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Investigating Factorial Invariance of Latent Variables Across Populations When Manifest Variables Are Missing Completely

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Abstract

Difficulties arise in multiple-group evaluations of factorial invariance if particular manifest variables are missing completely in certain groups. Ad hoc analytic alternatives can be used in such situations (e.g., deleting manifest variables), but some common approaches, such as multiple imputation, are not viable. At least 3 solutions to this problem are available. The first solution is to use a pattern mixture model. The latter solution is to use a mixture model for all of the same variables. The nature of the approach is to use a mixture model for the latent variable in each group.

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Notes

¹EQS ([Bentler, 2006](#)) scripts and output files for all models presented in this article are available on request from the first author.

²Mplus ([Muthén & Muthén, 2007](#)) scripts and output files for all pattern mixture models presented in this article are available on request from the first author.

³Analysis scripts and output files for all models presented in this article using the random data approach are available on request from the first author.

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