclusion The data consistently showed how the Self-Determination Theory could be applied to improve learning for students in large (n=32-38) heterogeneous high school American biology classes. Proficiency in content knowledge was improved for students in these classes, which included low achieving students, high achievers, the learning disabled, second language learners, and those typically disengaged in schooling. The findings from this research have the potential to improve learning for children across cultures and across content areas, and show that students of a wide range of abilities can be engaged in solving problems that motivate them and make them struggle, while simultaneously ensuring they are not overwhelmed with problems beyond their capacity to solve.[1]"PISA 2009 Results: What Students Know and Can Do."

PISA 2009 Results: What Students Know and Can Do, OECD, <http://www.oecd.org/pisa/pisaproducts/48852548.pdf>, page 147.

P-112

Parental Academic Involvement Styles and Pupils Academic Motivation - A Matter of Style!

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Recent meta-reviews show how the quality of parental academic involvement have a significant impact on children's school adjustment (Pomerantz, Moorman, & Litwack, 2007). From an SDT point of view (Ratelle, Duchesne, 2017) the crucial variables determining the characteristics of parental involvement are *autonomy vs. control*, *involvement vs. disengagement*, and *structure vs. chaos*. For this study, we wanted to explore parental self-report on their styles of academic involvement and identify combination profiles in order join them to their children's motivational regulation and satisfaction of the basic psychological needs.

The empirical research is based on a dataset of school pupils' ($n = 112$;) with a token-merged online based survey for their parents. We assessed guardians by a newly created instrument (Parental Academic Involvement Style, PAIS; α from .67 to .77). To assess the academic motivation and its regulation we implemented an Austrian adaption of the Self-Regulation Questionnaire (Thomas & Müller, 2011) with reliability coefficients between $\alpha = .69$ and $\alpha = .86$ according to subscales.

Through a latent profile analysis (LPA; $BIC = 1041,0911$, $AIC = 986,3671$), three distinct parental profiles found: (1) high on control and high on autonomy and low on disengagement, (2) low on control and chaos/disengagement, and moderately on autonomy, (3) high on chaos/disengagement, low on autonomy and moderate on control.

Implementing these three profiles to examine differences for the motivational regulation and the satisfaction for the basic psychological needs, we see some differences. Kids of parents on profile 3 show higher levels of controlled regulation (+ 0.15 SD for introjected and +.20 for external regulation), while children with a guardian in profile 2 show lower levels of external regulation (- 0.19 SD) and higher levels of intrinsic motivation. Finally, pupils linked to profile 1 show higher means in identified regulation.

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P-113

Examination of Japanese EFL students' relatedness needs and task motivation: an interview study

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The purposes of this presentation are to (a) examine the relatedness needs of Japanese university EFL learners and (b) make suggestions on how instructors organize group work in their classes. Self-determination theory postulates that, the more individuals' relatedness needs are fulfilled, the more they are intrinsically motivated. However, some Japanese EFL motivation studies only partially endorse the causality. In this study, 24 Japanese university students participated in an interview. They were asked if their relationship with their classmates would influence their motivation to engage in tasks in an EFL classroom. The results indicated that, (1) when learners have not become well acquainted with their classmates in or out of class, becoming connected with them may enhance their motivation; conversely, when learners have already built good relationships with their classmates out of class, it may have different impacts on their in-class motivation, depending on the characteristic of the relationship; (2) learner motivation may improve when a given task entails collective responsibility with other classmates; and (3) already motivated learners may prioritize competence and/or autonomy needs over relatedness needs. The author suggests that instructors assess classmates' relationships and alter the ways they form groups and enhance positive goal interdependence among group members.

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An exploration of students' motivation and learning behaviors in an open learning environment

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In education, self-directed learning environments – already promoted by Dewey - promise to foster students' autonomy and motivation. At the same time, studies show that especially low-achieving students may be overwhelmed by these settings. This leads teachers to an old dilemma: How can one guide students (better) to enable self-directed learning (SDL)?

This is the principal question, which prompted a group of teachers from a middle school serving low achieving, disadvantaged students, to become engaged in this research project starting in summer 2018. The school has implemented on average three units for SDL each week for all students. The main objective of the research project is to gain a better understanding how students benefit and fail to benefit from these units, and to develop strategies to support students to become self-directed learners.

As a first step, we have planned a longitudinal study, in which we follow up on all students (grade 5-8) of that school at the beginning and the end of each school year with a general questionnaire, to see how their motivation, their emotions concerning SDL, their work habits and help-seeking behavior (all self-reports) change.

Central research questions for this first study are: Do students of higher grades report more behaviors and attitudes conducive to SDL? How much do the various parallel classes differ (three per grade)?

For the questionnaire we used Thomas and Müller's (2016) motivation scales, the questionnaire for questions about aspects of SDL was put together from a number of sources, but has to be further developed.

The first round of questionnaires was collected in fall 2018 (12 classes, n = 269). Using cluster analysis, we derived five student motivation types based on different motivational profiles (Vansteenkiste et al. 2009). These types are then used to analyze differences in measures of SDL (e.g. help-seeking behavior, goal checking) – the analysis is still ongoing. For results, we will present student motivation profiles (as determined by the clusters), show their breakdown with respect to gender and age, and relate them to measures of SDL.

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P-115

College choice and first-year achievements of Hungarian university students: The role of autonomous regulation

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Background: According to self-determination theory (SDT, M. Ryan & E. L. Deci, 2000), autonomous regulation of choices and actions is essential for sustainable and enduring achievements in any learning environment. Consequently, low autonomy in initial college choice may contribute to delays in completion of the degree or may even increase the chances of a college dropout.

Method: In a sample of first-year university students (N = 1136) at a state University in the south of Hungary, we run a prospective questionnaire study. At the intake to the college, freshman students voluntarily participated in an extensive questionnaire study (Time 1) that aimed to explore psychological aspects of academic success and student retention. At the end of the first semester (Time 2), their grades were collected through the administrative system. Time 1 questionnaire, among others, included questions on college choice: four questions assessed the respondent's external, introjected, integrated and intrinsic reasons for studying at the specific major. At Time 2 GPA was assessed and it was adjusted for the variations in average GPA of specific majors.

Results: A series of regression analyses showed that first semester GPA was significantly and independently predicted by external and integrated motivation of choice (betas = -.156 and .147, respectively, $p < .001$). These associations prevailed even after controlling for test anxiety, life satisfaction and meaning in life in T1.

Conclusion: Results confirm that freshman university students' motivations concerning their choice of college and major may also influence their later career path at the university. Consistent with SDT, more autonomous and less controlled reasons predict better adjustment to challenges in the first year of the university. Moreover, these results also confirm the need for university programs for students that aim at the development of self-regulation skills.

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P-118

Burnout, engagement and motivation among PhD students in medicine (The BEeP study)

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Background

Burnout on the job means that an individual finds no energy for carrying out job-related activities and responsibilities. In the Netherlands, burnout has been recognized as a health-related diagnosis which obligates financial and other support from a work organization for its employees. Burnout has been reported to be on the rise among medical students, residents, physicians, and PhD students in the Netherlands, but scientific inquiry into burnout among PhD students in medicine is lacking. The present study investigated burnout and engagement among PhD students in medicine, and their association with the quality of their motivation, work-life balance, quality of sleep, perceived conflict in work-related responsibilities and fulfilment or frustration of their basic psychological needs.

Method

This cross-sectional study was conducted among all PhD students in medicine registered at VUmc Amsterdam (n=990). Data was collected through an electronic survey on background characteristics like age, gender, etc., working within a team setting or alone, type of department, work setting, working hours, quality of sleep and validated questionnaires on burnout, engagement, motivation and basic psychological needs. Qualitative data on the top three stressors and energizers in PhD work was also collected.

Results

The response rate was 47% (n=464). Eighty five percent participants were 25-34 years old, 80% were females, 84% were Dutch, 61% had a Masters in medicine, 20% were single, 14% had children, 47% were from clinical departments and 44% from non-clinical departments, 54% worked in an office, 26% worked in a lab and 13% actively worked with patients, 69% had a full-time (36 hours/week) contract, but the actual work hours of 62% of the participants were 37-50 hours/week. Females had a significantly poorer work-life balance and vigour than males. Participants from clinical departments had significantly poorer work-life balance, higher autonomy frustration and higher conflict between work responsibilities than those from non-clinical departments. Conflict between work responsibilities was significantly higher among participants working directly with patients than the ones working in a lab or office. Structural Equation Modelling analysis results for exploring the associations between motivation, basic psychological needs satisfaction and frustration, burnout and engagement and work-life balance will be ready for presentation at the SDT conference. The top themes for stressors were high workload in relatively less time, obligations besides PhD work and poor guidance by supervisors. The top themes for energizers were relatedness with colleagues, concrete achievements like publishing a paper and intrinsic motivation for the topic of PhD.

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Cross Lagged Relations Between Maladaptive Achievement Strategies, Externalizing behavior and Academic performance

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Amotivation or controlled motivation, defined here as task avoidance following failure expectations, and externalizing behavior problems, are known to have their own effect on academic performance. In this study we combine these two known risks for academic problems in the context of school transition. We aimed to find cross-lagged relationships between amotivation or controlled motivation (as maladaptive achievement strategies, MAS), externalizing behavior (EXT) academic performance among 311 11-13 year-old students in Finnish comprehensive schools during school transition. The measure of motivation consisted of student ratings in failure expectations, self-protecting strategies and task avoidance assessed with the Strategy and Attribution Questionnaire for Children (SAQ-C; Aunola, Onatsu-Arviolommi & Nurmi, 1999), whereas the externalizing behavior was measured as teacher ratings of Goodman's Strengths and Difficulties Questionnaire scales for ADHD and Conduct Disorder (CD) symptoms. Academic performance was assessed using individual student grades. The analyses were conducted with Mplus Statistical Package, and analyses were conducted for ADHD and CD, since they have been noted to interact differently during school transition (Palmu, Närhi & Savolainen, 2017).

We found that the model for ADHD symptoms was different from the baseline model for Conduct Disorder Symptoms. In the ADHD-model, we found a cross-lagged association from Grade 5 MAS to Grade 5 ADHD symptoms, whereas both MAS and ADHD were very stable over time. In the CD model we found no significant cross-lagged relations, but conduct problems and (a)motivation were very stable over time and negatively associated with Grade 7 academic performance.

The social and neuropsychological aspects of externalizing problem behavior seem to differ in the way they interact with students' motivation on long-term effects on academic performance. Our results leave us wondering, if students' own experience of their motivation and what teachers reflect as ADHD symptoms is something similar; i.e. if the students' amotivation or controlled forms of motivation lead to behavior patterns that their teachers interpret as hyperactivity.

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P-119

Changes in bariatric patients' physical activity levels and health-related quality of life following a postoperative motivational physical activity intervention

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Introduction: Self-determination theory (SDT) has been widely used as a useful motivational framework for improving long-term adherence to physical activity (PA) and health-related quality of life (HRQoL). The aim of this study was to examine the effects of a 6-month motivational PA intervention (MPAI) on bariatric patients' PA levels and HRQoL from pre-surgery to the end of the MPAI (7 months post-surgery). Additionally, a re-test was performed 13 months post-surgery. **Methods:** 39 participants undergoing sleeve gastrectomy [79% female; Body Mass Index (BMI) = 43.3 ± 4.7 kg/m²] were assigned to a 6-month MPAI (*n* = 18) or to a control group (CG) (*n* = 21). The MPAI was based on motivational strategies from SDT. At baseline and post-intervention measures, both groups wore accelerometers (Actigraph™ GT3X+) for one week to calculate PA levels and they completed the 36-item Short Form Health Survey (SF-36) to assess HRQoL. **Results:** PA levels did not significantly differ between groups at any of the assessment points. Clinically significant differences (*d* ≥ 0.5), favouring the MPAI group, were found for SF-36 domains of bodily pain (at pre-surgery, increasing 7- and 13-months post-surgery, which indicated less pain over time), general health and vitality (7 months post-surgery), and physical functioning and physical component score (PCS) (both 7- and 13-months post-surgery). Social functioning also showed clinically significant differences favouring the MPAI group at pre-surgery, increasing 7 months post-surgery. However, these differences disappeared 13 months post-surgery. **Conclusions:** PA interventions focused on SDT could enhance several HRQoL dimensions of bariatric patients after bariatric surgery. Nevertheless, further research is needed to understand what motivational processes are key to promote PA participation in these patients.

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The consequences of unanswered social support at work

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Receiving social support when it is imposed or unneeded can lead to negative outcomes; however, researchers have not systematically explored the reverse – that is, what happens when employees need support but do not receive it? Is requesting support but not receiving it even more detrimental than never asking for support in the first place? In our research, we examined this phenomenon, termed *unanswered* social support, and its consequences. We expected that unanswered support would have a negative impact on four key outcomes: well-being, performance, organisational identification, and perceived leader effectiveness. Using Self-Determination Theory, we predicted that these negative relationships would be mediated by lower psychological need satisfaction (specifically, the needs of competence, autonomy and relatedness). We also examined causal attributions as a potential moderator of these indirect relationships.

We conducted two studies to test predictions. An online survey was administered to 301 people who were currently working. Participants either recalled a time when they asked for support from their supervisor but did not receive it (unanswered support), or a time when they asked for and received support from their supervisor (answered support). In the second study, 344 participants took part in a work simulation where they were randomly assigned to one of four conditions. Participants either received support after asking for it (answered support), they did not receive support after asking for it (unanswered support), their request for support was acknowledged but they did not receive support (acknowledged), or they did not ask for support at all (control).

One-way between participant ANOVAs and models 4 and 8 in PROCESS macro were run to test predictions. Across both studies, results confirmed that lower need satisfaction, and in particular, lower autonomy, mediates the negative relationship between unanswered support with indicators of well-being, performance, organisational identification and perceived leader effectiveness. There was minimal evidence for the moderating role of attributions. The results suggest that not receiving support when it is requested reduces people's sense of competence, autonomy and relatedness, which subsequently negatively impacts the way they feel, behave, and connect with others. These findings extend on the current understanding of social support and have important implications for support provision and leadership in the workplace.

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Longitudinal sport motivation among young athletes in intensive training settings. Using methodological advances to explore temporal structure of YBRSQ scores

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Abstract

Sport psychologists and coaches consider the experience of self-determined forms of motivation as an essential aspect of the performance. The measurement of motivation has been studied extensively in literature using specific tools such as the Young Behavioural Regulation in Sport Questionnaire (YBRSQ, Viladrich et al., 2013). The constraints experienced by young athletes involved in intensive training settings could lead them to experience change in their motivation across a competitive season (Martinent & Decret, 2015). Exploring temporal structure of BRSQ scores is of prime importance to examine change over time in sport motivation using longitudinal design. This study aimed (a) to examine the factor structure and the self-determination continuum of youth behavioural regulation in sport questionnaire (YBRSQ) scores using advanced methodology; (b) to test the longitudinal invariance of YBRSQ scores and the effects of sex, type of sport and competitive level on differential item functioning (DIF); and (c) to explore the dynamics of motivational regulation across the competitive season. 736 adolescent athletes completed the YBRSQ at the beginning, the middle and the end of the season. A series of different models (Confirmatory Factor Analysis; bifactor; Exploratory Structural Equation Modeling, ESEM; bifactor-ESEM) were conducted for each of the measurement points. Longitudinal configural, metric, strong and strict invariance were tested in simultaneously including all the measurement times. Finally, a latent mean comparison was computed using a latent growth modelling approach.

The factor structure analyses provided evidence of the simplex structure of YBRSQ scores but revealed contextual differences on the self-determination continuum in a sport setting. Results revealed a partial strict temporal invariance of YBRSQ scores and did not reveal DIF for demographic variables. We hope that evidence of the longitudinal invariance of YBRSQ scores will promote research on the issue of stability and change in sport motivation across time. Finally, the present results demonstrated an increase in amotivation and external regulation, and a decrease in intrinsic motivation across the season highlighting the motivational consequences of daily pressures.

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Motivation and physical activity in COPD patients

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INTRODUCTION:

COPD is a chronic disease that leads to patient's loss of functionality and quality of life, being pulmonary rehabilitation (PR) an intervention that research has evidenced positive gains and a direct impact on these indicators. Its benefits go far beyond the functional and motor components, also looking for behavioral change and the adoption of healthy lifestyles. With this project, we intend to evaluate motivational regulations of COPD patients after the implementation of a set of tools to manage their home-based self-management condition, in particular focus on physical activity, keeping the benefits of PR after the implementation in hospital setting.

METHODS:

A quasi-experimental methodology will be used. The sample is constituted by patients with COPD who are enrolled in the PR program in hospital setting. In the intervention group, the optimized PR program will be implemented, with strategies that aim to promote self-management interventions in patients, with a methodology of monthly follow-up by telephone contact, using an approach of motivational interview model. The control group will follow the standard care model.

RESULTS:

The Behavioral Regulation in Exercise Questionnaire (BREQ) and its subsequent changes have become the most used form of evaluation of the continuous behavior regulation in the exercise, and for this study we will use BREQ3. The period of 1 year for the application of the intervention was stipulated, and the results will be evaluated at the end of the PR program and at 6 and 12 months after it.

DISCUSSION AND CONCLUSIONS:

Maintaining the benefits of PR over time seems to be more related to the acquisition of positive behavioral changes, allowing the patient to become aware of the importance of performing physical activity (Meis, 2014). Evidence suggests that motivation generates greater energy by directing some kind of behavior, in this particular case to the practice of physical activity, acting as a real engine of achievement (Dosil, 2008). It is in this complex game of external and internal forces, individual needs and the vulnerability of an individual to be exposed to these variables that the Self-Determination Theory appears.

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P-123

Autonomy support in physical education promotes autonomous motivation towards leisure-time physical activity: Evidence from a sample of Chinese college students

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Abstract

Introduction: With the socio-economic development and urbanization, the level of physical activity in China has seen a dramatic decline during the last decades. Physical education has been recognized as a useful platform to support the adoption of health-enhancing physical activity. Based on the trans-contextual model (Hagger, Chatzisarantis, Culverhouse, & Biddle 2003), we conducted two studies to test whether autonomy-supportive physical education promotes autonomous motivation towards leisure-time physical activity among Chinese college students.

Methods: Study 1 used a cross-sectional design. Participants were students ($N = 681$) who provided data on perceived autonomy support and motivation for physical activity. Regression analysis was used to analyze the data. Study 2 employed an experimental design. Participants were ten physical education teachers and their students ($N = 258$). The teachers were randomized to either an intervention or a control group and those in the intervention group received a 3-month-long autonomy-supportive intervention program. Their students provided data on motivation. The data were analyzed with repeated measurement ANOVA.

Results: In Study 1, perceived autonomy support predicted autonomous motivation in physical education ($\beta = .18, p = .001$), which in turn predicted autonomous motivation towards leisure-time physical activity ($\beta = .51, p = .001$). In Study 2, students who were educated by the intervention teachers had significantly stronger autonomous motivation towards leisure-time physical activity than students educated by the control teachers after the intervention, $F(1, 256) = 12.41, p = .001, \eta_p^2 = .05$.

Discussion & Conclusion: The results suggest that physical education may serve as an effective platform to promote an active lifestyle among Chinese college students when teachers provide students with an experience of autonomy. The findings also add to the discussion about whether or not autonomy support generates universal benefits across cultures by showing that the same positive effects as in Western countries are visible in China despite that group needs are typically superior to individual needs in Eastern collectivistic cultures (Markus & Kitayama, 2003).

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Hagger, M. S., Chatzisarantis, N. L., Culverhouse, T., & Biddle, S. J. H. (2003). The processes by which perceived autonomy support in physical education promotes leisure-time physical activity intentions and behavior: A trans-contextual model. *Journal of Educational Psychology, 95*(4), 784-795. doi:10.1037/0022-0663.95.4.784
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Competence support in physical education: a predictor towards a more self-determined physical activity behavior?

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Objectives: Given a widespread continuous decrease in children's and adolescents' physical activity (PA), the potential of physical education (PE) in promoting young people's PA motivation and behavior has become a key issue. Research in line with the trans-contextual model highlights the support of perceived autonomy in PE as a significant predictor for self-determined PA behavior in a leisure-time (LT) context (Hagger et al., 2003). However, the impact of competence and relatedness support still remains unclear. Therefore, the present study aimed to investigate the role of support during PE, differentiated into three basic needs for behavioral regulation in PE and LT. It was expected that, in addition to perceived autonomy, competence and relatedness would be relevant predictors.

Method: 244 students (139 girls) from Luxembourg, ranging from 11 to 21 years, participated in the study. Via a digital questionnaire, the scales need support (perceived autonomy, competence and relatedness; Standage, Duda, & Ntoumanis, 2005), basic needs (BPNES; Vlachopoulos, Ntoumanis, & Smith, 2010), and external and intrinsic motivation in PE (PLOC-R; Vlachopoulos et al., 2011) as well as in LT (BREQ-II; Markland & Tobin, 2004) were applied in the classroom. With regard to the theory of planned behavior (Ajzen, 1985), the attitudes, perceived behavioral control, and intentions toward PA were assessed (Hagger et al., 2003).

Results: A SEM analysis showed that competence support in PE was the major predictor for self-determined behavior in PE, while perceived autonomy produced mixed findings. Relatedness support had a negative effect on external regulated behavior in PE. In accordance with the assumptions of the trans-contextual model, similar behavioral regulations in PE and LT were found. Furthermore, a more self-determined behavior in LT predicted higher attitudes, subjective norms, and perceived behavioral control towards PA, which increased the intention of doing sports.

Discussion: Results suggest that the children's perceived support of competence from the teacher during PE is an important factor to increase self-determined PA behavior. Further intervention programs may focus on improving the perception of competence during PE in order to increase motivation. In addition, these findings underline the importance for future research to consider the different roles of perceived support of competence, autonomy and relatedness in PE.

Key Reference: Hagger, M. S., Chatzisarantis, N. L., Culverhouse, T., & Biddle, S. J. (2003). The processes by which perceived autonomy support in physical education promotes leisure-time physical activity intentions and behavior: a trans-contextual model. *Journal of Educational Psychology, 95*(4), 784-795.

P-125

Development of a novel qualitative method to measure young children's motivation for physical education: draw, write, show and tell.

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Introduction: Physical Education (PE) plays a pivotal role in establishing the knowledge and skills required for lifelong physical activity. It is therefore imperative that children are motivated to engage in PE. Although questionnaire methods exist for measuring children's PE-related motivation, these are limited by a focus on intrinsic motivation, the exclusion of amotivation and the collapsing of regulatory types into one construct. It has been posited that young children can differentiate between motivation regulations at an earlier chronological age when using developmentally-appropriate measures (Pannekoek, Piek & Hagger, 2013). However, to our knowledge, there are currently no such measures. **Purpose:** This study aimed to develop a novel qualitative method (Draw, Write, Show and Tell; DWST) based on self-determination theory (SDT) to assess young children's motivation regulation and basic psychological needs satisfaction (Ryan & Deci, 2017) in relation to PE.

Methods: The DWST method was iteratively developed by a team of child development, PE and SDT experts. Several iterations of the DWST method were piloted with 5-6-year-old children from across three primary schools in the United Kingdom (UK) (n=41, 54% male) (phase 1), and refined according to children's responses. The final DWST method was then piloted with two further children who had not taken part in the initial study (50% male) (phase 2).

Results: The finalised method consisted of the Draw and Write task (like and disliked aspects of physical education), three Show and Tell activities exploring relatedness, autonomy and competence, and an ordering task to assess motivation regulation. The findings indicate that different types of motivation can be distinguished in young children and valuable information around their basic psychological needs satisfaction can be gained using appropriate measures.

Conclusion: This study has developed an SDT-based qualitative method that evaluates young children's motivation and basic psychological need satisfaction within PE and has provided evidence of face validity. This process provided depth on how young children understand different types of motivation and basic psychological need satisfaction. Future research will further validate the method in a larger sample through content analysis and triangulation with other data sources.

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P-126

Effect of basic psychological needs satisfaction on attentional states of pupils in Physical Education

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"How much were my pupils attentive today?" is a question that Physical Education (PE) teachers are used to ask, when assessing their pedagogy. Previous studies have underlined the increasing difficulty in maintaining adequate concentration levels among children and adolescents (Vanhelst, 2016). The current research analyses the relationship between the Basic Psychological Needs (BPN) satisfaction in PE and pupils' attentional states. After a PE situation, 426 high school pupils (*Age* = 15.36 years; *SDage* = .82 years) from 21 class filled questionnaires rating each statement using a 7-point scale ranging from 1 (do not agree at all) to 7 (completely agree). BPN satisfaction was assessed using three scales measuring the satisfaction of autonomy need, competence need, and relatedness need. Attentional states were measured with the Exercise Attentional Questionnaire (in process of validation), including four dimensions: "concentration on the task" ($\alpha = .90$; 5 items), "distraction on the task" ($\alpha = .74$; 4 items), "concentration through teacher support" ($\alpha = .86$; 5 items), and "distraction through teacher support" ($\alpha = .68$; 4 items). The Confirmatory Factorial analysis supported a satisfactory model fit: ($p = .00$; $\chi^2/df = 2.09$; $SRMR = .05$; $RMSEA = .05$; $NFI = .92$; $TLI = .96$; $CFI = .96$).

Multilevel regressions were realized, as intraclass correlation showed that belonging to a class explained 8.74 % for "concentration on the task", 9.87% for "concentration through teacher support" and 7.39% of "distraction on the task". Multilevel regressions with the three BPN as independent variables showed that only the "concentration on the task" was significantly related to the three BPN ($p < .05$). However, multilevel regressions with each BPN as independent variable showed significant relationships between each BPN with attentional variables ($p < .01$), excepted with the "distraction through teacher support", where only the competence need was significantly related ($p < .05$).

In line with previous works (Standage, 2005), these outcomes highlighted that the BPN satisfaction are related to attention during a PE exercise. In agreement with other theories (e.g. flow concept), the competence need seemed the most related to pupils' attentional states. In sum, since each BPN satisfaction and attentional states are related, it seems essential that PE teachers support a motivational climate enabling this relationship, and especially the relationship between the competence need satisfaction and pupils' attention.

Regarding these preliminary outcomes, futures analyses will perform Multilevel Structural Equation Modelling (MSEM).

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Associations among motivational climate, psychological needs, cardiorespiratory fitness scores, enjoyment, and anxiety of Finnish students during physical education fitness testing class

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Fitness testing is a widely popular element in school physical education curriculum. However, students affective and motivational experiences during fitness testing classes have received surprisingly little empirical research attention. The purpose of this study was to investigate the relationships among motivational climate, psychological need satisfaction, cardiorespiratory fitness scores, enjoyment, and anxiety of physical education students in fitness testing situation. The participants of the study were 328 Finnish Grade 5 students ($M_{age}=11.2$, $SD = .35$) who completed questionnaires immediately after completing a fitness testing class. During the testing class, 20-metre shuttle run test (20mSRT) was conducted measuring cardiorespiratory fitness. Other measures of the study included Finnish versions of the Motivational Climate in Physical Education scale, the Basic Psychological Needs in Physical Education scale, Physical Education State Anxiety scale and the enjoyment subscale of the revised Sport Commitment Questionnaire. Confirmatory Factor analyses were conducted to examine the validity of the scales when used in fitness testing class situation. A structural equation modeling (SEM) using robust maximum-likelihood estimation method was applied to study the relations among study variables. Results indicated that the model fitted the data adequately ($\chi^2(916) = 1334.5$, $P = 0.00$; $CFI = 0.93$; $TLI = 0.93$; $RMSEA = 0.038$, $SRMR=0.07$). The need for autonomy was positively associated with enjoyment, and negatively with worry and somatic anxiety. In addition, the need for relatedness was negatively associated with cognitive anxiety. Also, the need for autonomy was positively associated with cardiorespiratory fitness. Furthermore, task climate was positively associated with all psychological needs. Additionally, ego climate was positively associated with the need for competence. Squared multiple correlations showed that significant variables explained enjoyment by 76 %, cognitive anxiety by 15 %, somatic anxiety by 11 %, worry by 18 %, 20mSRT by 19 %, the need for autonomy by 52 %, the need for competence by 33 % and the need for relatedness by 47 %. The results of this study revealed that students' performance in 20mSRT was not associated with enjoyment or anxiety. In conclusion, when planning and conducting fitness tests in physical education, teachers can emphasize higher levels of enjoyment and lower levels of anxiety by supporting psychological need satisfaction and by highlighting task-involving elements during the class.

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How to Enhance PE teachers' Motivating Style? Initial Results and A Study Protocol

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Introduction: Physical inactivity is a major public health problem. Physical education (PE) teachers can improve their students' motivation for physical activity by creating a climate supporting basic psychological needs (see Aelterman et al. 2018). Teachers' motivating styles can be enhanced by training, but we need a better understanding how to incorporate motivating styles into PE teachers' daily practice. This poster describes 1) initial results of a study aimed to understand Finnish pre-service PE teachers perceived barriers in adopting motivating style in PE classes, and 2) a study protocol for an intervention research project using these results, including a phased process to improve the aforementioned training intervention.

Methods: 1) Based on an earlier school-based, SDT-based intervention to promote physical activity (Hankonen et al. 2016), a training intervention was created to teach pre-service PE teachers motivational interaction. A subsample of participants was interviewed ($n=19$) after the course, to examine perceived barriers in adopting more motivating styles. Narrative analysis was used. 2) The training intervention will be enhanced by the means of behaviour change intervention development frameworks, including a variety of specific concerns and misunderstandings related to motivating styles.

Results: Participants viewed motivating style as beneficial for fostering motivation and engagement. Concerns related to e.g. difficulty to allocate time and feedback equally, losing control and authority, time, fear of awkward interaction situations, difficulties in structuring the intended message and deciding what amount of choice would be appropriate. In addition, some concerns represented misunderstandings, which were addressed on the course, however articulated by the interviewees. The plan for the enhancement of the training course will include development of materials to address the discovered misunderstandings, and components to de-implement de-motivating styles.

Discussion and conclusion: The results highlight the stumbling blocks in the use of the motivational styles, described by the interviewees. We provide suggestions to improve effectiveness and acceptability of training courses on motivational interaction for teachers and health promotion professionals.

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Keywords: acceptability, motivational interviewing, physical education, professionals.

P-129

Academic procrastination: the role of basic psychological needs and coping strategies

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Introduction: Academic procrastination is an inability of regulating cognitions, emotions and behaviors, resulting in a subjective discomfort that may have negative consequences for the well-being and mental health. Procrastination is a phenomenon that has not yet been studied, within the framework of the basic psychological needs satisfaction theory. Objectives: This study aims to investigate the pattern of relations of academic procrastination with basic psychological needs satisfaction (BPNS), a set of coping strategies, and anxiety, depression and stress.

Method: The participants were 211 university students, age between 18 and 44 years old ($M = 24.23$; $SD = 5.72$), predominantly females (56,4%), that filled the Procrastination in Study Questionnaire, the BPNS Scale, the Proactive Coping Inventory, and the Anxiety, Depression and Stress-21 Scale.

Results: A correlation analysis showed that academic procrastination has a negative relationship with BPNS and with proactive coping, and a positive relationship with avoidance coping, and with anxiety, depression and stress. A mediation analysis identified proactive coping as a partial mediator of the negative relationship between BPNS and academic procrastination.

Conclusion: The non-satisfaction of the basic psychological needs, in students, is a predictor of less adaptive coping strategies, which lead to procrastination and further to anxiety, depression and stress, which may enhance this dysfunctional cycle. As such, we stress the importance of an interventive program based on the basic psychological needs satisfaction theory, in the university context, as a way to increase proactive coping, and consequently decrease procrastination and negative psychological features.

Key-words: Basic psychological needs; academic procrastination; coping strategies; anxiety, depression and stress.

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P-130

Motivation for extracurricular activities: Needs, support and more!

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Motivation for language learning especially in foreign language (FL) contexts has been long discussed from different points of view including Self-determination theory (SDT). Motivational orientations of language learners range from extrinsic/controlled regulation to intrinsic/autonomous motivation. As the opportunities for language use are rather limited in FL contexts, language use is confined to the classroom settings, and motivational orientations are not necessarily intrinsic. Learners tend to meet the classroom requirements by attending classes, participating in activities and doing homework. However, the same tendency may not be observed when it comes to attend extracurricular activities which offer opportunities to use the language outside the classroom. This study focuses on the role of teachers in students' motivation for attending extracurricular activities in a one-year language program, which is offered in four languages, namely English, French, Russian and German, at university level. The activities include walking tours in the old town, speaking games, movie screening, board games and the like. Despite the regular announcements via conventional (e.g. posters on notice boards) and modern ways (i.e. Instagram), the participation to the activities is rather low considering the number of the learners at the program ($N=2800$). This study aims at investigating the reasons behind this by trying to find out if the extracurricular activities really meet learners' needs and what mediates their engagement, and if learners receive adequate support from their teachers in meeting their needs, hence more participation. The data is being collected via surveys (5-point likert scale) given in learners' mother tongue and will be analyzed to test; 1) whether learners report lower autonomous motivation towards extracurricular activities because they are not graded on them; 2) what makes them engaged in activities, and 3) whether learners perceive their teachers as providing support for extracurricular activities. The results will help better organize extracurricular activities meeting learners' needs and raise awareness of teachers about learner needs and the importance of teacher support in extracurricular activities because teacher behaviours and practices have a great impact on learners' feelings and engagement in learning.

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'I can usually talk myself out of being upset.' How do medical specialists cope with perceived stress through fulfillment of autonomy and relatedness.

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Abstract

Medical specialists work in a system that is becoming more fragmented and efficiency minded. Levels of awareness, alertness, and tension that are too high produce stress. The need to keep up with fast-moving changes in the healthcare system in terms of technical innovations and with increased societal demands in terms of social accountability poses an additional stressor for specialists (Langelaan et al., 2017). Thus, every working day demands continuous adaptation from medical specialists (Van den Goor et al., 2015). The current study sought to understand how medical specialists cope with daily stressors during their daily work by examining the link between de-motivators, stress and coping through fulfillment of the basic psychological needs. The research questions for the present study were: Which aspects of their daily work demotivate medical specialists and how do they cope with daily stressors? A multi methods study, was conducted in the Brigham and Women's hospital, Boston, MA, United States. The qualitative part was conducted using a constructivist approach in which knowledge is constructed through the interaction between the researcher and the researched. The quantitative part, which included questionnaires on motivation, was mainly used for triangulation to ensure validity of the data collection. Twelve medical specialists, recruited through convenience, snowball and purposive sampling until sufficiency was reached, were shadowed for two days each in order to observe the changes in their situational motivation. After each observation day the participants were asked to make a graph of their motivation level during this day and an interview was conducted after the last observation day. Transcribed data were open coded in a constant comparative manner independently by two researchers. Through selective coding and iterative discussion the research team came to a consensus about the themes. The results show that medical specialists construct different coping narratives to be able to cope up with the situation that is experienced as stressful or demotivating. Two coping narratives could be linked to the fulfillment of autonomy: the narrative of acceptance and the narrative of control. One coping narrative could be linked to fulfillment of relatedness: the narrative of togetherness. The coping mechanisms may be used consciously or unconsciously, it still ensures that issues are palatable in the moment and in the longer term that motivation for medical practice can remain high. In turn this benefits the quality of care and patient safety.

