Perspectives on the Implementation of Mental Health Apps on Clinical Interventions in Mental Health

Perspetivas de Implementação de Aplicações Dedicadas à Saúde Mental na Prática Clínica

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Psychiatric diseases are quite common in the global and national population, with an annual prevalence rate in Portugal of 16.5% for anxiety disorders and 7.9% for depressive disorders, respectively. The percentage of patients without access to healthcare is high, reaching 81.8% for mild severity disorders and 33.6% for severe cases.[1] Due to the lack of clinical response, multiple digital strategies have been successfully developed to improve symptom management.[2]

Mental health apps have focused on areas such as psychoeducation, symptom assessment, monitoring, intervention, and social support. The areas of greatest development target anxiety and depressive disorders, but there are apps for most diseases. These apps have the potential to reduce the percentage of people without access to healthcare services or adequate information. Due to their greater accessibility, low cost of availability and maintenance, flexibility, personalization, interactivity, and dissemination, they are among the innovative health strategies, alongside artificial intelligence.[2]

The UK's National Institute for Health and Care Excellence (NICE) Guidelines were the first to introduce apps in their recommendations. Apps are not meant to replace direct interventions but rather to provide access to simple self-regulation techniques to a larger number of individuals. These recommendations result from scientific evidence collected from multiple meta-analyses that support their autonomous use or integration into clinical practice.[3] It is worth mentioning that a large proportion of mental health app development, especially well-known ones, comes from companies rather than research groups, resulting in many apps lacking scientific validation or appropriate clinical information.

Most of the apps created by research groups are un-available, as their sustainability is limited to funding support. For example, the project funded by the European Union, e-mental health innovation, and transnational implementation platform Interreg North-West Europe (eMEN), with a €6.21 million fund, facilitated the development of seven apps, but only two are currently in regular use.[4]

The pandemic has made it clear that technology is an effective tool in clinical practice.[5] When it was needed, most healthcare professionals were prone to try and reach their patients through digital solutions. The general belief among healthcare professionals is that apps should be integrated into clinical practice.[5] However, there are some barriers to this step. Most healthcare professionals do not have access to a list of validated and recommended apps for simple recommendations. The integration of apps in the normal daily practice of healthcare professionals introduces new challenges in their time management, leading to multiple complaints of exhaustion and lack of resources. For them, integration depends on: (1) time availability, (2) financial resources, (3) technology training, (4) availability for use, (5) integration into existing systems, (6) integration into meetings, (7) limiting digital availability hours (to avoid professional overload and surpassing therapeutic relationship boundaries), (8) access to hardware and software for free, (9) adaptation to cultural and language contexts, and (10) solution efficiency.[6,7]

The integration into healthcare services is quite complex, and the main factors are: (1) readiness of services for change, (2) local and national leadership, (3) rapid and appropriate response to technology by users, and (4) availability of economic funds.[6]

In the literature, some solutions are presented, such as (1) understanding the technological needs of users and healthcare professionals, (2) involving users and healthcare

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professionals in the design, construction, and validation of solutions, (3) increasing digital literacy, reducing stigma and myths about technology (e.g., healthcare professionals fear that technology may interfere with the therapeutic relationship and treatments, reducing effectiveness, despite evidence suggesting otherwise; they believe that digital solutions are only for the younger population, despite multiple evidence showing preferential use among those over 35 years old), (4) bringing together researchers, clinicians, and development companies to ensure higher quality and future maintenance, (5) certification of quality, (6) personalization, (7) ease of use, (8) training users and professionals in usage and adaptation, (9) privacy, and (10) anonymity.[8]

The role of the digital navigator has been developed and studied to create a mediator between users and healthcare professionals. A new professional with adequate training would be responsible for the digital relationship between the user and healthcare services, relieving clinicians of this additional burden.[7]

Digital solutions only work if they are used. Most apps have very low retention of users at 30 days. The apps with higher retention rate are not necessary those that are more profitable or well-known. For users, the main factor is the recommendation by a healthcare professional, and the main barriers are (1) recognition of effectiveness, (2) safety, (3) usability, and (4) digital literacy.[9]

At this moment we are at a crucial point in the integration of digital solutions in the healthcare system. Clinicians do not have the time or resources to change their practices. Users have access to a lot of solutions, most focused on economic profit and without scientific validation. Recent developments in generative artificial intelligence radically changed the development of chatbots and are now being applied to the development of chatbots for mental health purposes. There was recently a fatality associated with its use.[10] Who is supposed to take responsibility for this? Who should be held accountable for it? How can we avoid future deaths from technology use? This suggests that we are facing major changes in technology use in health and that the healthcare system and healthcare professionals may not be ready for them yet.

It is essential to create a central structure to regulate, develop and recommend digital solutions for health use. There are regulations in the European Union, but the market has not changed with them and the main app stores – Apple App Store® and Google Play Store® have not changed their offer. A central structure could organize the research funding and coordinate future maintenance of the effective solutions. It could better guide where the funds should be invested, to avoid waste of resources and future availability. This structure could also guide healthcare professionals and users in recommended solutions through the recognition of digital solutions with scientific evidence and their adaptation to our culture and language. After this central validation, the support of decision-making bodies in healthcare services is crucial for the integration of the necessary solutions into existing structures and for planning training and adaptations. Development should be a shared effort among all the involved parties to facilitate the recognition of needs and necessary specificities in creating new digital solutions that allow for integration with healthcare services and have long-term sustainability.

AUTHOR CONTRIBUTIONS

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CS: Literature search.
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