University of Luxembourg

Multilingual. Personalised. Connected.

The Mullticultural Ideology Scale: Factor Structure and Measurement Invariance

Maria Stogianni & Elke Murdock

UNIVERSITÉ DU LUXEMBOURG

Multiculturalism can refer to three different aspects (Van de Vijver, Breugelmans, & Schalk-Soekar, 2008)

1. Demographic aspect
- Plural composition of a population

2. Policy aspect
- Policies and practices that support cultural diversity in the public domain (e.g. eliminating discrimination, a positive view on cultural maintainance of minority groups, dealing with diversity in various contexts)

3. Psychological aspect
- Positive attitudes towards a culturally plural society
- Actions that support cultural diversity

- Support for multiculturalism can vary across different life domains among minority and majority group members.

- **Minority members** express more positive attitudes but make a distinction between private and public domains (Verkyten & Martinovic, 2006).

- **Majority members** support multiculturalism in the domain of anti-discrimination but expect assimilation of immigrant groups in all life domains (Van de Vijver, et al., 2008).

Examples of instruments that assess multiculturalism:

- Multicultural Ideology Scale (**MIS**; Berry & Kalin, 1995)

- Multiculturalism Attitude Scale (**MAS**; Breugelmans & Van de Vijver, 2004), developed in Canada and also used in the Dutch context.

- Attitudes towards multiculturalism are treated as a unidimensional, stable construct. In studies conducted in the Netherlands, components that assess support for multicululturalism in different life domains loaded on a single underlying factor (Arends-Tóth & Van de Vijver, 2003; Verkuyten & Brug, 2004).

- Few studies have confirmed the unifactorial structure of these instruments and their conceptual equivalence in different cultural contexts.

- Most of them investigated mean differences in support for multiculturalism without establishing measurement invariance (Verkuyten & Thijs, 2002).

- Cultural background may affect conceptualizations of multiculturalism and support for multiculturalism in different life domains.

Objectives

- To examine the psychometric properties and the factor structure of the Multicultural Ideology Scale (MIS) scale.

- To assess its measurement invariance across different language versions and ethnic groups.

Participants

- The entire sample consisted of 1572 adolescents (from 3 different schools) and adults living in Luxembourg.

- Native majority members (N = 693) and 1st and 2nd generation immigrants from diverse ethnic backgrounds (N = 879)

- 72% were born in Luxembourg

Sample

Characteristics	Total	German	French	English
N	1572	1085	279	208
Age (M, SD)	27.51, 13.25	29.02, 13.24	25.57, 14.25	22.23, 9.85
Gender				
Female (%)	51%	51.9%	49.1%	48.6%
Male (%)	49%	48.1%	50.9%	51.4%
Born in Luxembourg	72%	82.7%	62.4%	33.2%
Dual Citizenship/ more than 2 nationalities	18.5%	13.1%	33.1%	26.9%

Mulicultural Ideology Scale (MIS; Berry & Kalin, 1995)

- 9 items (instead of 10), assess attitudes towards a culturally plural society

- 7-point Likert scale (1 = totally disagree to 7 = totally agree)

- The original scale was adjusted to the Luxembourg context

- 3 language versions German (69% respondents), French (17.7%) and English (13.2%).

  Translations were made using a translation-back translation procedure.

- Reliability coefficients: German version Cronbach's α = .811

  French version Cronbach's α = .710

  English version Cronbach's α = .660
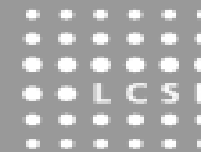
Mulicultural Ideology Scale (MIS; Berry & Kalin, 1995)

3 domains:

1) attitudes towards diversity (e.g. "It is good that many different groups with different cultural backgrounds live in Luxembourg")

2) acculturaion strategies by minorities: assimilaion vs. cultural maintenance (e.g. "Immigrant parents must encourage their children to retain the culture and traditions of their homeland")

3) acculturaion preferences of majority members (e.g. "If immigrants want to keep their own cultures they should keep to themselves")

Exploratory Factor Analyses (oblimin rotation)

- 2 factors extracted in all language versions with eigenvalues 3.69 and 1.20 (German version), 2.77 and 1.30 (French version), 2.47 and 1.43 (English version). The two factor solution explained approximately 50% of the variance in the 3 different language versions.

- The German and the English version demonstrated similar factor structure.

