Overview of levels of measurement invariance and identification

Table 1: Levels of measurement invariance

	Loadings	Intercepts	Uniqueness	Identification	Notes
Configural	Free	Free	Free	Set $\alpha = 0$ and $\psi = 1$ in both groups	
Metric	Constrained	Free	Free	Set $\alpha = 0$ in both groups, set $\psi = 1$ in group 1 and estimate ψ freely in group 2	
Scalar	Constrained	Constrained	Free	Set $\alpha = 0$ and $\psi = 1$ in group 1, estimate α, ψ freely in group 2	Free the intercepts where loadings were freed
Strict	Constrained	Constrained	Constrained	Same as scalar	Any or all θ can be freed

See Putnick and Bornstein (2016), Millsap (2011), Meredith and Teresi (2006), Widaman and Reise (1997), Van De Schoot et al. (2015), and Meredith (1993) for additional information.

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