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Factors influencing autonomy supportive consultation: a realist review

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Introduction

Traditionally the patient - healthcare professional relationship was paternalistic, in which the professional made the decisions on behalf of the client. There has been a paradigm shift away from this type of encounter toward a more patient-centered care, in which the patient is more empowered, informed, and autonomous.

However, there is room for improvement in the way professionals facilitate patient's empowerment and autonomy during consultation (Martin et al, 2018). By autonomy supportive consultation professionals facilitate more autonomous forms of self-regulation (Ng et al, 2012).

The aim of this review is to determine how contextual factors support or hinder the development of an autonomy-supportive climate and identify the factors which influence the mechanisms to support patients autonomy before, during and after decisionmaking in consultations and the outcomes.

Methods

We conducted a realist review which allowed us to analyze heterogeneous evidence to understand an underlying mechanism. The data are analyzed using the model of context, mechanism and outcome. Literature searches were performed in Pubmed, Embase, PsycINFO and Cinahl. The search terms used were autonomy, support, consultation/communication and intervention.

Results

Out of 2200 articles we found, 16 articles met the inclusion criteria.

We first filtered the *context factors* and found that work organization, the attitude and competence of a professional are important factors for creating an autonomy-supportive climate during a consultation. As mechanism we found as most important overarching factor knowing the client, the most important factor related to the process of decision-making was respectful interaction on rational and emotional issues. Two important patient outcomes we found were higher perceived decision satisfaction and higher compliance for treatment or behavior change.

Discussion & Conclusion

Healthcare providers hardly offer autonomy support during consultation. We found that to realize an autonomy-supportive climate the attitude and competence of professionals are important. To facilitate the transition to become a more autonomy-supportive professional, training is required. Based on these new insights into context and mechanisms of autonomy support we intend to develop a framework for training.

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The Well-Being of South-Asian Students from a Self-Determination Perspective

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Basic SDT Research Topics: <http://selfdeterminationtheory.org/domains/basic-psychological-needs-domain> During the last decades more and more universities worldwide have set internationalization in their focus, and Estonian universities are among them. Involving international students and scholars has become one of the priorities in order to increase academic quality, add compatibility among universities both at national and international level, and increase multicultural awareness as well as attractiveness among students. Hosting international students creates new challenges and requires a thorough analysis of students' expectations and needs to provide better and improved support system. International students' adjustment concerns change in time. Hence, their well-being and needs should be studied systematically and repeatedly. Self-Determination Theory (SDT Ryan & Deci 2000) provides a framework to perform such analysis. According to SDT all individuals are affected by the satisfaction of basic psychological needs for autonomy, competence and relatedness. The theory also suggests that individual's well-being depends on social conditions and engagement with the environment.

13 interviews were conducted (9 male and 4 female interviewees) with international students of South Asian origin who are currently enrolled in 3 different Estonian universities at BA, MA and PhD level. During the semi-structured in-depth interviews the students were asked to describe their experiences, sense of belonging, upcoming obstacles and problems, and relationships. The interviews were later analyzed in three categories, which were based on SDT. The results suggest that international students experience a strong sense of belonging within their university community of international students. However they lack communication with local students. Most of the students can be described as autonomous learners, whilst some of them perceive certain pressure on their studies. The higher the students' study level was, the more competent they felt. The importance and the quality of feedback emerged from the interviews as a way of support to promote students' need for competence.

As a result of this study several propositions to Estonian universities can be recommended in order to support international students' well-being.

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Increasing Daily Physical Activity in the Classroom: Using the Basic Psychological Needs to Explore Involvement Experiences in a Kinesiology-Student Led Mentorship Program for New Teachers

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Introduction: As rates of physical activity (PA) have declined amongst children, the goal of the Daily Physical Activity (DPA) policy in Ontario is to ensure that elementary students receive at least 20 minutes of PA daily during instructional time. Yet, studies show that this goal is rarely achieved. Given the pressures teachers experience regarding the coverage of academic curricula, coupled with low confidence and training for delivering DPA, innovative strategies to promote related teaching skills are needed. The satisfaction of a teacher's Basic Psychological Needs (BPN) achieved in an autonomy supportive environment has been deemed valuable for implementing and sustaining school-based PA-programs. University students studying kinesiology are inherently equipped to assist with the delivery of PA initiatives. In light of the known benefits of mentorship models applied in educational contexts, combined with the utility of interventions grounded in theory, a collaborative kinesiology student-teacher-based program could be a viable health promotion strategy to combat low (D)PA rates. To date, no studies exploring the BPN as they relate to a mentorship-based DPA program exist. The purpose of this study is to determine the effectiveness of a new teacher-Kinesiology MSc student partnership as part of a 6-week graduated DPA program integrating standardized regional curricula. This will involve assessing: a) the teachers' partnership-based experiences through a BPN lens; and b) the feasibility of the program from structural, logistical, theoretical, and experiential perspectives.

Methods: A feasibility study with repeated measures integrating mixed-methods will be undertaken. A demographic survey (e.g., teacher characteristics, PA/DPA history) and the Learning Climate Questionnaire to assess autonomy support provided by the kinesiology student will be administered. Pre- and post-intervention semi-structured interviews will also be conducted to glean program involvement perspectives. Descriptive statistics and deductive content analysis will be used to analyze the data.

Anticipated Results: Preliminary findings will be presented and discussed in the context of mentorship-based DPA programs, and how they relate to autonomy support and the BPN among new teachers. Given the known benefits of these types of programs in other contexts, it is expected that teachers will note enhancements to these domains (Klassen et al., 2012; Rickwood, 2015).

Conclusion: Studies to determine how a kinesiology student might provide a feasible avenue to enhance the BPNs among new teachers while strengthening the quality of DPA delivery are scarce and needed. It is hoped that the findings will provide a foundation from which a larger study can emerge.

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Exploring how parental conditional regard is associated with psychological needs satisfaction and frustration.

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Parental conditional regard (PCR) is a form of controlling parenting behaviour where parents provide their child with more affection when the child behaves in desirable ways (parental conditional positive regard; PCPR) or with less affection when the child behaves in undesirable ways (parental conditional negative regard; PCNR). According to Self-Determination Theory (SDT), controlling parenting behaviour would limit feelings of autonomy and conditional affection may damage feelings of relatedness for the child. This study seeks to examine how PCR might impact the child's general sense of psychological needs satisfaction and frustration. Given that the two types of PCR have been shown to impact the child differently (e.g., Roth & Assor, 2010; Roth, Assor, Niemiec, Deci, & Ryan, 2009), they will be analyzed separately.

This study surveyed 501 Canadian university students to assess the impact of PCR on their psychological needs satisfaction. Data was collected on their experiences of PCPR and PCNR with their mothers and fathers and their general feelings of psychological needs satisfaction and frustration in their lives. Multiple regression analyses were used to analyze how psychological needs satisfaction and frustration is impacted by different styles of PCR from each parent. When both parents were analyzed together, psychological needs satisfaction was only associated with PCNR from mothers ($b=-.15$, $t=-6.10$, $p<.001$, 95%CI [-.195, -.100]) and psychological needs frustration was associated with PCNR from fathers ($b=.062$, $t=2.17$, $p=.031$, 95%CI [.006, .118]) and mothers ($b=.20$, $t=7.29$, $p<.001$, 95%CI [.145, .252]). Secondary analyses analyzed each parent separately and did not find PCPR to significantly predict psychological needs satisfaction (mother: $b=.033$, $t=1.55$, $p=.12$, 95%CI [-.009, .075]; father: $b=.018$, $t=.76$, $p=.45$, 95%CI [-.028, .064]) or frustration (mother: $b=.004$, $t=.16$, $p=.87$, 95%CI [-.043, .051]; father: $b=.014$, $t=.53$, $p=.60$, 95%CI [-.039, .068]). PCNR from fathers did significantly predict less psychological needs satisfaction ($b=-.11$, $t=-4.82$, $p<.001$, 95%CI [-.155, -.065]) when PCNR from mother is not controlled for.

In conclusion, withdrawing affection from the child when they behave in undesirable ways predicted increased psychological needs frustration and decreased psychological needs satisfaction in the child. Providing more affection when the child behaves in desirable ways did not increase psychological needs satisfaction but did not increase frustration either. These results are in accordance with the postulates of SDT and support the theoretical distinction between PCNR and PCPR.

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The relationship between parents' autonomy support, perceived stress and coparenting quality following the birth of the first child

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Primiparous parents enter a new and exciting chapter of their relationship named the coparenting relationship. It only includes the aspects of the parental relationship affecting the child and thus, includes parents' supportive or undermining communications, and the way they manage parental responsibilities (Feinberg, 2003).

In the literature, autonomy-supportive relationships predict the relationship quality which include dyadic adjustment and secure attachment (Deci et al., 2006). Perceived autonomy support is associated with more optimal responses to conflict. Impacting parents' relationship and conflict management, these consequences could improve the quality of the coparenting relationship. Moreover, the literature has shown that autonomy is associated with perceived stress reduction. Since autonomy is associated with one's stress level, our goal was to examine whether stress reduction due to a partner's perceived autonomy support may predict higher coparenting relationship quality. We hypothesize that the relationship between perceived autonomy support and the coparenting relationship is better explained by the mediation of perceived parental stress.

Method. Primiparous parents (95% mothers; $N_{preliminary_sample}=80$) of 6-month-old babies completed an online questionnaire, including *Perceived Stress Scale*, *Coparenting Relationship Scale*, *Fatigue Assessment Scale* and *Interpersonal Behavior Questionnaire* (IBQ). The mediation model was assessed through PROCESS in SPSS.

Results. The direct effect show that perceived autonomy support significantly predicts coparenting ($\beta = .541, p = .000, R^2 = .306$). We also found a partial mediation. When perceived stress is integrated in the model, perceived autonomy support still significantly predicts coparenting quality ($\beta = .411, p = .000, R^2 = .401$). The indirect effect ($\beta = .136, 95\% \text{ CI } [.30 \text{ to } .289]$) indicates that perceived autonomy support also significantly predicts coparenting relationship quality through its effects on stress also known as the mediator (perceived autonomy support-Stress: $\beta = -.408, p = .000, R^2 = .17$; Stress-Coparenting: $\beta = -.334, p = .001, R^2 = .001$).

Discussion & Conclusion. As expected, perceived autonomy support predicts coparenting relationship quality and perceived stress for new parents. Interestingly, perceived stress partially explains the relationship between perceived autonomy support and coparenting relationship quality.

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How and when to exert authority? Two experimental studies

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Introduction

Persistent rule-breaking contexts represent a considerable challenge for parents as interventions known to prompt compliance (e.g., mild punishments; MP) are at risk to hinder children's internalization process and need for autonomy. Recently, researchers showed that logical consequences (LC) were at least as effective as mild punishments (MP) to prevent future transgressions (and more than reasoning-only), yet more likely than any intervention to foster an indicator of internalization - that is, children's acceptability beliefs regarding the intervention (e.g., Mageau et al., 2018). LC are a form of behavioral limitation (BLIMIT) aiming to address the problem created by children's misdeed, rather than making them experience aversiveness (as do MP). As such, they ensure compliance by solving the transgression-induced problem and facilitate internalization by being logically related to it.

Although important, these experimental studies were only examined in non-personal domains, such that it is unclear if any BLIMIT would be perceived more positively than reasoning-only or no authority in personal domains. In addition, they did not consider the impact of these interventions on children's compliance motivations (autonomous vs controlled) and need for autonomy. The goal of our research was to extend past work by addressing these limitations.

Methods

Based on Mageau et al (2018), we used an experimental vignette methodology and a sample of 214 adolescents to assess the acceptability of interventions (LC, MP, reasoning-only, no-authority), their effectiveness to prevent future transgressions and their impact on adolescents' compliance motivations and autonomy frustration. In Study 1, we controlled for the characteristics of the BLIMIT. In Study 2, we used a transgression that could be perceived as a personal or a non-personal issue.

Results

When adolescents categorized transgressions as non-personal, past results were replicated and enhanced. LC were at least as effective as MP to prevent future transgressions (and more so than reasoning-only and no-authority) and the most acceptable strategy. Furthermore, they elicited as much autonomous compliance and as little autonomy frustration as reasoning-only. In contrast, MP elicited less autonomous compliance and frustrated more autonomy than reasoning-only. However, in Study 2, when adolescents perceived transgressions as personal, all BLIMIT lost their advantages over reasoning-only to elicit compliance and internalization and frustrated more children's autonomy, leaving reasoning-only as the preferred strategy.

Discussion

These results highlight LC as a promising intervention in non-personal persistent rule-breaking contexts. They also stress the importance of considering children's social domain perceptions to decide when and how to exert authority.

Maternal conditional regard with toddlers: early antecedents and potential effects on toddlers' functioningN. Hagari¹, T. Dagan¹, O. Ezra¹, A. Assor¹, J.G. Auerbach¹, Y. Kanat-Maymon²¹*Ben Gurion University of the Negev, BEER-SHEVA, Israel*²*Inter-Disciplinary Center, HERZLIYA, Israel*

Based on Self-Determination theory (Ryan & Deci, 2017), this paper examines the hypothesis that the socializing-practice of parental conditional-regard (PCR) - providing more affection and esteem when children comply with expectations, and less affection and esteem when they don't – is an antecedent of the following child outcomes: (1) Compliance, (2) Stressful coping when unintentionally failing to comply. While results of past studies are consistent with this view, none used a longitudinal design, or was conducted in early childhood. Furthermore, no studies have ruled out the possibility that the negative effects of PCR could be attributed to a harsher power-assertive practice that may accompany PCR. Also missing is research on antecedents of PCR in early childhood. The present study addressed these issues, hence being the first longitudinal study of potential outcomes and antecedents of PCR. Participants were 163 Israeli expecting mothers and their first-born child (48% female). Data were collected at four time points. At T1, expecting mothers completed a scale assessing their contingent self-esteem. When children were eight months-old, mothers reported the child's frustration-proneness. When children were approximately 1.5 years-old, mothers completed three measures: (1) a scale assessing their use of CR; (2) a scale assessing their use of harsh power-assertive practices to gain child compliance; and (3) a brief index of children's developmental level. At the age of 2-years, children and their mothers participated in a lab procedure assessing children's compliance to maternal request using the "forbidden toy" paradigm ("don't" task) and children's avoidance following unintended violation of adults' request using the "mishap" procedure.

Regression analyses showed that mother-reported use of PCR, but not harsh power-assertive control, with 18-month old toddlers uniquely predicted two 24-month toddler's behaviors: Compliance with mothers' prohibition, and avoidant behaviors in the "mishap" situation when toddlers unintentionally failed to comply. This pattern is consistent with the view of PCR as a "double edged" socializing practice, which may promote compliance, but also has significant emotional costs (Assor et al., 2004). Mothers' CR at 18-month was predicted by mothers' prenatal contingent self-esteem, and 8-month infants' frustration-proneness.

The findings provide the best evidence so far that the PCR practice might be both a product and a cause of stressful psychological processes, starting in early childhood. The presentation will present additional findings pertaining to the ways the participating children cope with challenging cognitive tasks when they reach pre-school, and mothers' perceptions and experiences before children were born.

The Antecedents and Consequences of Unconditional Parental Regard of their Children

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Parents' unconditional positive regard has long been postulated to be crucial for children's optimal development (Rogers, 1961). Yet, many parents argue that children's motivation to achieve would be undermined if children are accepted unconditionally. Although considerable research has documented the detrimental effects of parental conditional regard, love withdrawal is still prevalent among parents whose self-worth is contingent on children's performance (Ng, Pomerantz, & Deng, 2014). Conversely, for parents who are able to accept themselves regardless of their success at parenting tasks, they are more likely to show unconditional acceptance to children (Ellis & Bernard, 2006). To unpack the antecedents and consequences of unconditional parental regard, the present study has two goals. First, to examine whether child-based worth, unconditional self-acceptance and grandparents' use of unconditional regard are the antecedents of unconditional parental regard. Second, to investigate the consequences of unconditional parental regard on parents' provision of structure and children's self-improvement motivation in academic domain.

The current study was a self-report survey and the participants were 113 Chinese fifth or sixth graders and their mothers in Hong Kong. In line with Assor, Roth, and Deci's (2004) study, our results showed intergenerational transmission of unconditional parental regard. There was positive association between mothers' perception of their own mothers' unconditional acceptance and their current child-rearing practice. Child-based worth was negatively associated with mothers' unconditional acceptance, indicating the more the mothers' self-worth being contingent on children's academic performance, the less likely the mothers accepted their children unconditionally. In contrast, mothers' unconditional self-acceptance predicted their acceptance of children's worth regardless of achievement. It was found that mothers with higher level of unconditional self-acceptance were more likely to enact unconditional regard with warmth and structure to children's academic behaviors. Furthermore, when children perceived more unconditional acceptance from their mothers, they had higher self-improvement motivation. This finding addressed parents' worry that unconditional acceptance would undermine children's motivation. Instead, children being accepted non-judgmentally had stronger autonomous motivation to improve their weaknesses when they felt more secure in face of setback.

Overall, the present study extends past research (e.g. Roth, Kanat-Maymon, & Assor, 2016) by shedding light on the antecedents and consequences of unconditional parental regard. It has practical implication on parent education that advocates for unconditional parental regard to optimize children's development.

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Need-supportive parenting fosters psychosocial development in youth with and without autism spectrum disorder, cerebral palsy and down syndrome: a cross-disability comparison

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Parents play a critical role in supporting their child's social, behavioral and emotional development. In the past decade, research in mainstream populations took huge strides forward by applying insights from Deci and Ryan's Self-Determination Theory (SDT) to better understand these parenting effects on child behavioral outcomes. In the context of raising a child with a developmental disability, however, very little research has evaluated SDT-based premises. This study investigates the impact of need-supportive versus need-thwarting parenting behaviors on child behavioral problems and strengths across four specific groups. Parents of children between 7 and 15 years old with Autism Spectrum Disorder (n=95), Cerebral Palsy (n=121), Down syndrome (n=73) and without any known disability (n=120) rated their use of responsive, autonomy-supportive and psychologically controlling parenting strategies, as well as their child's behavioral problems and psychosocial strengths.

Group comparisons indicated that levels of parenting did not vary widely across groups. By contrast, important differences in behavioral presentations were observed, with parents of children with ASD reporting the most behavioral problems and the least psychosocial strengths. Multi-group structural equation models revealed similar, SDT-predicted relations between parenting dimensions and psychosocial outcomes in each group. Three structural effects were found: higher levels of psychologically controlling related to more externalizing problems, whereas higher levels of responsive as well as autonomy-supportive parenting were associated with more psychosocial strengths. These results corroborate the beneficial impact of need-supportive parenting and the unfavorable effect of need-thwarting socialization on the psychosocial development in and across youth growing up with and without special needs.

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Engagement in Tasks: What is the motivation behind them?

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It is acknowledged that motivation is a key factor for success in the process of language learning. Some learners are engaged in language learning because they find it interesting and exciting, while others learn as it is an obligation for them. There have been a lot of studies researching this phenomenon like Self-determination Theory (SDT). Being aware of the value of motivation in this process, it is important to understand what motivates learners to learn the language and integrate these motivational patterns into teaching practice. Especially in educational contexts, motivational orientations are crucial because learners are required to sit formal exams and do various tasks that aim to evaluate their improvement in the language learning process, which are not necessarily motivating. As SDT continuum suggests, learners' motivations for doing exams and tasks may vary. This study aims at investigating what kind of motivation learners have while they are doing graded tasks in an intensive English language program in a Turkish state university. The participants of the study are the learners at B2 level (N=30) in the spring term of 2018-2019 academic year. The tasks are the ones from the school curriculum that require learners to practice the language in different, and supposedly interesting, ways such as video recording of imaginary job interview, doing a class presentation of a product they have designed and writing essays with the integration of reading and listening. The data is being collected via surveys given after each task and interviews conducted with students. The results may suggest that tasks considered motivating may not match how learners perceive them, which helps to redesign some of the tasks in a more motivating way.

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Is treatment outcome improved if patients match themselves to treatment options: the self-match study

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Background and aims: Involving patients in planning their own treatment as a key to health behavior change is still increasing, although research on informed choice in psychotherapy is limited. Various studies in Self Determination Theory have shown that involving people in decision making improves intrinsic motivation, which, in theory, also might be the case in psychotherapy treatment leading to improved outcome from therapy. Consequently, we designed a rigorous test of patients choosing from a menu of therapies to determine whether it does improve retention, adherence and outcome in alcoholism treatment.

Method: The Self-Match Study is a randomized controlled trial. 400 consecutive patients aged 18 or more will be enrolled and randomized to either self-matching or expert-matching to one of five different treatment options. All patients entering the alcohol outpatient treatment center in Odense, Denmark, are offered to participate in the study.

Exclusion criteria: cognitive dysfunction measured by mini mental state examination, and non-Danish or non-English speaking individuals. English speaking individuals must understand Danish because the video presentation of treatment options is in Danish. The following instruments will be administered at intake: Addiction Severity Index, Time Line Follow Back, WHO quality of life questionnaire, NEO Five-Factor inventory-3 and Personal Happiness Form.

Results: Primary outcome: Number of monthly excessive drinking days 6 months after initiation of treatment.

Secondary outcomes: (1) Compliance. (2) Quality of life. The influence of personality traits on outcome will also be examined in both groups. Enrollment is expected to end in March 2019. Follow-up is 6 months; hence data analysis begins September 2019. Results presented on the poster will be preliminary data based on baseline interviews.

Discussion: The Self-Match Study is investigating informed choice in planning psychotherapy in addiction treatment. Results will provide information on whether choosing own treatment enhances compliance and outcome. No specific self-determination theory tools have been used for measuring motivation, but we imply that intrinsic motivation is enhanced when people have an influence on their own treatment.

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Motivation and Muscular Ideals: The Impact on Men's Cognitive Processing Proficiency

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Introduction: Extant research advocates that media body ideals have become a prominent source of pressure and motivation for men. In fact, portrayals of the muscular ideal in Western cultures are increasingly affecting men's emotional, psychological, and physical health. While research is proliferating, we know little about the effects of media body ideals on men's cognitive functioning. Grounded in Self-Determination Theory, we explored the impact of the muscular ideal on men's cognitive functioning using an objective Stroop task, a measure of information processing proficiency. Furthermore, we examined whether autonomous and controlled motivation moderated the effects given that not all individuals are influenced by socio-cultural pressures such as the media. **Methods:** Using a between-subject cross-sectional design, male participants ($n = 175$) were recruited under the pretext that the study was on "Advertising and Consumerism". Participants completed assessments of their autonomous and controlled motivation and demographics, then engaged in a practice Stroop test to learn the task and normalize their reaction times, watched a randomly assigned video (muscular ideal versus neutral), and completed the Modified Stroop task. **Results:** Participant's ages ranged from 16 to 30 years ($M = 19.82$, $SD = 2.39$) and the majority were White (57.1%), followed by Asian (12%), Middle Eastern (10.9%), African Canadian (9.2%), Native Indian (3.4%), and other (7.4%, e.g., mixed). Using a Bonferroni correction, significant Stroop differences between the muscular ideal and neutral video groups emerged for appearance words, $t(173) = -2.52$, $p = .013$, $d = 0.38$, and color words, $t(173) = -2.93$, $p = .004$, $d = 0.45$, but not neutral words. Two multiple moderation models revealed significant interaction effects of autonomous motivation, $b_4 = -57.79$, $p = .002$; $b_4 = -47.15$, $p = .009$. Controlled motivation did not play a significant moderating role. **Discussion:** Consistent with previous studies among women, exposure to media body ideals prior to engaging in the Modified Stroop task predicted poorer performance (i.e. slower reaction times) for color and appearance-related words. Hence, information processing was hindered following the muscular ideal video. Overall, idealized images can undermine men's cognitive processing which may explain and inform existing cognitive-psychological knowledge. Fortunately, an autonomous motivation orientation can protect men from experiencing the deleterious cognitive effects above and beyond one's level of controlled motivation.

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Beyond Fighting Fires: Exploring What Motivates Firefighters to Volunteer as Physical Activity Coaches in Their Community

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Introduction. The motivational reasoning to engage in voluntary work has been studied extensively with a range of motives that span a multifaceted combination of altruistic, egoistic, and social motives that vary over time. Altruistic motivation has been studied across many disciplines of psychology and philosophy with reasoning for altruistic behaviour ranging from self-interest, moral stage development, the expression of an authentic self, along with basic needs satisfaction. The positive effect of beneficence on wellbeing has also been shown to be mediated by the satisfaction of basic psychological needs of autonomy, competence, and relatedness (Martela & Ryan 2015). It is therefore of interest to explore volunteering motives in professionals for whom altruism is central to their operational duties, such as full-time firefighters.

Methods. This study employed a cross-sectional qualitative design with a convenience sample of participants ($n=18$). Semi-structured interviews were employed covering themes such as: Do firefighters differentiate between assisting at operational incidents versus helping in a volunteering role? What are the prominent values of the person? Does the phenomenology of being a firefighter affect people's desire to volunteer? Is the fulfilment or thwarting of psychological needs important to promoting altruistic behaviours? Interviews were audio recorded, transcribed verbatim and then analysed using hermeneutic phenomenological thematic analysis (Ho et al., 2017).

Results. Following qualitative investigation this study explored what motivates firefighters to engage in prosocial and altruistic activity with a number of themes being uncovered, including: altruistic behaviours being authentic to a sense of self or personal identity, a personal value of giving something back to the community as a part of their being. Exposure to situations in which people were perceived as being in need (i.e. witnessing social deprivation) appeared to enhance motivation to persevere with volunteering. In terms of basic psychological needs, autonomy support and relatedness with close work colleagues were perceived to be important for volunteer retention. A lack of perceived competence within the volunteering role led to cessation of volunteering activity for some participants.

Conclusion. Despite altruism being a key characteristic in being a firefighter, this study found that firefighters displayed various autonomous motives for volunteering, along with supporting previous SDT research regarding the importance of needs fulfilment and volunteer motivation. Further research should be directed towards identifying needs-supportive strategies that might be employed within the fire service to encourage greater volunteering recruitment, retention and flourishing of the individual.

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Educators' value-based practice in basic level secondary vocational education: their thinking and doing when guiding the development of students' sustainable and responsive craftsmanship

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Professionalization of educators in vocational education is an important topic in Dutch education policy. Especially at the basic level of Secondary Vocational Education and Training (basic SVET), a pedagogic approach is needed as students often have problems such as a lack of motivation, complex background and/or learning disabilities. Educational researchers have identified the emphasis of Dutch policy on evidence-based education as an obstacle for the professionalization of educators. Instead, they promote a focus on the values of education. Consequently, bringing the values of educators into account is an explicit part of a PhD research in two fields of basic SVET in the North of the Netherlands: *Car Mechanics* and *Assistants in Care and Welfare*. Unique in this Participatory Action Research (PAR) is the collaboration between supervisors from the work setting and teachers, both 'educators'. In the study, narratives and focus group discussions were used to redress educators' value-based basic level professional secondary vocational practice, by asking the following questions, based on Imelman (2017): Which students (who) should learn which content (what)? The findings showed the diversity of students in basic SVET. Educators described challenges of students such coping with a complex background and insufficient interpersonal skills. The question about the learning content showed that the students mainly need interpersonal skills such as 'evaluation of their practice', 'adequate communication', and 'solution focused instead of problem focused'. An inductive analysis of the focus groups showed the importance for educators to collaborate and reflect together. The reciprocal focus on the values of educational practice generated relatedness between the educators from both practices and was considered essential to build a meaningful learning environment for students at basic SVET. This is in line with the finding of Stroet (2014): team practice supports the development of students' motivation. Furthermore, the study confirmed the importance of need support of relatedness with students by educators, especially for those students with a lack of confidence or trust in adults. Finally, the chosen methodology of PAR proved to be helpful in redressing educators' value-based basic level professional secondary vocational practice and autonomy in guiding the development of students' sustainable and responsive craftsmanship.

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Validation of learning motivation measure Patterns of Adaptive Learning Scales (PALS) in the Czech Republic

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The focus of this presentation is to describe adaptation of the PALS questionnaire (Midgley et al., 2000) in the Czech Republic. In current research the relationship between goal orientation and parenting styles was tested. The original Czech questionnaire (ÁĀĀp, Boschek, 1994) was used to establish parenting styles, emotional relationship and directivity in both mother and father. Several scales for determination of goal orientation from the PALS questionnaire (teacher, student and parent scales) were used. Exploratory scales for Dissonance Between Home and School and Neighbourhood were also administered. The data were collected from elementary school students in 7th, 8th and 9th grade that referred about their perception of parents' parenting styles and goal orientation of teacher, parents and their own.

The results show the need to modify performance-approach and performance-avoidance items in the manner that would better reflect language and culture differences. The relationship between goals and parenting styles per se was found only in exploratory scale Dissonance Between Home and School. However, the results on partial scales of emotional relationship and directivity show that low emotional relationship of mother and father and directivity in general were correlated with performance goal orientation. Similarly, positive emotional relationship of both mother and father was correlated with mastery goal orientation.

This indicates it is more reliable to examine aspects of parenting styles than parenting styles themselves to determine the relationship with goal orientation. Czech students also did not differentiate between performance-approach and performance-avoidance goal. It is then crucial to formulate items in these scales more precisely for Czech semantics and school environment which is more oriented on ego goals rather than task goals. The next step is to design parallel validity research of the PALS questionnaire with findings above integrated and make it useful tool for schools and teachers to assess their classes and adapt their approach accordingly to facilitate self-regulatory and internalization processes of their students.

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An exploration of the relationship between professional autonomy and the holistic well-being of Irish primary principals

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In Ireland, Catholic bishops are patrons of 90% of the state's 3,300 primary schools. Each school is governed by a Board of Management (BOM) with the local bishop controlling the appointment of half of BOM members including the Chairperson, a role traditionally reserved for the local Catholic parish priest, who holds a second and casting vote on all governance and school management decisions. Principals (headteachers) report highly individualistic relationships with their Chairpersons and widely differing skill sets of BOM members, resulting in widespread devolution to principals of BOM tasks (Drea & O'Brien, 2002). This combination of low decision-making power, a burgeoning workload and ongoing accountability to the BOM, creates a stressful work environment where principals experience low job control combined with high work demands. Within this unique model of school governance, the Economic and Social Research Institute (ESRI) found that education sector employees have the highest levels of work-related stress, anxiety and depression (SAD) in the Irish workforce with managers neither knowing how to measure nor address these work-related illnesses (Russell et al, 2016). This research aims to determine whether the application of self-determination theory (SDT) will identify the work environment of Irish primary principals as being adequately supportive of their holistic well-being and their need for professional autonomy, competence and relatedness satisfaction. It represents the first use of SDT in an Irish educational context and will provide a means of measuring levels of workplace motivation/ amotivation in principals as well as current levels of SAD. Principals' opinions on the viability of this historic denominational patronage model in modern day multi-denominational Ireland will also be explored. The research will follow a sequential explanatory design, with initial online surveying of principals in November 2018 (n=300), from which emergent themes will subsequently be explored by in-depth interviewing of principals in spring 2019 (n=30).

Following data analysis, results will be available in April 2019. It is postulated that this study will provide evidence that the application of SDT can satisfy the ESRI recommendation to education managers of finding a means of monitoring and addressing the incidence of SAD in this highest-risk category of workers.

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Students' authenticity and its influence on dropout inclinations of disadvantaged youths as mediated by psychological basic needs

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Introduction

This study explores students' authenticity (i.e., self-awareness, transparency, internalizing perspective, and balanced processing of information) and its influence on dropout inclinations of disadvantaged youths (i.e., regular school attendance, academic achievements, discipline, and social orientation). The present research suggests that the effect of students' authenticity on the dropout inclinations operates through mediating variables that are related to the fulfillment of the students' psychological needs (i.e., competence, relatedness, and autonomy) and contribute to lowering dropout inclinations. This argument is based on the Self-determination Theory (STD), according to which the fulfillment of basic psychological needs cultivates intrinsic motivation (Deci & Ryan, 2000). While other studies explore the theory of authenticity in business organizations, the present study expands it into the educational field and proposes a unique model that emphasizes the connection between the students' authenticity, their motivation, and dropout rates.

Methods

The quantitative research was based on the participation of 183 students (aged 12-18) from Second-Chance Programs for Youth in Israel. The hypotheses of the study were tested by mediation analyses. Indirect effects were tested by a bootstrapping approach (Hayes, 2013).

Results

The main research findings indicate that the effects of two (students' self-awareness and balanced processing of information by students) of the three elements of students' authenticity on three (regular attendance, discipline, and social orientation) of the four dropout inclinations are mediated by the fulfillment of the students' psychological needs.

E.g. analyses revealed two significant indirect effects of students' self-awareness on discipline with 95% confidence intervals: through autonomy and competence (indirect effect $-.17$; CI $[-.368, -.080]$) and relatedness (indirect effect $-.08$, CI $[-.203, -.009]$), and one significant indirect effects of students' self-awareness on social orientations with 95% confidence intervals: through relatedness (indirect effect $-.09$, CI $[-.239, -.017]$).

Discussion & Conclusion

The findings indicate that developing students' authenticity is an important mission, necessary for the fulfillment of their psychological needs, which helps decrease dropout inclinations. The main contribution of the research is in presenting and exploring a coherent model that outlines the effect of students' authenticity on their dropout inclinations through the fulfillment of their psychological needs.

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A Visual Guide to Deeper Learning: How Self-Determination Theory Suggests a Causal Model for Education

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The majority of K-12* students and teachers in the USA are disengaged according to Gallup (Gallup, 2017; Hasting & Agrawal, 2015). This pattern of widespread disengagement suggests that learning in K-12 is mostly shallow and fake rather than deep. Facilitating deeper learning is an antidote to K-12 disengagement, but deeper learning needs a solid theoretical foundation before it will become more widely accepted and pursued as a viable goal by policy makers. SDT provides just the theoretical foundation that deeper learning needs.

