

Differences in physical activity among children with physically active and inactive parents

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Objectives: Parental physical activity is considered as positively related to children's physical activity (PA; Sallis, Prochaska & Taylor, 2000). Since parents serve as role models, have the potential to influence the health-related behavior and, for instance, to alter a mainly sedentary lifestyle of their children (Beets, Cardinal & Alderman, 2010), the impact of parental PA has become a key issue in research. Many studies report associations between parental PA and the PA behavior of their children, e.g., the direct involvement of the parents in activities with their children is related to increased levels of their PA (Adkins, Sherwood, Story, & Davis, 2004; Beets, Vogel, Chapman, Pitetti, & Cardinal, 2007). However, the mechanisms of parental influence are still poorly understood and besides recent studies are based on self-reported data. Therefore, this study aims to examine if parental PA is related to the subjectively and objectively measured PA of their children.

Methods: 237 Luxembourgish children and adolescents (134 girls and 103 boys) aged from 10-18 years participated in the study. Via a digital questionnaire, the children indicated if their mother and father are physically active on a regular basis and if they are active together with their parents. Furthermore, the children and adolescents indicated if they are active at least 60 minutes/ day and if they own a membership in a sports club (MoMo physical activity questionnaire). Additionally, children's PA behavior was

objectively assessed by wearing an accelerometer (ActiGraph GT3X-BT) for a period of seven consecutive days. Activity was categorized as sedentary, light physical activity or moderate to vigorous physical activity (MVPA) using age-specific thresholds.

Results: A multivariate ANOVA revealed significant differences in self-reported physical activity if the mother was physically active ($F(2, 166) = 5.4, p < .01$). Thus, children reported subjectively higher daily activity duration ($p < .05$) and more activities in a regular week ($p < .01$). There was no impact on self-reported PA if the father was active or the children were active with their parents together. Regarding the objective data, there were no significant differences between children with active parents and children with inactive parents. If the parents were active with their children together there were significant differences ($F(3, 229) = 3.2, p < .05$), thus MVPA per day was higher ($p < .05$) and the sedentary time was lower ($p < .01$). Neither subjective nor objective data revealed gender-specific differences.

Discussion: In contrast to other studies, only the mother seems to have an influence on the subjective PA behavior of the children. The fact, that parents being active or in a sports club does not appear to enhance the PA of the children objectively. However, the objective PA is merely affected by being active together. According to this finding, joint activities of parents and children seem to be necessary to promote children's PA effectively. It is important to note that in our study the parental PA was rated by the children. In future studies, parents should be included via self-report questionnaires and/or accelerometer.

References:

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