

# A Proposal to Test Approximate Measurement Invariance of Multi-Item Self-Reports Across Intense Longitudinal Assessments

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## Oral presentation

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## Abstract

Intensive longitudinal studies - commonly referred to as experience sampling methods, ecological momentary assessments, ambulatory assessments, or daily diary studies - have become a prominent domain of psychological research focused on short-term within-person changes of mental attributes, which are typically measured by composite scores of the participants' self-reported endorsements of several questionnaire items. However, frequent self-reports within a short observation period might impact alertness towards and perception of one's respective experiences, hence changing item discrimination between levels of the latent construct and/or item severity (difficulty). Thus, there is a need to examine measurement invariance (MI) across the frequently repeated ambulatory assessments. To do so, recent research proposed to model approximate MI of intensive longitudinal measures by means of multilevel cross-classified (assessments nested within individuals and within occasions) structural equation models, with random effects of item intercepts and loadings and the respective between-occasion random variances signalling differential item functioning across repeated assessments (e.g., McNeish et al., 2021). The current study presents and adds to this approach, proposing a rationale to determine tolerable amounts of non-invariance, which could serve to test for approximate MI in the absence of significance testing options for the respective random variances (as the procedure needs Bayes estimation). Results from a simulation study will be presented to demonstrate the application and the feasibility of the approximate MI strategy proposed.

## Keywords

intensive longitudinal; measurement invariance; MSEM

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