Classroom and school management is often conceived of as the ability to boss students and teachers around, as in a command and control model, where a teacher's job is to command the children to take delivery of academics. Management practices in K-12 schools and classrooms are also sometimes conceived of as forms of behaviorism that unsophisticated practitioners may reduce to a system of rewards and/or punishments. In education parlance these behaviorist applications are labelled with trademarked phrases that refer to "Positive Behavior." A teacher is expected to manipulate the children into taking delivery of academics. When these types of management practice are pervasive then according to SDT, they are likely to produce patterns of motivation that are less than optimal due to the emphasis on external and introjected forms of motivation. This is consistent with the Gallup data on disengagement.

The model of psychological functioning supported by SDT is, at least partly, inconsistent with the models that are typically associated with the above mentioned management practices.

The poster will present four comics that explain the default assumptions of the discredited delivery model of learning plus explanations of shallow, fake, and deeper learning using a causal model for learning based on SDT. With a visually compelling image of how deeper learning works, practitioners and policy makers can better understand how to make use of the findings of SDT research and eventually make headway against the disengagement problem.

* Primary & secondary school

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The Effects of Students' Perceived Autonomy and Mastery Goal Orientation on Flow in Biology Lessons

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Abstract

According to self-determination theory (SDT), three basic psychological needs are innate to every human: *autonomy*, *competence*, and *social relatedness* (Deci & Ryan, 2000). In educational settings, the need for *autonomy* is regarded especially important. The perceived satisfaction of students' need for *autonomy* is expected to have an impact on the development of intrinsic motivation (Deci & Ryan, 2000). *Flow* is a complementary form of intrinsic motivation that is assumed to be beneficial for students' learning (Deci & Ryan, 2000). It is characterized by its holistic sensation that includes the merging of consciousness and action (Deci & Ryan, 2000). Furthermore, the perception of *autonomy* constitutes an important condition for *flow* experiences (Deci & Ryan, 2000). Goal orientations might have an impact on student's *flow* experience in class, too (Elliot & Church, 1997). Three dimensions of goal orientations are described in achievement goal theory: *mastery*, *performance-approach* and *-avoidance* goals (Elliot & Church, 1997). Generally, individuals with *mastery* goals want to acquire competence or new skills (Elliot & Church, 1997). In contrast, individuals who want to demonstrate their abilities or hide deficits exhibit *performance-approach* or *-avoidance* goals (Elliot & Church, 1997). Particularly, *mastery* goal orientation is attributed to self-determined motivation and achievement in school (Elliot & Church, 1997). *Flow* as intrinsic motivation quality might therefore not only be dependent on the degree of individual *autonomy* experiences but also on his or her *mastery* goal orientation.

In the current study, 196 students had a three-hour teaching unit dealing with the topic of nutrition and digestion. To examine students' goal orientation, their perceived *autonomy*, and their *flow* experience, we used validated scales for the assessment of learning and performance motivation, and adapted versions of the questionnaire 'perceived self-determination questionnaire' and the 'flow short scale'. With a multiple linear regression, we investigated the three aforementioned dimensions of goal orientation and perceived *autonomy* as predictors of *flow*. Our results show that students' perceived *autonomy* and their *mastery* goal orientation are predictors of their *flow* experience. Therefore, teachers should consider students' need for *autonomy* and their *mastery* goals to ensure intrinsically motivated learning.

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Know your why - Promoting autonomous learning in higher education with a utility-value intervention

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Moving along the continuum of behavioral regulation towards more autonomous forms of motivation is associated with beneficial academic and motivational outcomes in education (Ryan und Deci 2017). We investigated how a utility-value intervention implemented in the course curriculum might support behavioral internalization in terms of Self-Determination Theory. Students were asked to reflect about ways in which course contents will be useful for the job that they are preparing for. We hypothesized that the intervention will allow students to become more autonomously regulated when studying course contents. According to previous applications, we also expected improved academic achievement in the experimental group, especially for students with poor baseline performance (Canning et al. 2017). To test the hypothesis an experiment was conducted with $n = 159$ teacher trainees (female = 113, male = 38, age = 27.96, $SD = 5.66$) following a graduate course about research methods and statistics for teachers at a German university. Students were offered four learning progress tests (LPT) throughout the semester. Tests were administered online and the intervention preceded each test. The first test served as a baseline measure, the fourth test as a performance measure and students received course credit for passing the fourth test. In the experimental condition prior to each test students were asked to reflect on how course contents can be useful for their future job as a teacher. In the control condition they simply summarized the course contents. Results indicated that students in the experimental condition perceived the course as more useful, reported a higher autonomy satisfaction, stronger intentions to adopt course contents in the future and more autonomous motivation. We did not find a main effect for the experimental condition on academic achievement. However, a significant interaction with baseline performance emerged. This suggests that the academic performance of students with lower performance on LPT1 improved in the experimental group compared to the control. Findings suggest that the opportunity to connect course contents with meaningful applications in the future seems to be beneficial for motivational quality and associated with improved academic performance for low performing students.

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How do executive managers navigate an educational innovation: dealing with an existing social-cultural context and supporting teacher agency

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Introduction: Executive managers in Higher Education fulfill a complex facilitating role when implementing new educational programs in an already existing social-cultural context because they are the gate keepers between policy and implementation. The purpose of this study is to understand how executive managers deal with conflicting pressures that hinder the achievement of teacher agency in order to better support these managers in implementing an educational innovation. Departing from the OIT, we focus in this research on how executive managers facilitated the support of teacher agency by looking at facilitating social-contextual factors to support self-determination (Deci, Eghrari, Patrick, & Leone, 1994; Pelletier, Séguin-Lévesque, & Legault, 2002). Our research questions are: What is, according to executive managers, the rationale for implementing an honors program in their Higher Education institution?

What opportunities and barriers do executive managers face when supporting teacher agency?

Method: Fifteen semi-structured interviews were conducted with executive managers of 6 Dutch Universities who were responsible for the implementation of honors programs. The analysis was based on four constructs: *rationale*, *institutional policy*, *curriculum policy* and *work culture* and the coding followed the phases of open, axial and selective coding. The constructed typologies were opportunities and barriers for supporting teacher agency.

Results: The results showed that executive managers clearly described the rationale of this innovation consisting of four reasons: an ambitious learning environment, tailor-made education, teacher development and community building. This contributes to the internalisation of self-determination. Nevertheless, the faced conflicting pressures came from different policies and a more complex work culture which limited the facilitation of supporting self-determination. The possibilities to support teacher agency facilitated by the executive managers were teaching in the classroom and the composition of teacher teams.

Discussion and conclusion: In summary, it appears that limited support of self-determination in this context is primarily affected by both policy-related and work culture related pressures. Being aware of these present barriers in an innovative implementation will help executive managers to take a well-considered decision in their gate keeper role between the consequences for teacher agency when focussing on policy or on implementation.

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The motivation for learning foreign languages and perceived self-efficacy among Ukrainian students enrolled in courses at the Pedagogical University of Krakow.

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There is a growing number of incoming students from Ukraine, who undertake studies at Polish universities. However, their motives to learn, as well as academic and language skills vary across the entire (inflowing) population, and thereby pose considerable challenges to teaching academics. In order to ensure positive educational outcomes, we seek to recognize students' motives for learning, in particular, for acquiring the Polish language.

Self-determination theory offers an in-depth understanding of students' motivation not only in a variety of educational contexts but also across cultures. Numerous findings have indicated that intrinsically motivated students show greater effort and persistence, learn better in particular on tasks requiring conception understanding, and report increased perceived competence and cognitive pleasure (e.g., Niemiec & Ryan 2009, Noels et al. 2000). On the other hand, extrinsically motivated students might learn for attaining external rewards, or social approval, meeting requirements, avoiding shame, or the attainment of valued outcomes (Ryan & Deci, 2017).

This study aims to examine students' motivational orientations to learn foreign languages, in particular, the Polish language, and their perceived self-efficacy. The research is to be conducted in the first half of December 2018. The participants are Ukrainian students enrolled in geography and political science courses at the Pedagogical University of Krakow. Polish adaptations of Language Learning Orientations – Intrinsic Motivation, Extrinsic Motivation and Amotivation Scale (Noels, Pelletier, Clement and Vallerand, 2000) and Generalized Self-efficacy Scales (Schwarzer, Jerusalem, Juczynski, 2000) will be applied in the study. The findings are expected to provide valuable insights into students' motives for learning foreign language and their perception of self-efficacy, and as a result, offer practical implications for teaching faculty to ensure successful learning outcomes.

Keywords: foreign language learning, motivation, self-determination theory, self-efficacy

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Mastery in the foreign language classroom: Growth in self-efficacy

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Language learning is one of the most demanding tasks that students engage in and poses a great number of challenges. According to SDT, humans have a natural drive towards mastery (Deci & Ryan, 2017), but many students struggle to experience this when studying language, which is often marked by failure to achieve relatively basic levels of communicative competence.

This presentation discusses two studies conducted in a Japanese context, attempting to determine factors that may influence feelings of mastery with regard to language learning. Both studies were longitudinal and conducted in tertiary educational contexts in Japan. A measure of English speaking self-efficacy (SE) was developed and used in both studies. The first study attempted to determine individual difference variables as predictors of change in SE during the academic year. Hierarchical linear modeling was used to assess the model for growth, and English proficiency and extraversion were added as potential predictors of change. Results showed that all students experienced growth in self-efficacy, but proficiency was the only significant predictor, and had a negative relationship with SE growth. The results, in line with SDT theory, show that in order to experience growth in feelings of mastery, students need to be challenged, and then to experience success. Offering students experiences of success alone is not enough.

The second study attempted to determine the impact of a pedagogical intervention on changes in SE. Two groups of students were randomly assigned to a Task-Based Language Teaching (TBLT) or Present, Practice, Produce (PPP) approach. These are the two most widely used approaches to language teaching today. TBLT deep-ends students in tasks, and then provides feedback and support to encourage success in future tasks, while PPP gives students to necessary tools prior to the language task. Again, student SE was measured throughout the year, and assessed for growth. Although all students in the study experienced significant growth in SE, students in the PPP condition experienced greater increases in feelings of mastery, suggesting that at least in this context, students have a preference for language teaching that prepares them more thoroughly for the task ahead. The two approaches had no significant impact on changes in language proficiency during the year. The findings are discussed in the context of language learning in Japan, where after initial enjoyment and motivation to study (Oga-Baldwin et al. 2017), university entrance exams ensure that students often expect to fail in tertiary communicative language classrooms.

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Relationship between educational environment, fulfilment of basis psychological needs and motivation of pharmacist trainees in workplace-based education.

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Introduction

Research has shown that autonomous motivation for learning and academic performance are associated with satisfaction of students' basic psychological needs (BPN) for autonomy, competence, and relatedness. Studies in medical education show that the educational environment plays an important role in the motivation of students and in determining the degree to which education prepares them for independent practice.

The authors hypothesize that, in workplace-based education, the influence of the educational environment on the motivation of trainees is mediated by fulfilment of the BPN. This study investigates the relationships between the experienced educational environment, needs satisfaction and frustration, and the academic motivation of pharmacist trainees using Structural Equation Modeling (SEM).

Methods

The study is carried out in the Netherlands with pharmacist trainees in a 2-year postgraduate workplace-based education programme specializing as community pharmacists.

Between November 2017 and October 2018, pharmacist trainees were asked to fill in three questionnaires: (1) The SPEED (Scan of Postgraduate Educational Environment Domains) to measure the educational environment based on Moos' theoretical framework for human environments (15-items), (2) The 'BPN Satisfaction and Frustration Scale for the Work Domain' (24-items), and (3) the Academic Motivation Scale (24 out of 28 items, excluding amotivation). The reliability of the measurements, the factor structure and the relationships between educational environment, basic psychological needs and the level of autonomous and controlled motivation will be analyzed through SEM, using SPSS v24 and MPlus, respectively.

Results

A total of 200 out of 232 pharmacist trainees participated in this study, which resulted in a response rate of 86%. Currently, the data are being analysed. The results of this study will show if the educational environment has a direct effect on the motivation of trainees and/or an indirect effect through the fulfilment of the BPN.

Discussion & Conclusion

The outcomes may be used to improve the educational environment in workplace-based education. The results, discussion and conclusion will be updated in the abstract in March 2019.

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Theorizing the effects of unsolicited guidance on self-determination within the environment of Self-Directed Education

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This study theorizes how unsolicited guidance or advice given to children by adults might affect a child's autonomous motivation. In order to develop a theoretical framework for the effects of unsolicited guidance, I draw on my experiences in "Self-Directed Education" (SDE) in the context of a self-governing democratic school (Gray, 2017). In conventional schools, students are socialized to comply with adult direction, thereby motivated by adults rather than listening to their own inner voices. Autonomy support in a conventional school is constrained by the limitations of curricular requirements and by compulsory attendance. Elements of control in educational settings undermine the relatedness of teacher and student and affect the natural desire to learn (Niemi & Ryan, 2009). These authors write how constraints lead not to intrinsic motivation, but lead at best to "integrated motivation" in which students participate in endorsed activities.

In contrast, self-governing democratic schools provide a unique environment with which to study the role of unsolicited guidance or advice in the adult-child relationship, because students are free to spend their time in any pursuit they choose, as long as it does not break the agreed-upon rules of the school. In particular, students who have transferred from a more conventional teacher-directed environment to a self-governing democratic school need time to build trustful egalitarian relationships with adults. Professionals working in self-directed democratic schools often describe a shift towards self-initiated activities and the acceptance of pursuits that are not necessarily enjoyable or interesting (Niemi & Ryan, 2009), which they refer to as the transition time.

In this paper, drawing on my personal observations of student-adult dynamics in democratic schools in combination with Self Determination Theory, I present a model to theorize why adult unsolicited guidance tips the scales in this transition time towards controlled motivational regulation behavior. This framework could serve as a model for further research into the area of SDE in self-governing democratic schools and may explain in more detail the observed motivational behaviors of students in educational settings elsewhere.

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Does Learner-Centered Teaching Improve Relatedness and Perceived Autonomy? An Intervention Study among Undergraduate Engineering Students.

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Learner-centered teaching methods (LCTM) such as active learning and cooperative learning shift the focus of activity from the teacher to the learners. Past research has found learner-centered methods to be superior to the traditional teacher-centered approach to instruction in measures of motivation, confidence and enthusiasm. However, little is known about the relation between LCTM and basic psychological needs such as relatedness and autonomy. Accordingly, the aim of the current study was to examine whether LCTM is predictive of relatedness and perceived autonomy among Norwegian university students. A total of 438 undergraduate engineering students, primarily in their first year, participated in the study. The students attended introductory courses in mathematics and statistics, and completed a self-reported questionnaire in one of the lectures during the teaching period. The Learning Climate Questionnaire short version and the Psychological Sense of School Membership (PSSM; Goodenow, 1993) were employed to measure autonomy and relatedness, and in addition demographic variables such as gender and student category (i.e. traditional/nontraditional student) were included. In addition, information about the teaching methods and academic achievement of the students were obtained. The study followed a quasi-experimental design, where the five involved classes ranged between 79 and 120 students in terms of size. In the experimental group (n=263), learner-centered teaching methods were adopted and involved use of electronic response systems. In the control group (n=175) traditional teacher-centered approach to instruction was employed. Hierarchical Logistic Regression analysis showed that both teaching methods and the basic psychological needs: relatedness and autonomy was associated with academic achievements. In addition, student category and gender were central in explaining relatedness. Somewhat surprisingly, the study also found that the measures of relatedness and autonomy changed independent of teaching methods. The authors discuss the importance of educators' fostering relatedness and autonomy among students as they transition to university.

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Fixed mindset predicts preservice teachers' intentions to enact controlling teaching: a preliminary analysis

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Introduction

The current study aims to test if preservice teachers' (PSTs') fixed mindset (i.e., the belief that students' intelligence is fixed) predict their intentions to enact autonomy supportive and controlling teaching beyond the effects of beliefs about these two teaching approaches (i.e., whether they are effective and easy to implement). Examining PSTs' beliefs should be a central concern of teacher education (Levin, 2015). PSTs are generally not practicing yet, their intentions most closely mirror their practices in the future. To prepare future teachers who are ready to engage in actual autonomy support practices, it is vital to study PSTs' autonomy support intentions, and to help them develop adaptive beliefs contributing to such intentions. SDT suggests a most important predictor of autonomy support is beliefs about autonomy support (Reeve, 2009; Reeve et al., 2014). Sparse recent studies (e.g., Kingma et al., 2015) have found mindset as another predictor, but this link needs further testing.

Methods

PSTs (N=108) at a large Midwestern university completed a survey in fall 2018. Survey measures included (a) a scale on teachers' mindsets with items framed as fixed mindset (Shim et al., 2013); (b) scenarios of autonomy supportive and controlling teaching approaches, and follow-up questions on beliefs about and intentions to enact these two approaches (Reeve et al., 2014). Hierarchical multiple regressions were used for data analyses. Mindset and beliefs about teaching were IVs, intentions of teaching were DVs.

Results

Fixed mindset remained significant in its positive effect on intentions of controlling teaching ($\beta = .208, p < .05$), even after controlling beliefs about teaching approaches, accounting for an additional 3.5% of variance (model $R^2 = .342$). It did not significantly predict intentions of autonomy supportive teaching although these two constructs were significantly negatively correlated ($r = -.338, p < .001$). Additionally, beliefs about controlling teaching significantly positively predicted intentions of controlling teaching ($\beta = .531, p < .05$), but did not predict autonomy supportive teaching; beliefs about autonomy supportive teaching significantly negatively and positively predicted intentions of controlling teaching ($\beta = -.245, p < .05$) and autonomy supportive teaching ($\beta = .538, p < .05$) respectively.

Discussion & Conclusion

Results supported our hypotheses. Mindset has additional value for our understanding of the mechanisms underlying autonomy support, above and beyond the beliefs about teaching practices examined by previous research. It has practical implications for training PSTs to teach in an autonomy supportive way for their future students.

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The effects of environment-based education on students' basic psychological needs and academic self-regulation

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Although a time-stable construct, children's academic intrinsic motivation typically declines as they progress through formal education (Gottfried, Fleming, Gottfried, 2001). Because of its relationship to perceptions of competence, learning, and achievement, as well as other affective outcomes, sustaining academic intrinsic motivation is key to reversing the concerning trend of declining academic achievement in the United States. According to self-determination theory (SDT), satisfaction of three basic psychological needs (autonomy, competence, and relatedness) supports students' internalization and development of self-regulation and intrinsic motivation. The current study uses this lens to investigate the influence of environment-based education (EBE) on secondary students' basic psychological needs and academic self-regulation. While literature suggests that EBE uses pedagogy that would foster satisfaction of the basic psychological needs (Lieberman, 2013), there is not yet research that examines SDT in the context of EBE. Seventy students in grades six through twelve from five Midwestern U.S. high schools participated in the study. Data collection is currently occurring through the 2018-2019 school year, with six months of existing environment-based education programs serving as the treatment. Students' scores on the *Academic Self-Regulation Questionnaire* (SRQ-A) and the *Need Satisfaction and Frustration Scale* (NSFS) assess students' academic self-regulation and basic psychological needs, respectively. Collectively, these scales measure the extent to which EBE may aid in the development of key components necessary for sustaining academic intrinsic motivation. Data triangulation will occur through student interviews. Data for each grade level will be analyzed using a split plot ANOVA. In order to further analyze the effects of multiple years of participation in an EBE program, correlational analyses of post-test scores will be used to examine the relationship between years of participation and each of the outcome measures. To control for variance, gender and race/ethnicity will serve as covariates in this analysis. Given the paucity of research on the effects of EBE on SDT constructs, this research has the potential to contribute an example of a concrete educational methodology through which to meet the needs of various secondary students in order to elicit and sustain self-regulation and ultimately academic intrinsic motivation. Gottfried, A. E., Fleming, J. S., Gottfried, A. W. (2001). Continuity of academic intrinsic motivation from childhood through adolescence: A longitudinal study. *Journal of Educational Psychology, 93*(1), 3-13. Lieberman, G. A. (2013). *Education and the environment: Creating standards-based programs in schools and districts*. Cambridge, MA: Harvard Education Press.

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Instructional Matters: Purdue's Academic Course Transformation (IMPACT) program systematic review

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The Instructional Matters: Purdue's Academic Course Transformation (IMPACT) program is guided by self-determination theory (Deci & Ryan, 1985). The purposes of this paper are to synthesize the quantitative and qualitative evidence of the effectiveness of IMPACT transformation and to guide future research regarding course transformation in IMPACT in higher education. In total, there are currently 19 published journal articles, two articles in revision for publication, and nine articles under review regarding IMPACT. The scope of the topics in IMPACT varied and the course transformation was applied to various study contexts and disciplines. Most studies had been conducted within the science, technology, engineering and math (STEM) field.

Overall, 19 studies were concerned with the active learning teaching methods or pedagogy involving online learning, flipped format, interactive learning, cooperative learning and formative peer evaluation. Depending on the disciplines, the type of course intervention was varied and included online lectures, online tutorials, simulations, use of social media, writing exercise, cooperative learning, etc. Assessment measures were used in various ways to assess students' learning gains and to examine students' perceived learning environments, motivation to learn, and the degree of satisfaction of their basic psychological needs. The most common measures were the course exams, the IMPACT students' perception survey and the online university sponsored course evaluation.

Research demonstrated that the attempts to redesign the course have been effective in promoting students' performances and motivation. Much empirical evidence supports the course redesign demonstrating a positive impact on students' learning experiences, such as motivation, satisfaction of basic psychological needs, which in turn promote knowledge transfer, and academic performance. However, when faculty implement course redesign and use new way of teaching and technology, they should consider contexts and purposeful objectives more than technology and implementation should be done carefully with specific intention (Morris & Parker, 2014). Moreover, students' characteristic should be taken into consideration when implementing course redesign. Additionally, in order to measure solid results after intervention, course assignments and measurements should be guaranteed at least standard content validity and reliability. A couple of suggestions for future studies are discussed.

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Morris, R.C., & Parker, L.C. (2014). Examining the connection between classroom technology and student engagement. *Journal of Teaching and Learning with Technology*, 3(1), 1-15.

P-162

Self-determination theory and its possible implications on effectiveness of a social-emotional learning program

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The purpose of this presentation is to explore the possible roles of self-determination theory in explaining the conditions that would facilitate positive outcomes of a social and emotional learning (SEL) program which aims for promoting well-being and positive psychological development of Chinese adolescents in Hong Kong. From the perspective of the self-determination theory, new initiatives and changes in a school organization is more feasible to happen only when all members of the school value and internalize its importance (Deci, 2009). Basing on the self-determination theory, it is proposed that factors operating in teachers' level, such as whether their psychological needs of autonomy, competence, and relatedness are fulfilled, and their emotional competence may affect the effectiveness of the SEL program implementation. More specifically, teachers' psychological needs of autonomy, competence, and relatedness may affect their readiness to adapt to the changes associated with the educational initiatives, and therefore affect the effectiveness of the implementation of SEL program. When the psychological needs for autonomy, competence, and relatedness of teachers are supported, it would facilitate internalization of values of SEL and integration of SEL in their teaching practices and daily interactions with students. The social and emotional competence of teachers would influence the teacher-student interactions and the quality of implementation of the SEL program. If teachers have better social and emotional competence, they are more likely to provide an emotionally supportive classroom environments for students.

Following the arguments in self-determination theory, its implications on school and educational policy making in school settings would be discussed. It is argued that both up-to-bottom and bottom-up processes of change within the school system are vital, and the two processes of change are complementary to each other to bring out the intended benefits of SEL. Therefore, the development and implementation of SEL should be accompanied by school-based policies to build positive school culture and classroom climate, and to foster the trust between different stakeholders of the schools. It calls for the support from the school leadership and school management to value the importance of SEL, and to formulate school policies to support the teachers' psychological needs for autonomy, competence, and relatedness. Lastly, some of learning activities that teachers may use to facilitate the basic psychological needs of students with the use of self-determination theory would be proposed.

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P-163

Investigating the potential of using video as a tool for reflection to develop an environmental approach to promote the self-determination of students with autism in Post-16 Special Education

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Introduction: Self-determination has been gaining increasing attention in recent decades as an educational outcome, and can be defined as 'choosing and enacting choices to control one's life – to the maximum extent possible – based on knowing and valuing oneself, and in pursuit of one's own needs, interests and values' (Campeau and Wolman, 1993, p. 2). Previous research shows that self-determined individuals with autism have better post-school outcomes and increased quality of life, by being equipped with the skills and abilities to exert control over their lives.

Theoretical framework: The study is based on Bronfenbrenner's bioecological model of human development, which recognises the importance of the relationship between behaviour and environment, and the significance of research in context. This will be supported by self-determination theory which assumes that specific social-contextual factors can support or hinder the development of the tendency to form relationships, and can lead to an array of outcomes, 'ranging from a relatively active and integrated self to a highly fragmented and sometimes passive, reactive, or alienated self, as a function of social-environmental conditions' (Ryan and Deci, 2002, p. 5).

Methods: My study will involve an emerging participatory action research design, which will be structured in three phases involving different tools of data collection, in an all-age specialist school for students with autism. The first phase involves 10 semi-structured interviews with teaching staff and parents, semi-structured observations of the Post-16 curriculum and a document interrogation of the existing Post-16 curriculum. The data collected will be used to inform the second phase, which will consist of a survey with the teaching staff, parents and students within the school. The data from the first two phases will be used to develop the environmental approach, along with the staff and students, using video as a tool for reflection.

Initial findings: The study is at the beginning of the data collection process, but an initial phase reveals that staff and parents recognise the importance of self-determination and its promotion within the school setting. A need has been highlighted to help staff recognise how best to support students develop their self-determination, which will be addressed in the last phase of the study.

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P-164

Examining self-determined motivation of rural students to cross cultural boundaries: A qualitative study of rural pre-service teachers engaging in diverse conversations at a large university

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Introduction: Although there is a broad range of research on the resistance of university students to participate in diversity classes, there is little research on how rural students experience diversity at large universities. Research in this area is important, as rural students' compatibility with the academic environment is crucial to their experience of higher education (McDonough, Gildersleeve & Jarsky, 2010). Examining the self-determination of rural pre-service teachers' engagement in diversity discussions at a large university is a crucial step in advancing diversity education.

How do rural pre-service teachers experience diversity discussions at a large university?

Methods: I conducted a phenomenological study to examine the essence of College of Education (COE) students' experiences with diversity conversations at a large Midwestern university. I purposefully sampled five pre-service teachers from rural backgrounds: three females and two males. I audio recorded semi-structured 30-45 minute interviews. I also analyzed over 100 pages of interview transcripts, field notes, and artifacts. Four processes were blended throughout the study: collection, constant comparison, coding, and analysis (Strauss & Corbin, 1990).

Results: Participants showed low levels of engagement in diversity discussions on campus, namely when they perceived a lack of competence, relatedness and/or autonomy. Students lacked experience interacting with diverse backgrounds or handling topics dealing with racial/ethnic/sexual/political differences; they were fearful of appearing incompetent before the teacher and peers. For example, one student stated, "for fear I was going to say something that is out of the social norm." Students reported a lack of relatedness: "It became a Black versus White group in this class." Further, students reported that they lacked autonomy to express themselves honestly, which thwarted participation in classroom discussions. For example, students stated: "There was definitely a right or wrong answer", "Yeah, I got oof, BRUTALIZED for that opinion", and, "I learned how to walk on eggshells."

Conclusion: Current courses that claim to foster positive attitudes toward diversity may be undermining those attitudes among rural pre-service teachers. According to SDT, in order to support our rural students to develop a strong cultural competence, we must create an autonomous environment where students feel they belong and are not afraid of appearing incompetent. Teacher education will improve when students feel a sense of safety to express personal opinions. Further, acknowledging the self determination of this population should result in interventions that would motivate rural students to cross cultural boundaries, resulting in better prepared teachers.

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predicting academic performance in a sample of at-risk youth: a longitudinal study

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Background

Early school leaving remains an issue of great concern for the Dutch government. In the long-term, early school leaving constitutes a tremendous waste of potential, for individual, social and economic development. This study reports on an educational institute specifically for youth without qualifications, who cannot return to regular education due to multiple problems (e.g. debts, delinquency, unstable living situation, behavior problems, and addiction). The institute offers these disadvantaged youth an integral program including education, learning on the job, and 24/7 individual counseling.

While there is ample research now available demonstrating the effects of need supporting behavior, basic psychological need satisfaction/ thwarting on motivation and academic performance (e.g. Standage, Duda & Ntoumanis, 2005), few researchers have collected data using the framework of the SDT among at-risk youth. The purpose of this study was to explore teacher behavior, need satisfaction/ thwarting, motivation and academic performance among disadvantaged youth. This population is of special interest, since psychological needs are more likely to be thwarted compared to general populations (e.g. Cordeiro, Paixão, Lens, Lacante & Sheldon, 2016) and conditions supporting the individual's experience of autonomy, competence, and relatedness are thus of great importance in order to promote well-being and positive (academic) development.

Methods

We will test our hypotheses using a longitudinal design. Eighty-two participants (aged 15-26) completed a questionnaire, resulting in a high response rate for these types of populations, i.e. 79%. The questionnaire included measures of teacher involvement, provision of structure and autonomy support by teacher, need satisfaction/ thwarting, and motivation. We will combine the survey data with school records regarding academic performance up to one year after the survey.

Originality

This study can provide support for the SDT and may offer new insight into the application of the framework to enhance our understanding of motivational processes related to school performance of disadvantaged youth.

References

Cordeiro, P., Paixão, P., Lens, W., Lacante, M., & Sheldon, K. (2016). Factor structure and dimensionality of the balanced measure of psychological needs among Portuguese high school students. Relations to well-being and ill-being. *Learning and Individual Differences*, 47, 51-60.

Standage, M., Duda, J. L., & Ntoumanis, N. (2005). A test of self-determination theory in school physical education. *British Journal of Educational Psychology*, 75(3), 411-433.

P-166

Using self-determination theory to facilitate career-discernment with adolescents of diverse backgrounds in an out-of-school learning environment

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Introduction

United States out-of-school learning (OSL) has increased, however the number of programs for teens aged 13 through 18 remains limited (Table 1). Research indicates successful OSL programs for adolescents is much different than those for younger children and program failure is typically due to lack of participant interest. The complex nature of adolescent development indicates older youth need programs that provide different and varied purposeful content from those for elementary youth with the traditional focus of safety, supervising, and studying. These unique complexities and self-determination theory are applied to the creation of programming that facilitates adolescent career discernment and their becoming in an environment of community out-of-school.

Method

A literature review of quantitative and qualitative research studies was conducted examining the programming and experiences of teen participants in OSL environments for grades 6-12. The role of community, schools, and adults in the success of the program was noted. Adolescent engagement, self-determination, and career discernment were also criteria. All studies were grounded in research methodologies and passed a peer-reviewed evaluation process. The ERIC database, University of Pittsburgh Libraries, and Google Scholar were researched. Further review of referenced sources of related material were searched by hand to identify additional studies or those repeatedly referenced.

Results

Critical appraisal of research provided criteria for use in the design of teen programming in an OSL environment where framework flexibility allows for extensive interactions, modeling of behavior and trial-error experimentation by teens.

Discussion and Conclusion

Deci and Ryan's focus on the adolescent's need for environmental autonomy, demonstrated competence, and sense of relatedness/connectedness are shown to be critical determining factors for adolescent engagement in the learning process (2000). "Learning for the future" (Dawes & Larson, 2011) allows for exploration and fosters teens' development of peer/adult relationships and communication skills. Creating a personal sense of purpose and tying it to a future goal while experimenting in an autonomous supportive environment creates the opportunity for real engagement and deep learning. From these defining elements, successful programming for teens of this post-Millennial generation can be designed.

Table 1: 2017 State Policy Survey, The Forum for Youth Investment

References

- Dawes, N. P., & Larson, R. (2011). How youth get engaged: Grounded-theory research on motivational development in organized youth programs. *Developmental Psychology, 47*(1), 259–269.
- Deci, E. L., & Ryan, R. M. (2000). The "What" and "Why" of Goal Pursuits: Human Needs and the Self-Determination of Behavior. *Psychological Inquiry, 11*(4), 227–268.

P-167

Trigger Warnings in the Classroom: Autonomy Concerns as Predictor and Outcome

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Recent years have seen professionals in higher education battle over trigger warnings (TW), typically depicted as warnings given to students by instructors about sensitive topics. Public discourse surrounding the issue tends to focus on the effect of TW on student mental health, academic freedom, and learning; however, there is little agreement about how to accomplish these goals, how TW fit into the equation, and strikingly, what even qualifies as a TW. The present research aims to examine just one possible psychological function of TW – to provide students with autonomy as to how they handle difficult material as well as to signal autonomy support in the classroom more generally. In a content analysis of both general and academic online news sources addressing TW and in a lab study examining how different types of TW impact student anxiety, learning, and course and instructor perceptions, I examine (a) how autonomy concerns are related to instructor attitudes about the use of TW, and (b) how types of TW shape student perceptions of instructor autonomy support. The present study is designed to address two key limitations of the existing work: first, to distinguish amongst different types of TW when considering the impact on student learning and experiences; and second, to examine TW using the most relevant sample, undergraduate students with a range of prior experiences with trauma and mental illness. Preliminary analyses of the content analysis indicate that instructors (as compared to journalists and administrators) who are generally in support of the use of TW are more likely to cite concerns with student choice and freedom to justify support than are those generally against the use of TW. Implications for the effective use of TW in the classroom (or not) will be discussed.

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Using teacher feedback on formative assessments to improve student motivation

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Introduction

If we want to increase student achievement through bolstering intrinsic motivation, what teachers say matters. Just as stickers, money, or other such incentives have a limited shelf life for motivating students, so does verbal or written feedback - particularly evaluative type A or B (Tunstall & Gipps, 1996). As a practitioner-researcher, I will present my theory of teacher feedback influence on students' self-constructs of motivation (Deci & Ryan, 2000) as a guide for how teachers provide feedback to students.

Methods

The purpose of the grounded theory study was to determine how teacher feedback on formative assessments influenced early adolescent students' motivation along the SDT continuum by attempting to note changes in sense of autonomy, relatedness, and competence. Four teachers and 30 of their students in grades five and six participated. I observed and interviewed all participants. Students also completed the PCS and SRQ-A questionnaires before and after receiving feedback.

