

Research In Focus: A Weekly Digest of New Research from the NIDILRR Community

People with Disabilities Describe Features of Mobile Health Apps that Would Increase Accessibility

A study funded by the National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR).

Mobile health (mHealth) apps are health-related apps that people can use on a smart phone or tablet to manage their own health. Examples may include exercise or fitness apps, nutrition trackers, apps for meditation and stress relief, or apps to connect patients with their doctors between visits. mHealth apps have been gaining popularity, and they may present a convenient, affordable way for people with disabilities to manage their own wellness. However, these apps may not be optimally accessible to people with a variety of disabilities. In a recent NIDILRR-funded study, researchers asked people with disabilities whether they used mHealth apps and which types of mHealth apps they used. They wanted to find out how commonly people with disabilities use these apps, and which types of apps were most and least popular. The researchers also asked the respondents what features they wanted from mHealth apps that are not yet available.

Researchers at the [LiveWell RERC - Rehabilitation Engineering Research Center for Community Living, Health, and Function](#) reviewed survey responses from 412 individuals with a variety of disabilities, including physical, vision, hearing, and cognitive disabilities. The respondents reported what mHealth apps that they currently used, if any. They also answered an open-ended question asking what features or functions they would like to see in an existing or new app but had not yet found in the app marketplace.

The researchers found that about half of the respondents (53%) reported using at least one mHealth app. Among users, the most commonly used app types were exercise and fitness apps, and clinical portal apps to communicate with healthcare providers. The least commonly used app type was apps for managing specific diseases, like diabetes.

When asked to describe desirable new apps or app features that they thought would be useful, the respondents described a variety of features relating to both accessibility and functionality. In terms of accessibility, some of the respondents suggested improvements to screen-reader compatibility, verbal descriptions of exercises, enhanced speech-to-text for people with hearing disabilities, or the ability to request telehealth appointments with captioning or sign language interpretation. Respondents with cognitive disabilities suggested more picture-based functionality and ways to simplify medication management. Some of the respondents with physical disabilities also suggested making exercise recommendations appropriate for wheelchair users. Other features desired by the respondents included the ability to

synchronize health information from multiple providers in one app, or a diabetes monitor that allows entry of notes.

The authors noted that popular mHealth apps may be utilized and appreciated by people with a variety of disabilities. However, they may not be optimally accessible. Developers of mHealth apps may wish to incorporate adaptations such as haptic feedback, speech-to-text or text-to-speech conversion, and fitness advice designed for people with physical disabilities. In addition, symptom management apps may be an under-utilized resource for people with chronic conditions such as diabetes. Targeted marketing efforts may assist in promoting adoption of these apps by users who could benefit.

[To Learn More](#)

The App Factory, part of the LiveWell RERC, helps software, app, and hardware developers to develop and release assistive technology apps for health and function. [Learn more about the program and some of the technology it has supported.](#)

Previous issues of Research In Focus have looked at diverse topics in mHealth and mRehab, including:

- [Mobile Health Systems May Benefit People with Physical Disabilities, But Some People May Have Challenges Using Them](#)
- [A New Mobile Health System Can Help People with Spina Bifida Take Charge of Their Health](#)
- [“Even People Who Cannot Speak Should Be Able to Make Their Voices Heard”: Soliciting User Feedback from People with Severe Speech and Physical Impairments](#)
- [Mobile Rehabilitation Shows Promise, but Therapists May Benefit from Training and Support](#)

[To Learn More About this Study](#)

Lippincott, B., Thompson, N., Morris, J., Jones, M., and DeRuyter, F. [Survey of user needs: Mobile apps for mHealth and people with disabilities](#). Lecture Notes in Computer Science, 12377, 266-273. This article is available from the NARIC collection and free in full text from the publisher.

Research In Focus is a publication of the National Rehabilitation Information Center (NARIC), a library and information center focusing on disability and rehabilitation research, with a special focus on the research funded by NIDILRR. NARIC provides information, referral, and document delivery on a wide range of disability and rehabilitation topics. To learn more about this study and the work of the greater NIDILRR grantee community, visit NARIC at www.naric.com or call 800/346-2742 to speak to an information specialist.

NARIC operates under a contract from the National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR), Administration for Community Living, Department of Health and Human Services, contract #GS-06F-0726Z.