- The 1st factor included all the items that reflected positive attitudes towards multiculturalism and the 2nd items that reflected negative attitudes.
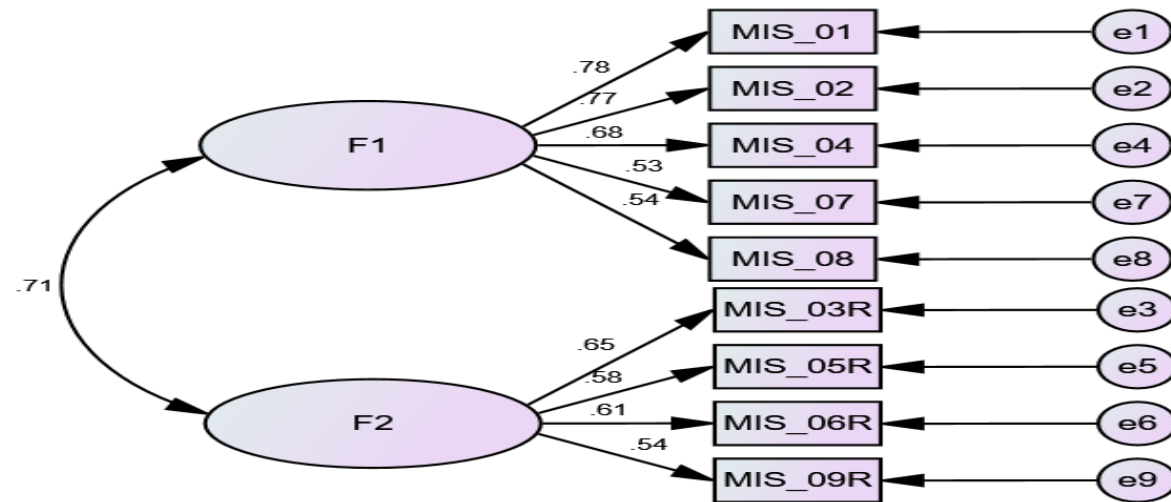
Results

	Positive Attitudes		Negative Attitudes	
	DE	EN	DE	EN
1.It is good that many different groups with different cultural backgrounds live in Luxembourg.	.662	.627		
2. Ethnic minorities should preserve their ethnic heritage in Luxembourg.	.722	.767		
3. It would be best if all people forget their background as soon as possible.			.612	.686
4. A society that has a variety of cultural groups is more able to tackle new problems as they occur.	.636	.679		
5. The unity of the country is weakened by non-Luxembourgers.			.743	.730
6. If immigrants want to keep their own cultures they should keep to themselves.			.709	.480
7. Native Luxembourgers should do more to learn about the customs and traditions of the other cultural groups.	.781	.633		
8. Immigrant parents must encourage their children to retain the culture and traditions of their homeland.	.745	.482		
9. Immigrants to Luxembourg should change their behavior to be more like the Luxembourgish people.			.727	.651

Results

C²DH
LUXEMBOURG CENTRE FOR
CONTEMPORARY AND DIGITAL HISTORY

uni.lu
UNIVERSITÉ DU
LUXEMBOURG

Confirmatory Factor Analysis

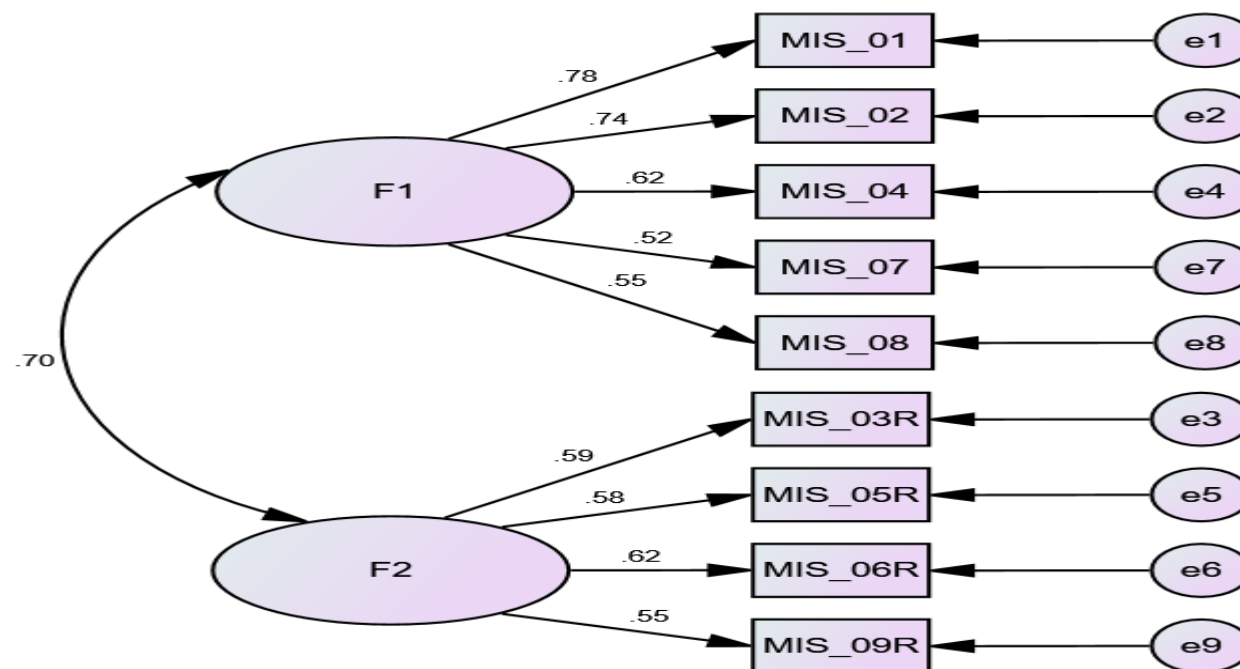| Language version	χ^2	df	RMSEA	NFI	CFI
German (n = 1085)	87.041**	26	.047	.966	.976
English (n = 208)	122.591**	26	.054	.957	.966