Results

After coding interviews and focus groups, several themes emerged, such as: defining feedback, evaluating the effectiveness of feedback (teachers) and the impact of feedback (students). Ostensibly teachers used feedback to regulate behaviors, set social norms, inspire or encourage students, and to provide strategies to guide them in understanding, completing, and evaluating their own work and learning. However the influence of teacher feedback on students' motivation depended on the type of feedback the teacher used consistently and the teacher's working definition of feedback. Students felt greater competence and sense of relatedness when descriptive feedback was used regularly. Although evaluative type B feedback fostered some sense of competence it also resulted in student demotivation.

Discussion and Conclusion

These findings suggest teachers need to clearly define what mastery is and how it will be measured. Likewise, educators need to use a common conceptualization of feedback to better assist students in their understanding and pursuit of mastery. When our language is more universal and descriptive, we can perhaps use feedback to help students learn how to evaluate and correct their own work. As students evaluate their work, we may find they experience a sense of autonomy and competence, that ultimately yields more intrinsic motivation.

Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11, 227-268.

Tunstall, P., & Gipps, C. (1996). Teacher feedback to young children in formative assessment: A typology. *British Educational Research Journal*, 22, 389-404.

P-169

Evaluating learner's autonomy in an elective bachelor course on pain: students' perception on openness

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Introduction

Autonomy is one of the cornerstones of Ryan&Deci's self-determination theory. Learner's autonomy is often linked to freedom on what to study, how to study and/or when to study. In this respect students need to be given opportunities to explore their own learning goals and learning needs and experience openness within a learning environment.

For this reason, we have developed a multidisciplinary, small-scale bachelor course on pain with autonomy-supportive elements that consist of reflective writing assignments, group discussions and group meetings without supervision, and individual coaching activities (e.g. virtual voucher). The main course objective was defined as follows: after completion of the course students should be able to approach biomedical topics from multidisciplinary angles. This objective was assessed by an individual written assignment in which three out of five perspectives were integrated in a topic of choice.

The overall aim of this study was to evaluate the students' perception of the course, and specifically the experience of openness within the course.

Methods

For this study, both qualitative and quantitative data were collected. The qualitative data were collected via a free-form written reflective assignment on the perception of the course, and more specifically the openness of the course. The quantitative data were collected via the institutional on-line course evaluation and via the free-form written assignment.

Results

In this year's course (2018-2019), 39 out of 40 students were actively involved in the course. The institutional course evaluation revealed an overall appreciation of the course of 7.6 ± 1.0 (scale 1-10, response rate: 39%). This resembles the overall appreciation of 7.8 ± 0.95 (scale 1-10, response rate: 95%) that was obtained from the free-written reflective assignment. Moreover, the study showed that 78% students appreciate the openness of the course, although 46% of these students indicated that they disliked it at the beginning.

Discussion & conclusion

We succeeded in developing a small-scale course with autonomy-supportive elements that students appreciate. Approximately half of the students coped with the discomfort situation on openness in that they turned from disliking it to appreciating the openness of the course. This was probably due to the set-up of the course and/or autonomy-teaching strategies of the teacher involved in this course. These autonomy teaching strategies consisted of empowering students by having vivid discussions during and after lectures, giving feedback on reflective assignments, and coaching students whenever they found it necessary.

P-169A

Lacking motivation or learning silently? Motivation and participation of medical students in small group learning activities

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Background Studies have linked student participation in small group active learning activities to desirable outcomes like motivation and grades, and to the development of knowledge, skills, and personal attributes. Stimulating participation is dependent on a complex interplay of not only student factors, but also to teacher behaviours, course designs, and educational cultures and policies. However, when teachers fail to receive a response from students after prompting them for participation, they often and easily attribute this silence to a lack of motivation.

Silence in the classroom can be a sign of low motivation and participation. Silence can also be consistent with high motivation and participation, when students are paying attention or engaging quietly with a question. In fact, one recent study showed that silent students learned as much as their vocally participating counterparts in a classroom in which a culture of active participation was well-established.

As medical schools increasingly use small group active learning, we need to expand our understanding of participation.

Project2.1 Aim

This project aims to contribute to our understanding of student participation in small-group active learning within the medical curriculum by exploring how motivation is connected to different ways of participation.

The research questions are:

Why do students speak up or stay silent in small group activities?

Do students with different types of motivation participate in different ways in small group activities?

2.2 Methodology

Video-Stimulated Recall (SR) is an extensively used research method in education, and uses video recordings of behaviour to stimulate participants' recall and reflection on critical moments. We will record tutorial group meetings, select fragments showing participation, and ask students to reflect on their behaviour in individual interviews. We will also ask students to fill out the Learning Self-Regulation Questionnaire (SRQ-L) to determine their type of motivation. The video recordings themselves provide observational data, which we will use to rate and assess the nature of the participation of students. Triangulating data from the interviews, questionnaires, and observations allows us to explore connections between types of motivation, reasons for (non-)participation, and the nature of student participation.

2.3 Outcomes

We will understand why students choose to participate (or not) in small group learning activities, and to differentiate between types of participation. This will improve achievement of desirable participation-related outcomes. We will disseminate our findings through publications, conferences, and workshops.

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The Unexpected Downside of Paying or Sending Messages to People to Make Them Walk

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People do not exercise as much and as regularly as they should. To support users in adopting healthy exercise routines, app designers integrate persuasive techniques in their apps. In this study, we focus on two of these techniques: offering tangible rewards and sending motivational messages to users. Past research has demonstrated the effects of these techniques in nudging recipients to increase their physical activity levels. However, the effect of these interventions on the intrinsic motivation of the participants has not yet been studied. We conducted a seven-month intervention involving 282 participants: a four-month intervention (experiment) and a three-month follow-up (post-phase). The participants were randomly assigned to one of three conditions; either they receive money (through a fix incentive or a lottery) or informative messages. Their daily goal was to walk 10K steps. Through their smart phones, we recorded how many steps they walked every day. These interventions had a detrimental effect on the main outcome variable (i.e., the number of steps) and even on their intrinsic motivation, measured through a standardized questionnaire. This negative effect extended into the follow-up period. Our study reveals that tangible rewards and motivational messages decrease the intrinsic motivation of the participants, hence their connected physical activity. In our findings, we highlight the importance of intrinsic motivation in setting up healthy exercise routines that will be carried on autonomously by the participants after the period of the intervention. Finally, we present implications for the design of persuasive apps.

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The importance of broad self-regulatory skills at multi-locational knowledge work - introducing a new questionnaire instrument

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Purpose: Along with the growing complexity of the digital, physical and social work environments employees are faced with increasing demands in managing their own work and the psychological resources available. Multi-locational knowledge work requires substantial employee autonomy and new kinds of self-leadership skills, also regarding the use of mobile surroundings and digital tools. However, measures for studying the various ways in which employees proactively manage their resources with behavioral, cognitive and emotional strategies are lacking. This study presents a theoretical foundation and an empirical pilot on a scale for measuring broad self-regulation at knowledge work.

Methodology: 202 participants from 2 large public organizations from Finnish metropolitan area responded to a questionnaire. The questionnaire consisted of 22 items measuring behavioural self-regulation, cognitive-emotional self-regulation and self-regulation regarding recovery. Confirmatory factor analysis was conducted. Differences between subgroups were examined with independent samples t-test and MANOVA. Correlational analyses were conducted to examine relations to established scales on workplace wellbeing (work engagement, burnout, workaholism).

Results: The initial three-factor model specified according to the theoretical background fit the data well, and after eliminating five cross-loading items the fit further improved. Minor statistically significant differences were found between certain gender, organization and job position groups. Correlational analyses indicated expected relations to established scales on wellbeing.

Limitations: This study is an opening to an unexplored ground. Despite the promising results the scale should further be developed by rephrasing of some of the items, including the cross-loading items, as well as confirming the results with several representative samples.

Implications: The results imply that it is purposeful to measure the self-regulatory skills of knowledge workers with this scale. Further, on the organizational level it is relevant to support the development of these skills and develop interventions in order to do that.

Value: This study offers new understanding and a practical tool to approach current challenges of working life. It operationalizes the topical questions of how to study and support proactive employee functioning in growingly complex physical, digital and social surroundings.

Selected references:

Hutchins, E. (2000). Distributed cognition. *International Encyclopedia of the Social and Behavioral Sciences*, 2068–2072.

Vartiainen, M., & Hyrkkänen, U. (2010). Changing requirements and mental workload factors in mobile multi-locational work. *New Technology, Work and Employment*, 25(2), 117-135.

P-172

Becoming a Gamer Girl: Assessing the Role of Need Supportive Social Groups in Female Gamer Avidity

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In online gaming communities, women often encounter need-thwarting social interactions including gender-based attributions of lower skill, and harassment. This has been demonstrated to activate stereotype-threat responses including less identification with the gaming community and lower perceived gaming ability, yet there is evidence that these affects may be partially ameliorated in women who are part of supportive online gaming communities (Richard & Hoadley, 2013). The current research applies a Self-Determination Theory framework to the issue by assessing need satisfaction in both male and female gamers who play the popular skill-based third-person shooter Fortnite. Specifically, we looked at the extent to which male and female gamers experience need-supportive online gaming interactions and the effect this has on their gaming avidity. In addition, we also looked at additional factors such as the frequency and type of need-thwarting experiences encountered by each gender.

Richard, G.T., & Hoadley, C.M. (2013, June). Investigating a Supportive Online Gaming Community as a Means of Reducing Stereotype Threat Vulnerability Across Gender. Paper presented at The Games, Learning, and Society Conference, University of Wisconsin-Madison, Madison, Wisconsin (pp.261-266). Pittsburgh, PA: ETC Press.

P-173

'That's how it works, and I like it': interactions between trainees and the clinical environment that stimulate trainees' motivation.

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Working and learning in complex workplaces increases the need for trainees to stay motivated (1), which can impose challenges. Little is known about how trainees deal with challenging work environments, and the different aspects of the clinical environment, besides social aspects, that support trainees' motivation. This knowledge is necessary to empower trainees to navigate through postgraduate training. Therefore, in this study we aim to understand how the clinical environment influences trainees' motivation and how they are both intertwined.

We employed a drawing method called Rich Pictures to elicit interviews. As a methodology, we used constructivist grounded theory (2). Fifteen trainees drew a rich picture, i.e., a visual representation, of a motivating situation in their training and were interviewed afterwards. Data collection and data analysis were performed iteratively, using open, focused, and selective coding strategies, as well as memo writing.

Trainees drew situations about tasks they enjoyed doing and that really mattered for their learning or for patient care. Four dimensions of the environment were identified as sources of trainees' motivation, either directly or through optimisation by trainees. First, the social dimension, including interpersonal relationships, supported motivation through close collaboration between healthcare professionals and trainees in relation to their learning. Second, the organisational dimension, including processes and procedures, supported motivation, for example, when providing trainees with learning opportunities or when trainees were able to influence their work schedule. Third, the technical dimension, including tools or artefacts, supported motivation, for example, when a supervisor sent a text message to a trainee with valuable feedback or when trainees used specific instruments in their training. Finally, the physical dimension supported motivation when the physical workplace improved the atmosphere or when trainees could modify their learning environment, for example, by closing curtains, which helped them to focus.

In conclusion, trainees are intertwined with their clinical workplaces. This study confirms the importance of the social dimension, but also uncovers other dimensions that matter in supporting trainees' motivation and basic needs. We suggest supervisors to optimise learning circumstances in all dimensions to support trainees' needs and motivation to learn and practice. Additionally, trainees need to become more aware of these dimensions so that they can make their needs more explicit.

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(2) Charmaz. Constructing grounded theory. Sage; 2014.

P-174

Motivations of village water committees: examining the role of strength-based approaches in rural Malawi

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Aim

This research uses self-determination theory (SDT) to analyse the motivation and autonomy-support for volunteer water point committees (WPCs) in Southern Malawi. Village-based WPCs manage and maintain water supply across rural Malawi. WPC motivations are important, only 66% of Malawi's rural population have basic access to water. WPCs are typically responsible for water tariff collection, maintenance and repairs of mechanical hand-pumps. However, WPC motivations and the influence of government and donor interventions on motivations is poorly understood.

WPC motivations and autonomy-support were analysed in a non-government organisation (NGO) water program. A strength-based approach (SBA) framed the NGO's engagement with over fifty communities between 2011 and 2016. SBAs are an emerging participatory practice in international development (i.e. aid), used to drive bottom-up social change. They focus on strengths inherent to people and place; it is argued this supports internal motivation. However, the lack of literature and theory associated with SBAs has hindered analysis of motivation claims.

Method

A mixed-methods approach was used to collect data, including interviews with WPC members, community leaders, water users and NGO staff across five communities. Interviews were analysed using SDT constructs. WPC members also completed modified SDT questionnaires on self-regulation, competency and the autonomy-support climate.

Findings

There were three significant findings concerning WPC motivations. First, on balance, members described autonomous reasons for participating in the WPC. These included leadership opportunities and a desire to sustain water for their own and other's benefit. Second, SBA activities supported the autonomy of participants. The SBA process supported community's identification of development priorities which included water. By contrast, WPCs' and leaders' resented previous instances where NGO priorities were 'imposed'. Third, WPCs had a sense of perceived competency in managing water. Initially, this was supported through training and an SBA process which identified existing community 'competencies' – namely resources, skills and past successes. However, with time, competency was hindered by limited on-going management and financial support from government and NGOs.

Conclusion and Recommendations

On balance, WPCs were autonomously motivated. This suggests NGO interventions should start by recognising and supporting existing, autonomous WPC motivations, and avoid the imposition of an external agenda. The Malawi case showed SBAs are one means to guide such an approach. Further application of SDT is recommended to analyse WPC motivations in different socio-cultural contexts and evaluate if and how different NGO practices support and inhibit WPCs' autonomous motivations.

P-175

Motivation for adherence to medical treatment among individuals with schizophrenia living in a rehabilitation center: application of the self determination theory perspective

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Adherence to medical treatment is considered an essential means for alleviating symptoms and enhancing the recovery processes of people with schizophrenia. However, poor adherence to medical treatment is such a common phenomenon that only about 50% of the administered treatment for schizophrenia is actually taken as prescribed. Research has shown that inconsistent adherence to prescribed medication regimens is related to various health care costs such as poor psychosocial functioning, unnecessary changes of medication, and continual re-hospitalization. In spite of that, there is limited success in health care research and policy interventions to reduce the phenomenon and enhance adherence to medications among people with severe mental illness.

The current study is unique in its attempt to use an integrative model to explore motivation for medication adherence among people with schizophrenia, capturing the interplay between the individual's subjective needs and the treatment environment, as conceptualized from Self-Determination Theory (SDT) perspective (Ryan & Deci, 2017).

Ten participants living in a post-hospitalization rehabilitation center (RC), were interviewed. A theory-driven approach - the Self-Determination Theory (SDT) - was adopted. SDT supplied a framework by which to explore how motivational dynamics are shaped by participants' perceptions of their needs for a treatment environment supportive of their competence, relatedness and autonomy.

The findings indicate that in contrast to the participants' past hospitalization experiences, the RC experience brings about a growing recognition of their basic needs and concerns regarding the medical treatment. Participants described the RC as including autonomous regularities leading to a growth in autonomous motivation for adhering to medical treatment. Specifically, taking medication was no longer perceived as a controlling act forced upon them by medical staff, but rather as a necessary, valuable step on their way to recovery.

The findings of this study highlight treatment environment's major role in shaping the motivation for medication adherence among people with schizophrenia. Identifying participants' perceptions of changes experienced in the transition from hospitalization to the RC may provide mental health service providers with deeper understanding of the factors that positively influence medical adherence. Implementing them may facilitate the ability to enhance motivation for medical adherence of patients by designing more autonomy-supportive practices and treatment environments.

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P-176

A training intervention to enhance nurses' competencies for self-management support through an ABC lens

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Introduction. Patients living with a chronic illness need to be empowered to take the lead in managing their condition. Nurses lack confidence and skills to adequately support patients towards self-managing their illness. The aim of this study was two-fold: (1) to systematically develop an Self-Determination Theory-driven training intervention to enhance nurses' competencies for self-management support (SMS), and (2) to test the feasibility, acceptability and usefulness of the training.

Methods. The training intervention was developed according to the Utrechts' model for development of complex nursing interventions (Van Meijel *et al.*, 2004). In phase one, the building blocks for the design were gathered through a systematic literature review on effective components to train competencies for SMS; a current practice analysis among hospital ($N=323$) and home care ($N=154$) nurses, as well as among final-year nursing students ($N=256$); and a need assessment by a grounded theory study. In phase two, the training intervention was designed using the 5A's-model (Glasgow *et al.*, 2003) and the Self-Determination Theory (Deci & Ryan, 2000). Five experts were involved in the process. Phase three consisted of a pilot evaluation on the feasibility, appropriateness, and meaningfulness among the participants (focus group) and the trainers. From a teach as you preach principle, elements of A(utonomy), B(elongingness), and C(ompetence) were incorporated in the didactical methods. A first enrolment of the training has been evaluated by an interdisciplinary group of employed care providers who participate as students in a primary care study trajectory.

Results. A first enrolment of the theory- and use-feedback driven training intervention has been successfully welcomed by an interdisciplinary group of employed care providers. The broader theoretical frameworks and the time to practice autonomy-supportive communication were most appreciated by participants. Moreover participants spontaneously recognize the ABC building blocks of the training and evaluated these ABC building blocks as core elements of the intervention.

Discussion & Conclusion. We developed a multi-faceted training, which takes into account participants' learning needs to provide self-management support from an ABC-standpoint. The method of development led to a theory- and user-feedback driven training intervention. A first evaluation revealed that participants not only appreciated the way the training helped them to support the autonomy of their patients but they also valued the ABC-elements that were incorporated in the didactical methods. In a next step the effectiveness of the intervention on nurses' competencies will be evaluated.

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The Importance of quality clusters for GPs' motivation and treatment behaviour

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Systematic quality improvement has been on the policy agenda in general practice for many years and several improvement strategies have been developed. However, large scale implementation has often been difficult. Some strategies attempt to influence GPs' motivation and behaviour through financial incentives or regulation based on quality standards, while other rely more on bottom-up mechanisms where groups of GPs drive the quality improvement process based on their own assessments of needs and opportunities.

In Denmark, it has been decided to phase out the accreditation program in general practice and introduce a new national frame for quality improvement based on professional collaboratives named clusters. A recent study on the accreditation program, which most GPs experienced as a tool for external control, showed that intrinsic motivation was crowded in among accredited GPs perceiving the program as a tool for quality improvement (1). Furthermore, a study found associations between motivation and treatment behaviour(2) among GPs in Denmark.

Based on self determination theory and motivation crowding theory, as well as recent evidence in the field, we expect the GPs' perception of the cluster program as either supportive or controlling to be of importance for change in the GPs' motivation and thus for changes in treatment behaviour.

Aim The overall aim of this study is to analyze the introduction of clusters' importance for the GPs' motivation and treatment behaviour.

Methods The study will employ a mixed methods design. Interviews with GPs will address early experiences with the cluster program and form the basis of a nationwide questionnaire sent to all GPs twice during implementation. The questionnaire will comprise items on GPs' motivations, preferences and barriers to participate in clusters. Finally, we will perform a register study including selected quality indicators to examine changes in treatment behaviour and associations with GP motivation and attitudes to the cluster program.

Results The project will contribute with knowledge about how a cluster program is associated with motivation and treatment behaviour in general practice.

Presentation Hypotheses and design of the project as well as preliminary results from the qualitative interviews will be presented at the conference.

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P-178

Exploring the role of need supportive behaviours on relationship satisfaction and well-being in adults with spinal cord injury and their spouses.

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From the moment an individual sustains a spinal cord injury (SCI), their life and the lives of those around them are changed forever. Despite having no formal training in caregiving, spouses play an essential role in helping their partner with an SCI manage their day-to-day needs. The burden and stress associated with providing care can often lead to increased relationship dissatisfaction and ill-being. Research under the Self-Determination Theory (SDT) framework suggests that engaging in autonomy-, competence-, and relatedness-supportive interpersonal behaviours is essential for promoting success in caregiving and romantic relationships and promoting positive outcomes (e.g., coping, satisfaction), while preventing negative outcomes (e.g., anxiety). The benefits of receiving need supportive behaviours are well documented; however, the process of engaging in these behaviours may also be associated with increased positive outcomes (La Guardia & Patrick, 2014). As such, the purpose of this study was to explore the role of supportive interpersonal behaviours between adults with SCI and their spouses, with the objective of understanding how both engaging in and being the recipient of these behaviours contributed to the well-being and satisfaction of both partners. A sample of 6 adults with SCI and their spouses participated in a dyadic semi-structured qualitative interview together, as well as an individual follow-up interview. A qualitative approach was selected since it is flexible and allows participants to elaborate on what they feel is most important. Furthermore, dyadic interviews are ideal when researchers want to capture both social interactions and the depth of a relationship. In both interviews, participants were asked about their personal experiences and feelings about the challenges they have faced together, as well as the strategies they used to support each other.

The interviews were transcribed verbatim and a thematic analysis was conducted using Braun and Clark's framework to identify instances of autonomy-, competence-, and relatedness-supportive behaviours. Preliminary results suggest that need supportive behaviours are related to relationship satisfaction for both partners. Specifically, helping their partner regain autonomy through shared experiences and improving confidence is essential to the well-being of a spouse of an adult with an SCI.

The findings from this study were the first to examine the specific interpersonal behavior styles used by adults with SCI and their spouses using SDT. Additionally, this was the first study, to our knowledge, to use dyadic interviews in the context of SCI or SDT in order to better understand the dynamics of these interpersonal relationships.

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A motivational account for the employee satisfaction - customer satisfaction relationship

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Introduction

A substantial stream of research has shown that the relationship between employee satisfaction and customer satisfaction is more complex than initially assumed. Paying attention to how customers and employees interact from a need fulfilment point of view may shed light on this complexity. We identify basic need satisfaction, as defined in self-determination theory, from frontline employees and customers as an important source of customer satisfaction. We model customer demands and resources as antecedents of frontline employees' need satisfaction and test the associations of the need satisfaction of frontline employees on customers' need satisfaction and subsequent customer satisfaction.

Methods

We opted for an analysis at the individual level and collected dyadic data in business-to-business environments from frontline employees and corresponding customers. We used scales based on WBNS (1). We used structural equation modelling to test our hypotheses.

Results

Results showed a positive relation between frontline employees' need satisfaction and customer need satisfaction and subsequent customer satisfaction, suggesting that frontline employees' need satisfaction associates with customer satisfaction through customer need satisfaction. Customer demand related negatively to the need fulfilment of the employee, while customer resources associate positively with the need fulfilment of the employee.

Discussion & Conclusion

Our research shows that the influence of need fulfilment can be extended beyond the individual him- or herself and has implications for professional relationships in the service context. First, by establishing the relationships between the employee and customer need satisfaction, we emphasize the importance of need satisfaction in the relation between the customer and the supplier, and the frontline employee in particular for customer satisfaction. Second, our research suggests that this need satisfying process is influenced by customer behaviour. Our findings suggest a causal chain: the customer behaviour influences the need satisfaction of an employee, which influences the service and subsequent need satisfaction of the customer, which then influences the customer satisfaction. Longitudinal research is necessary to confirm this causal path.

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P-180

Being Gentle with a Rental: Fostering Autonomous vs. Controlled Motivation for Treating Carsharing Vehicles with Care

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“Don't be gentle, it's a rental” – this saying summarizes the wide-spread attitude we tend to have towards objects we don't own. Indeed, the tendency to mishandle company property is particularly pronounced for access-based services such as carsharing (Schaefers et al., 2016). This claim is further substantiated by reports from carsharing operations, which describe instances of customer misbehavior ranging from failures to report caused damages to cases of racing/drift. Such misbehavior negatively impacts the carsharing operators both via direct costs and contagion effects (Schaefers et al., 2016).

While some studies have examined the role of motivation in carsharing customers' behavior (Bassemir, Koof, & Büttgen, 2016), no research has yet addressed the question, how the internalization of the “appropriate” behavior can be enhanced. This study seeks to close this gap by analyzing how environmental factors can be shaped in a way that enhances (vs. impedes) internalization. It is hypothesized that targeted contextual cues with informational (vs. controlling) functional significance lead to the satisfaction of basic psychological needs, resulting in higher levels of autonomous self-regulation and, ultimately, more benevolent behavior towards the carsharing operator and its vehicles.

A field experiment is devised to test the related hypotheses in the existing US carsharing business of a German automobile manufacturer. The study includes one manipulated factor (contextual cue, implemented as a sticker with one of five text options, placed visibly in the car), as well as a number of measured outcome variables (e.g. number and severity of damages, driving style indicators), and is planned for a duration of 3-6 months, starting in January 2019.

Although no empirical evidence is available yet at the time of writing, this study promises to provide novel insights into the elements of the environment that enhance or impede customers' autonomous motivation for benevolent behavior towards the carsharing operator. In addition to possible cost reductions in business operations, such findings could be generalized to other customer communications both within the carsharing context (e.g., marketing campaigns), as well as outside of it (e.g., donation requests of a non-profit).

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P-181

How Effective is a Self-Determination Based Model of Therapeutic Support for Adults with ADHD?

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Introduction

Attention Deficit Hyperactivity Disorder (ADHD) is currently one of the most prevalent and highly debated mental disorder diagnoses. Current ADHD treatment produces effective short term outcomes only, and is focused on an 'illness model' developed from cognitive theories of motivation. This approach may unnecessarily pathologise the ADHD cognitive process, reinforcing a negative cycle of self perception and negative long term outcomes.

Purpose

It is hypothesized that a more inclusive positive approach to ADHD treatment will improve long term self management. A brief self-determination based intervention through Contemporary Psychotherapy was designed to integrate a biological understanding of difference and perception of self to treat low self-esteem and self-efficacy with comorbid anxiety and depression in adults with ADHD.

Material/Method

A Hermeneutic Single Case Efficacy Design (HSCED) analysis was performed with pre- and post- symptom measurement using the Weiss Functional Impairment Rating Scale Self Report (WFIRS-S) and Beck Depression Inventory (BDI-II). Weekly performance measures were gathered throughout treatment, as well as a qualitative client description of experience of process and change, with 1 year follow up.

Results

After 11 sessions, the client had a statistically significant reduction in WFIRS-S from 92 to 73, and on BDI-II from 23 to 12. This significant change was demonstrated qualitatively in the client's perception of ADHD and integration of ADHD within the context of self. The client demonstrated improvements in self awareness, self management and confidence in designing supportive solutions.

Conclusions

Contrary to traditional methods that focus on disability and impairment, self-determination based therapeutic coaching was effective in improving self esteem, self efficacy, anxiety and depression comorbid with ADHD, and continued to be effective at 1 year of follow-up.

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An exploration of how motivation from a self-determination theory perspective impacts the therapeutic change process

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A common issue in the field of counseling psychology involves facilitating treatment engagement for clients in therapy and minimizing premature termination of mental health services (Barrett et al., 2008). This study examined self-determination theory as a theoretical framework to integrate into practice to facilitate client motivation and engagement in the change process; thereby, reducing the likelihood of drop out. The two major aims of this study were to validate the *Adapted Precursors for Therapeutic Change* (APTC) assessment and to examine the relationship between motivation, from a self-determination theory perspective, and readiness for change. Participants were recruited through Amazon Mechanical Turk (MTurk) and included individuals 18 years of age or older who are currently in therapy or considering participating in therapy or psychological services ($N = 369$).

This was a quasi-experimental study which utilized the *Client Motivation for Therapy Scale* (CMOT) to assess motivation, APTC to assess precursors for change, the *University of Rhode Island Change Assessment* (URICA) to assess stage of change, and a brief demographic form to assess possible group differences. The adapted quantitative self-report version (APTC) of the qualitative *Precursor's for Therapeutic Change* assessment was constructed based on the four steps outlined by Furr (2011). All materials were completed by participants on Survey Monkey and analyzed with IBM SPSS (2017). Principal Component Analysis indicated the APTC is a valid measure of readiness for change. Canonical Correlation examining each motivation orientation and precursors for change indicated significant patterns of relationships. Multiple Regression analyses demonstrated motivation orientations to be significant predictors of readiness for change for the *Precursors for Change* model and *Stages of Change*. A Profile Analysis illustrated stage of change to predict group membership based on motivation orientation and precursors for change. Specifically, internal motivation orientations and increases in precursors for change were demonstrated over later stages of change (e.g. *Action*) in comparison to early stages (e.g. *Precontemplation*). Overall, the results from this study demonstrate the importance of motivation from a self-determination theory perspective in the therapeutic change process, particularly in initiating and engaging in treatment. Additionally, results indicated the predictability of motivation on readiness for change, where clinicians can utilize this information to intervene with clients in a way that promotes internalized motivation orientations that encourage the change process.

P-183

Using Self Determination Theory to explore young people's experiences of acute adolescent mental health inpatient care. A qualitative study.

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Background: Young people come into acute adolescent mental health inpatient care at a point of considerable distress with high needs and a high level of risk. There is very little research to guide the day to day interactions of inpatient care. The evidence base supporting Self Determination Theory has the potential for application to acute inpatient care.

Aims: This qualitative study aimed to explore young people's experience of acute mental health inpatient care through the lens of relatedness, autonomy and competence.

Method: We interviewed fifteen young people. We initially analysed the transcripts openly and then via template analysis using relatedness, autonomy and competence as templates.

Results: Young people identified the importance of relatedness with staff, other young people and families. They described loss of autonomy associated with admission as a negative experience but appreciated opportunities to be involved in choices around their care and having more freedom. Coming into hospital was associated with loss of competence but they described building competence during the admission. They identified safety as important and some indicated that feeling connected to staff, having choices and being able to engage in activities contributed to an experience of safety.

Conclusions: This study supports the application of Self Determination Theory to the provision of acute mental health inpatient care. This provides an evidence base to guide everyday interactions such as how to get young people out of bed, respond to self harm, develop and implement rules. This may contribute to their experience of safety. This has specific application for inpatient care but also underlines the importance of attending to potentially therapeutic aspects of engaging young people in activities and interpersonal contact outside specific psychotherapy and counselling sessions.

P-184

A case study on motivation in young football players in a technological self-directed learning based approach

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Nowadays there is a considerable growth on football studies, both in the professional field and in the training of young players.

Traditionally, sports training or teaching has been focused on the game. Currently, many proposals are centered player due to the fact that each person assimilates technical or tactical concepts in a different manner. Passion and motivation are determinants for learning. Hence, if the main point is the player over the game, we must work to make the process personal and motivating.

The objective of this research is to find out what happens when a training activity is based on self-directed learning that uses the image technology, the social network and takes the Self Determination Theory (Deci & Ryan, 2000) as a reference to designed it. In other words, the aim is to check whether an approach that gives players responsibility and decision-making power over tasks (autonomy); that seeks to improve self-confidence in their abilities (competence); and that foster the relationship and inclusion within the group (relationship), generates more motivation.

A case study developed during 8 weeks in a football training academy (18 Kuwaiti players, aged 11-13, M= 11,6; DT= 1,13) is presented. Groups of three players were formed, from three different levels of competence. A set of cooperative skill challenges was developed, analyzed and validated by experts. The players chose freely and tried to achieve them. This instrument was designed in the shape of video clips executed by players of similar ages and managed through an internal social network.

Information has been collected through filming, field notes, structured interviews, a 6-point Likert scale to know their level of initial and final perceived competence, the Task and Ego Orientation in Sport Questionnaire (TEOSQ) at the beginning and final and an ad hoc questionnaire to assess the degree of satisfaction of the activity.

The results indicate: players improved their skills (competence) and perceived competence; players are more focused on the task rather than the ego and; and finally, the most competent players are willing to help those who initially perceive them as less skills competent.

According to this case study, using a self-directed learning approach fosters players' intrinsic motivation by generating pro-social behaviors and an improvement of the competence.

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P-185

A basic psychological needs perspective on experiences of older adults with a blended exercise intervention

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Introduction

Physical activity is vital for wellbeing. It can prolong the older adults' ability to live independently at home. Exercising sufficiently is, however, challenging. A focus group study revealed that older adults already participating in weekly group-based exercise programs are willing to increase the exercise frequency, if they can perform the exercises safely in the convenience of their own homes. To meet those requirements, a blended exercise intervention was developed that supports older adults to follow a tailored home-based exercise program that is delivered by a tablet and a personal coach.

Methods

From the older adults that had been participating at least 6 months in the blended intervention, 17 participants were randomly selected for a semi-structured interview that lasted approximately 45 minutes. The transcripts of the interviews were analyzed by a directed content approach. Two researchers independently coded for the three basic psychological needs; competence, autonomy and relatedness. Differences were resolved by discussion with a third researcher.

Preliminary Results

The majority of the participants felt the tablet was easy to operate and needed only a couple of weeks to get used to it. Video's that demonstrated how to correctly perform the exercises were often used as they familiarized themselves with their exercise routine. The weekly schedule gave them a general structure to hold on to.

The ability to tailor the exercise program was highly valued. The personal coach that was appointed to them played a crucial role in advising and motivating the participants, especially in the beginning. After a couple of months they felt, however, this was not needed anymore. Although they enjoyed the social interactions during the weekly group-based exercise classes, in general they rejected the notion of using the tablet to support the social interaction with peers.

Conclusion

The blended exercise intervention appears to meet the basic psychological needs. It increases the competence of older adults to follow an exercise program at home. Video's and a weekly schedule support them to perform the exercises safely. It also facilitates their autonomy by letting them personalize the exercise program. The benefits of a coach decrease over time. Furthermore, relatedness plays an important role. Older adults appear to prefer face to face contact with peers during group-based classes, rather than digitally supported communication. Choosing a blended approach for public health intervention seems promising.

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The role of teachers' autonomy-supportive and controlling behaviour on adolescents' intrinsic motivation in physical education: Test of a conditional process model

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Introduction

Based on self-determination theory (Deci & Ryan, 2017), intrinsically motivated students participate in a physical education (PE) lesson with pure inherent interest and enjoyment. Students' intrinsic motivation may depend on the extent to which the school environment fostered by their teacher is perceived as autonomy-supportive and controlling. In the current study, we tested a conditional process model in a PE context in which students' perceptions of their teachers' controlling behaviour moderated the indirect relationship between perceived autonomy-supportive behaviour and intrinsic motivation via need satisfaction.

