

Benefits and Risks of Apps

As mobile mental health and behavioral apps gain in popularity, psychologists need to understand their helpful uses as well as potential limitations.



Given an exponential rise in the use of smartphones and tablets, mobile applications (apps) designed to support a user's health and wellness – including mental and behavioral health apps – have gained in popularity. More than 40,000 health, fitness and medical apps are available across the digital marketplaces through Google Play, iTunes, Windows and other sources. Non-psychologist users of these apps may find them appealing because they often provide tips related to behavioral health and even allow for assessing symptoms of concern, such as stress and anxiety.

This growing trend presents new opportunities for psychologists to connect with patients through mobile apps in ways that could supplement the therapeutic relationship and provide additional support to patients. However, the sheer number and variety of apps that are available can make it difficult for psychologists and patients to determine which apps are the most effective, safest and most useful.

This article helps educate psychologists about the potential benefits and risks involved in using mental health and wellness apps as an adjunct to therapy.

Potential benefits

Several benefits of using apps include:

- **Supplementing the therapeutic relationship.** Apps can be helpful as an adjunct to therapy. For example, they can provide worksheets and tools that the provider can “assign” to a patient between sessions in order to save time for face-to-face interaction during therapy sessions.
- **Maintaining connection with patients between sessions.** Apps that provide for real-time symptom and activity monitoring offer a useful tool for helping patients maintain learning between sessions while tracking behaviors and building on skills learned in therapy. With some apps, providers can “check in” on patients as the week progresses to determine how they are doing.
- **Enhancing patient awareness and improving client functioning.** Patient functioning may be improved

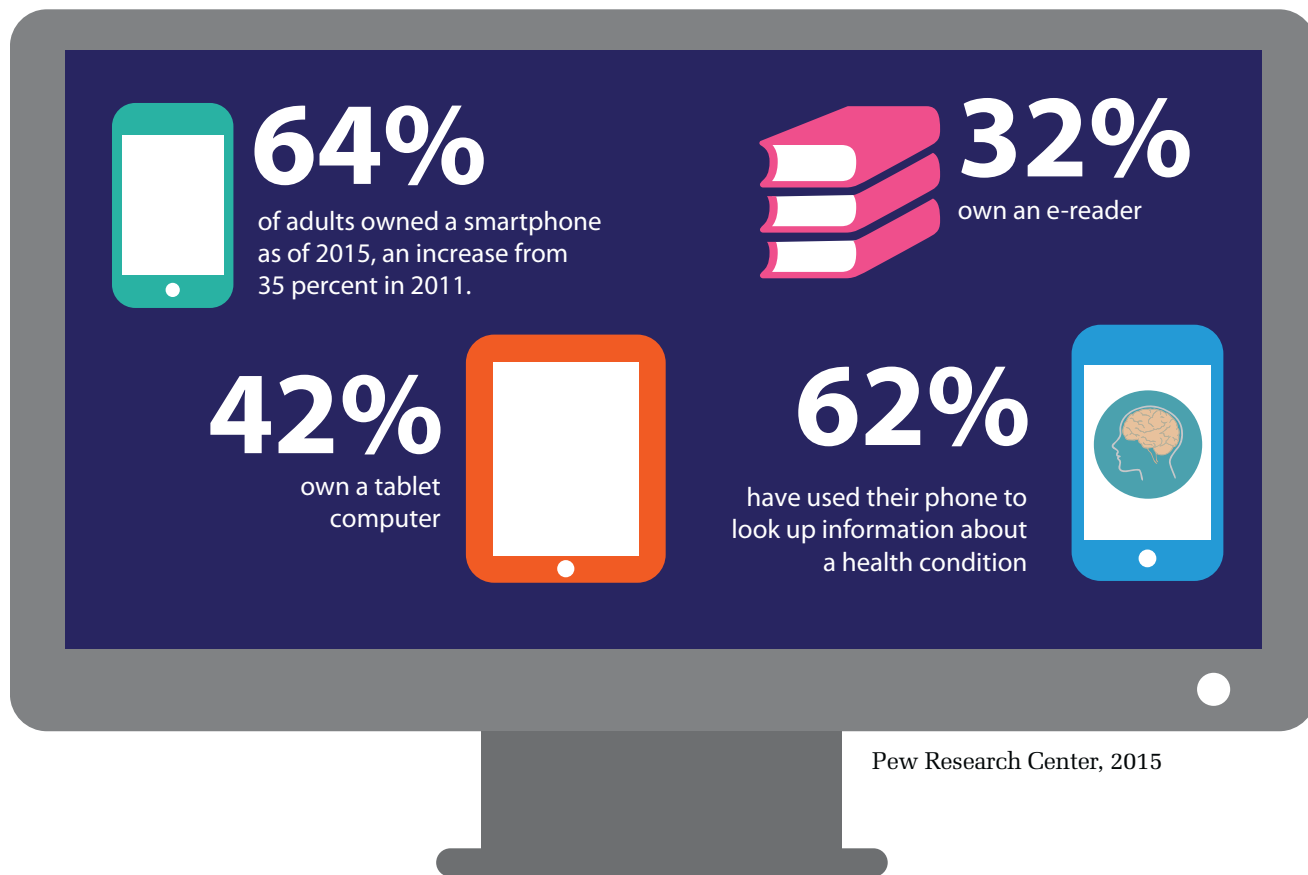
through increased awareness and understanding of different disorders and symptoms, along with helpful tips for use of the app at home. Self-reporting measures included in some mobile apps can also serve to improve functioning by helping patients monitor themselves and enhance their awareness of stress, anxiety and depression.

