Ecological Momentary Assessment

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References

Shiffman: Ecological momentary assessment (EMA) in studies of substance use **Shiffman-2009**

Saul Shiffman. "Ecological momentary assessment (EMA) in studies of substance use". In: *Psychological Assessment* 21.4 (Dec. 2009), pp. 486–497. DOI: 10.1037/a0017074.

Abstract: Ecological momentary assessment (EMA) is particularly suitable for studying substance use, because use is episodic and thought to be related to mood and context. This article reviews EMA methods in substance use research, focusing on tobacco and alcohol use and relapse, where EMA has been most applied. Common EMA designs combine event-based reports of substance use with time-based assessments. Approaches to data organization and analysis have been very diverse, particularly regarding their treatment of time. Compliance with signaled assessments is often high. Compliance with recording of substance use appears good but is harder to validate. Treatment applications of EMA are emerging. EMA captures substance use patterns not measured by questionnaires or retrospective data and holds promise for substance use research.

Shiffman et al.: Ecological momentary assessment **Shiffman-Stone-Hufford-2008**

Saul Shiffman, Arthur A. Stone, and Michael R. Hufford. "Ecological momentary assessment". In: *Annual Review of Clinical Psychology* 4.1 (Apr. 2008), pp. 1–32. DOI: 10.1146/annurev.clinpsy.3.022806.091415.

Abstract: Assessment in clinical psychology typically relies on global retrospective self-reports collected at research or clinic visits, which are limited by recall bias and are not well suited to address how behavior changes over time and across contexts. Ecological momentary assessment (EMA) involves repeated sampling of subjects' current behaviors and experiences in real time, in subjects' natural environments. EMA aims to minimize recall bias, maximize ecological validity, and allow study of microprocesses that influence behavior in real-world contexts. EMA studies assess particular events in subjects' lives or assess subjects at periodic intervals, often by random time sampling, using technologies ranging from written diaries and telephones to electronic diaries and physiological sensors. We discuss the rationale for EMA, EMA designs, methodological and practical issues, and comparisons of EMA and recall data. EMA holds unique promise to advance the science and practice of clinical psychology by shedding light on the dynamics of behavior in real-world settings.

Smith et al.: From ecological momentary assessment (EMA) to ecological momentary intervention (EMI): Past and future directions for ambulatory assessment and interventions in eating disorders **Smith-Juarascio-2019**

Kathryn E. Smith and Adrienne Juarascio. "From ecological momentary assessment (EMA) to ecological momentary intervention (EMI): Past and future directions for ambulatory assessment and interventions in eating disorders". In: *Current Psychiatry Reports* 21.7 (June 2019). DOI: 10.1007/s11920-019-1046-8.

Abstract: Purpose of Review: Ambulatory assessment methods, including ecological momentary assessment (EMA), have often been used in eating disorders (EDs) to assess the type, frequency, and temporal sequencing of ED symptoms occurring in naturalistic environments. Relatedly, growing research in EDs has explored the utility of ecological momentary interventions (EMIs) to target ED symptoms. The aims of the present review were to (1) synthesize recent literature pertaining to ambulatory assessment/EMA and EMI in EDs, and (2) identify relevant limitations and future directions in these domains. Recent Findings: With respect to ambulatory assessment and EMA, there has been substantial growth in the expansion of constructs assessed with EMA, the exploration

of state- vs. trait-level processes, integration of objective and passive assessment approaches, and consideration of methodological issues. The EMI literature in EDs also continues to grow, though most of the recent research focuses on mobile health (mHealth) technologies with relatively minimal EMI components that adapt to momentary contextual information. Summary: Despite these encouraging advances, there remain several promising areas of ambulatory assessment research and clinical applications in EDs going forward. These include integration of passive data collection, use of EMA in treatment evaluation and design, evaluation of dynamic system processes, inclusion of diverse samples, and development and evaluation of adaptive, tailored EMIs such as just-in-time adaptive interventions. While much remains to be learned in each of these domains, the continual growth in mobile technology has potential to facilitate and refine our understanding of the nature of ED psychopathology and ultimately improve intervention approaches.