Methods

The sample comprised secondary school students ($N = 592$, boys, $n = 278$, girls, $n = 314$) aged between 12 and 15 years ($M_{\text{age}} = 13.58$; $SD = 1.14$). Multidimensional self-reported measures of perceived teachers' autonomy support and perceived controlling behaviour were used with dimensions of cognitive, procedural, and organisational autonomy support and negative conditional regard, intimidation, controlling use of grades, and excessive personal control, respectively. Students were also asked to fill in the measures of perceived need satisfaction and intrinsic motivation. To test the conditional process model, a moderated mediation analysis was conducted using the SPSS PROCESS macro (Hayes, 2013).

Results

As predicted, the effect of perceived teachers' multidimensional autonomy-supportive behaviour on students' intrinsic motivation was mediated by their perceived need satisfaction. Perceived multidimensional controlling behaviour did not moderate this indirect effect. Specifically, higher levels of perceived multidimensional controlling behaviour did not attenuate the positive indirect effect of perceived multidimensional autonomy-supportive behaviour on students' intrinsic motivation through need satisfaction.

Discussion & Conclusion

Our research demonstrated that students perceiving their PE teachers as more autonomy-supportive are more likely to report higher levels of intrinsic motivation even if they perceived their teachers to exhibit controlling behaviours. This is because autonomy-supportive environments offer more opportunities for the satisfaction of basic psychological needs for autonomy, competence, and relatedness. Results of our study highlight the importance of providing autonomy support as it seems to buffer the potential undermining effects of the controlling behaviours on adaptive outcomes in PE. In the light of our findings, future interventions in PE contexts should consider increasing teachers' autonomy-supportive behaviour with the same importance as stemming controlling behaviour to enhance the students' intrinsic motivation.

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P-187

Perceived autonomy support in physical education and adolescents' objectively measured leisure-time physical activity: A trans-contextual model

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Introduction: The trans-contextual model of motivation (TCM) includes aspects from self-determination theory and theory of planned behaviour (TPB). TCM proposes that perceived autonomy support in physical education (PE) predicts autonomous motivation in PE, which, in turn, predicts autonomous motivation and physical activity (PA) during leisure-time (LT; Hagger & Chatzisarantis, 2016). Previous research, however, while explaining the determinants of PA within TCM, has used self-reported PA measures. The aim of the present study was to test TCM using objectively measured LT PA as an outcome.

Methods: A three-wave prospective correlational design was employed. Students ($N = 215$) aged 12-15 years completed questionnaires regarding constructs of perceived autonomy support and motivation in PE. Five weeks later, they answered questions regarding motivation in LT and constructs of TPB. At wave three, another five weeks later, and at wave one to assess past-behaviour, participants wore an accelerometer (ActiGraph GT3X) during seven consecutive days to monitor their vigorous PA in their LT. The structural equation modelling was used to examine the hypothesized relationships among the study variables.

Results: The hypothesized model showed a good fit with the data: $\chi^2 = 40.50$, $df = 25$; $CFI = .98$; $RMSEA = .054$. Students' perceived autonomy support from PE teachers was positively related to their autonomous motivation in PE which was positively related to autonomous motivation in LT. Autonomous motivation in LT was positively related to attitude and perceived behavioural control (PBC), which, in turn, were related to intention. Intention was positively related to objective LT PA. However, when the effect of past-behaviour was controlled, the latter prediction was not significant. Moreover, a significant negative relationship between PBC and PA emerged. The model accounted for 29% of the variance in objectively measured LT PA of adolescents.

Discussion & Conclusion: The results of the current study partially support the applicability of TCM to predict objectively measured vigorous PA of adolescents during LT. Previous research (Hagger & Chatzisarantis, 2016) using self-reported PA measures has shown a significant relationship between intention and PA which was not evident in the current study. The discrepancy of the findings might arise from the different measures used to evaluate PA. Further studies are needed to investigate associations between TCM and objectively measured PA.

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Predicting change in autonomous motivation, intention and behaviour for leisure time physical activity using trans-contextual model

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Introduction

Trans-Contextual Model (TCM) draws from the Self-Determination Theory proposing that physical education (PE) teachers' provision of autonomy support in PE classes has a trans-contextual effect on students' out-of-school physical activity. The aim of the present study was to test hypotheses of the TCM in predicting change over time in model components. We hypothesized that a spontaneous change in school students' perceived autonomy support from their PE teachers would predict change in school students' out-of-school physical activity by the mediation of autonomous motivation, behavioural beliefs (attitude, subjective norm, perceived behavioural control) and intention. Predicting change over time in the TCM constructs accounts to the criticism stating social cognitive constructs of the model being static and not predicting change *per se*.

Methods

Self-report ratings on the TCM constructs were delivered to 248 lower-secondary school students (aged 12-16) applying prospective three-wave correlational design. Residualized change scores were computed for each variable in the proposed model and the scores were inputted to a path analysis testing the model predictions.

Results for change scores

Perceived autonomy support from PE teacher predicted autonomous motivation for school PE ($\beta = .29$) which again predicted autonomous motivation for out-of-school physical activity ($\beta = .40$). Autonomous motivation towards out-of-school physical activity predicted attitude ($\beta = .34$), subjective norm ($\beta = .20$) and perceived behavioural control ($\beta = .40$). Autonomous motivation towards out-of-school physical activity predicted intention towards out-of-school physical activity ($\beta = .34$). Attitude and subjective norm predicted intention towards out-of-school physical activity ($\beta = .21$ and $\beta = .13$, respectively) but perceived behavioural control did not predict intention towards out-of-school physical activity. Also intention failed to predict out-of-school physical activity.

Perceived autonomy support from PE teacher predicted autonomous motivation towards out-of-school physical activity indirectly via autonomous motivation towards school PE ($\beta = .12$). Autonomous motivation towards out-of-school physical activity predicted intention indirectly through attitude ($\beta = .07$).

Discussion

Results support the predictions of TCM on the transfer of autonomous motivation between physical education and out-of-school physical activity when applied to spontaneous behaviour change over time. The model predicted the change in intention as hypothesized with the exception of perceived behavioural control that did not predict change in intention towards out-of-school physical activity. Model failed to predict change in out-of-school physical activity, which suggest that not merely intention but also factors such as past behaviour, behavioural automaticity and implemental intentions might moderate the change in out-of-school physical activity.

The mediational role of amotivation in the relationship between perfectionism and burnout in vocational dancers

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Introduction

Perfectionism is considered to be an important personality factor to take into account within the dance context given the high number of dancers who are influenced by its negative consequences, being burnout one of them (Cumming & Duda, 2012). Previous studies informed that "adaptive" perfectionism is negatively related or not related to burnout, while "maladaptive" perfectionism is related positively (Hill & Curran, 2016). Extending from preceding research (Appleton & Hill, 2012), in this study, amotivation as a potential mediator mechanism between perfectionism and burnout, is tested; specifically, it is hypothesized that self-oriented perfectionism (SOP) and social prescribed perfectionism (SPP) will be negatively and positively related respectively with overall burnout, and that amotivation will mediate this relationship.

Method

Participants (128 male and female Spanish vocational dancers aged between 12 and 24 years old) completed a package of questionnaires measuring the variables of interest.

Results

Results from hierarchical regression analysis showed that burnout was predicted negatively by self-oriented perfectionism (SOP) ($b = -.14, p < .01$), and positively by social prescribed perfectionism (SPP) ($b = .12, p < .01$) and amotivation ($b = .32, p < .001$). Mediation analyses reveal that amotivation totally mediated the relationship between both dimensions of perfectionism and burnout.

Conclusion

The study extends the knowledge on the relationship of both dimensions of perfectionism on burnout in vocational dance, confirming the role of amotivation as a mediator in this relationship.

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Keywords: perfectionism, amotivation, burnout, dancers.

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Correlation between self-determined motivation and parental behavior in a female basketball team

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(Introduction) Parents can be considered central figures in child development by creating appropriate social and emotional contexts, resulting in healthy behaviors and greater wellness. Thus, this study sought to verify the correlation between self-determined motivation and parental behavior in a basketball team. **(Methods)** We investigated 9 athletes participating in the School Games of the São Paulo State, Brazil, in the female basketball mode, with a mean age of 12.1 ± 0.8 , from a private school system. As instruments were used: 1) Questionnaire of Motivation in Sport; 2) Parental Behavior Questionnaire in Sport, version for athletes, for the father and for the mother. Statistical analysis was performed using SPSS 21.0 software. To verify the normality of the data, he used the Shapiro-Wilk test. Pearson's correlation tests for the symmetry data and the Spearman correlation test were used to determine the relationship between the different variables for the data that did not show symmetry. Significance was set at $p < 0.05$. **(Results)** The data presented significant correlations between the variables: a) Parent follow-up with introjected motivation ($r = -0.840, p = 0.005$); b) Sports support of the mother with introjected motivation ($r = -0.851, p = 0.004$), c) Monitoring of the mother with introjected motivation ($r = -0.931, p = 0.000$), d) Sports support of the father with introjected motivation ($r = -0.783, p = 0.013$), e) Dissatisfaction with sports performance of the father with the intrinsic motivation to reach the goals ($r = -0.814, p = 0.008$); f) Dissatisfaction with the sports performance of the father with the demotivation ($r = -0.699, p = 0.036$). **(Discussion and Conclusion)** The correlation between motivation and parental behavior through the accompaniment and sports support of the father and mother and the dissatisfaction with the sports performance of the athletes by the parents was related to the demotivation, which demonstrates the importance of an adequate conduct of the parents in this sporting phase. The introjected motivation also showed a positive correlation with parental behavior, which indicates that these athletes may be moved by internal pressures posed by themselves, and may feel embarrassed when they fail or do not perform well.

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Pilot study: The effects of self-determined motivation for physical activity on the well-being of sedentary men

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Introduction. The purpose of this study is to examine the effects of the different types of motivation – introjected, identified, intrinsic and amotivation - to engage in physical activity on participants self-reported well-being, self-esteem, stress and positive and negative affect. Motivation is a determining factor in maintaining physical activity in adulthood [1]. There are several types of motivation, which vary according to their level of self-determination. They range from intrinsic (most self-determined), where the behavior is led by the simple satisfaction provided, to extrinsic (least self-determined), where the behavior is motivated by an external reward.

Methods. Participants of this study ($n=31$) are Caucasian males, aged between 18 and 35 (*mean age: 25 ± 3.93 years*). They were all sedentary, therefore, engaging in less than 150 minutes of physical activity per week and responding negatively to the Physical Activity Readiness Questionnaire. They completed the five questionnaires: Psychological Stress Measure, The Satisfaction with Life Scale, Positive and Negative Affect Schedule, Self-Esteem Scale of Rosenberg's and the Behavioral Regulation in Exercise Questionnaire.

Results. Stepwise linear regressions were conducted to examine the relationships between motivational regulation types - introjected, identified, intrinsic and amotivation - and well-being, self-esteem, stress, and positive and negative affects. Results showed that intrinsic motivation to engage in physical activity positively predicts well-being ($\beta = 0.55, p < 0,001$), while amotivation negatively predicts well-being ($\beta = -0.62, p < 0,000$). Furthermore, identified regulation positively predicts the individual's positive affect ($\beta = 0.58, p < 0,001$).

Discussion & Conclusion. This study replicates previous findings that suggest that self-determined types of motivation have positive effects on psychological well-being [2]. This study also shows that these effects can be found among sedentary men. Indeed, it demonstrates that participant's motivational for physical activity may have a positive effect on their well-being and positive affect. This is also in agreement with Self-Determination Theory according to which intrinsic motivation, unlike extrinsic motivation, produces positive consequences in individuals. This study confirms interest of further scientific research on the effect of motivational regulation type during a physical activity practice. For instance, that can be on sedentary women.

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The basic psychological needs of students with special educational needs: a diary study

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Introduction

According to the self-determination theory, the three basic psychological needs for autonomy, competence and relatedness have to be met in order to achieve intrinsic motivation. Also, psychological need fulfillment is central to one's sense of well-being (Ryan & Deci, 2000). However, there is doubt about the need fulfillment of students with special educational needs (SEN). This can be a problem especially in the vocational track of regular secondary education in the Netherlands, as students in this track report more psychological problems than in the higher tracks (de Looze et al., 2014). This shows that students, especially in the vocational track, not only differ in cognition, but also in learning, behavioral, emotional and social problems. The goal of this study is to investigate how these differences between students affect the fulfillment of their basic needs, their intrinsic motivation and well-being experienced during a lesson.

Method

Approximately 200 students of 11 classes in the second year of secondary vocational education participate in this study. Their SEN are assessed by self-report (Strength and Difficulties Questionnaire) and school-report. To assess their daily experiences at school, we use the diary method. At the end of lessons Dutch, English or mathematics, students fill in a short questionnaire with statements about their basic psychological needs, intrinsic motivation and well-being in that particular lesson. The statements are based on the diary version of the Basic Psychological Needs Satisfaction and Frustration Scale and the Intrinsic Motivation Inventory. The diaries will last from November 2018 until April 2019, to investigate development and variability over time.

Results pilot study

The results of a pilot study (four weeks, $n=16$) show that students at risk (relatively low grades and intrinsic motivation and relatively high outsourcing problems) experience less competence, autonomy and relatedness with their teacher in comparison with their classmates. However, these students do have a good relationship with classmates. This pilot study shows the importance of paying special attention to the basic psychological needs of students with SEN. In May, we are able to show the first results of the ongoing, longitudinal study.

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P-194

'I lived quite an active life, I used to go for walks and ride my bike, and then all of a sudden... I just gave it all up'. The role of competence in people's experiences of living with severe asthma.

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Introduction

According to Self-Determination Theory (SDT), competence is one of three basic psychological needs that support intrinsic health motivation and personal well-being. Clinical intervention studies have highlighted the need for harnessing competence in health behaviour change and motivation. However, understanding the role of competence from the patient perspective in the lived experience of chronic illness has not been studied from the SDT perspective. There is a considerable body of literature on the clinical management of severe asthma, yet there is little empirical data on how it affects patients' daily lives, including their psychological needs. Thus, our aim was to explore the role of competence in patients' narratives about their experiences of living with and managing severe asthma.

Methods

Qualitative research methods were used to conduct in-depth semi-structured interviews. Participants were recruited from different ethnicities, age groups and sociodemographic backgrounds, and from metropolitan, rural and remote areas. Participants were included if they were ≥18 years old and diagnosed with severe asthma. They were asked to talk about their experiences of living with and managing severe asthma. Interviews were video and/or audio recorded, transcribed and thematically analysed through the SDT's lens of competence.

Results

Thirty-six face-to-face interviews, lasting 1.5-4 hours, were conducted. Findings showed that participants had low self-efficacy for achieving everyday yet critical tasks such as attending health appointments, going to work or doing household chores due to both physical limitations and fear of symptoms. Three categories emerged from the analysis illustrating perceptions of competence through: 1) the labelling of severe asthma as a disability; 2) achieving asthma management-related goals and broader life goals, and 3) the role of external influences (such as healthcare providers and family) in supporting or challenging the accomplishment of day-to-day tasks.

Conclusion

Our findings offer a broader application of the SDT construct of competence than previous studies which typically focused on maximising health behaviour outcomes. The achievement of competence in everyday activities was challenging in the face of living with severe asthma, which in turn impacted health quality of life and goal setting. Our results suggest that healthcare providers could incorporate the practice of 'narrative medicine' in their patient interactions through exploring patients' perceived competence for everyday tasks. Examining the everyday competence needs of patients with chronic illness has the potential to inform clinical interventions to improve patients' quality of life, as well as furthering theoretical understandings of the SDT competence construct.

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Motivated to Express: Salience of Sexism toward Others Encourages Women's Self-Expression

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Five studies explore whether women react to the oppression of other women by wanting to express themselves more. Study 1 explored two forms of oppression of women: restricted self-expression and restricted economic opportunities. Results identified that women self-reported a desire to self-express after exposure to either form of women's oppression, as compared to control. Study 2 replicated results for restricted self-expression, but not restricted economic opportunities, this time using time spent lingering on a decisions task in the lab as our self-expression outcome. Study 3 used picture manipulations to compare exposure to female versus male (outgroup) oppression, and found more words written about an unrelated, but relatively important topic (Brexit). Study 4 found that reactance mediated the link between the oppression manipulation and more words written about Brexit. A final study indicated a reactance effect following learning about oppression of other women, leading to greater self-expression.

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Explaining the Relationship Between ADHD Symptomatology and Amotivation: The Role of Basic Psychological Need Frustration

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Recent research has shown that undergraduate students who experience both clinical and subclinical attention-deficit/hyperactivity (ADHD) struggle academically. Furthermore, these students have cited amotivation as a factor in their academic difficulties. Self-determination theory (SDT) posits that a lack of motivation—known as amotivation—may be the result of the frustration of the basic psychological needs—autonomy, competence, and relatedness. For this reason, the current study examined whether basic psychological need frustration mediated the relationship between ADHD symptomatology and amotivation. A sample of 503 undergraduate students at the University of Ottawa completed an online questionnaire about their university experience. Data was analyzed using a mediational structural equation model. Results suggested significant relationships between all of the variables. Moreover, basic psychological need frustration fully mediated the relationship between ADHD symptomatology and amotivation. These results demonstrate the importance of fulfilling the basic psychological needs of undergraduate students experiencing ADHD symptomatology, as it may increase their motivation, and, subsequently, reduce their academic difficulties.

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Cultura indigna - Missing the basic psychological needs within the concept of dignity fosters the destructive impact of capitalism: splitting and alienating societies and exploiting the environment

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German social and cultural life is regulated by article 1 paragraph 1 of the constitution of the federal republic of Germany:

“Human dignity shall be inviolable. To respect and protect it shall be the duty of all state authority.”

Thus, this article is the basis of German governmental legitimization. The main task of the state is to serve the people. However, the currently only restrictively defined concept of human dignity as the most important value, lacks a universal, positive and concrete content. The human dignity guarantee is therefore currently not able to give a universally applicable orientation for serving the people.

Moreover, due to the historical background, article 1 paragraph 1 focusses exclusively on respecting and protecting only the most extreme burdens and only the entire occupation of human beings. Conversely, this leads to the legitimization and legalization of extreme burdens and approximately entire occupation.

By applying the concept of basic psychological needs to analyze the impacts of the societal understanding of human dignity, three main hypotheses will be introduced and discussed: (1) the concept of human dignity only respects and protects basic physiological needs, while completely ignoring the basic psychological needs of human beings. (2)

This insufficient societal understanding of human beings causes a culture, which usually serves only fictions in the form of economic and governmental organizations instead of human beings. Embedded in a global capitalistic culture, the insufficient concept of human dignity supports global capitalism in the form of alienation and exploitation of beings and the environment. In the shadow of the human dignity guarantee a destructive culture developed. To sustain the developed societal system, the state prefers to serve the aims and the corporate philosophies of fictions instead of serving human beings. (3) This has far-reaching impacts and destructive consequences for the people, the society and the environment.

Thus, there is a societal need for filling the concept of human dignity with a concrete and universally applied content. In order to fulfill its basic task, the state must serve human beings. Therefore, I want to answer the question, if the concept of basic psychological needs can be transferred to article 1 paragraph 1 of the constitution of the federal republic of Germany and other legitimizing articles of (supra)national constitutions. Integrating the basic psychological needs in the concept of human dignity intends to support human, social and ecological well-being and thriving.

'Hey teachers! Don't leave your students alone': A New Perspective on Relationship Quality and Students' Motivation to Learn

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Last decades much research is conducted on teachers' need-supportive teaching styles. Teachers can support students' basic psychological needs for autonomy, competence, and relatedness, and promote students' autonomous motivation by providing autonomy support, structure, and involvement. Surprisingly, research on involvement received less attention (Stroet, Opdenakker, & Minnaert, 2013), despite the importance of educational faculty/staff such as for creating "a warm classroom environment that facilitates successful adaptation in school and thereby increasing students motivation to learn" (Koca, 2016, p. 2.). From a SDT-perspective as well as relationship management research, we know student/faculty relationships are crucial. Therefore, the way how students perceive the quality of their relationship with educational faculty/staff is of interest. Students' perceptions of student/faculty relationship quality can be divided into five dimensions: 1) trust in benevolence; 2) trust in honesty; 3) affective commitment; 4) affective conflict; and 5) overall satisfaction.

The relationship quality construct shows similarities to the construct of involvement. Where involvement is about the relationship with one specific teacher, relationship quality is about the relationship between students and staff (i.e., all teachers and supporting faculty/staff). The aim of the current study is to explore the associations between students' perceptions of student/faculty relationship quality and their motivation to learn. Data were collected among undergraduate students ($N= 594$, 63,4% female, $Mage= 20,98$, $SDage= 4,37$), and analyzed by PLS-SEM.

Results showed that affective commitment and affective conflict were significantly associated with motivation to learn. Affective commitment had significantly positive associations with identified, intrinsic, and introjected motivation, and, affective conflict had a significantly positive association with extrinsic and negative associations with identified and intrinsic motivation.

Our study indicates that especially the affective component of relationship quality is of importance for students' motivation. The patterns are coherent, as positive affection (commitment) is associated with the more autonomous forms of motivation and negative affection (conflict) is associated with more controlled and less autonomous motivation. Apparently, it is not the way students think of faculty/staff (i.e., level of trust), but what faculty/staff evoke emotionally (i.e., affection) that relates to students' motivation to learn. These findings provide new insights how to realize involvement.

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An SDT perspective of the relationship between organizational justice, organizational citizenship behaviors and workplace deviance.

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Past research has highlighted the crucial role played by employees' perception of organizational justice in the adoption of positive (organizational citizenship behaviors (OCB)) and negative (organizational deviance (OD)) organizational behaviors. Recent SDT-based literature has suggested that the impact of perceived justice on employees' behaviors can be explained by its impact on need satisfaction (e.g. Olafsen et al., 2015). However, to this date, no study has examined the mediating role of need satisfaction in the relationship between perceived justice and the adoption of organizational citizenship or deviance behaviors specifically. Moreover, although a growing number of studies stress the importance of studying not only need satisfaction but also need frustration (e.g. Vansteenkiste & Ryan, 2013), no study has examined the relationships between organizational justice, need frustration and employees' behaviors. We therefore propose to test the mediating role of need satisfaction and frustration in the relationship between organizational justice and OCB and OD. More specifically, it is proposed that enhanced perception of justice is beneficial for need satisfaction, but also that decreased perception of justice is linked to need frustration. Also, based on studies that showed that need satisfaction and frustration tend to be linked to positive and negative consequences respectively, it is hypothesized that need satisfaction would mediate the relationship between perception of justice and OCB whereas need frustration would mediate the relationship between perception of justice and OD. In total, 1315 workers completed a questionnaire assessing perceptions of organizational justice, psychological need satisfaction and frustration, and their tendency to adopt citizenship and deviant behaviors. Results of SEM analysis using SPSS AMOS 25 (CFI = .96, NFI = .95, IFI = .96, RMSEA = .08) show that procedural and interpersonal justice impact need satisfaction and frustration. Indeed, while procedural justice influence both need satisfaction ($\beta = .33$) and frustration ($\beta = -.43$), increased perception of interpersonal justice is related to lower level of need frustration ($\beta = -.17$). As expected, need satisfaction is positively linked to the adoption of OCB (in-role, $\beta = .34$; extra-role, $\beta = .34$; organizational, $\beta = .25$), whereas need frustration is positively related to interpersonal ($\beta = .28$) and organizational ($\beta = .23$) deviance. Surprisingly, need satisfaction is also negatively linked to organizational deviance ($\beta = -.15$). The contribution of this study to the organizational justice and SDT literature will be discussed.

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The striving to have an authentic inner-compass (aic) as a distinct aspect of the need for autonomy

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Assor (2018) posited that people have a basic striving to have an authentic inner compass (AIC): Self-guiding schemas of autonomous values and interests, which inform them on what is truly important to them. When this striving is satisfied, people feel vital and thrive; when it is frustrated, they feel bad. Assor (2018) further posited that the experience of having an AIC is distinct from other aspects of the need for autonomy involving (1) freedom to direct and express oneself, and (2) self-congruence. He also pointed out that while the latter two aspects of the need for autonomy are assessed by extant measures of the need for autonomy, AIC is not captured by current need satisfaction scales.

Based on these considerations, two studies examined whether Israeli adolescents distinguish between the experience of having an inner compass, and: (1) other aspects of the need for autonomy, as conceptualized by Assor (2018), and (2) other psychological needs posited by self-determination theory. Furthermore, in Study 1 ($n = 257$) we examined whether the experience of having an AIC uniquely predicts various indicators of well-being also when controlling for other aspects of the need for autonomy as conceptualized by Assor (2018). In study 2 ($n = 308$), we examined if the experience of having an AIC predicts well-being also when controlling for the effects of widely used scales of the needs for autonomy, relatedness and competence.

Results of study 1 (exploratory and confirmatory factor analyses; SEM) showed that the experience of having an AIC and the experience of freedom to self-direct were both unique predictors of well-being (positive and negative affect, lack of depressive feelings, satisfaction with life). Results of Study 2 (exploratory and confirmatory factor analyses; SEM) showed that the experience of having an AIC was distinct from experiences of autonomy, relatedness and competence as assessed by Chen et al (2015) measure. Furthermore, the experience of having an AIC contributed to well being also when controlling for the effect of the three other need measures.

The results suggest that the need for Autonomy is not only about freedom to self-direct and self-congruence; it is also about having a firm and authentic inner compass: knowing what we truly value, need and aspire to. Given the unique contribution of AIC to well-being it is proposed that this aspect of autonomy should be integrated into current conceptions and measures of the need for autonomy.

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The contribution of basic psychological need satisfaction to motivation and well-being among older adults: A cross-cultural study between China and France

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Introduction :

As the population ages, it is important to understand the factors that contribute to well-being in the elderly. According to self-determination theory (SDT), the basic psychological needs satisfaction (autonomy, competence and relatedness) are universal and important to enhance organism psychological well-being (PWB), regardless of age or culture (Ryan & Deci, 2017). In contrast, some cross-cultural perspectives challenged SDT's universalistic viewpoint, especially SDT's view that autonomy yields universal positive effects. In the aim to test this theoretical framework cross-culturally, especially in the field of aging, this study examined the contribution of basic psychological need satisfaction on elderly's motivation and well-being in China and France.

Méthode :

Participants: 489 Chinese elderly ($M = 69.51$, $SD = 6.88$ years) were recruited from China in Beijing. 181 French elderly ($M = 71.06$, $SD = 7.78$ years) were recruited from North of France.

Mesures :

Basic Psychological Need Satisfaction: Basic psychological needs satisfaction scale for the elderly (Indoumou-Peppe, Altintas, Ngoma-Vumbi and Guerrien, submitted)

Motivation: Elderly's motivation scale (Vallerand & O'Connor, 1991)

Psychological well-being: The Psychological Well-Being Manifestations Measure Scale (Massé et al., 1998)

Results:

Preliminary results showed that the basic psychological need satisfaction showed positive correlations with Intrinsic motivation (IM), self-determined extrinsic motivation (SDEM) and PWB among the Chinese elderly, also the French elderly. The cultural differences were found that amotivation was negatively associated with PWB was only found among French elderly ($r_{\text{france}} = -0.19$, $p < 0.05$). And non-self-determined extrinsic motivation was found positively associated with PWB among Chinese elderly ($r_{\text{china}} = 0.26$, $p < 0.01$).

Main results/Analyses Examining Fit of the Model

To examine how each psychological need satisfaction influence motivation and PWB, we performed a structural equation modeling (SEM). The finding of which was accordant with SDT: basic psychological need satisfaction enhanced directly PWB, and it promoted indirectly PWB through SDEM (identical in China and in France)

Discussion & conclusion:

This study generally confirms the adaptation of SDT in the field of aging in China and in France. At the same time, there are some very interesting findings about cross-cultural heterogeneity. The results about French elderly from our study almost repeated previous studies (Altintas & Guerrien, 2014; Altintas, De Benedetto, & Gallouj, 2017), while some results about Chinese elderly were inconsistent with existing research results, as well as the hypothesis of SDT. This could open new perspectives for understanding the determinants of well-being in different cultures, especially in the field of aging.

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Why are they here? Culture and motivation for attending college from the perspective of self-determination theory

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Although academic motivation has long been the subject of study, the role of culture has only recently begun to receive attention. Guiffrida (2006) asserted that cultural orientation, as outlined by Triandis, could be used to understand this phenomenon better, but research has not empirically tested his assertions. The purpose of this study was to provide an empirical test of Guiffrida's conceptual model. Based on a large U.S. sample ($N=2537$), the presenters utilized Latent Profile Analysis (LPA) to specify the culture groups represented among the participants. Four distinct culture groups emerged from the LPA. The groups were named based on the cultural dimensions that were the most pronounced and made the students in each group distinct from those in the other culture groups. The names of the groups that emerged are: horizontal individualistic, collectivist, horizontal, and strongly blended. The strongly blended group heavily endorsed horizontal individualism (HI), horizontal collectivism (HC), and vertical collectivism (VC), and in addition also had the highest mean average for vertical individualism (VI) of the four groups that emerged. Following Guiffrida (Guiffrida, Lynch, Wall, & Abel, 2013), the presenters examined the associations between motivation for attending college (based on reasons reflecting autonomy, competence, and four forms of relatedness) and students' outcomes of grade point average (GPA) and intent to persist (IP). Using hierarchical regression the presenters then introduced the four culture groups to examine how these might moderate the predictive links between students' motivations and academic outcomes. Not only did the results indicate that the culture groups moderated the links between several of the students' relatedness motives for attending college and their GPA, but a main effect was also indicated by those students in the Collectivist group for their intent to persist. Although the introduction of culture appears to differentially impact the relationship between students' relatedness motives and their outcomes, the results also suggest that the associations of autonomy and competence to the outcomes were not moderated by cultural membership, supporting SDT's predictions regarding these basic psychological needs. The presenters will discuss their results in detail, along with their implications for higher education and cross-cultural research.

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Effect of Same Ethnicity Role Models on Physical Activity Motivation

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Objectives: Failure to comply with physical activity guidelines is often due to lack of motivation. Readiness to change behaviour (SOC) depends on motivation. Role-models, people we wish to emulate and identify with, are successful motivators. Self-determination theory proposes that fulfilment of basic psychological needs: autonomy, competence, and relatedness drives motivation. Having a known role-model positively impacts on ethnic identity and health risk behaviours. Prior research shows that goal-congruent role-models increase motivation and culturally-congruent health messages are most effective. However, it is not known if relatedness is stronger towards ethnically-congruent role-models and whether this increases motivation to change physical activity behaviour particularly for Black ethnicities. **Methods:** With non-student participants, $N = 344$, (Black $n = 168$, White $n = 176$) age 18+, ($M_{age} = 33$, $SD = 10.06$) we tested whether relatedness was stronger towards an online photograph of a Black or White role-model and whether Black participants had lower levels of motivation than White participants. We examined relationships between ethnicity, role-models, autonomy, competence, intrinsic motivation, SOC and relatedness with SEM and ANOVA. **Results:** The structural model comprised ethnicity (Black vs White), SOC, role-model (same vs different vs none) and relatedness predicting motivation. Fit indices for the final model $\chi^2(40) = 58.795$, $p = .028$ were, CFI value .991, RMSEA .037. All parameter estimates were significant with SRMR = .0354, representing a good fitting model. Multi-group analysis found non-significant Chi sq. difference, $\chi^2(10) = 12.196$, $p = .272$, between the unconstrained and constrained models indicating model equivalence for both Black and White participants. ANOVA results showed no significant difference in mean levels of relatedness to either Black (White participants $M = 2.95$, $SD = 1.12$, Black participants $M = 2.92$, $SD = 1.10$) or White role-models (White participants $M = 3.03$, $SD = 1.12$, Black participants $M = 2.74$, $SD = 1.19$). The observed data supported the latent constructs of motivation: autonomy, intrinsic motivation and competence. SOC positively related to competence.

Ethnicity significantly related to motivation with Black participants being more motivated than White participants. Role-models increased motivation through relatedness irrespective of ethnic-congruency. Motivation, (comprised autonomy, competence and intrinsic motivation) predicted SOC and a higher SOC increased participants' competence. **Conclusions:** Relatable role-models increase motivation for physical activity behaviour change, irrespective of ethnic-congruency. This finding has positive practical and financial implications in the field of often financially constrained health care interventions and supports the use of a few role-models to motivate many different aspirants.

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Borderline Personality Disorder in the context of Self-Determination Theory

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Introduction

The aim of the research was to determine whether individuals showing symptoms of Borderline Personality Disorder (BPD) significantly differ from others in terms of major self-determination-related variables. All 10 personality disorders listed in the fifth edition of Diagnostic and Statistical Manual of Mental Disorders (DSM-V) were analyzed in this regard.

Symptoms of BPD such as unstable interpersonal relationships and constant fear of abandonment were assumed to be manifested in lower levels of relatedness and autonomy need satisfaction whereas the need for competence was assumed to be disturbed by impulsive and unpredictable behaviors. Individuals with BPD were also suspected of being less self-aware due to black-and-white thinking, distorted self-image and disturbed sense of identity. Substance abuse frequently observed among emotionally unstable individuals was believed to manifest itself in perceiving one's choice externally.

Methods

In order to verify the hypotheses, each of 478 participants filled in 3 questionnaires:

- 1) *Basic Psychological Needs Satisfaction and Frustration Scale* (Chen et al., 2015) – Polish adaptation;
- 2) *Perceived Choice and Awareness of Self Scale* (Thrash & Elliot, 2002) – Polish adaptation;
- 3) *Styl Źycia 05-SK* (Trzebińska, 2013).

The lattermost ("styl Źycia" = "lifestyle") is a Polish research tool used to determine potentially disordered personality traits divided into 10 categories: schizotypal, paranoid, schizoid, borderline, histrionic, antisocial, narcissistic, dependent, obsessive-compulsive and avoidant.

Results

The analysis revealed that individuals with higher scores of borderline traits showed significantly lower levels of all three needs satisfaction and higher levels of frustration. A strong negative correlation was also observed between borderline personality and self-awareness. Participants with symptoms of BPD showed moderate but significant negative relationships with perceived choice. Therefore, all of the hypotheses were confirmed with moderate-to-strong correlations.

Supplemental analysis indicated that BPD, among all the personality disorders listed, shows the most profound connections with SDT-related variables. However, Dependent Personality Disorder appears to be very similar to BPD in this regard.

Discussion & Conclusion

Although these findings may be seemingly apparent, it is important to note their prospective implications for psychotherapy of individuals with BPD. Dialectic Behavioral Therapy, perceived as the most efficient psychological treatment for this condition, already uses tools encouraging clients to satisfy their needs for relatedness and competence. However, it appears to lack autonomy support which may be crucial in engaging with and remaining in the psychotherapy process.

