

Abstract

In contrast with other patient populations and settings, there has been limited uptake of mobile technologies for the assessment and treatment of adults with serious mental illnesses. This poster reports on clinicians' perceptions of: 1) factors that would increase likelihood of adoption; 2) operational barriers to implementation; and 3) clinical barriers to implementation. Participants, 505 mental health professionals practicing in the U.S. and Canada, completed an online survey querying perceptions of mobile technologies and of possible barriers to implementation. Requirement by law was rated most highly as a factor that would increase likelihood of adoption. Cost of purchasing software and other equipment was rated most highly as an operational barrier to implementation. With respect to clinical barriers, inappropriate use (e.g. over-initiation of client contact) was ranked highest. Further analyses revealed differences in responses between professional groups (i.e., psychologist, psychiatrists, nurses, social workers). Findings are discussed with regards to strategies for overcoming barriers and increasing adoption of mobile technologies in practice.

Implementing Mobile Technologies for Adults with Serious Mental Illnesses: A Survey of Clinician Attitudes

Sarah L. Desmarais¹, Katareena Done¹, Robert Furberg², Marvin S. Swartz³, & Richard A. Van Dorn²

¹North Carolina State University; ²RTI International; ³Duke University Medical Center

Introduction

Background

Mobile technologies have proliferated over the past decade and are now frequently used in healthcare settings (Lajunen et al., 2008). Research demonstrates the benefits of mobile technologies for tobacco cessation (Rodgers et al., 2005), sexual health (Lim et al., 2008), physical fitness and weight loss (Eakin et al., 2007), medication adherence (Wei et al., 2011), and disease management (Krishna et al., 2009). Importantly, mobile technologies may improve healthcare while reducing costs (Groupe Speciale Mobile, 2010). Unfortunately, adoption of mobile technologies in mental healthcare has not kept pace, and, as a result, current approaches do not reflect the state-of-the-art (Luxton et al., 2011; Ben-Zeev, 2012).

The Present Study

Mobile technologies represent an opportunity to improve mental health research and practice (Kazdin & Blase, 2011). However, there has been little research examining the use of mobile technologies for the assessment and treatment of adults with serious mental illnesses, such as schizophrenia spectrum, bipolar, and major depressive disorders. This poster reports on a survey of clinicians regarding: 1) factors that would increase likelihood of adoption; 2) operational barriers to implementation; and 3) clinical barriers to implementation.

Methods

Participants

Participants were 505 mental health professionals—26.9% psychologists, 12.3% psychiatrists/physicians, 28.9% nurses, 17.0% social workers, and 14.9% “other”—practicing in the U.S. (92.5%) and Canada (7.5%). The majority (85.9%) identified their race/ethnicity as White, and 70.8% were female. Participant age ranged from 23 to 75 years ($M = 46.71$, $SD = 12.14$). Clinical settings included general hospitals ($M = 14.4\%$ of clinical time), community health centers/clinics ($M = 15.8\%$), and private practices ($M = 21.9\%$), among others.

Measures and Procedures

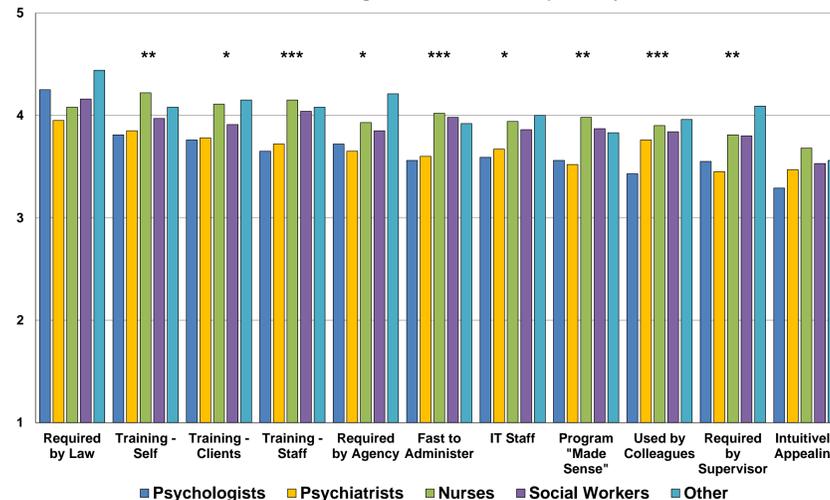
Participants were recruited through email lists, advertisements on websites, and snowball sampling. The online survey included questions measuring perceptions of mobile technologies and potential barriers to implementation. The survey took 15-20 minutes to complete. Responses were rank ordered from most to least highly rated. Mean ratings by profession were compared using *F* tests. All study procedures were approved by the NC State University's IRB.