Notes. Estimator: ML robust; χ^2= chi-squared; df= degrees of freedom; *RMSEA*= root mean squared error of approximation; Bentler and Bonnet's Normed Fit Index (NFI); *CFI*= comparative fit index; ***p<.001; **p<.005; *p<.01.

Results

■ Test for Invariance

	χ^2	df	RMSEA	$\Delta RMSEA$	CFI	ΔCFI	TLI
Factorial invariance	137.205		.037		.968		.955
Metric Invariance	181.949	61	.040	.03	.954	-.014	.946
Scalar Invariance	282.717**	68	.051	.011	.918	-.036	.914

Notes. Estimator: ML robust; □²= chi-squared; *df*= degrees of freedom; *RMSEA*= root mean squared error of approximation; *CFI*= comparative fit index; *TLI* = Tucker Lewis index***p<.001; **p<.005; *p<.01

- The findings suggest that the two-factor solution was partially invariant across the 2 different language versions.

Limitations of CFA

- Poor model fit when CFA approach is used to test measurement invariance in large samples. (Restricted non-target factor loadings and error covariances)

- Establishing a baseline model for all groups before assessing multigroup equivalence

- Software limitations when conducting multigroup CFA - Possibility to compare only one group with each of the other groups (Byrne & van de Vijver, 2017)

Alternative approaches

Exploratory Structural Equation Modeling (ESEM)
Bayesian Structural Equation Modeling (BSEM)

- Appropriate to test measurement invariance, particularly when the number of groups is large and the population heterogenous.

- These methods assess whether the measurement parameters are approximately, rather than exactly invariant across groups.

THANK YOU FOR YOU TIME!

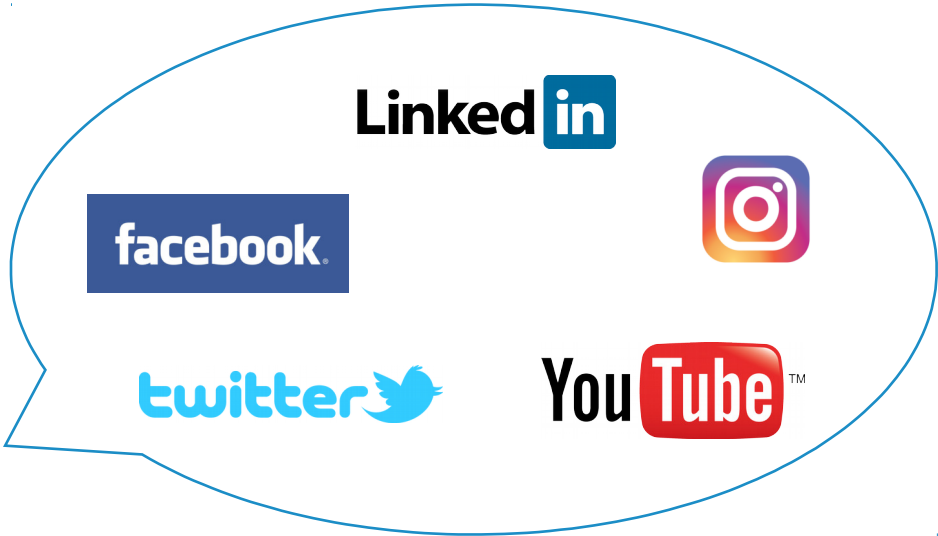Contact: maria.stogianni@uni.lu

AKNOWLEDGEMENTS

Dr. Elke Murdock, University of Luxembourg
Funding: Fonds National de la Recherche Luxembourg