

# Mapping methodological variation in experience sampling research from design to data analysis: A systematic review

*Thursday 24 July 2025 09:30 (15 minutes)*

## Oral presentation

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## Abstract

The Experience Sampling Method (ESM) has become a widespread tool to study time-varying constructs across many subfields of psychological and psychiatric research. This large variety in subfields of research and constructs of interest has contributed to considerable methodological variation. Despite the importance of the methodological choices made by ESM researchers for the quality and veracity of current ESM research and potential future innovation, few have attempted to systematically assess these choices, and to explore their justification. Therefore, the two aims of the current work are to 1) describe the methodological variation in ESM study designs in the recent psychological literature and 2) assess the transparency (i.e., reporting and open science practices) of these studies. These aims are a first step towards a broader goal to improve the methodological quality of ESM research in psychology, contributing to a more rigorous, credible science of daily life.

A broad systematic review of methodological practices in the recent psychological and psychiatric ESM literature addresses these aims. For this review, we developed an extensive list of data extraction items covering the entire workflow of an ESM study, from conception of the research question to reporting of the results. This data is extracted from 150 recently published articles applying ESM in the field of psychology and psychiatry (Stage 1 Registered Report at <https://doi.org/10.17605/OSF.IO/ZTVN3>). A descriptive and narrative synthesis provides a broad overview of current methodological and reporting practices. These include conceptualization and operationalization of research questions, sampling and design (including within-study adaptivity in these decisions), data pre-processing and analysis, open science practices, and reporting. In this discussion, description of the variation is prioritized over mere identification of the most ‘common’ practices. This broad overview can be a starting point for 1) anyone interested in learning about experience sampling, 2) development of guidelines for specific aspects of the method, and 3) future development of experience sampling methodology.

## Keywords

experience sampling, transparency, methodological variation

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**Session Classification:** Session 14 : "Dynamic and temporal models in psychology"

**Track Classification:** Design/Research methods: Design/Research methods