Chapter 1
Mobile Mental Health: Opportunities and Challenges

Raquel Simões de Almeida
Santa Maria Health School, Portugal & School of Health, Polytechnic Institute of Porto, Portugal

ABSTRACT

Several people with mental health problems do not receive suitable treatment and often avoid or delay seeking help due to concerns about being treated differently and other practical barriers (for example, services costs and unavailability). The mobile health concept has gained more enthusiasts worldwide exactly because it helps mitigate some of these issues. However, despite the emerging scientific evidence in the last decade that proves the efficacy and safety of these interventions, professionals have shown some doubts and worries about their implementation, especially in the mental health field. Thereby, this chapter provides a review on the subject, presenting several mobile applications for mental health problems and also the expectations and needs of health professionals and users for development and implementation of a mobile application.

INTRODUCTION

Mental health problems are a global challenge that affect a large number of people of all ages and from all social status. According to the World Health Organization (WHO), 4.4% of the world population, about 322 million people, suffer from depression and 3.6%, about 264 million people, from anxiety (WHO, 2017).

Due to the costs associated with treatment, many individuals who experience mental health problems do not receive timely professional care. But cost is not the only contributing factor; other reasons include a shortage of specialized professionals, difficult access to services, and the stigma yet associated with mental illness.

At the same time, the use of digital therapies is increasingly spreading and the enthusiasm for combining mobile technologies in support of healthcare has led to the appearance of a new interdisciplinary field called mobile health (mHealth). According to data from the report "The New Decade of Health and Science" (IQVIA Institute, 2021), Covid-19 has been a catalyst for change, promoting remote and

DOI: 10.4018/978-1-7998-8634-1.ch001

virtual models of healthcare. Nowadays, more than 10.000 mental health applications are available for download (Carlo et al., 2019). Although applications focused on well-being in general still represent the majority of software of this kind, the number of those focused on managing mental health conditions is increasing.

In this context, smartphones have come to stand out as attractive platforms for mental illness self-management and psychosocial rehabilitation because they are easily accessible, can be carried anywhere by the user and, obviously, have the ability to connect to the Internet. Mobile Health presents several purposes, from prevention to intervention: allows its users to better manage their condition by giving them reminders to take their medication, tracking mood patterns, providing coping and problem-solving strategies, delivering cognitive-behavioral interventions, collecting vital signs by sensors, and so on.

mHealth interventions have several benefits: (1) allows the users to use them 24/7 in a portable and flexible way; (2) might reach people who would otherwise not seek treatment; (3) it is easy and intuitive since most people already use their mobile phones and other applications on a daily basis, and the youngest are already considered digital natives; (4) could be used to deliver large-scale interventions in emerging and low-income economies where resources for mental health are scarce; and (5) individuals can be supported in applying treatment-related skills in real life situations, in which behavior change is at its most vulnerable, and clinicians often struggle to support individuals appropriately (Weisel et al., 2019).

Throughout the technological evolution, different functionalities of mobile phones have been used: calls, text messages, emails and more recently mobile applications. Regarding this last item, recent research on the creation of chatbots or virtual assistants has proliferated. Maybe some users find it easier to share potentially embarrassing information with a "virtual therapist"; when patients talk to a psychotherapy bot, they report not feeling judged. In addition, these systems are always available and can offer a much higher frequency of therapeutic interactions compared to a human therapist.

Despite this great interest in the use of mobile applications in the area of mental health, the level of scientific evidence in most of these mobile applications, is relatively low or non-existent. Some trials showed the potential of apps targeting mental health symptoms, but using smartphone apps as stand-alone psychological interventions cannot be recommended based on the current level of lack of evidence (Weisel et al., 2019). What many authors have suggested, is the complementarity with the preferred therapy, whenever possible. These mental health mobile applications seem to contribute to helping its users to engage in health-promoting behaviors outside the clinical context or in other activities such as therapeutic homework and facilitating the generalization and transfer of skills. Obviously, we should pay attention to the applicability to different populations – for instance, young people and older adults will have different needs which could lead to different apps or different features of the same app.

Given the need for instruments to assess the quality and effectiveness of mobile apps before they become publicly available, the American Psychiatric Association (APA) has developed a 4-step evaluation model for mental health apps whose result can help therapists and users decide whether an app can be used to help with treatment or not (2018). Legal regulations and guidelines on these digital therapies are also beginning to emerge in Europe and in the United States of America, which the authors will present in detail in this chapter.

Nevertheless, the user retention rate for smartphone apps in the general population is low, and reports for mental health apps show limited downloads and poor retention, especially outside of clinical trials and research settings (Bauer et. al, 2020). Continuous interaction leads to higher engagement rates which in turn leads to higher retention, and retention is one of the most important statistics to ensure