Results

Factors Affecting Likelihood of Adoption

Table 1 presents clinicians' ratings of whether or not each factor would increase their likelihood of adoption by profession (1 = strongly disagree; 5 = strongly agree). Requirement by law was rated substantially higher than all other factors by clinicians overall ($M = 4.18$ out of 5, $SD = 1.11$) and within professional group, with the exception of nursing (see Table 1). Intuitive appeal was rated as the least relevant to likelihood of adoption. *F* tests showed interdisciplinary differences for all but requirement by law and intuitive appeal. For instance, compared to participants in other professional groups, nurses ranked having enough training to use the mobile technology as being more likely to lead to adoption, whereas psychologists rated requirement by law more highly.

Table 1. Factors Affecting Likelihood of Adoption by Profession

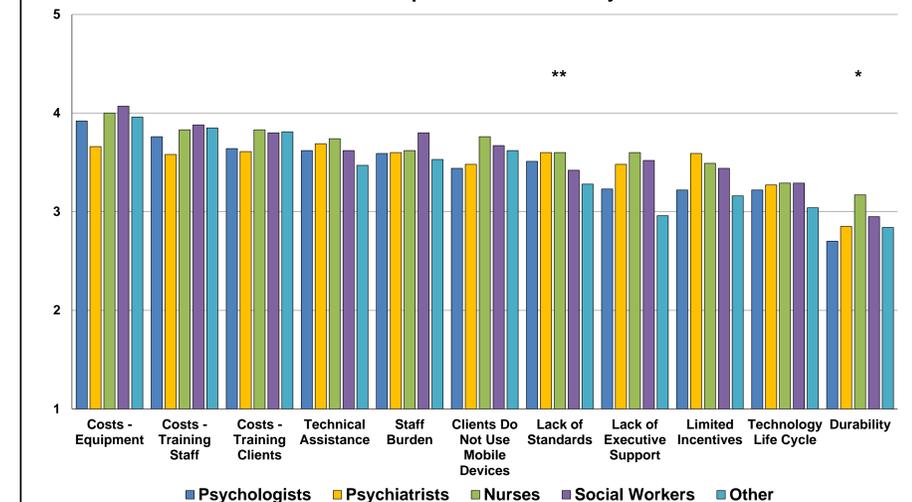


Notes. Factors are rank ordered from most to least important. * $p < .05$. ** $p < .01$. *** $p < .001$.

Operational Barriers to Implementation

Table 2 presents clinicians' ratings of potential operational barriers to implementation by profession (1 = not at all; 5 = to a very great extent). Cost of purchasing software and other equipment was rated most highly across groups ($M = 3.94$, $SD = 1.01$). The next two most highly rated operational barriers were the costs associated with training clinical staff ($M = 3.79$, $SD = 1.03$) and with training clients ($M = 3.74$, $SD = 1.04$). Concerns regarding costs also were rated most highly within each professional group. *F* tests showed only two differences in perceptions of potential operational barriers to implementation: 1) lack of executive support, and 2) durability of mobile devices (see Table 2).

Table 2. Potential Operational Barriers by Profession

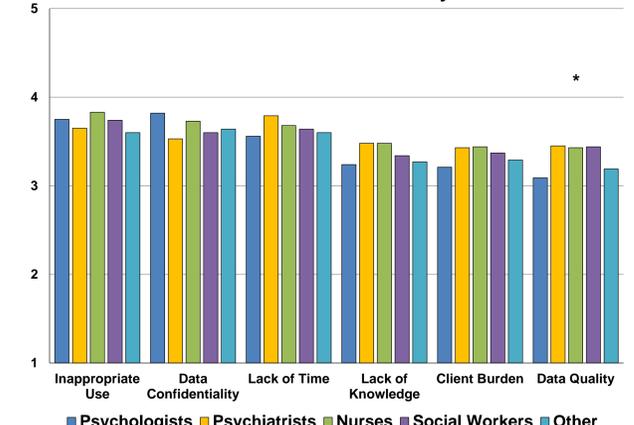


Notes. Barriers are rank ordered from most to least important. * $p < .05$. ** $p < .01$.

Clinical Barriers to Implementation

Table 3 presents clinicians' ratings of potential clinical barriers to implementation by profession (1 = not at all; 5 = to a very great extent). Inappropriate use by clients was ranked highest ($M = 3.74$, $SD = 1.10$). *F* tests showed differences in concerns regarding data quality.

Table 3. Potential Clinical Barriers by Profession



Notes. Barriers are rank ordered from most to least important. * $p < .05$.

Discussion

Results suggest support for mobile technologies in clinical practice with adults with serious mental illnesses, but also highlight potential barriers to implementation. Successful implementation will require planning, investment of sufficient resources (financial and otherwise), engagement and training of stakeholders, and regular review.