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# Abandon All Thumbs Ye Who Model: Model Fit Evaluation in SEM for a New Century

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## Abstract

Structural equation modeling (SEM) is a central statistical technique for evaluating intricate relationships between latent constructs. A crucial ingredient of SEM is model fit assessment, which often relies on universal cutoffs, such as RMSEA ≤ .05 or CFI ≥ .95. These thresholds stem from past simulations and experience but fail to account for variations in model and data characteristics. In this talk, I will discuss the limitations of these cutoffs, particularly those proposed by Hu and Bentler, and highlight how model complexity, reliability, localization of misspecification and other model and data properties influence fit indices. I will present the results of a systematic review and demonstrate how fit measures behave under different conditions and why seemingly universal cutoffs often lead to misleading conclusions. Finally, I will propose a more nuanced approach to model fit evaluation, emphasizing conceptual understanding and situational assessment. This talk aims to encourage a more thoughtful approach to SEM, sparking discussion on improving fit evaluation practices and reducing the prevalence of poorly fitting models in social science research.

## Keywords

SEM, model-fit, CFI, RMSEA, SRMR

## Oral presentation

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