Reexamining Nonlinear Structural Equation Modeling Procedures: The Effect of Parallel and Congeneric Measures

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Resumen

The current study examines the performance of the extended unconstrained approach (EXUC) and the latent moderated structural equation modeling procedure (LMS) in situations where quadratic and interaction terms are tested simultaneously and investigates their limitations with regard to the employment of parallel and congeneric measures, relatively low indicator reliabilities, and relatively large numbers of indicators. By means of a Monte Carlo study, we found LMS to be the best option for testing multiple nonlinear effects given sufficient sample size (n 500) and normally distributed exogenous variables. Its advantages became more prominent when indicator reliabilities were heterogeneous and small. The EXUC was a viable option for estimating the model when indicators were parallel and exhibited large indicator reliabilities. An empirical example of the results is provided, and the relevance of measurement model characteristics to assess nonlinear relationships is discussed.

Palabras clave

Palabras clave de autor: extended unconstrained approach; interaction effects; latent moderated structural equations; nonlinear SEM; quadratic effects

KeyWords Plus: LATENT VARIABLE INTERACTIONS; MAXIMUM-LIKELIHOOD-ESTIMATION; MULTIPLE-REGRESSION; PRODUCT INDICATORS; SAMPLE-SIZE; EUROPEAN INTEGRATION; MEASUREMENT ERROR; UNEQUAL NUMBERS; MODERATOR; SUPPORT

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