Mobile applications for self-management in psychotic disorders

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Introduction

Mental illnesses, such as psychotic disorders, have a great impact on individuals affected and on society, being one of the leading causes of disability [1]. In addition, 60% of people with such problems remain without access to mental health care and, in particular, rehabilitation programs, impairing their functionality, quality of life and social inclusion [2]. This is mainly due to the lack of resources to allow access to a comprehensive and early intervention, dedicated to not only to control symptoms, but also to enable people to live satisfactorily in the contexts they choose to live, work and socialize, enhancing their life project. With the increased economic pressure on mental health services, mHealth could reduce treatment gaps, reduce waiting time for patients and deliver interventions at lower costs. Technology advocates altering how health care is delivered in general, and in particular for chronic diseases like mental illnesses.

Opportunities

Finding ways to help people self manage psychotic disorders is important for long-term health benefits. Mobile apps are increasingly accessible and affordable, could reduce barriers and increase access to care. Mobile apps characteristics allows for the transferring of research, evaluation and treatment from the therapeutic setting to the various contexts in which the patient performs activities in real time. Apps are relatively easy to develop, offer the possibility to promote treatment compliance and gather psychological or physiological data (e.g. hallucinations, heart rate…) [5]. This technology also reduces the stigma of seeking help, since it promotes self-determination and empowerment.

Challenges

There are some concerns about using mobile apps for health. Health apps should be designed considering patients with low health literacy, old age or less savvy practitioners. Other issues to consider are patient privacy and data security, as well as, the quality and accuracy of the information provided [3, 4]. It would be imperative to inform (and give guidance to) patients about how to use and evaluate a particular app. In psychotic disorders, apps should be very intuitive and considerer the positive and negative symptoms of the illness, promoting a strong alliance with the practitioner.

Future Directions

To develop and implement applications that can be useful for both professionals and patients, we suggest the following steps: (1) Explore patients' and professionals' needs and concerns regarding mental health mobile apps, by means of surveys, interviews or focus groups; (2) Analyze the evidence on the acceptability, feasibility, security and benefits of mobile-based interventions for psychotic disorders trough a systematic review; (3) Test app usability with rating questionnaires and tasks to assess content flaws and design.

Conclusions

Mobile-based interventions provide an exceptional opportunity to deliver cost-effective, accessible, and real-time support to people with psychotic disorders [6]. Mobile apps have the potential to play a significant role in patient education, disease management, improvement of treatment adherence and delivering easy tracking. However, more research is needed to provide data regarding the usability and intervention effectiveness of mobile device software's in mental health domains. We recommend that researchers and clinicians consider the use of this devices as part of their clinical practice, combined with ethical principles and conduct codes suggested for each intervention.

References

[1] Direção Geral de Saúde. 2013. Saúde Mental em Números. Lisboa: DGS. [2] Ben-Zeev, D., Drake, R.E., Brian, R.M. 2014. Technologies for People with Serious Mental Illness, in Marsch, L., Lord, S., & Dallery, J. (Eds.), Behavioral Health Care and Technology: Using Science-Based Innovations to Transform Practice, p. 70-80. New York: Oxford. [3] Luxton, D., McCann, R., Bush, N., Mishkind, M., Reger, G. 2011. mHealth for Mental Health: Integrating Smartphone Technology in Behavioral Healthcare. Professional Psychology: Research and Practice 42 (6), p. 505–512. doi: 10.1037/a0024485. [4] Giota, K.G. Kleftaras, G. 2014. Mental Health Apps: Innovations, Risks and Ethical Considerations. E-Health Telecommunication Systems and Networks 3, p. 19-23. http://dx.doi.org/10.4236/etsn.2014.33003. [5] Ben-Zeev, D., Brenner, C., Begale, M., Duffecy, J., Mohr, D., Mueser, K. 2014. Feasibility, Acceptability, and Preliminary Efficacy of a Smartphone Intervention for Schizophrenia. Schizophrenia Bulletin 40 (6), p. 1244-1253. doi: 10.1093/schbul/sbu033. [6] Alvarez-Jimenez, M., Alcazar-Corcoles, M., González-Blanch, C., Bendall, S., McGorry, P., Gleeson, J. 2014. Online, social media and mobile technologies for psychosis treatment: A systematic review on novel user-led interventions. Schizophrenia Research 156, p. 96–106. http://dx.doi.org/10.1016/j.schres.2014.03.021.