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Responsive and autonomous or self-sacrificing and pressured? Integrating communal and self-determined models of sexual motivation.

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Motivation is a key factor that shapes sexual and relationship satisfaction in romantic relationships. People are often motivated to fulfill their partner's sexual needs, and when they do so to be responsive (i.e., *high sexual communal strength*), they report higher sexual desire and both partners report greater satisfaction, but when the motivation to meet a partner's needs neglects one's own needs (i.e., *high unmitigated sexual communion*), this detracts from relationship satisfaction. Sexual motivation can also be beneficial to individuals and their partners when it's autonomous in nature (i.e., *self-determined*) such as having sex because it's fun or inherently pleasurable, but detrimental when it's internally or externally pressured (i.e., *non-self-determined*) as is the case when one engages in sex to validate their sexual abilities or to avoid disappointing their partner. In the current research, we merge theories of communal motivation and self-determination to test the prediction that sexual communal strength (SCS) is associated with greater satisfaction and desire because people higher in SCS engage in sex for more self-determined reasons (SD), whereas unmitigated sexual communion (USC) is associated with lower satisfaction and desire because people higher in USC engage in sex for more non self-determined reasons (N-SD). In a preregistered study of 114 couples, we used multilevel modelling guided by the Actor Partner Interdependence Model (APIM) to test whether self-determined sexual motivation mediated the associations between SCS and USC on relationship satisfaction, sexual satisfaction, and desire. We found that individuals (and partners) higher on SCS reported more SD and less N-SD, and in turn reported positive relationship and sexual outcomes. Inversely, individuals higher on USC reported more N-SD, and in turn reported negative relationship and sexual outcomes. Being responsive to your partner's sexual needs for self-determined reasons is associated with positive outcomes whereas attending to your partner's sexual needs while neglecting your own for non-self-determined reasons is linked with negative outcomes for couples. The following findings provide a unique understanding of motivational processes that explain why certain interpersonal factors impede or foster relationship and sexual satisfaction. This study is the first to empirically merge communal and self-determined models of sexual motivation in romantic relationships.

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Understanding extradyadic sex and its underlying motives through a dualistic model of sexual passion

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Extradyadic sex in monogamous romantic relationships represents a violation of trust that has been associated with adverse personal (Allen et al., 2005) and relationship outcomes (Allen & Atkins, 2012). Although relational factors related to extradyadic sex have been extensively studied, few individual sexual factors have been identified and these factors have remained one-dimensional. The present research proposes that sexual passion as defined by the dualistic model of sexual passion (Philippe et al., 2017) can help better understand extradyadic sex and its underlying motives by distinguishing two types of passion for sexuality: sexual harmonious passion (HSP) and obsessive sexual passion (OSP). Both types of passion are characterized by the passion criteria of loving, valuing, and frequently engaging in sexual activities (Philippe et al., 2017). However, they result from distinct internalizations of sexuality. HSP develops as a result of an autonomous internalization of sexuality (Vallerand et al., 2006), which occurs when people make their own choices regarding sexuality and express sexuality according to what they believe is important and enjoyable (Deci & Ryan, 2000). Conversely, OSP develops when sexuality is internalized in a controlled fashion (Vallerand et al., 2006), which occurs when norms, values, and beliefs related to sexuality are imposed onto the person and are less likely to reflect the person's own values (Deci & Ryan, 2000). Study 1 showed that obsessive sexual passion (OSP), but not harmonious sexual passion (HSP), was related to past extradyadic sex ($\beta = .18, p < .05$ and $\beta = .07, ns$, respectively), a subjective feeling of conflict between sex and romantic relationships ($\beta = .41, p < .01$ and $\beta = .03, ns$, respectively), and ego-invested motives for engaging in extradyadic sex ($\beta_s > .11, p < .05, \beta_s < .05, ns$, respectively). Study 2 used a longitudinal design and showed that OSP ($B = .80, SE = 0.39, Wald = 4.15, p < .01$), but not HSP ($Wald = 0.09, p = .77$), predicted prospective extradyadic sex. In addition, Study 2 revealed that OSP predicted the number of times extradyadic sex occurred and the number of extradyadic sex partners for men ($t_s > 3.32, p_s < .01$), but not for women ($t_s < 1.00, ns$). Specifically, men with an OSP reported engaging in extradyadic sex more often and with more partners than other individuals. These studies underline the importance of using a two-dimensional approach to understand how sexual passion relates to extradyadic sex.

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Exploring basic psychological needs satisfaction in physical activity-based relationships: A relationship motivation theory perspective

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Introduction: Relationship Motivation Theory (RMT) posits that interpersonal relationships that satisfy basic psychological needs will be perceived as the most fulfilling and of 'highest quality,' and ultimately contribute to enhanced psychological wellbeing (Deci & Ryan, 2014). Emerging adulthood is a critical developmental stage for individuals, age 18-29 years, to establish healthy behaviors, including quality relationships and consistent physical activity (PA) engagement. Institutions of higher education are positioned to support the development of these developmental tasks in emerging adults enrolled on their respective campuses. **Purpose:** Framed in RMT, basic psychological need satisfaction (BPNS) in PA-based relationships among emerging adults who participated in a socially structured PA program on a university campus were explored. **Methods:** Participants were university students, age 18-31 years (M=23.29, SD= 4.33) who engaged in the Fitness Buddies (FB) program (n=10), along with student interns/volunteers that served as program peer session leaders (n=7) over one academic semester at a mid-Western USA university. Participants completed Basic Need Satisfaction in Relationships (BNSR) measures and paired narrative interviews. **Results:** Descriptively, the sample mean BNSR score (M=6.27, SD=0.54) was comparable to previously published BNSR means scores among university students' BNSR with a best friend (La Guardia et al., 2000). This finding is meaningful as the BNSR does not appear to have previously been utilized to measure relationships in a PA context. The number of PA sessions attended was a significant predictor of competence needs satisfaction through FB relationships as indicated by the results of regression analysis ($p < 0.05$). Narrative interview data illuminated the ways the FB program provided participants access to support and resources to experience BPNS through FB relationships, while also, anecdotally, improving their situational affect, self-confidence, motivation to be consistently physically active, overall mental health, and engagement with academic coursework. **Discussion:** Participants' comparable degree of BPNS in their FB relationship to university students' BPNS in relationships with best friends, suggests that having a peer to connect with consistently for as little as one hour each week, in a PA setting, may serve as a 'high quality' relationship that supports and satisfies needs. Relatedness need satisfaction that fosters acceptance and belonging, and encourages autonomous motives to pursue risks (e.g., new challenges), that in turn develop competence, is predicted by RMT and was consistently described by participants in paired interviews. This evidence suggests that peer-led, socially structured PA programs, on university campuses can improve wellbeing and support healthy development of emerging adults.

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The Impact of Autonomy Support on Identity Disclosure and Well-being among Sexual Minority Individuals

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Much of the early research on sexual minority (SM) mental health emphasizes the importance of "coming out" or disclosing one's sexual orientation in developing a positive sense of self. While some research indicates that disclosure is beneficial, other work has failed to find such well-being benefits. Thus, the emphasis on disclosure as a means of improving the health and well-being of SM individuals does not address the wide range in well-being among those who are "out." Drawing on self-determination theory (Ryan & Deci, 2000), the present work examines the role of autonomy support in shaping coming out experiences as a possible source of this variability. Specifically, I examine the impact of recounting best and worst coming out stories on psychological well-being and cardiovascular reactivity and test the hypothesis that autonomy support mediates the impact of telling negative (versus positive) experiences on well-being and cardiovascular threat reactivity. SM individuals came to the lab and recounted their best and worst coming out experiences while cardiovascular measures of stress were assessed. Narratives were later transcribed and coded for autonomy support provided by the confidant. Within-person analyses indicated that participants reported greater well-being after discussing their most positive, as compared to their most negative, coming out experiences. Results also indicate that disclosure recipients provided greater autonomy support (as coded from the narratives) in the best compared to worst coming out experiences. Autonomy support partially predicted self-reported well-being differences by condition, but cardiovascular indices of stress did not vary by condition. Taken together, results suggest that positive experiences are characterized by relatively more autonomy support provision than negative ones and that participants tend to report greater well-being after discussing positive relative to negative experiences. However, CV results suggest that even when things go well discussing these coming out experiences may be physiologically stressful. Implications of this work for policy and clinical interventions are discussed.

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Staying energized at work: an experimental study of newcomer socialisation

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Empirical research to date suggests that effective socialisation plays a critical role in shaping newcomers' transformation into participating and effective insiders in an organisation. Though researchers have examined the role of socialisation tactics on important newcomer adjustment outcomes such as role clarity and social integration, the effects of the methods in which organisations socialise their newcomers on new members' motivation remains unexplored. Organisational socialisation tactics related to the social context of newcomer experiences is critical for newcomer integration as they provide the social cues and facilitation necessary during the learning processes. Investiture (vs. divestiture) is a social tactic that refers to the affirmation of a newcomer's incoming personal identity and attributes. Conversely, divestiture is the denial and stripping away of the newcomers' personal identity and the reconstruction of self-concept in the organisation's image. In this experiment, we proposed a between-groups design to manipulate these tactics, where individuals joined a pretend-organisation as newcomers to learn the various responsibilities expected of them in this job. Using Self-Determination Theory, this research aimed to examine the causal effects of said tactics on newcomers' autonomous motivation, and subsequently their well-being and intentions to leave.

Eighty-three university students attended two-hour laboratory sessions in which they were told that they were new employees working as air traffic controllers for 'Air Services Western Australia'. Participants received the socialisation tactic manipulation at the beginning of each session in the form of a welcome and onboarding presentation. The investiture presentation focused on the affirmation of newcomers' prior skills and values, and participants created a personalised nametag for themselves. The divestiture presentation focused on the organisation's image and how new employees had to behave, whereby participants were addressed via their employee number and given a uniform for the duration of the experiment. All participants were then provided instructions and participated in a conflict-recognition air traffic control work task.

Results revealed a significant interaction between experiment condition and participants' reported vitality from the start to end of the experiment. More specifically, individuals reported a significant decrease in subjective vitality when subjected to the divestiture socialisation experience, while there was no vitality change for participants who were in the investiture condition. No effects were found for participants' reported autonomous motivation and intentions to quit. Taken together, these findings suggest a protective effect of investiture socialisation tactics on newcomers' well-being against relatively mundane and cognitively demanding tasks.

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Vitality in the Consumption Context

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Marketers increasingly use the concept of "vitality" to promote offerings aimed to improve wellbeing, e.g., healthy groceries ('Vitality juice' by Tropicana) and tech gadgets (Oral-B's toothbrush 'Vitality'). Meanwhile, consumer research literature exploring the role of vitality in consumers' behavior is scarce (Chen & Sengupta, 2014). Focusing on the impact of behavioral motivation on individual vitality, the existing studies provide no insights on either consumers' perception of the concept of vitality nor their regulation of own vitality through consumption behavior. Thus, it remains questionable whether consumers actually buy into the promotion of vitality and deliberately adjust their consumption patterns to increase own vitality.

We build our study on SDT model of vitality implying that extrinsically motivated behavior decreases vitality, while intrinsically motivated behavior heightens vitality (Ryan & Deci, 2008) and address this gap by using a qualitative approach incorporating 48 in-depth interviews. Our study is the first describing an individual perception of vitality. Although prior studies recognize vitality as a subjective phenomenon, the concept of vitality has not yet been tackled through an interpretive approach.

Our findings indicate that individuals understand vitality as a balanced *simultaneous* experience of both positive physical and psychological energy. Consumers attribute great significance to the concept of vitality by considering vitality an essential antecedent of their somatic and mental healthiness and performance. This makes vitality a deliberate goal, which consumers focus on and deliberately adjust their consumption behavior seeking for the solutions for retaining own vitality through various, at times controversial consumption practices, e.g., consumption of both healthy and unhealthy foods at short instances.

We revealed that consumption practices consumers consider as increasing individual vitality can be motivated both extrinsically and intrinsically. Existing studies has demonstrated that intrinsically motivated lifestyles heighten vitality, while extrinsically motivated behavior drains it (e.g., Ryan & Deci, 2008). However, our data suggest that extrinsically motivated consumption behavior, despite being driven by external demands set by the public promotion of vitality, may enhance vitality, by satisfying the psychological need for relatedness. With this finding we add a complementary view on SDT model of vitality by informing that in the case of consumption extrinsically motivated behavior can have a positive effect on vitality. Our insights on the perception and approach to vitality in the consumption context provide an inroad to how consumers themselves view and self-manage vitality through specific consumption practices, and thus develops a more profound understanding of the vitality-related consumption behavior.

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Authentic leadership practices and nurses' job and life satisfaction: The mediating role of work/life enrichment and autonomous job motivation

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Faced by a projected shortage of its nurse workforce, the province of Québec (Canada) now focuses more on creating healthy and supportive work environment in health organizations. In part, this is due to recent research suggesting that supporting nurses' professional and personal growth may potentially increase their satisfaction at work. In this sense, it seems important to focus on the relation that may exist between the leadership practices of nurses' supervisors and their satisfaction at work, but also in life in general, because few studies have examined how the benefits of a supporting leadership could spread outside the work domain. In a sample of 448 nurses, we examine whether autonomous motivation, family to work enrichment and work to family enrichment act as mediators between perceived supervisors' authentic leadership practices and nurses satisfaction towards work and life in general. Results support the proposed indirect effects suggesting that authentic leadership positively predicts job satisfaction through autonomous motivation, whereas authentic leadership positively predicts life satisfaction through work/life enrichment. Future directions will be discussed as well as theoretical and practical implications.

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Testing an integrated model of healthy behaviour regulation - An empirical approach of SDT on the eudaimonian view of living well

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Introduction: Ryan, Huta, & Deci (2008) come up with a perspective on living well that is grounded in the philosophical concept of Aristoteles' eudaimonia (Ryan, Huta, & Deci, 2008). Based on the psychological construct that were suggested by Ryan, Huta, & Deci (2008) to be part of this concept, this study drafts and tests an integrated model of living well in the scope of SDT. It integrates the main concepts *mindfulness*, *intrinsic aspirations*, *autonomy of life-goals* and the *three basic psychological needs*. Beyond that, it refines the model of living well with other variables that have to be shown essential for healthy behaviour regulation. The study integrates *clarity about personal values* and *clarity about personal strengths* as possible mediators between *mindfulness* and the *autonomy of life-goals*. The model also integrates *goal progress* as possible mediator between *autonomy of life-goals* and the *basic psychological needs* satisfaction. Furthermore, *effort into goal pursuit*, *ease and naturalness of goal pursuit*, *values-behavior fit* as well as *strengths-behavior fit* are included as possible mediators between *autonomy of life-goals* and *goal progress*. Beside that, *intrinsic aspirations* were measured through the more comprehensive universal continuum of human values by Schwartz & Butenko (2014). Furthermore, *intrinsic behavior* was integrated as possible mediator between *intrinsic aspirations* and *basic psychological needs satisfaction* and measured with the corresponding scale that measures values on the level of behavior. In line with Ryan, Huta & Deci (2008), *positive affect*, *satisfaction with life*, *subjective vitality* and *presence of meaning in life* were added as possible outcomes of *basic psychological needs satisfaction*.

Method: The empirical model is tested with an international sample of 980 individuals. They took part in an online survey that included all variables (197 items). The cross-sectional data was used in correlational analyses as well as structural equation modeling.

Results: The results indicate that the hypothesized causalities in the model can not be falsified. For some hypothesized causalities, the results show strong relations that support the hypothesized causalities.

Discussion & Conclusion: The empirical model adds to the current research on eudaimonia as a comprehensive empirical based model that integrates recent studies.

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Beyond Basic Psychological Needs: The Hope Construct During the Adjuvant Treatment in Colorectal Cancer Patients

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Introduction: Cancer is the second leading cause of death in the world. After diagnosis, many cancer patients are treated with surgery followed by adjuvant chemotherapy. Chemotherapy involves several side effects (fatigue, disrupted sleep, neuropathy, chronic pain, loss of physical function, impaired cognition, depression and anxiety) which impact negatively on patients' health. Self-Determination Theory (SDT) is one of the most important motivation theories, which links personality, human motivation, and optimal functioning. Basically, SDT proposes that humans need to satisfy their Basic Psychological Needs (BPN; competence, autonomy and relatedness) to achieve more autonomous motivation, and thus psychological well-being. However, to date, no studies have been carried out on cancer patients' BPN satisfaction during the adjuvant chemotherapy treatment. For that reason, the aim of this study was to qualitatively analyse the relationship between BPN, motivation and quality of life in colorectal cancer (CRC) patients during the treatment period. **Methods:** A total of 30 people participated in this study: ten CRC patients (stage II-III) treated with surgery followed by adjuvant chemotherapy, ten relatives and ten physicians (four oncologists, seven nurses and one psycho-oncologist). Qualitative data were collected by semi-structured interviews, which were transcribed and analysed using a thematic analysis. **Results:** Participants revealed that patients felt frustrated their BPN (mainly competence and autonomy). However, many patients reported that the "hope" of recovering and returning to normality, which would extend their possibility of enjoying positive life aspects (e.g. seeing their grandchildren growing up), motivated them when they were receiving treatment. Patients mentioned several sources of hope such as positive medical feedback, knowing that they were going to receive a short-term chemotherapy treatment, a positive attitude, the realization of the fact that other patients were living a worse condition, and religious faith. Although patients had their BPN frustrated during the treatment, hope sources helped them to develop more autonomous motivation, and positive quality of life in terms of better disease adjustment, enjoyment of life and perceived health status. **Conclusions:** Future interventions could also consider hope satisfaction in order to promote autonomous motivation and psychological well-being throughout cancer disease.

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Combining neuroscience and Self-determination theory approaches to correlate daily life self-reported and fMRI data on reward and stress experiences in young adults with family history of depression.

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Background

The integration of findings from phenomenological, behavioral and neuroscience studies is a major challenge to improve understanding and interventions in mental health disorders. Here, we propose an innovative way to investigate the complexity of family risk of major depression disorder by combining neuroscience and Self-determination Theory (SDT) approaches with ambulatory assessment (AA) and functional magnetic resonance imagery (fMRI) measurements.

Aim

Explore whether we can correlate fMRI and daily life self-reported data on reward and stress experiences in order to extend our understanding of increased risk of depression.

Methods

We included 16 asymptomatic young adults with family history of depression (FHD) and 16 age- and gender-matched healthy controls (HC). They performed the Fribourg Reward Task without and with stress administration (i.e., threat of electrical shocks) using event-related fMRI. We conducted whole-brain analyses as well as volume of interest (VOI) analyses focused on the striatum, testing the main effect of reward (rewarded > not-rewarded conditions) during reward delivery. Beta weights extracted from significant activation in this contrast were correlated with self-reported daily reward experiences assessed over one week with ambulatory assessment (5x/days) using electronic devices. Reward experiences consisted of self-reported positive and negative affect, and activity-related motivation SDT-based, including intrinsic, introjected, identified, and extrinsic reward). Subjective stress was self-reported on a scale from 0 (none) to 9 (extremely).

Results

Between-group whole brain analyses revealed no differences comparing groups. VOI's analyses revealed a significant higher activation of the putamen in the FHD group compared to HC. Activation in the putamen did not correlate with AA self-reports. AA scores didn't differ between groups. Taking groups separately, VOI's analyses revealed activation in the right caudate nucleus, which correlated positively with negative affect and negatively with positive affect while no activations appeared in FHD on striatum regions. Within-group whole brain analyses revealed significant activations in the anterior cingulate cortex (ACC) and anterior insula cortex (AIC) in both groups with correlations with AA reward and stress experiences. Interestingly, AIC activation correlated negatively with identified ($r=-.56$, $p=.023$) and intrinsic ($r=-.62$, $p=.010$) motivations in HC, while the opposite was found for FHD (respectively, $r=.52$, $p=.040$ and $r=.55$, $p=.029$).

Conclusion

Our results suggest that activation in anterior insula cortex is related to intrinsic and identified reward experiences in daily life and that this correlation can differentiate between FHD and HC. This could hint to the potential expression of vulnerability in this group.

Keywords: Intrinsic motivation, Reward, Stress, anterior insula cortex, ACC, Depression

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What motivates young adults with learning disorders to choose teaching as a profession?

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Self-efficacy and expected need-satisfaction play a significant role in the decision people take regarding their future profession. The past experience of people with learning disorders in school is of low efficacy, low support and low need-satisfaction. What then motivates people with learning disorders to become teachers? To what level their decision is autonomous or controlled? What role do self-efficacy and needs satisfaction play in this decision? In this study, we investigated these questions under the basic assumption of SDT.

200 first year pre-service teachers participated in this study. 100 diagnosed with learning disorders (dyslexia, dyscalculia, dysgraphia, and attention disorders) and 100 without learning disorders. The participants were located in 5 teacher-training colleges in Israel. They completed an online self-reported survey assessing their motivation to choose teaching as a profession (autonomous/controlled), their perceived self-efficacy for teaching, the level of support they experienced from parents and teachers in the past, and their experience of need-satisfaction/frustration.

We hypothesized mean level differences between the groups (i.e. pre-service teachers with learning disorders will report lower levels of autonomous motivation, support, needs satisfaction and self-efficacy than pre-service teachers without learning disorders). Moreover, we hypothesized that in both groups a model which will fit the data best is a model in which experience of support from parents and teachers, is associated with need-satisfaction/frustration and self-efficacy, which in turn is associated with the level in which the decision to choose teaching as a profession was made autonomously. The Structural Equation Modeling (SEM), with Multi-Group analysis revealed good fit for the data for both groups. The results of this study highlight the role of needs support/frustration perceived self-efficacy and autonomy among people with LD play in career-choice decisions.

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Predicting parental autonomy support and controlling behaviors in the sport context: The role of self-compassion and self-esteem contingencies

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Past research has documented the numerous benefits of autonomy support (AS) in various contexts (e.g., sport, home, school), while controlling behaviors (CB) have been systematically linked to negative outcomes. Despite the well-known consequences of AS and CB, fewer research has investigated their potential determinants. Yet, understanding the risk and protective factors of these behaviors would greatly contribute to promoting AS and preventing CB. Past research suggests that parents who base their self-esteem on their child's performances are more likely to adopt CB, while lower self-esteem contingencies seem to facilitate AS (Grolnick et al., 2007). Despite its relevance, the link between self-esteem contingencies and AS has not been tested in the sport domain. Another factor that could promote AS in this domain is self-compassion. Self-compassion helps parents to accept drawbacks as part of the human experience and to avoid having harsh judgments towards themselves (Neff, 2003). As such, higher self-compassion, paired with fewer self-esteem contingencies, should help parents focus on their child's experience and perspective, instead of on their own goals and insecurities.

The goal of this study was thus to investigate the relations between these two potential determinants of AS and CB in the sport context. It was hypothesized that higher parental self-compassion and fewer self-esteem contingencies between parents' self-esteem and their child's sports achievement should be positively linked to AS, while being negatively associated with CB. 73 athletes (38 boys; cross-country skiers) aged between 13 and 23 years old ($M = 16$, $SD = 1.8$) and 39 parents (19 fathers) participated in this study for a total of 75 parent-child dyads. Parents reported their self-compassion and their self-esteem contingencies, while athletes reported their perceptions of parental AS and CB. Using structural equation modeling with full information maximum likelihood estimations, we investigated if self-compassion and self-esteem contingencies independently predicted parental AS and CB. Results showed that while parental self-esteem contingencies did not predict CB, it was negatively related to perceived AS ($\beta = -.40$, $p < .01$). We also found that parents' self-compassion negatively predicted perceived CB ($\beta = -.34$, $p < .05$). These findings suggest that having higher self-esteem contingencies could impede AS, while being self-compassionate could represent a protective factor against CB. These relations will be discussed in light of the personal pressures that parents may experience when experiencing high self-esteem contingencies and low self-compassion and how their subsequent behaviors may be useful to alleviate these pressures.

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A longitudinal study of perceived parental autonomy-support and need-thwarting at school as predictors of risk-behavior: the mediating roles of need satisfaction, disclosure and defiance

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The present study, grounded in Self-Determination Theory (SDT; Ryan & Deci, 2017), focuses on socialization processes that influence socio-emotional adjustment in early adolescence, and especially adolescents' involvement in risk-behaviors. Adolescents' involvement in problem behaviors (i.e. drinking alcohol, smoking, school truancy, stealing etc.) rises significantly with the transition to junior high school (Walsh, et al., 2010). This increase is partly attributed to adolescents' growing attraction to risky and exciting situations (Steinberg, 2010), and to changes in adolescents' social environment. However, based on SDT we posit that one important factor affecting adolescents' engagement in risk-behavior is the extent to which adolescents experience their parents' and school-context as supporting their basic needs, particularly their need for autonomy.

Accordingly, the main objective of the study was to test the hypothesis that adolescents' experience of their parents' as autonomy supporting and their school as need-thwarting, contributes to motivational and interpersonal processes (i.e. self-disclosure and defiance), which in turn effect adolescents' risk-behavior and other related outcomes (i.e. submission to peer-pressure, internalizing problems).

543 Jewish-Israeli 7th and 8th graders (60% girls, mean age at wave 1 was 12.7) completed self-report questionnaires at three time-points. On December 2016 (T1) participants completed a questionnaire assessing the two main independent variables (parental autonomy support and need-thwarting at school) as well as moderating variables (defiance and self-disclosure) and dependent variables (involvement in risk-behaviors, internalizing symptoms and submission to peer-pressure). Moderating and dependent variables were assessed again after 4 months (T2) and after a year (T3).

Structural Equation Modeling (SEM) and mediation analyses generally supported the hypothesized model, suggesting that perceived autonomy-support by parents promotes disclosure to parents, which in turn reduces further risk-behavior, internalizing problems and submission to peer-pressure. Autonomy supportive parenting also predicted the experience of parents as supporting one's basic needs, which in turn predicted reduced defiance and subsequent decreases in the three negative outcomes noted above. Of particular interest, experiencing school as need-thwarting predicted a compensatory perception of risk-behavior as need-satisfying, which in turn predicted more defiance and subsequent increases in adolescents' involvement in risk-behaviors and submission to peer-pressure.

Discussion will focus on theoretical implications of the processes detected in the study, especially with regard to different forms of need-satisfaction and need-thwarting, and on applied programs that may address these processes to promote adolescents' adjustment.

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The impact of perceived autonomy support and psychological control on classical musicians' perfectionistic traits

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Introduction

The research literature suggests that very few studies have investigated the aetiology of perfectionism (Maloney et al., 2012).

Methods

To fill this gap, 233 professional musicians and tertiary level music students completed a battery of validated scales for (1) perceived parental Autonomy Support (AS) and Psychological Control (PC) and (2) different dimensions of perfectionism.

Exploratory factor analysis of the responses suggested a five-factor solution for perfectionism, expressing participants' Negative Reactions to Mistakes with Self-doubt ($\alpha = .94$), Fear of Negative Evaluation ($\alpha = .78$), Satisfaction with Achievement with Self-confidence ($\alpha = .90$), and Perfectionistic Aspirations in Practising ($\alpha = .90$) and in Performing ($\alpha = .93$). Further, partial confirmatory factor analysis confirmed the factor structure, AS ($\alpha = .89$) and PC ($\alpha = .77$) of the original scales.

To test how AS and PC predict perfectionism, multiple regression analysis was performed entering factor scores of AS and PC as predictors and the five factors of perfectionism as outcome variables.

Results

PC negatively predicted the Satisfaction with Achievement with Self-confidence, and positively predicted the other four perfectionism dimensions, having a more powerful effect on the Negative Reactions to Mistakes with Self-doubt factor. However, AS had no effect on the prediction of Perfectionistic Aspirations in Practising and in Performing, and on Satisfaction with Achievement with Self-confidence, but it negatively predicted Negative Reactions to Mistakes with Self-doubt and Fear of Negative Evaluation. In total, AS and PC yielded weak effect sizes, explaining between 4% and 9% of the variance in perfectionism, $p < .01$.

Discussion & Conclusion

These results explain how parental attitudes might influence musicians in developing high perfectionistic standards. Also, they suggest that PC has a stronger impact on musicians' perfectionistic traits than AS. However, it is proposed that AS, which can be considered in SDT as the opposite of psychological control, reduces the likelihood of musicians developing a maladaptive trait of reacting to mistakes by frustration and fearing criticism. This means that the presence of controlling and the absence of autonomy supportive parenting styles may have an important role in the development of classical musicians' maladaptive perfectionism, which has been suggested as one of the main causes of musicians' performance anxiety (Kenny, 2011).

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P-220

A qualitative study of parental beliefs, goals and practices in feeding their children: a self-determination perspective.

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One area of parenting that is of increasing importance, given the obesity epidemic, is food parenting. In today's obesogenic environment, feeding children has become more challenging and while research clearly supports parental use of autonomy support, structure, and involvement to guide children's eating, they are often not practiced. In this study, we qualitatively explored parenting practices, beliefs, goals, priorities and desired support for feeding their children. We also investigated factors affecting parents' need satisfaction.

In order to examine these concepts, we conducted 4 audiotaped semi-structured focus groups (2 English, 2 Spanish) discussing parents' experiences preparing meals for and feeding their 2-5 year old children. A directive content analysis using self-determination framework was used to analyze data and identify themes associated with parents' practices, goals and priorities along with contextual factors affecting needs satisfaction and frustration. Participants ($n=25$) were primarily women (92%) and Hispanic (80%). They reported using many suboptimal practices including control and unstructured routines to encourage their children to eat. Parents did report the use of supportive practices such as structure and involvement, but did not report using language that supports children's autonomy. One important theme that emerged was parental concern for their children to just eat. Most parents wanted their children to sit and enjoy meals, but they struggled with managing meal time behaviors. A common goal was for their children to eat nutritious family meals, but in reality, parents prioritize the child's wants over their own goals.

Parents in this population reported feeling competent in cooking and preparing meals but did not feel capable of getting their children to sit and eat healthy foods. Allowing children independence in food choices appears to come at the cost of parents' autonomy. Parents reported a sense of relatedness coming from family meals. Contextual factors affecting parenting practices were child eating behaviors, lack of resources, family involvement, and generational influences. Parents also described parenting practices and child eating behavior varying from day to day and meal to meal.

This study identifies important food parenting practices, beliefs and goals within a self-determination framework. Parents' use of feeding strategies appear to be controlled by fear of child hunger and unwillingness to foster developmentally appropriate independence. Cultural and generational influences among other contextual factors affect parents competence and autonomy in feeding their children. Future interventions should help foster a needs supportive environment to encourage families to improve what their children eat.

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Wellbeing and agency of witnesses of adolescents' bullying through self-determination perspective

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A considerable number of Russian and international studies are dedicated to various psychological aspects of bullying among adolescents. Most of the studies are focused on bullies and victims, while witnesses stay less reported. However, bullying behavior in adolescents relies to a certain extent to witnesses' reactions. Witnesses can be subdivided into 2 main groups according to type of involvement: defenders and bystanders. Moreover, in bystanders there are those who sympathize with a victim but choose not to protect them against aggression. The choice of active protector strategy is closely connected to development of competence, autonomy and relatedness, and on personal level reflected with wellbeing and agency.

The goal of current study is to estimate differences in wellbeing and agency between defenders and victim sympathizers. Study sample consisted of 690 adolescents of 12-16 age. Wellbeing parameters were assessed with Psychological Wellbeing Scale by C. Ryff (54-item version). Agency was measured with author's questionnaire consisted of 6 scales: activity, introspection, free choice, personal development, understanding others, uniqueness. Witnesses' behavior was revealed with Bully/Victim Questionnaire by D. Olweus.

Results showed that there were 107 (15%) bullies, 206 victims (30%) and 331 witnesses (48%) in the sample. Among witnesses 111 (33%) were victims sympathizers, 179 (54%) were defenders. Those respondents were included into comparison. Defenders were found to have significantly higher environmental mastery, personal growth, purpose in life and self-acceptance rates than sympathizers. They also exceed sympathizers in several agency domains such as free choice, activity, personal development, understanding others.

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Guilt (as opposed to shame) as the mediator of the relation between emotional integration to empathy and pro-social behavior

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Emotion regulation refers to the processes by which individuals control their emotions and their expression in response to emotional information. Integrative emotion regulation is the ability to experience negative emotions and view them as an important source of information, trying to understand these emotions, and using these understandings to adaptively regulate their actions. As a result, integrative regulation of negative emotions enables adaptive functioning.

Guilt and shame are moral emotions that arise from a violation of social or moral standards. The difference between these two feelings lies in the degree of focus on the self.

Shame focuses on the self ("I'm bad") whereas guilt focuses on the act itself ("the act is bad"). Shame involves an experience of inferiority, and degradation and therefore facilitates avoidance. By contrast, guilt involves feelings of tension, remorse and regret, but does not affect one's core identity. Guilt seems to motivate restitution, confession, and apologizing rather than avoidance. Shame is associated with the desire to undo aspects of the self, whereas guilt is reported to involve the desire to undo aspects of behavior. Therefore, the motivation that arises from shame is a sense of avoidance. Moreover, shame and guilt appear to be differentially related to empathy related responding. While Guilt is associated with other-oriented empathic responsiveness, shame is negatively associated with empathy, and positively associated with personal distress.

Empathy is the ability to understand the emotional experience of others. Previous studies have found that integrative emotion regulation predicts empathy. The present study examined the hypothesis that this relationship is mediated by the tendency to feel guilt (as opposed to shame). The research hypothesis is that the pattern of emotion regulation will predict whether the individual will feel guilty or ashamed in situations involving the violation of social norms. In particular, integrative regulation will be related to the tendency to feel guilty, since integrative regulation includes nonjudgmental observation of the individual's emotional experiences. Additionally, the tendency to feel guilty will predict empathy.

Two studies were conducted. The first supported the link between integrative regulation and guilt. The second study replicated this relationship, and initially supported the mediation model described above.

