

Title: CAN WE TRUST THE SCORES IN ESM STUDIES? ESTIMATING THE RELIABILITY OF ESM DATA

Authors:

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Level: Intermediate, **Format:** Half-day

Background:

Self-report measures are extensively used in Experience Sampling Methods (ESM) for studying psychological processes in everyday life. Generally, data collected via these methods is considered more accurate due to reduced recall bias (Schwarz, 2012). However, there is no guarantee that measurements are indeed reliable and the presence of measurement error is unavoidable (Schuurman et al., 2015). Despite this, reliability of ESM scores is rarely assessed or reported. Traditional reliability indices, such as Cronbach's alpha, are generally not appropriate for intensive longitudinal data because they do not account for its multilevel and dynamic nature. Over the past two decades, several methods have been developed to estimate reliability in ESM data, but these approaches remain underutilized in empirical research. This workshop introduces these methods and discusses their strengths and limitations.

Aims and Learning Objectives:

The workshop aims to provide participants with both a conceptual understanding and practical skills for estimating and reporting the internal consistency reliability of multi-item ESM measures.

Participants will learn about six complementary approaches for estimating reliability in ESM data.

Through a hands-on practical in R with example data, participants will learn how to estimate within-person, between-person, and person-specific reliability coefficients, interpret the results, and identify which methods are most appropriate when considering the research question and study design.

Target Audience/Format:

This workshop is intended for a maximum of 20 researchers and students who work with ESM and have a basic working knowledge of R. The workshop combines a theoretical introduction with a hands-on practical session in which participants apply several reliability estimation methods to either a provided dataset or their own ESM data. Participants should bring a laptop with R and the required packages (psych, misty, and dynr) installed; because the [installation of dynr](#) can be intricate, installing it before the workshop is strongly recommended. Mplus is optional and only required for two advanced methods.

Expected Outcomes:

By the end of the workshop, participants will understand why reliability should be routinely assessed in ESM research, recognize the different types of reliability coefficients that can be estimated from intensive longitudinal data, and be able to compute and report several of these coefficients using R.

Participants will also leave with practical code and guidance that they can directly apply to incorporate appropriate reliability analyses and reporting practices into their own ESM studies.

Conflict of Interest: The author declares no conflict of interest.