Can latent growth modeling (LGM) and growth mixture modeling (GMM) be used with a sample size around 100?

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Briefly Explain Your Question (max. 100 words)

We have data on a sample of Chinese mothers and their newborns followed from 6 months. Using 3 waves of data on committed compliance, we attempted to conduct LGM and GMM to describe the origins of heterogeneity in developmental trends. However, most experts argue that a sample size of 100 is not sufficient for these models. Even with acceptable model fit and classification results, it is hard to argue against the power issue of a small sample size. We want to know if there is an alternative solution for analyzing the data that avoids the sample-size issue of these models.

Scientific field(s) of the author(s)

Developmental Psychology

Relevance to conference theme (max. 50 words)

The poster presents a dilemma that developmental psychologists are facing: limited money and time for recruiting a large number of participants for observational longitudinal research and a small sample size resulting in a power issue for conducting LGM/GMM.

Keywords (max. 3)

Latent Growth Modeling, Growth Mixture Modeling, Sample Size