

Apps for depression: Effective, but with room for improvement

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A study involving the Universitat Oberta de Catalunya (UOC) has found that the use of applications for depression can have a significant effect on treating the symptoms of this increasingly prevalent mental illness, especially when used in hybrid treatments, i.e. those that combine technology with the involvement of a professional.

That is one of the main conclusions from the research done by the team led by Carme Carrion, principal investigator at the eHealth Lab, based on their compilation and analysis of the most painstaking scientific research in this field in recent years.

The members of this research group, which is affiliated to the Faculty of Health Sciences and collaborates with the eHealth Center, have studied apps for [depression](#) as part of the EvalDepApps project.

The project aims to study in greater depth the methodology used to evaluate apps aimed at managing depression. As a result of the research that is being carried out, the program will develop a tool that aims to help patients and professionals determine the best apps for treating this illness, which affects more than 5% of the population.

"App repositories contain dozens of apps which aim to prevent or treat depression, but very few of them are based on [scientific evidence](#) or include contributions from professionals or patients," explained Carrion. A review of the scientific literature identified 29 rigorous scientific studies that study the effectiveness of smartphone-based health interventions applied to depression.

This [analysis](#) suggests that the use of mHealth interventions has a moderate positive effect, and may be a viable method for providing [mental health care](#), but also that the current range of resources is very diverse, which means that classifying them is difficult.

The more severe the depression, the more extensive the use

Apart from their effectiveness in reducing symptoms of depression, with hybrid interventions achieving better results than purely technological

ones, one of the most frequently observed patterns is that users prefer simple applications that are easy to use compared to those that offer many features and options but which are not as easy to understand. Furthermore, the more serious the depression, the greater the tendency to use them. In contrast, no significant differences in terms of age or gender were observed.

"All this highlights the need for tailored approaches that take personal differences, preferences and needs into account. To ensure their effectiveness, it is important to prioritize evidence-based principles and standardized evaluation tools like the ones we want to develop," said Andrea Duarte, a researcher at the Canary Islands Health Research Institute Foundation (FIISC), affiliated to the Evaluation and Planning Service of the Canary Islands Health Service (SESCS), who led the meta-analysis.

Other participants in the research were Antoni Pérez Navarro, a researcher at the eHealthLab and a member of the Faculty of Computer Science, Multimedia and Telecommunications at the UOC; Noemí Robles, of the eHealth Center, and staff at the Universitat Autònoma de Barcelona, the University of Vic, the Universitat Internacional de Catalunya and the Catalan Health Institute.

"In general, apps for depression have a moderate effect on reducing symptoms, but they are highly diverse in terms of their characteristics and components. None of them on their own is related to higher or lower levels of effectiveness, so we need to move beyond trying to make an app for everyone, and find out which app with what features we need to develop for people with specific needs," explained Duarte.

She acknowledged that the use of technology in the treatment of mental health "is still in its infancy", but at the same time she agreed with Carrion that it is an avenue that must be explored. "Given the increase in

demand and the limited resources, in order to improve the effectiveness of treatments and to keep the health care system efficient, introducing technological tools will be essential, but they must be good ones, that are validated and add value."

Research in this field will continue after this study is completed: work is now under way on a [doctoral thesis](#) on how technology for the management of mild depression should be introduced in Catalonia, and there are also several workshops scheduled for patients who suffer or have suffered from depression, so that they can give their opinions and offer researchers some guidance on the contributions that add the most value to interventions.

The work is [published](#) in the journal *JMIR Mental Health*.

More information: Andrea Duarte-Díaz et al, Efficacy, Safety, and Evaluation Criteria of mHealth Interventions for Depression: Systematic Review, *JMIR Mental Health* (2023). [DOI: 10.2196/46877](https://doi.org/10.2196/46877)

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