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P-223

Need frustration and emotion regulation in psychopathology: An exploration into borderline personality features

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From a Self-Determination Theory perspective (Roth, Vansteenkiste, & Ryan, in press), emotion regulation can be driven by either autonomous (i.e., integrative emotion regulation), controlled (i.e., emotion suppression) or amotivated (i.e., dysregulation) reasons. While integrative emotion regulation has been found to relate to adaptive functioning, such as need satisfaction, research has shown suppression and dysregulation to be related to maladaptive functioning, such as need frustration. These need-based experiences and especially need frustration have been shown to relate to psychopathology (Ryan, Deci, & Vansteenkiste, 2015). This research explores the effects of emotion regulation and need-based experiences in the prediction of borderline personality features. In a convenience sample of 225 Dutch university students, we assessed four borderline features, i.e., identity problems, negative relations, emotional instability and impulsive behavior. Results showed (1) that each of the four features was strongly positively related to need frustration (in comparison to need satisfaction); (2) controlling for each emotional regulation style, dysregulation and suppression related to identity problems and negative relations, while emotional instability and impulsive behavior were exclusively positively predicted by dysregulation; (3) regression analyses with need frustration and regulation styles as simultaneous predictors showed identity problems to be equally positively related to both need frustration and dysregulation, while the other features were most consistently predicted by dysregulation. This research can be aligned with recent attention to transdiagnostic factors, for which both need frustration and emotion regulation are valid candidates. Further, the current results are informative for emotion-focused therapies by indicating the importance of need-based experiences in the facilitation of emotion regulation.

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The enabling vs coercive impact of non-financial performance measures on executive intrinsic motivation and self-determination

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In his 2018 annual letter to Chief Executive Officer's (CEO's), Larry Fink, Chairman and CEO of the largest asset manager in the world, BlackRock, stated in no uncertain terms, that "to prosper over time, every company must not only deliver financial performance, but also show how it makes a positive contribution to society" (Fink, n.d). Put simply, Fink is demanding that now more than ever, the companies they invest in must demonstrate that they serve a "social purpose" by being able to clearly articulate a strategy for long term growth. He states that long term value creation requires companies to understand the broader structural trends impacting society, from rising automation to climate change (*ibid*). As a result, Boards have attempted to use various mechanisms to motivate a long-term focus, including the increasing reliance on non-financial performance measures (NFPMs), with varying degrees of success. Using a mixed methods approach, this study aims to expand on the current management accounting literature by attempting to understand how the design characteristics and contextual factors relating to NFPMs impacts an executive's intrinsic motivation to pursue the long-term interests of the organisation and broader societal issues. Understanding an executive's perception of the design features of NFPMs provides insights into the contexts and conditions under which measures encourage social responsibility and long-term focus, as opposed to stifling motivation and generating short-sightedness and dissatisfaction. Hence this study aims to explore the application of self-determination theory to executives, in order to explain the extent to which a work context (specifically performance measures) either satisfies or inhibits an executive's basic psychological needs (Gagne & Deci, 2005) and consequently decision making. Furthermore, there may be implications for practitioners to the extent that the insights from this research will enable organisations to make more informed decisions in relation to executive performance and incentive structures that enable executives to balance the trade-off between conflicting financial and non-financial measures and consequently short and long-term priorities.

The expectation is that focus may be better placed on motivating executives to achieve long-term performance outcomes through greater prioritisation of the corporations "social purpose" through not just the selection, but implementation of appropriate measures that align the executive's intrinsic needs with the corporation's long-term strategy.

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Effects of using a Fitbit device on the motivation and well-being of sedentary men: a pilot study

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Introduction: Physical activity (PA) is associated with decreased symptoms of stress, anxiety, and depression as well as increased self-esteem [1]. Not surprisingly, depressive symptoms, stress, and anxiety are higher among those with low AP. Recent research suggests that the use of a Fitbit device may lead to a more active lifestyle [2]. The objective of this study was to measure the impact of a Fitbit device on PA, motivation, and life satisfaction, in a group of sedentary men.

Methods : Thirty two sedentary men aged between 19 and 35 years (mean age: 25 ± 3.93 years) were randomly assigned to one of the following groups: G1) no intervention ($n = 8$); G2) Fitbit ($n = 8$); G3) kinesiology and nutritionist counseling ($n = 7$); G4) Fitbit + kinesiology and nutritionist counseling ($n = 8$). They were evaluated 3 times: T1) pre-intervention; T2) post-intervention; T3) 6 month follow-up.

Results: An increase in life satisfaction tends to be more notable for G2 than the other groups (Cohen's $d = 0.72$ for T1-T2 difference in G2). Meanwhile, intrinsic motivation also tends to increase for G2 at T2 ($d = 0.37$). The G4 seems to have interesting effects sizes too on intrinsic motivation ($d = 0.48$), identified regulation ($d = 0.53$), introjected regulation ($d = 0.57$) and external regulation ($d = 0.6$). G3 also has an interesting effect size for external motivation ($d = 0.8$).

Discussion and conclusion: Results pertaining to G4 should be interpreted with caution since attrition was important in this group from T1 to T2. The intervention seems to have produced changes for those using a Fitbit device between T1 and T2. T3 will be interesting to observe to compare with T1 for the same variables.

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Self-determination of people with severe congenital motor disability in the process of implementing adequate developmental tasks in the early adulthood - a report on the research conducted in Poland

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The first studies on self-determination of people with severe congenital mobility disabilities were conducted in Poland. The research focused in particular on people who need assistance in everyday functioning. The aim of the research was:

- to determine the extent to which young adults, who are not physically independent due to the degree of their disability, are ready for self-determination and undertaking adequate development tasks
- to determine which factors are the most stimulating for self-determination of young adults with congenital motor disability

83 people with a severe motor disability, aged 18 – 40, participated in the study. 45 people, who need the support of the other person in the majority of daily activities, were classified in group number 1. Group number 2 consisted of 38 people with severe motor impairment, who do not require any assistance in their daily lives.

The following tools were used to carry out the research:

- Questionnaire for the study of the self-determination of people with motor impairments (questionnaire written by the author, inspired by the functional model of self-determination and the theory of causal agency M. Wehmeyer)
- The Rosenberg Self-Esteem Scale
- Delta Questionnaire by Drwal used to measure the locus of control
- Antonovsky's modified Sense Of Coherence - 29 Questionnaire

Respondents from group number 2 turned out to have a significantly higher level of self-determination than those from group 1. In particular, these differences concerned Volitional Action and Action – Control Beliefs. The strongest factor in relation to self-determination was the sense of coherence, moreover, there were connections between self-determination and self-esteem and an internal sense of control. People from group number 2 were able to undertake much more development tasks. The most common development task carried out was finding related social group. The least common development task carried out was starting a family. People from group 1 displayed the strongest relation between self-determination and taking up civic duties, as well as, finding related social group. Respondents from group number 2 displayed the strongest relation between self-determination and being in a relationship, living on their own, as well as, performing their civic duties. People from group number 1 tend to have lower level of self-determination. The level of self-determination is connected to a large extent with undertaking specific development tasks. Self-evaluation, internal sense of control and a sense of coherence stimulate the level of self-determination of people with physical disabilities.

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The prospective link between materialism, gratitude and need satisfaction at work

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Purpose:

Self-determination theory has consistently shown that materialism is associated with lower need satisfaction in several domains. However, only a few cross-sectional studies have explored this association in the workplace. In addition, the underlying psychological processes explaining this relationship are not clear enough. Therefore, we extended previous workplace literature by (1) testing a bi-directional prospective negative link between materialism and need satisfaction and (2) exploring the mediational role of gratitude.

Design/Methodology:

Among a large sample of Chilean workers ($N = 725$), we used a three-wave cross-lagged design with one month between each wave.

Results:

First, we found that materialism and need satisfaction reciprocally predict each other over time. In other words, we found that higher materialism prospectively predicts lower need satisfaction and vice-versa. Second, we found that gratitude mediates the link from materialism to need satisfaction as well as the reverse link from need satisfaction to materialism.

Limitations:

We used self-report measures, a short period of time.

Research/Practical Implications:

We show that pursuing materialism values reduces gratitude, which in turns decreases need satisfaction, leading back to a decrease in gratitude and an increase in materialism. This process would start a vicious circle for employee's well-being and companies' results.

Originality/Value:

We show for the first time that (1) the link between materialism and BNS may be bi-directional and (2) gratitude mediates the process in both directions.

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Motivation and obstacles in goal pursuit: Does motivation influence how people set up their environment, or how they perceive it?

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Introduction. Recent research indicates that experiencing fewer obstacles might be a potential mechanism for the relationship between autonomous motivation and goal attainment (Milyavskaya, Inzlicht, Hope, & Koestner, 2015). But how does motivation influence this mechanism? Does it lead people to set up their environment as to encounter fewer obstacles ("situation selection"), or to subjectively experience the same environment as less of an obstacle? To investigate this, we examine the effect of motivation on how individuals set up obstacles in their environment, and on the subjective perception of obstacles.

Methods. In two studies (total $N = 737$), participants recruited from Amazon TurkPrime and a student participant pool were presented with two types of hypothetical scenarios containing obstacles (unhealthy foods) to their goal of eating healthy. First, they were asked to make decisions about the positioning of unhealthy foods in their environment (or their own positioning relative to those food items). For example, they decided where to build a candy store relative to their house. Second, they were asked to report on their subjective perception of unhealthy foods fixed at the closest distance. For example, to what extent is sitting next to the pizza and donuts at the conference table an obstacle to their goal of eating healthy?

Results. Autonomous motivation led participants to set up obstacles further away, while controlled motivation sometimes led participants to set up obstacles closer to themselves. Controlled motivation also led individuals to perceive obstacles close to them as more disruptive to their goal.

Discussion. The present research suggests that situation selection might be a potential mechanism in the relationship between autonomous motivation and the experience of fewer obstacles, while the subjective perception of obstacles as being more disruptive might explain the relationship between controlled motivation and the experience of more obstacles. Future research should investigate these mechanisms with the addition of goal progress measures, to examine if the situation selection and subjective perception of obstacles might partly explain the relationship between motivation and goal attainment. Future research should also consider other goal domains, experimental manipulation of motivation, and other operationalizations of situation selection.

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Psychological Needs Thwarting and Sustainable Careers

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Introduction and purpose:

Sustainable careers can be defined as "sequences of career experiences reflected through a variety of patterns of continuity over time, thereby crossing several social spaces, characterized by individual agency, herewith providing meaning to the individual" (Van der Heijden & De Vos, 2015, p.7). This requires ongoing self-regulation; by pursuing needs and avoiding frustrations in a proactive and selective way with the aim to protect and promote one's development, well-being and productivity.

According to the self-determination theory (SDT), individuals are intrinsically proactive, self-regulating and inherently inclined to development and integrated functioning. For optimal functioning, need satisfaction of the three basic psychological needs for autonomy, competence and relatedness, is required. Failure to satisfy any of these needs will be manifested in diminished growth, integrity and well-being. Even worse, need thwarting is associated with greater ill-being and more impoverished functioning. SDT further states that psychological needs satisfactions and frustrations vary within persons, over time, context and social interactions. Factors or events, alone or in interaction, that generate variations in need satisfaction or frustration, will also produce variations in activity, self-regulation, and well-being.

In line with SDT, it is useful in the context of sustainable careers, to study how personal and contextual events and changes, as well as their interconnectedness, over the life span, influence need satisfaction or frustration, and what consequences this has for activity, integration, and well-being towards sustainable careers. Therefore, this qualitative study explores how (non-)sustainable careers have developed over time, and which factors and their mutual relationships have influenced them.

Design, Methodology and Results

Data will be collected by means of semi-structured interviews with employees of a Dutch care organization. The results are expected in the winter of 2018. Qualitative content analyses will be applied.

Discussion

The results of this study can help to further understand the development of (non-)sustainable careers.

The presented study is retrospective, which has as disadvantage that the reliability of memories is debatable.

This study is to our knowledge the first to generate insights in personal and contextual factors over time, in relation to sustainable careers, grounded in self-determination theory, and may as such, offer relevant directions for further research on sustainable careers and SDT.

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Increasing Coherence with our Values: Experimental Attempts to Increase Authenticity Across More Than 500 Participants and 4000 Reports

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Perhaps the most prominent theory of authenticity (Kernis & Goldman, 2006) is derived directly from self-determination theory and describes knowing one's values and living in line with those values. Authenticity is associated with numerous benefits including increased well-being, decreased ill-being, reduced negative health behaviors like alcohol-related problems, and buffering against problematic experiences like loneliness. Despite these benefits, we know of no theoretically-derived interventions to increase authenticity long-term. The present work presents three attempts (two pre-registered) to increase authenticity experimentally. In study 1 ($n=205$), a priming procedure was used wherein participants in the authenticity condition identified whether they had ever experienced various states associated with authenticity (e.g., "Have you ever: 'been aware of your strengths and weaknesses at the same time', 'acted in agreement with your values'") then reported on a time they felt that way. This was compared to a control condition in which participants reflected on irrelevant opinions and described why they held those opinions. In study 2 ($n=123$, $m_{reports}=1077$) and study 3 ($n=249$, $m_{reports}=2784$) people in the authenticity condition identified their values, developed goals based on one of those values, and selected three implementation intentions to help them meet that goal in the coming week. This was compared to a self-affirmation condition (Study 2) and a food description control condition (Studies 2 and 3). Participants did this each week for 13 weeks. Every study did significantly alter reports of authenticity, but (with the exception of study 2) often not in intended ways. For instance, against predictions in study 1, those in the authenticity condition felt significantly *less* authentic than those in the control condition. In line with predictions in study 2, participants in the authenticity condition made gains each week in their authenticity compared to participants in the other conditions. Against predictions in study 3 (which was a better-powered replication of study 2), participants in the control condition made greater improvements in authenticity than participants in the authenticity condition. Theoretical and methodological explanations for why these paradoxical findings may have occurred are discussed and presented. Among those reasons examined empirically are different levels of baseline authenticity, other personality moderators, and negative affect that may have been caused by some of the prompts. These results are then discussed in terms of their methodological and theoretical implications for the conceptualization of authenticity and attempts to manipulate it.

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Partner's support for personal projects of women diagnosed with breast cancer - a Self-Determination Theory informed pilot study

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Background: Chronic illness, and more specifically, breast cancer, is a condition that can considerably hinder patients in realizing their personal projects. Nevertheless, according to Self-determination Theory, basic psychological need (BPN) satisfaction, that is, having autonomy, competence and relatedness experiences may still support realization of their pursuits. Thus, they contribute to the actualization of growth capabilities and well-being. Therefore, we may assume that breast cancer patients' well-being will be considerably affected by the amount and quality of BPN support they experience from close others in their personal projects.

Methods: We run a pilot study on a sample of Hungarian women diagnosed with breast cancer within the last year ($n=62$). As controls we used data of women of similar age and lifestyle without diagnosis ($n=67$). Participants lived in a committed relationship. Personal Project Analysis was used for assessing BPN satisfaction; respondents rated their self-generated projects along a series of predefined aspects related to the extent of a) expected and b) actually received ways of support (autonomy, competence and relatedness) from their partners. Correspondence between expected and received support was also calculated. We also assessed satisfaction with life, meaning of life and self-esteem as indices of well-being.

Results: Diagnosed women, compared to the control group, received less competence support (i.e. instrumental assistance) from their partners, while they had higher expectations for support; moreover, they evidenced lower level of subjective and psychological well-being. However, regression analyses showed that diagnosis itself did not predict well-being. Greater correspondence between expected and received support from the partner predicted higher level of each of the well-being indices. Self-esteem was also predicted by perceived competence support.

Discussion: Findings underline that it is vital for women struggling with breast cancer that they receive BPN support from their partners when accomplishing everyday personal projects. In fact, BPN support proved to be more important than diagnosis itself and was related to both subjective and psychological well-being. Consequently, perceived BPN support (especially relatedness and competence) from significant others can be interrelated with successful adaptation for a serious illness. For refining these results we are extending our study to a major sample of Hungarian women having a diagnosis of breast cancer.

Keywords: Personal Project Analysis, social support, basic psychological need satisfaction, goal appraisal, close relationships

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From initiating to integrating healthy eating behaviors into one's lifestyle: what role does motivation play?

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Introduction: Individuals in Western civilizations have the opportunity to exercise control over their health by making healthy food choices; yet, prevalence rates of obesity continue to rise. In order to help policy makers in implementing effective public health strategies to improve health and to reduce the prevalence of obesity, it has recently been suggested that messages used to promote healthy behaviors should be tailored to individuals' stages of change and framed in a way to promote high quality motivation as to facilitate moving from initiating to integrating healthy behaviors into one's lifestyle. Based on these principles, the main objective of this study is to examine how motivation and eating behaviors differ across stages of change for eating regulation. As a secondary objective, the psychometric properties of a new scale for measuring healthy and unhealthy eating behaviors according to Canada's food guide will be examined.

Methods: Undergraduate female students (N= 725) were recruited from the University of Ottawa's (Canada) research participation pool in exchange for partial course credits. Through an online questionnaire, the participants completed measures related to their motivation, their eating behaviors, as well as their stage of change for eating regulation.

Results: The results from a principal component analysis provided support for a two-factor solution for the healthy and unhealthy eating behaviors scale. Separate ANOVAs also revealed significant overall group differences for self-determined and non-self-determined motivation, as well as for healthy and unhealthy eating behaviors. As a follow-up, planned contrasts demonstrated that women in earlier stages of change reported higher levels of non-self-determined motivation and lower levels of self-determined motivation for eating, as well as a higher consumption of unhealthy and a lower consumption of healthy food items. Also, women in later stages of change reported higher levels of self-determined motivation and lower levels of non-self-determined motivation for eating, as well as a higher consumption of healthy and a lower consumption of unhealthy food items.

Discussion & Conclusion: This study provides support for a new scale measuring healthy and unhealthy eating behaviors according to Canada's food guide. Furthermore, it provides evidence for the role of motivation quality in moving from deciding to act, to implementing, to integrating, and finally, to maintaining healthy eating into one's lifestyle. By designing messages based on the proposed psychological principles, policy makers may facilitate behavior change by increasing individuals' motivational quality and consequently, their eating behaviors.

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Mindfulness and motivation in social-emotional learning

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Introduction. This study is on motivating students in social-emotional learning. It is anchored on a theory of human motivation - The Self-Determination Theory. Recently, mindfulness defined as "a receptive attention to and awareness of present events and experiences" has been incorporated into the Self-Determination Theory framework. This study attempted to contribute to the extant research on Self-Determination Theory by incorporating mindfulness and the Self-Determination Theory in social-emotional learning. **Method.** Participants of this cross-sectional, self-reported survey study were 958 adolescent students, mean age = 13.28 years old, $SD = 1.06$, 58% female, attending public primary and secondary schools in Singapore. **Results.** Findings suggested that mindfulness (attention and awareness) significantly predicted more autonomous motivational regulation (measured using Relative Autonomy Index), emotional regulatory outcomes (perceived stress, test anxiety, affect, self-control) and cognitive regulatory outcomes (use of organisational skills and metacognitive self-regulation) in learning. Self-acceptance significantly predicted motivational, emotional and cognitive regulatory outcomes in learning, over and above that predicted by attention and awareness. Mediation analyses suggested that the satisfaction of basic psychological needs of autonomy, competence and relatedness partially mediated the relationships between mindfulness and the motivational, emotional and cognitive regulatory outcomes in learning. **Discussion and conclusions.** There are evidence to suggest that mindfulness could promote social-emotional learning. Less is known about motivating students in social-emotional learning and the potential mechanisms underlying these salutary outcomes. This study addressed these questions using a non-clinical sample of adolescent students. Findings suggested that mindfulness could nurture the basic psychological needs as postulated under the Self-Determination Theory and promote more autonomous motivation in social-emotional learning. The implications of this study will be discussed in the context of social-emotional learning in the classrooms.

Keywords: Self-Determination Theory, Mindfulness, Social-Emotional Learning

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The role of mindfulness in self-concordant goal setting

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According to the self-concordance model (Sheldon & Elliot, 1999), certain goals are better for an individual's mental health, well-being, and development because they align with his or her core values and sense of self. Self-concordant goal selection is a difficult life skill that predicts persistent goal effort and enhanced goal attainment. Moreover, the attainment of self-concordant goals leads to increases in well-being. Non-concordant goals, on the other hand, can lead people to waste time and energy pursuing goals that, even if attained, may not benefit their personal growth or happiness. One potential avenue for improving individuals' ability to set self-concordant goals is mindfulness. Trait mindfulness refers to a general disposition to be attentive to one's thoughts, feelings, sensations, and emotions, and can be cultivated through mindfulness exercises, such as mindfulness meditation. Researchers have previously theorized that mindful individuals may set goals that are more self-concordant. To date, no empirical research has investigated this assertion. Using self-determination theory (Ryan & Deci, 2017), it was hypothesized that trait mindfulness would be positively associated with self-concordant goals. Across two samples ($n_1 = 240$, $n_2 = 527$), results indicated that trait mindfulness positively predicts setting goals that are more self-concordant (sample 1: $b = .29$, $p < .001$; sample 2: $b = .15$, $p < .001$). These findings provide initial support for the claim that mindful individuals set "better" goals that are more likely to be conducive to well-being. To extend these findings, a third study investigated the causal relationship between mindfulness and self-concordant goal setting. We conducted an online experiment to test whether inducing a state of mindfulness would increase an individual's tendency to set self-concordant goals. Participants ($n_3 = 267$) were randomly assigned to one of three conditions: a mindfulness induction, a mind-wandering induction, or a control condition (where participants completed filler questionnaires). Following the manipulation, participants set three goals for the upcoming week and rated their autonomous and controlled motivation for each goal. Results indicated that there were no significant differences in goal self-concordance between conditions, $F(2, 264) = 0.22$, $p = .98$. These findings suggest that a single-session mindfulness intervention is not sufficient for enhancing goal self-concordance. This research is important given that everyone sets goals in all areas of life and cultivating mindfulness may be an effective strategy for setting goals that more accurately reflect one's authentic self.

Social networks and academic motivation: how do friendships matter?

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Introduction: This research explores the impact of peer groups on academic motivation, examined through the lens of self-determination theory. At school, students have many opportunities to spend time with one another, and through these social interactions, beliefs and behaviours become shared between peers in the process of social contagion (for a review, Burgess et al, 2018). Here, we use concepts from network science to comprehensively assess the impact that social connections have on intrinsic motivation.

Methods: In total, 334 students, from seven year groups, completed an online survey assessing their intrinsic motivation using a variety of measures. Students also provided their social network information by nominating up to five people from their year group. To assess similarity between friends we calculated an assortativity index for each construct, within year groups, and synthesized the results with a random-effects meta-analysis. Moreover, network centrality of each student was quantified using the degree and eigenvector centrality of the social network, and we examined whether and how these centrality indices predict motivation using multiple regression analysis (controlling for year group effects).

Results: The meta-analysis of assortativity indices showed that level of agentic engagement is significantly similar across all school years, meaning that at a whole school level, students have friendships with those who express similar levels of classroom engagement and autonomy. Regression analysis of centrality measures focussed on degree and eigenvector centrality. We found that level of eigenvector centrality significantly predicts levels of agentic engagement and English interest. Eigenvector centrality measures the influence of a node in a network. Therefore, those with high eigenvector centrality have higher levels of self-reported agentic engagement and levels of interest in their English classes.

Conclusions: Self-determination theory is well linked to education, and has been highlighted as an important contributor to behavioural, affective, and cognitive outcomes at school (Guay et al., 2008). The present study provides a strong contribution by highlighting the social aspect of intrinsic motivation and demonstrating that some motivation components are shared throughout peer groups. We take a novel approach to motivation and education research, assessing classroom dynamics by utilising concepts from network science.

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Autonomy-support and transfer of learning: Testing the self-determination theory in a Chinese service-learning activity?

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An important goal of higher education is to prepare graduates with the knowledge and skills for success in the workforce. Previous research has shown that participating in service-learning activities could promote college students' transfer of learning. However, the dynamic processes and mechanisms of students' development of transfer of learning have not been explored thoroughly. Furthermore, no one has explored the contextual factors that affect students' transfer of learning in service-learning settings. According to self-determined theory, autonomy-support from authorities is the key for promoting students' motivation and performance. Therefore, we examined the effect of autonomy-support from supervisors on students' transfer of learning in the context of Chinese higher education.

Ninety-six undergraduates from Psychology department participated in a 9-week service-learning program. Students were asked to work in a group of four people, and each group served and interacted with one child with special needs. After each activity, students were asked to write a reflection journal about what went well in the activity and what changes they would like to make for the next activity. After receiving the journals, the supervisors provided written feedback to each student. Autonomy-support was assessed via students' self-report surveys as well as 433 feedback documents. Students' transfer of learning was measured with open-ended questions. Students' answers were coded and scored with a transfer of learning rubric. Furthermore, we measured activity evaluation with a self-report questionnaire.

To examine the relation between autonomy-support and transfer of learning, we first analyzed the cross-sectional quantitative data. A linear mixed model was conducted. Our findings showed that students' perception of autonomy-support was positively associated with students' evaluation of the service activity. Students' evaluation of service activity was positively associated with students' transfer of learning. To investigate the dynamic relations of autonomy-support and student performance, the weekly reflection journals and feedback documents were analyzed. The results were consistent with previous findings.

The present study makes meaningful contributions to the fields of service-learning and self-determination theory. First, it provides new evidence about the application of self-determination theory in the context of Chinese higher education. Second, the present study explored the relation between autonomy support and transfer of learning in the dynamic process of service-learning, which has largely been ignored in this field. Third, the mixed methodology of survey and content analysis gave more insight into this topic and strengthened the results.

Internalization of mastery goals: The role of teacher autonomy support and control

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A growing body of research is integrating achievement goal theory with self-determination theory. Several studies, specifically in the school context, has indicated that achievement goals pursued with underlying autonomous reasons are more adaptive than those pursued with underlying controlled reasons. The purpose of the current study was to test whether students' internalization of mastery goals is dependent upon their teachers' autonomy support and control (Ryan & Deci, 2017, Sommet & Elliot, 2017). This is a longitudinal study that examined at two time points, at the beginning and the end of the school year (Time 1 and Time 2, respectively), how students' perceptions of teachers' autonomy supportive and controlling practices when they promote mastery goals differentially predicted their internalization of the goals set by teachers. participants were 240 Arab Israeli students (68% girls, mean age=14.84 years) in Grades 9-10 from three different schools. In both time points, students filled in questionnaires assessing their teachers' promotion of mastery goals, their autonomy supportive and controlling practices when they promote mastery goals, and their achievement goals pursuit.

Results demonstrated that only perceptions of the teacher as autonomy supportive when promoting mastery goals at Time 1 predicted students' pursuit of mastery goals at Time 2, beyond students' own mastery goals at Time 1. Importantly, perceptions of the teacher as controlling for mastery goals at Time 1 predicted students' pursuit of performance goals at Time 2.

This research suggests that, if teachers want their students to pursue mastery goals, they should promote the goals in an autonomy supportive way. They join a growing body of evidence demonstrating that combining achievement goal theory with SDT can further our understanding of the underpinnings of achievement motivation, especially underlying mastery goals motivations. It also provides a further understanding of the goal-complex model of achievement goals, practically regarding teacher-student relations.

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Mental toughness among high school students: Are autonomy-supportive relationships relevant for mental toughness and academic outcomes?

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Mental toughness (MT) has gained considerable attention as a key factor for determining outstanding performance regardless of challenging or stressful circumstances (Hardy et al. 2014). MT has been defined as an unshakeable perseverance and conviction towards some goal despite pressure or adversity (Middleton et al. 2011). Although MT has been studied mainly in the sport context, recent studies posit that it is a relevant construct for predicting achievement outcomes in academic settings (Lin et al., 2017). Considering the recent interest in MT in the education context, we aimed to understand MT's determinants in a sample of adolescents as well as its consequences in light of SDT (Ryan & Deci, 2017).

Using a cross-sectional design, this study tested the contribution of autonomy supportive relationships (teacher, mother, father) on MT as well as the associations between MT and three achievement related outcomes: academic engagement, preference for difficult tasks and grades. Our sample consisted of 515 high school students (girls 58%).

Results from structural equation modeling revealed that students' perceptions of autonomy supportive relationships by mothers, fathers, and teachers predict their MT, but more so for teachers. MT was positively associated with academic engagement and preference for difficult tasks. Finally, academic engagement and preference for difficult tasks were positively associated with grades. Accordingly, students who perceived higher autonomy support showed higher MT. Students high on MT showed higher academic engagement and preference for difficult tasks, which in turn, led them to achieve better grades.

Overall, these results corroborate previous findings that have shown positive associations between MT and educational outcomes (Lin et al., 2017). Most importantly, these results are consistent with findings showing that an environment offering a supportive rather than controlling learning climate best predicts MT (Anthony et al., 2016). These results provide support for contributions of autonomy supportive behaviors in the classroom and at home. Teachers, mothers and fathers should thus be aware that their behaviors can influence MT; an important resource that can in turn increase desirable outcomes in education.

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Mediating effects of career-decision making autonomy in the relationship between belief in a just world and career adaptability of university students

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Introduction

The main purpose of this study was to investigate antecedent variables that facilitate career adaptability of university students in South Korea, especially focusing on Belief in a Just World (BJW). The just world hypothesis suggested by Lerner (1977) stated that people need to believe in a just world which everyone gets what they deserve and deserves what they get. This belief encourages people to invest in long-term goals by giving them the confidence that their investment will be justly rewarded (Hafer, 2000). This implies that BJW is closely related to motivational aspects. Therefore, in this study, career decision-making autonomy (CDMA), which is consisted of 4 types of motivations in career decision making (i.e., intrinsic motivation, identified regulation, introjected regulation, external regulation), was considered as a mediation variable in the relationship between BJW and career adaptability to gain understanding of the process how BJW influences on career adaptability of university students.

Method

One hundred and eighty-two university students in Seoul, South Korea, were participated in this study (males=112; females=70). Participant's mean age was 22.09 years. The data were analyzed using AMOS 23.0

Results

The structural equation modeling showed that BJW increased intrinsic motivation and identified regulation in career decision making, whereas BJW had no significant effects on introjected and external regulation. In addition, intrinsic motivation and identified regulation in career decision making had positive effects on career adaptability whereas the effects of introjected and external regulation on career adaptability were non-significant. In particular, effects of BJW on career adaptability were mediated by intrinsic motivation and identified regulation.

Conclusion

The results of this study suggest that BJW serves adaptive functions in career field of university students by facilitating their intrinsic motivation and identified regulation in career decision making. This indicates that BJW regulate motivational aspects of university students in their career development. It was expected that this study would be useful information for understanding the roles of BJW in career education field of university students.

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P-240

Can an intervention based on self-determination theory foster positive beliefs about autonomy support? - A quasi-experimental study with preservice biology teachers

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Motivating students in the classroom is a key challenge for every teacher. But teachers are often not well prepared for this challenge. Many teachers still tend to apply controlling behavior that has been shown to negatively affect students' motivation. Teaching behavior that aims to satisfy the students' need for autonomy can foster self-determined motivation in class. Previous studies have shown that teachers' intention to apply such behavior is dependent on underlying beliefs (Reeve & Cheon, 2016). To foster positive beliefs about autonomy support and prepare preservice biology teachers for upcoming challenges, we designed an intervention based on the assumptions of self-determination theory (Ryan & Deci, 2017).

Eighty-four preservice biology teachers ($Age=24.71\pm 3.64$ years; $Msemester=7.24\pm 2.05$; 63% female) participated in the current study. The experimental group (EG; $n=50$) took part in the intervention. Specifically, the EG learned about the basic psychological needs and the continuum of motivation as well as five autonomy-supportive methods in three sessions. The control group (CG; $n=34$) did not participate in this intervention.

In order to evaluate the intervention, we investigated the preservice teachers' theoretical and practical knowledge with 14 open-ended items (Cohens $\kappa=.91-.93$). Furthermore, their beliefs about the effectiveness and the easy implementation as well as their intention to apply autonomy-supportive teaching behavior were examined (Cronbachs $\alpha=.70-.91$). All test instruments were applied in the pre- and posttest.

All interaction effects (Mixed-ANOVA; time x treatment) were significant. The EG showed higher scores in both knowledge tests after the intervention than the CG ($F(1,82)=62.04, p<.001, \eta^2=.43$; $F(1,82)=149.78, p<.001, \eta^2=.65$). In addition, the EG assumed the autonomy-supportive behavior to be more effective ($F(1,82)=8.31, p<.01, \eta^2=.09$) and easier to implement ($F(1,82)=28.56, p<.001, \eta^2=.26$). The EG further stated higher intentions to apply this behavior after the intervention than the CG ($F(1,82)=14.15, p<.001, \eta^2=.15$).

Results show that the intervention can positively affect the preservice teachers' knowledge and beliefs about as well as their intention to apply autonomy-supportive behavior. Fortunately, positive beliefs about and intentions to apply such behavior can be fostered by interventions for preservice teachers. Such interventions might help to reduce controlling teaching behavior in the classroom.

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P-241

Motivation at school and at an extracurricular learning setting: Different educational contexts are related to distinct positive and negative aspects in motivation

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Motivation is a crucial factor in education. It influences the quality of and the way that things are learned, and more self-regulated forms of motivation are regarded as more beneficial in learning. Extracurricular learning settings (ELS) might promote such types of motivation, e.g. intrinsic motivation, and might thus be a valuable supplement to regular learning contexts. From the perspective of self-determination theory (Ryan & Deci, 2017), it is therefore of question how exactly motivation types at school and at ELS differ. Therefore, we investigated the development and differences in the types of motivation at school and at a biological-ecological station as one example of an ELS. We hypothesized that extracurricular learning is related to more self-regulated forms of motivation and that interest, perceived choice, competence, and pressure predict intrinsic motivation.

We administered a questionnaire on intrinsic motivation, identified regulation, external regulation, amotivation, interest, perceived competence, choice, and pressure to $N=125$ biology major students (age: $M=17.69, SD=0.72$, 60% girls) at the highest stratification school level in Germany during the field trip at the ELS and before and after the trip, i.e. during regular biology lessons at school.

Identified regulation was significantly higher at school, $F(2,90)=33.66$, $p<.001$, amotivation and competence at the ELS, $F(2,90)=11.85$, $p<.001$ and $F(1.817,83.585)=6.738$, $p=.003$, and pressure stayed lower even after the field trip, $F(2,92)=6.774$, $p=.002$. There was no significant difference in intrinsic motivation, external regulation, choice, and interest, all $p>.05$. Linear regression models including interest, competence, choice, and pressure significantly predicted intrinsic motivation, with interest explaining the highest percentage of variance.

e found complex differences in the types of motivation between the school and the extracurricular learning context. Extracurricular learning might pronounce both positive and negative motivational aspects and not only more self-regulated forms of motivation, which can e.g. be seen because pressure decreased after the visit at the ELS, while amotivation was higher during the field trip. The fact that all students major in biology and therefore prepare for their final exams and the respective structure and the tasks at the ELS might explain these findings as well as the similarity of intrinsic motivation, external regulation, perceived choice, and interest at both settings. Future research should include such context characteristics to better describe factors influencing the respective motivational quality at school and at the ELS.

