

Effects of Missing Data Treatments and Model Specification on Fit Indices in Structural Equation Modeling

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This Monte Carlo study explored effects of missing data treatment and model specification on 8 recommended fit indices in structural equation modeling. The results indicated that the structured maximum likelihood method tended to overestimate the degree of model-data fit, and the degree of overfitting increased as the percentage of missing data increased. Overfitting was not observed with unstructured maximum likelihood method, although this method tended

to reject the model too often when the model was correctly specified. None of the fit index or missing data treatment was found to be superior across all conditions. The power of Gamma hat and Mc was found to be low. A careful selection of missing data treatment and fit indices was called for.

Keywords: missing data, structural equation modeling, fit index