- **Providing practice management support.** There are applications that help health care professionals run the office – for example, practice management apps and HIPAA-compliant note-taking apps. Resource and research apps include ICD-10-CM, DSM and a mental health dictionary.
- **Gathering data about your practice.** Some mobile apps can generate graphs or tables showing consumer improvement or areas that need improvement. A provider can use them to help determine which interventions are working best and which ones should be changed. Health care professionals can use this information individually for patients or gather information into a chart for the whole practice to determine how interventions are working broadly across their patient population.

Possible risks

Among the potential risks posed by the use of apps:

- **Lack of research.** While research exists about the use of mobile apps in conjunction with therapy, research is generally lacking about how these apps are developed, with one exception: If the apps are products of the federal government, like the Substance Abuse and Mental Health Administration (SAMHSA) or the US Department of Veteran's Affairs (VA)/Department of Defense (DOD), they generally include information about app development. (For more information, see Research Highlights on page 18.)
- **Lack of knowledge about apps and incorrect use.** Mobile apps can prove troublesome if the provider or patient lacks knowledge about how apps work in general and is unable to use them correctly.



- **Technical issues.** Mobile applications may look different depending on the operating system where they are based. For example, if a psychologist is using the app on the Apple interface and the patient is using the app on the Android interface, it may prove difficult for the provider to try to teach the consumer how to use the app.
- **Potential expense of in-app purchases.** Many applications are free; however, some mobile apps do have an initial expense to download or involve expenses at a later time, for example, to download “extras” within the app. It is important that the psychologist be aware of these potential expenses and inform patients as applicable.
- **HIPAA compliance/security.** Providers should encourage patients to use apps that are HIPAA compliant. However, it is important to realize that patients are not regulated by HIPAA, so they can use any apps that they feel suit them well. Providers who will be using an app to store patient data must choose one that is HIPAA-compliant.

- **Big data and passive/active data collection issues**

Big data is collected when you surf the internet, download an app or order a prescription. “Cookies” from different internet searches you conduct or apps you download may lead to information being gathered so that you get ads from different companies. For example, a consumer does a search on Amazon for books on treating depression. The next day, they see an ad for depression medication on their Facebook page. This is an example of big data at work.

Mobile mental health apps can be broken down into either passive or active apps. Active apps require direct participation from the patient – such as completing mood logs, self-symptom ratings or recording personal experiences. Passive apps are able to access information independently and gather data through smartphone functions such as GPS without the patient or provider even noticing. Though it may be beneficial, some people may not like the potential invasion of privacy associated with this type of data gathering.

Play with the app. Providers should familiarize themselves with any apps that they would want to recommend to patients.

Steps to mitigate risk and learn more about apps

Taking several steps can help you educate yourself about apps and mitigate potential risks related to their use:

- Talk to your colleagues who have used mobile health apps in practice. Have they found particular apps useful or not? Are there any apps that they specifically recommend to clients or other providers? Do they avoid certain apps because they are difficult to use?
- Play with the app. Providers should familiarize themselves with any apps they would want to recommend to patients. It is important that the provider knows how the app works and can explain its use clearly to patients.
- Psychologists should be able to inform patients of any basic issues with the app related to privacy and security. Much of this information is available on the initial page that displays when you click on an app or by contacting the company that developed the app.
- If an application has an expense associated with downloading or using it, make sure to inform clients of that if you are requesting that they download app for use in conjunction with therapy.
- Develop a general understanding of big data and passive data issues (see preceding section) in order to explain potential issues to patients.
- Determine the appropriateness of using mobile apps with patients on a case-by-case basis. Not all apps are appropriate for all patients. It is important that the provider consider how the app works, the extent to which the patient is knowledgeable about technology use and whether the app will benefit the patient. If the provider decides that an app is appropriate for the therapeutic intervention chosen and that the patient likely will benefit from using the app outside of therapy, the provider should take time to educate that patient about how the app works.
- Read the research and reviews. Research on mobile apps is just picking up. Many agencies and non-profit organizations are looking into mobile apps with an eye to providing resources for practitioners as they adopt the apps. The IMS Institute for Healthcare Informatics, Pew Research Center, The Food and Drug Administration


RESEARCH HIGHLIGHTS

Federal, foundation and private-sector organizations are providing resources to support the development of new mobile technology-based treatments. Additionally, industry representatives such as mobile phone providers are also pushing for the implementation of broad mobile health interventions (Tomlinson, Rotheram-Borus, Swartz, & Tsai, 2013). However, despite the growing development and usage of such apps, research examining the efficacy of mental health smartphone apps remains limited.

A recent literature review conducted by Torous and Powell (2015) identified ten studies that examined the use of apps tailored to assist in the treatment of mood disorders, specifically depression and bipolar disorder. Several of the studies identified focused on mobile treatment delivery and demonstrated self-reported improvement of depressive symptoms for individuals who used apps that encouraged behavioral activation, mindfulness activities and other cognitive behavioral therapy program activities. Mobile mental health apps have also been recently developed and pilot-tested for the treatment of schizophrenia (Ben-Zeev, D., Kaiser, S. M., Brenner, C. J., Begale, M., Duffecy, J., & Mohr, D. C., 2013 & 2014), and for comorbid borderline personality and substance abuse disorders (Rizvi, S.L, Dimeff, L.A., Skutch, J., Carroll, D., Linehan, M.M., 2011).

Several studies identified in a recent literature review examined the usability, helpfulness and satisfaction ratings of consumers using mobile mental health apps (Donker et al., 2013). The authors found that app adherence rates are high, and that consumers perceived apps as a useful way to access evidence-based monitoring and self-help for mental health concerns and disorders.

and the Office of the National Coordinator are all good resources. Use the search box on these websites to find information on “mobile applications.”

- Read user reviews of apps in the app stores for Android, iPhone and Windows devices. Also consider using app rating sites such as PsyberGuide, ADA Mobile Apps and Health Apps Library (based in England). 

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