Ryan, R.M., & Deci, E.L. (2017). *Self-Determination Theory – Basic psychological needs in motivation, development, and wellness*. New York, NY: Guilford Press.

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Effects of different health communication media on enjoyment and pressure during educational interventions

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Health communication in general is not neutral but follows an informative or even persuasive goal. Moreover, communication on topics concerning other people's lives, such as organ donation, cannot be ethically neutral and is normally of persuasive character. However, education on organ donation in Germany should present arguments in favor and against donation and the decision to donate organs should be self-determined. Furthermore, when teaching ethical topics teachers' grading must be independent of the student's decision which prevents indoctrination. Lessons about organ donation at school should therefore pursue an informative goal. Nevertheless, lessons with media that is not ethically neutral, such as educational films with promotional character or affected persons talking about their tale of suffering and recovery might be perceived as persuasive and might exert some moral pressure on the students. Pressure and feelings of reactance or excessive commiseration might impair the intrinsic character of the students' motivation.

In a pre-posttest-intervention design with three groups we investigated whether an educational film produced for use in school lessons (F; $N=221$), talks of transplant surgeons and affected persons in class (PA; $N=131$) and a neutral slide presentation (SP; $N=238$) led to different degrees of pressure/tension (Cronbachs $\alpha=.59$; $k=3$) and interest/enjoyment (Cronbachs $\alpha=.72$; $k=3$) in the students (mean age: $M=16.7$ ($SD=0.67$); 56% female). We furthermore analyzed whether the different media led to a differential development of pre- and post-attitude towards organ donation using pressure/tension (P/T) and interest/enjoyment (I/E) as covariates.

Results show that the students in all groups experience little P/T (F: $M=1.05$, $SD=0.76$; PA: $M=0.74$, $SD=0.79$; SP: $M=1.10$, $SD=0.95$; min 0, max 4) and a medium amount of I/E (F: $M=1.83$, $SD=0.85$; PA: $M=2.20$, $SD=1.09$; SP: $M=2.11$, $SD=0.88$; min 0, max 4). However, Games-Howell post-hoc tests show that the media led to slightly different feelings of P/T ($F = SP > PA$; $F=SP$: .055, $p=.771$; $PA<F$: -.31, $p=.000$; $PA<SP$: -.36, $p=.002$) and I/E ($F < SP = PA$; $F<SP$: -.28, $p=.002$; $F<PA$: -.37, $p=.003$; $SP=PA$: .09, $p=.679$). Furthermore, the students' P/T and I/E had no or a small effect, respectively, on the development of the students' attitude towards organ donation from pre- to posttest-time (ANOVA with repeated measures: P/T: $F(1;498)=1.78$, $p=.183$, $\eta^2=.004$; I/E: $F(1;498)=10.35$, $p=.001$, $\eta^2=.02$). Overall, a serious topic like organ donation leads to a medium amount of I/E in students. However, media that are not ethically neutral do not exert more P/T or impair I/E.

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Associations between developmental typologies of basic psychological needs and engagement in school

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Pupils' functioning and performance at school typically derive from a combination of simultaneous, rather than isolated, personal experiences (Earl, Taylor, et al., 2019). Based on SDT we sought to identify groups of students according to classes of change trajectories of needs satisfaction and frustration in school domain. Similarly, we were interested in distinguishing groups of students based on combinations of four types of school engagement. Finally, our goal was to evaluate how the developmental trajectories of needs and school engagement are related.

Adolescents ($N = 795$; $Mage = 16.16$ years at T1; 49.8% girls) reported on three basic psychological need satisfaction and frustration in school domain and four dimensions of school engagement (i.e., agentic, behavioral, emotional and cognitive) three times with a half year interval during one and a half school year.

A Multivariate Latent Class Growth Analysis (LCGA) was used to identify classes of developmental change trajectories of both psychological needs (i.e., satisfaction and frustration of autonomy, competence, and relatedness) and school engagement (i.e., agentic, behavioral, emotional and cognitive). Based on the model fit indices, four trajectory classes were identified for need satisfaction and frustration: "High need satisfaction and low frustration", "Moderate need satisfaction and frustration", "High autonomy need frustration", "High autonomy and competence need frustration". Similarly, four trajectory classes were identified for engagement: "High engagement", "Low and decreasing engagement", "Average behavioral engagement with low decreasing emotional engagement", "Low behavioral engagement with average decreasing emotional engagement".

Cross-tabulation analysis, which was performed to estimate the overlap between classes of psychological need and engagement trajectories, indicated a substantial association ($\chi^2 = 106.18$, $df = 9$, $p < .001$; Cramer's $V = .231$). Specifically, "High engagement" class was more common to "High satisfaction and low need frustration" class, while "Low and decreasing engagement" class was more common to "High autonomy need frustration" and "High autonomy and competence need frustration" classes. "Average behavioral with low decreasing emotional engagement" class was more common only to "High autonomy need frustration" class, while "Low behavioral engagement with average decreasing emotional engagement" was more common only to "High autonomy and competence need frustration"

Taken together, the findings highlight the interplay between three psychological needs satisfaction and frustration and potentially distinct theoretical mechanism that explain different types of school engagement.

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P-244

The longitudinal changes and relations of Korean middle school students' academic motivation, learning strategies and academic achievement

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Introduction

Students should be motivated both intrinsically and extrinsically and also be encouraged to use cognitive strategies for successful academic achievement (Pintrich & De Groot, 1990). Since middle school students experienced rapid personal and environmental changes, the longitudinal study should be conducted to observe the continuous changes (Jo & Kwon, 2010). This study was to explore the long-term changes of academic motivation and examine the mediating role of learning strategies between academic motivation and achievement.

Methods

Using 3-years longitudinal data (middle school years) of the Gyeonggi Education Panel Study (GEPS), the current study tracked longitudinal changes of academic motivation in 2,573 Korean students through Latent Growth Modeling (LGM). In addition, this study examined longitudinal relation model that academic motivation effects on learning strategies and academic achievement. Academic motivation and learning strategies consisted of 4 sub-factors with 16 items respectively. Academic achievement was measured through the tests developed by Gyeonggi-do Institute of Education in Korea. Academic motivation and learning strategies were rated on a 5-point Likert-type scale ranging from 1 (not at all like me) to 5 (very much like me) and Cronbach's alphas were acceptable. Lastly, academic motivation was calculated using the Relative Autonomy Index (RAI) formula.

Results

Results showed that academic motivation (i.e., external, identified, and intrinsic motivation) significantly decreased during middle school periods. However, the introjected regulation, one of the sub-factors of academic motivation, was not statistically significant. The examination of the longitudinal relation model showed that fit of the model was acceptable (i.e., CFI, NFI, and GFI were greater than .90, SRMR was smaller than .08). Also students with high motivation were found to use effective learning strategies and high academic achievement.

Conclusion

This study suggests that Korean middle school students who are more academically motivated are likely to have more effective learning strategies and achieve higher academic success. Therefore, the study can be used as a basis for developing educational programs for students who have difficulties in achieving academic performance.

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P-245

Principal's leadership and teacher motivation for educational reform in Austrian failing schools

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In the last decades, many European countries implemented instruments to monitor schools and students' achievement. From an SDT point of view, this not only led to an increase of perceived pressure for school leaders, teachers, and students but also led to labelling schools that fail to reach basic educational standards. In March 2017, the Austrian Ministry of Education initiated a school development reform aimed to support schools with major challenges. Previous research shows, that school reform programs, frequent inspections from the school board and the professional stigma of belonging to a "failing school" additionally add pressure to an existing struggling condition (Jones et al., 2017). On the other side, SDT shows that school leaders can contribute positively to initiating and guiding school reform activities and that his/her leadership style has an evident impact on teacher's motivation (Eyal & Roth, 2011).

In this study, we want to present an insight of first data from a four-year evaluation program. In January 2019, 110 schools will be evaluated in regard to the program implementation of a national school improvement project. For school leaders, we designed a qualitative interview with questions focussing on the project initiation. A latent class analysis (LCA) for the coding of the interviews will identify distinct principal profiles. In addition, teachers assess their school leaders with the Multifactor Leadership Questionnaire and participate in a survey on the motivational regulation for engaging in the school reform program, and on the satisfaction and frustration of the basic psychological needs.

The profiles found through the LCA from qualitative categories of the principal's interview will be used to moderate a path analysis yielding to show the effects of the principal's (perceived) leadership on the motivation and estimation towards the school reform project. We expect an effect principal's leadership styles on teacher's autonomous motivation linked to higher acceptance of the reform project. Higher levels of transactional leadership are expected to be linked to greater controlled motivation or amotivation with an effect on a lower estimation of the appropriateness of the program.

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P-246

Adolescents' well-being and confidence in academic success: the role of different sources of need fulfillment.

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Academic success and wellbeing among adolescents are important goals within education. To enhance academic success and wellbeing it is important to focus on malleable factors. Therefore, we turn to self-determination theory: basic psychological need fulfillment is an important, malleable predictor of academic success while it is also an important means to promote wellbeing. Recent research has shown that different social sources (i.e. mothers, teachers and siblings) relate uniquely to changes in need fulfillment (Van der Kaap-Deeder et al., 2017). This general finding may also apply to the specific contexts that individuals are involved in. On a weekly time-scale an individual is involved in several contexts, for example the school context during the day, a family context in the evening and a friend context in the weekend. We know that contexts plays an important role in need fulfillment (Vansteenkiste & Ryan, 2013), but it is unclear whether the different contexts individuals are involved in can be seen as unique sources of need fulfillment. In present study we distinguish the school context from non-school contexts and we will examine to what extent need fulfillment in both contexts has unique relations with adolescents' well-being and confidence in academic success.

We present results of our u-can-act project, where we conducted an experience sampling study following adolescents ($n = 187$) from vocational education for several months. We use within-individual factor analyses to examine to what extent the need fulfillment in both contexts has unique relations with (1) adolescents' well-being and (2) confidence in academic success. Preliminary analyses show that we have obtained suitable data to be able to effectively perform our targeted analysis. Each student, who started the EMA study completed on average 22.3 questionnaires during the study protocol, which is approximately 84% of the possible questionnaires. Our study will inform theory by showing whether it is relevant to distinguish different contexts when studying need fulfillment. In addition, our study informs educational practice by showing how important need fulfillment in the school context and non-school context are to enhance adolescents' well-being and confidence in academic success.

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Recognition and Management of Pediatric Anxiety Disorders in the Primary Care Setting: A Self-Determination Theory Guided Training Program

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Objective: The primary objective of this educational program was to enhance the ability of the pediatric primary care provider (PCP) to assess and manage mild to moderate anxiety by incorporating principles of Self-Determination Theory (SDT) in the program delivery to create an autonomy-supportive learning environment.

Method: Pediatric PCPs from a private practice in Rochester, NY were invited to participate in a SDT-guided, half-day training program to learn how to assess and manage mild to moderate anxiety, access mental health experts for collaboration and referral support, and to document and bill for services. A pre-/post- test design was used to assess participant knowledge, perceived competence and autonomy support, and perception of autonomy versus control. Three SDT survey instruments were modified for this program, under the guidance of SDT experts, to evaluate the participants' experience of autonomy-support before and after program participation. A program evaluation was conducted to evaluate participant experience and guide future program delivery. Electronic medical records were queried to determine the number of children and adolescents, among the 13,000 patients of record, being screened for and diagnosed with anxiety by the providers before and after implementing the program.

Results: The participants' anxiety knowledge test scores increased by a mean of 20 percent following participation in the program. Participants reported an increase in perception of knowledge, confidence, and competence in assessing and managing anxiety. Participants' documented screening for anxiety increased more than ten-fold in the three months following participation in the program. The incidence of diagnosing anxiety at the practice site increased by an average of over 70% in the three months following the program.

Discussion: An educational program delivered in a autonomy-supportive learning environment may be an effective method of training PCPs to care for children with mild to moderate anxiety, with the intention of preventing further deterioration. This method of conducting targeted, theoretically driven training programs could have more broad implications for use in the pediatric primary care setting.

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P-248

Understanding children - in the light of their psychological basic needs and motives of action (building relationships beyond attachment theory)

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What do children need during their starting time in crèche or day-care center? How can the transition from family to institutional care succeed? German early childhood education has developed specific concepts for the so-called settling in. Especially the concepts in crèches are grounded on attachment theory⁶. The basic assumption claims that only the presence of a bonded person can represent the necessary secure foundation ("safe anchor/haven") enabling the child to explore his environment.

These settling in concepts completely overlook the child's own resources and capabilities for exploration. Many other facets of the social environment that the child itself uses to feel competent remain completely disregarded. The cultural impact of attachment and relationships is nearly completely neglected^{3,4}.

Experiences gained in practice point to a problem: If children are bonded to a teacher at the beginning of their extra-familial care, dependencies arise in both directions.

Thus building and shaping relationships between child and teacher requires a different stance. Teachers need an alternative framework for interpreting children's behaviors.

Therefore, we have developed a model². Essential assumptions for the modeling stem from the findings of SDT⁷, transition research⁵, and a systemic view of development and relationships⁸.

Starting from the three basic needs, **areas of tension** are derived. Their respective poles give the target orientation. They are to be understood as **motives of action**:

Autonomy leads to the poles of **freedom** (self-deciding, acting, self-distinguishing) and **orientation** (adapting, fitting-in).

Social relatedness opens up the area between **contact** (togetherness, pursuing common goals) and **retreat** (to reflect on oneself, focusing inward).

Competence leads into the area between **challenge** (risking something, trying out new things) and **security** (relying on familiar things, go into routine activities).

On the basis of this model, professionals are dealing increasingly intensive with the intentions leading children's actions. Professionals have greater pedagogical leeway.

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P-249

The effects of flexible working conditions on need satisfaction

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Introduction: Triggered by the rise of information- and communication technologies, there is an increase in flexible forms of work observable. Workers are no longer required to be in the same location in order to fulfill their tasks.

Related to these developments, both, increases in employees' wellbeing and satisfaction with their work-nonwork balance, but also increases in stress and impaired wellbeing have been observed.

In our study, we first explored if flexible working conditions, defined as when (flexitime) and where (flexplace) work is performed, affect the satisfaction of the three basic needs. We differentiate between employee controlled (flexwork availability) and organization controlled (flexwork requirement) flexible working conditions. Secondly, based on self-determination theory, we tested if need satisfaction acts as a mediator in the relationship between flexible working conditions, emotional exhaustion and work engagement.

Methods: We used a cross-sectional survey to test our hypotheses. The sample consisted of 274 employees from the UK (49.1% female; mean age: 41.2 years), working at least 30 hours a week. Multiple mediation analyses were used for statistical analyses.

Results: Flexitime and flexplace availability increased satisfaction of the need for **autonomy**, which also fully mediated the relationship between flexitime/flexplace availability and emotional exhaustion and partially mediated their relationship to work engagement. Flexitime availability was slightly positive related to the satisfaction of the need for **relatedness**, which accounted for a decrease of emotional exhaustion and an increase of work engagement. Surprisingly, flexitime/flexplace availability tended to decrease the satisfaction of the need for **competence**, but only for employees with a low need for structure, which further resulted in partially negative consequences with regard to both outcomes. There were no mediation effects of need satisfaction observable with regard to flexitime/flexplace requirements.

Discussion & Conclusion: We theoretically underline and extend the research on flexible work and self-determination theory and emphasize the role of employees' control of their flexible work situation. Similar to Perry et al. (2018), we were able to show that flexitime and flexplace availability are positively associated with the satisfaction of the need for autonomy. However, when it comes to the effect on the satisfaction of the need for competence, we argue that differences in the personal need for structure have to be considered.

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P-250

Differential relations of autonomous and controlled motivation for using social networking sites to need satisfaction, need frustration, and mental health

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While the popularity of social networking sites (SNS) is on the rise, there is much discussion about how the use of SNS can affect individuals' mental health. Previous research on this issue is inconclusive, having shown benefits such as self-esteem, social support, and safety in identity exploration, as well as detriments such as depressive symptoms, cyber-bullying, and loneliness. To date, research has not explored whether and how the motivation for using SNS affects individuals' mental health. Using self-determination theory, we examined whether the autonomous and controlled motives that underlie use of SNS affect mental health over and above the daily use of SNS. The following hypotheses were tested in a sample of 244 undergraduate students, namely, that the number of hours per day spent using SNS will be associated with lower levels of wellness (Hypothesis 1), that controlled motivation for using SNS will be associated with lower levels of wellness (Hypothesis 2), and that autonomous motivation for using SNS will be associated with higher levels of wellness (Hypothesis 3).

In a cross-sectional design, participants provided self-reports of their basic psychological need satisfaction and frustration, subjective vitality, positive and negative affect, life satisfaction, loneliness, and depressive symptoms, as well as their daily use of SNS and the motives for using SNS. In line with Hypothesis 1, daily use of SNS was associated with higher levels of need frustration and depressive symptoms, and lower levels of need satisfaction, subjective vitality, positive affect, and life satisfaction. In line with Hypothesis 2, after accounting for daily use of SNS and autonomous motivation for using SNS, controlled motivation for using SNS was associated with higher levels of need frustration, negative affect, loneliness, and depressive symptoms, and lower levels of need satisfaction, subjective vitality, and life satisfaction. In line with Hypothesis 3, after accounting for daily use of SNS and controlled motivation for using SNS, autonomous motivation for using SNS was associated with higher levels of need satisfaction, subjective vitality, positive affect, and life satisfaction, and lower levels of need frustration, negative affect, loneliness, and depressive symptoms. With regard to discriminant validity, neither daily use of SNS nor motivation for using SNS were associated with body mass index or grade point average. In this sample, participants spent 15% of their waking day using SNS on average, and thus the importance of further examining the motivation for using SNS is readily apparent.

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Visual navigational cues used in virtual environments grounded in self-determination theory

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Limiting verbal instructions may facilitate implicit motor learning and may support self-determination theory (SDT). Virtual reality (VR) can provide additional motivation to complete clinical tests however, often patients respond to anticipated events.

Some clinical tests can be readily implemented into VR using treadmills, those which require turning, and extensive space are not suitable for treadmill use. Therefore, a technique known as natural walking may be introduced, allowing the user to physically walk freely around a tracked space mapped to a virtual environment (VE). A limitation with this approach is that the VE may be larger than the tracked space. Redirected walking is one approach used to achieve natural walking, by manipulating user's perception in the VE in order to be redirected safely in the physical environment (Boletsis, 2017).

However, by instructing users to follow a path, redirected walking may restrict autonomy and may not support SDT. Therefore, a preliminary study was conducted using natural walking without manipulation to investigate replacing verbal instructions with visual cues (aurora borealis and path), to encourage participants to complete the figure of eight walk test, when exploring a VE for 1 minute, and the effect this had on perceived agency and cognitive load. There were three VE conditions: control, low contrast and high contrast.

Deviation from the figure of eight path (FO8), did not differ between each condition in the study. In addition, perceived agency was self-reported as medium-high in both the low and high contrast conditions, this may have been due to providing participants the opportunity to make their own choices. Cognitive load was reported low in both the low and high contrast conditions but indicated that a small amount of cognitive load was used to navigate the VE. A few participants, however, did walk a FO8. Though, this appears to be the result of the overall layout (decision area) of the VE rather than the additional visual cues.

Although the additional visual cues, did not appear to be beneficial as an implicit instruction during the decision area. Therefore, it is important to continue to assess design of visual cues in relation to implicit instructions, with a focus on the decision areas in VEs alongside SDT principles, and cognitive load.

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P-252

Relations of basic psychological needs with defensive, self-protective strategies in the face of climate change

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Climate change is an existential threat that requires urgent action from all societal actors. However, most people in privileged, Western societies can be characterized by a paradox: they report having high pro-environmental attitudes and simultaneously ignore the reality of climate change in their everyday lives, e.g. by reducing their feelings of moral obligation to act against climate change through self-serving denial.

This work draws on self-determination theory to explain why people may use defensive, self-protective strategies – such as rationalization, avoidance, or denial – in the face of climate change. Climate change and its consequences are a threatening reality to bear. Many people may lack the psychological resources necessary to cope proactively with the crisis if their basic psychological needs are thwarted. Previous research has shown that promoting the satisfaction of the basic psychological needs for relatedness, competence, and autonomy may foster intrinsic and autonomous motivation for pro-environmental behavior (PEB). This research investigates how self-protective strategies may explain the interplay between basic need satisfaction and PEB.

We hypothesize that people, who experience need frustration, may not have sufficient psychological resources to deal with threatening information and resort to defensive, self-protective strategies instead.

We conducted two online studies ($N = 785$) to investigate the research question. In Study 1 ($N = 344$), a questionnaire assessing self-protective strategies in the face of climate change was constructed. Study 2 ($N = 441$) examined the associations between satisfaction of general and context-specific basic psychological needs, self-protective strategies, and PEB.

Preliminary data analyses reveal partial support for our hypotheses: When needs were satisfied in the environmental domain, i.e. when people reported feeling a sense of relatedness, autonomy, and agency when performing their recent pro-environmental actions, people reported engaging in more PEB than if the contrary was the case. Even though the relation was weaker, people also reported engaging in more PEB when they experienced a *general* sense of relatedness, competence, and autonomy, irrespective of the environmental context. The use of self-protective strategies was opposed to behaving in a pro-environmental manner. Furthermore, the more people's needs for relatedness, autonomy, and competence were satisfied, both overall and in the environmental domain, the less they reported using self-protective strategies.

Our results underline the importance and relevance of *overall* need satisfaction to engage with *specific* crises.

Findings are in line with SDT and implications for a social-ecological transformation are discussed.

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Supporting Autonomy: A Basic Needs Theory perspective on Interprofessional Collaboration in chronic care

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The World Health Organisation (WHO) has issued warnings to health practitioners and health education providers that the numbers of chronic conditions worldwide is becoming a global burden and changes in our approaches to health provision need to be addressed with some urgency.

In launching the Framework for Action on Interprofessional Education and Collaborative Practice, the WHO recognized the importance of this approach to help meet the gaps in complex health needs, but an Interprofessional Collaborative approach (IPC) with its different knowledge, practice and value orientations, is a complex problem in itself and difficult to maintain. It is therefore not surprising that very few studies have reported on client feedback or outcomes from an IPC approach, and where client feedback has been reported the clients were not aware of the practitioner teamwork, as it was not visible to them (Hewitt, 2015).

Two studies undertaken in Melbourne Australia, Branching Out (Dentry et al, submitted) and ActivePlus (O'Sullivan et al, 2018) have recently proposed that the visibility of the teamwork provided by the IPC approach in these programs led to enhanced client awareness and positive behaviour changes.

By assessing the client feedback and observations of these studies through a lens of Basic Needs Theory (BNT), we have proposed that the visible IPC approach in these programs provided the necessary support for competence, relatedness and autonomy as determined by BNT to be predictive of autonomous motivation for improved healthy behaviour choices.

It was further determined that the specific components of the IPC approach that ensured the teamwork was visible to the clients: the joint sessions, team advocacy, and autonomy support, were illuminating an environment of health literacy support, relatedness support and autonomy support which studies in BNT have shown allow intrinsic motivation to flourish. Based on these findings, an integrated model of interprofessional care and BNT for positive health behaviours has been proposed.

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Visual Communication Analysis: An Application of Self-Determination Theory for the Treatment of Autism

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Autism Spectrum Disorder (ASD) is a disorder marked by persistent deficits in social communication and social interaction, as well as a tendency for restricted, repetitive patterns of behavior, interests, or activities (American Psychiatric Association, 2013). Persons with severe autism are considered some of the most difficult people to teach because of their inability to communicate and the (sometimes extremely) negative behaviors that arise from this issue. This large section of the autistic population has been neglected in research due to their specific needs and required accommodations that are not readily addressed, remedied, or even measurable with the traditional methods. Visual Communication Analysis (VCA) is an innovative strategy for children on the autism spectrum and for children with various other neurodevelopmental and medical diagnosis.

VCA utilizes multi-dimensional non-linear ways of learning and interacting with the child, most notably with the application of the Self-Determination Theory (SDT). Participants will become familiar with and will view video footage on how the tenets of SDT are applied. VCA gives children choices in their learning to develop intrinsic motivation, reinforced through presumed competence and specifically designed for each child. Through evaluation, each child receives personalized treatment in order to work at an optimal level of difficulty. Relatedness support includes providing unconditional positive regard by withholding negative feedback and using innovative technology that provides only errorless learning. Children are met with empathy, their needs are recognized, and the treatment is given in a consistently warm interpersonal environment. While the most popular form and perceived gold standard for the treatment of ASD is Applied Behavioral Analysis (ABA) (Vismara & Rogers, 2010), its daily use over periods of years goes against the tenets of SDT. Research has found many of the SDT-predicted negative effects of task-contingent rewards, such as compliance, low self-esteem, anxiety, depression, learned helplessness, prompt dependence, self-injurious behaviors, etc. occur in patients who have treated with ABA over long periods (Bryan & Gast, 2000; Deci, 1971; Deci, Koestner, & Ryan, 1999; Gudjonsson & Sigurdsson, 2003; Lepper, Greene, & Nisbett, 1973; MacDuff, Krantz, & McClannahan, 2001; Malmgren & Causton-Theoharis, 2006; Mesibov, Shae & Schopler, 2004; Schwalbe, 1985; Sternberg, & Williams, 2010; Wilson, et al., 2014). On the other hand, to date VCA's visual application of SDT has yielded marked increases in self-esteem, decreases in maladaptive behaviors, and increases in communication in all recorded cases in both local center based and government school based locations.

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Consensus on the support of basic psychological needs? Perceptions of people with mild intellectual disabilities, their support staff, and family members.

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Introduction

Although the basic psychological needs are assumed to be universal, research about these needs of people with intellectual disabilities (ID) is still scarce. The extent to which these needs are satisfied in daily support of people with mild ID will, be related to, among others the quality of collaboration between people with mild ID themselves, their support staff, and family members. Particularly since equal collaboration between these parties is self-evident these days, the possible presence of perception gaps about the support of basic psychological needs between the different parties involved is utterly relevant. Awareness of perception gaps will contribute to effective communication and improve the quality of equal and constructive collaboration. This will ultimately lead to improved needs fulfillment of people with mild ID.

Methods

Based on the Basic Psychological Need Satisfaction and Frustration Scale – Intellectual Disability (BPNSFS-ID, Frielink et al., 2016), perceptions regarding the support of the three basic psychological needs (including need satisfaction and need frustration) of people with mild ID were assessed. This study identified the perceptions of 24x four different but related parties (i.e., people with mild ID, their family members, and two support staff members). To assess the level of absolute agreement between the participant groups, intraclass correlation coefficients were calculated.

Results

Moderate agreement between all four participant groups was found regarding the perceptions on the overall support of autonomy, relatedness and competence. On the level of satisfaction and frustration subscales, some perception gaps were found. People with ID reported higher frustration scores on the relatedness and competence subscales, and lower scores on the competence-satisfaction subscale compared to the three other participant groups.

Implications

Implications regarding the collaboration between people with ID themselves, their formal, and informal network members on the one hand, and processes of professionalization (e.g., development needs of teams/individuals) on the other hand are proposed. Based on these implications, this study has the potential to further enhance the implementation of basic psychological need fulfillment in the field of health care for people with ID.

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P-256

Working together in research projects: The motivation of researchers with and without intellectual disabilities

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Aim

Employment can contribute positively to the participation, inclusion, and self-determination of people with disabilities, including those with an intellectual disability (ID). Similar to the general population, the type of motivation is a significant predictor of employment success among in people with ID.

Although the rates of employment of people with ID are still low compared to people without ID, based on national and international developments (e.g., the declaration of the UN convention of the rights of people with ID and the initiation of the Dutch National Program Disabilities), increasing attention has been paid to employ people with ID in regular settings. Currently, the number of people with ID working as co-researchers within research teams together with researchers without ID is expanding. In this study, we explored the motivation regarding collaboration of people with and without ID who worked together in research projects.

Methods

In different research projects across the Netherlands, we assessed the motivation of researchers with ($n = 15$) and without ID ($n = 10$) using the Multidimensional Work Motivation Scale (MWMS; Gagné et al., 2015) for researchers without ID and an adapted MWMS for researchers with ID. The MWMS distinguishes six types of work motivation, ranging from amotivation to extrinsic motivation and intrinsic motivation. We compared the mean scores for each type of motivation for the two groups.

Results

Preliminary results will be presented. This study provides insight into the types of motivation of people with and without ID who work together in research projects.

Conclusion

Establishing a collaborative relationship in research projects between people with and without ID requires specific competencies, such as building a mutual relationship and commitment of both parties (Embregts et al., 2018). This study adds to these findings as it provides insights in the way people with and without ID are motivated to work together.

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P-257

Sellers Selling Performance: The Implications of Sellers Motivation

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In this paper, we investigate the salesperson's individual factors related to sales success. We want to address which specific individual behavioural dimensions are most effective in selling situations. Studies show that interpersonal interactions in selling situations are expected to be necessary and essential for customers positive evaluation of the sellers selling behaviour and selling performance. However, little research is done on sellers selling styles in selling situations and the sellers motivation to use different selling styles.

Selling styles can be viewed as a continuum of two approaches from a transactional selling style and an adaptive selling style – two possible selling strategies. Sellers exhibit a low level of adaptive selling (high transactional selling style) when they use the same sales presentation in and during all customer encounters. In contrast, a high level of adaptive selling is indicated by the use of different sales presentations and communication styles across encounters. When the salesperson meets a customer and tries to convince a possible customer to buy a specific product, the salesperson will approach the customer and use a selling style. The effectiveness of the salesperson's approach can be evaluated by the customer in form of, i.e., satisfaction with the product, the price paid, satisfaction with the salesperson product knowledge, salesperson responsiveness, empathy, and so. The salesperson's approach can also be evaluated by the salesperson themselves in terms of which approach is felt to be the best, i.e., from former experience, self-esteem, and self-confidence. Further, the salesperson motivations to use different approaches is also of interest. By drawing on mechanisms from self-determination theory, we propose that the sellers choice of selling styles can be explained by the seller's motivation, and therefore address the issue to which degree salespeople practice different selling strategies, and what motivates sellers to do so.

By using an experiment, we will present data from a student sample. The students were asked to see themselves as a salesperson, and in the experiments conducted they were exposed for two types of selling approaches – transactional vs. adaptive selling styles. We used a self-evaluation scheme of their own felt selling performance to see the effect of the two approaches, and also measured their motivation by using SDT. The results will be presented later.

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The bright and dark pathways from board members' (de)motivating style to volunteers' motives for volunteering in sports clubs: integrating organizational theories with Self-Determination Theory

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Most sports clubs rely on volunteers to deliver sport services and support daily operations. However, these sports clubs are confronted with environmental changes such as a decrease of people who are willing to volunteer. As a result, volunteer positions in sports clubs are difficult to fill, and the retention of volunteers is low. Given these changes and evolutions, the question arises as to how sports clubs can take up the challenge to attract and retain more volunteers. Many studies have focused on the role of effective management processes, hereby relying on general organizational theories such as the Competing Values Framework (CVF). However, the way by which board members of sports clubs install these processes may be equally important. Relying on Self-Determination Theory (SDT) we examined whether the perceived motivating style by which board members install specific management processes (as identified within the CVF) matters in terms of volunteers' motivation and enduring engagement. Specifically, we investigated the relationship between a board members' perceived motivating style and volunteers' autonomous motivation, experienced group cohesion (i.e. the bright pathway), and between a board members' perceived demotivating style and volunteers' controlled motivation, and amotivation (i.e. the dark pathway). Additionally, we investigated whether these relationships can be explained by volunteers' experiences of need satisfaction and need frustration respectively. Finally, we tested whether volunteers' motivation mattered in terms of their intention to continue as a volunteer. A random sample of 31 Flemish sports clubs participated in our research. In total, 231 volunteers were involved in our study. To measure board members motivating style, we used a situation specific questionnaire. More precisely, we developed a questionnaire that assesses the perceived board members' motivating and demotivating style within the context of a broad variety of management situations in which volunteers are involved. Volunteers' need-satisfaction and frustration, and their motivation to volunteer was measured with validated questionnaires. Structural Equation Modeling (SEM) with latent variables in Mplus revealed a unique bright and dark pathway. Furthermore, a MANOVA indicated that volunteers who planned to continue their volunteer work scored significantly higher on experienced group cohesion and lower on amotivation than those who doubt whether they would continue, and those who planned to stop volunteering. Overall, these results indicate that is important for board members to rely on a motivational style and refrain from demotivational behavior when they interact with volunteers within the context of various management situations at the sports club.

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Innovative intervention approaches: training teachers' motivating style through an online professional development program

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Several studies have shown that students are more autonomously motivated when being taught by a teacher who endorses a need-supportive rather than need thwarting teaching style. Teachers rely on a need-supportive style when they support students' basic psychological needs for autonomy (sense of psychological freedom or choice,...), relatedness (experiencing warm and caring relationships,...) and competence (feeling effective,...). Recent studies show that teachers often know which strategies are motivating (the provision of positive feedback,...), yet observational studies show that there is room for teachers to become more need-supportive (Haerens et al., 2013) and teachers tend to overestimate the degree to which they apply these strategies (Aelterman et al., 2018). Research shows that PDI will be even more effective when it is continuous over time. Moreover, if we want to endorse an autonomy-supportive approach when designing interventions, it is logical to involve teachers in the development and optimisation of a PDI, such that intervention programs are co-created with the teachers themselves as is the case in 'practitioner' research and design-based research. In the current study, we systematically developed an online reflection tool to optimize teachers' motivating style. In the first part of the online environment teachers receive a personalized profile of their motivating style, by filling out the recently developed Situation in School Questionnaire. In the second part of the online environment, teachers can self-analyse videos of their own lessons. They do so by selecting the strategies they want to reflect upon and by annotating in their personal videos when and how they apply these strategies. The third part of the online environment provides teachers with concrete good practices (lesson plans, materials,...) they can use to implement the motivating strategies. The online environment was developed and optimized in collaboration with teachers, to develop a user-friendly tool that teachers appreciate and consider feasible to use. Three different groups of teachers and/or students engaged in a one day workshop on need-supportive teaching. After participating in the one day training, they tried to optimize their motivating style by using the online environment. Teachers' filled out questionnaires regarding their appreciation, experienced feasibility and usability of the online environment, and further discussed their experiences in focus group interviews with the researchers. Their experiences and feedback were used to optimize the online environment in an iterative way. The data collection of this research is ongoing and the results will be discussed at the conference.

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