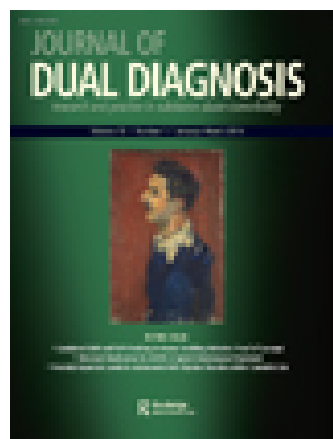


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mHealth for Dual Diagnosis: Considering Long-Term Implementation

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COMMENTARY

mHealth for Dual Diagnosis: Considering Long-Term Implementation

Dror Ben-Zeev, PhD

Over the last decade, we have witnessed impressive leaps in the penetration and technological sophistication of wireless technologies such as cellular phones, smartphones, tablets, and an array of wearable sensors that can continuously track movement, physiology, and location. Mobile devices have become widely accessible and increasingly affordable. There are few locations in the world that are not covered by a cellular signal, and practically none that are out of range for the Global Positioning System (GPS), a satellite navigation network that can be accessed by any device that has an unobstructed GPS receiver. Forward-thinking researchers are seizing the opportunity to leverage mobile technologies and commercially available infrastructure for the study, assessment, and treatment of clinical populations in an emerging interdisciplinary field called mobile health (mHealth).

In the current issue, Mitchell et al. (2013) combine two mHealth approaches to explore smoking behaviors in individuals with attention deficit hyperactivity disorder (ADHD). By merging participant self-reports collected via handheld computer with location data automatically collected through a mobile GPS device, the researchers were able to map relationships between external/contextual (i.e., location, distance from home) and internal/behavioral events (i.e., smoking, ADHD symptom change) in a manner that is otherwise unfeasible with existing laboratory or clinic-based assessment technologies. Such innovative uses of mobile technology open the doors to a more comprehensive understanding of the relationships between mental health conditions and substance use and may have great utility in informing potent time and context-sensitive interventions.

The study introduces novel data collection and interpretation techniques and demonstrates feasibility of these methods among people with dual diagnosis. Reading the article,

I pondered questions regarding the feasibility of continuous naturalistic self-monitoring using mobile devices; while there is ample scientific literature showing that people with mental health conditions and substance use disorders are willing to use mobile technologies in the context of research projects, it is not clear whether they would have the interest or capacity to engage in long-term self-monitoring. To fulfill the promise of wide-scale mHealth efforts, individuals will need to use mobile devices for continuous self-assessment and tracking on their own volition, without compensation or remuneration. They will need to be intrinsically motivated for long-term use and rewarded only by new insights into their behaviors or the positive gains they make using mobile interventions. With a typical use-life of 30 days or less for most commercial smartphone applications, one wonders whether mHealth systems will be compelling enough for extended user engagement. We may be heading toward a future in which, similarly to how health insurance companies and employers now offer rebates and reimbursements for people who engage in exercise and wellness programs, payers may choose to incentivize individuals with mental health and substance use disorders to engage in long-term mobile self-monitoring. Instead of requesting one's gym membership receipt for verification of their engagement in healthy activities, insurers may request access to an individual's mobile monitoring system-use data (e.g., response rate to daily assessment rather than actual response content) and tie their engagement in self-monitoring with compensation.

I also wondered about privacy and data security issues—in the current technological atmosphere, people knowingly forfeit a certain amount of privacy for the sake of access to exciting digital resources (e.g., e-mail, cloud-based applications, online search engines). They are willing to participate in mHealth research with assurances that their data will be protected and de-identified. When mHealth approaches become widely available and commonplace, will people be similarly willing to collect and or share sensitive psychiatric or substance use related information? Will the novel mHealth programs we develop be up to the task of protecting user information from third-party entities looking

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to cull their digital information for marketing or predatory activities?

As Mitchell et al. demonstrate in their proof of concept study, mHealth is an exciting field with tremendous potential for the study and treatment of substance use and mental health problems. While clinical researchers continue to develop innovative mobile methods for real-time/real-place data collection, in parallel, we must consider the obstacles we will encounter with their implementation in real-world conditions. At the pace with which mHealth technologies are developing, it is likely we will face these questions in the not-too-distant future.

DISCLOSURES

Dr. Ben-Zeev has no financial relationships with commercial interests with regard to this manuscript.

REFERENCE

- Mitchell, J., Schick, R., Hallyburton, M., Dennis, M., Kollins, S., Beckham, J., & McClernon, F. (2013). Combined ecological momentary assessment and global positioning system tracking to assess smoking behavior: A proof of concept study. *Journal of Dual Diagnosis*, 10, 19–29. doi:10.1080/15504263.2013.866841