EDITORIAL

Digital technology in psychiatry: towards the implementation of a true person-centered care in psychiatry?

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The coronavirus pandemic is putting unprecedented pressure on healthcare systems worldwide, including mental healthcare. More people experience mental health problems, as early reports from China show [1], and physical distancing measures make it harder to provide face-to-face treatment to those that were already suffering from mental health problems. These unforeseen circumstances are paving the way for a radical shift towards more digital care in psychiatry. Although the use of digital technology has already been growing quite substantially over the last years [2], its added value suddenly has become irrefutable. As we can expect an even stronger acceleration of this field in months and years to come, now, it seems to be the proper time to carefully consider what direction this field should be heading in.

One crucial issue is how to properly integrate digital tools in the existing healthcare systems. A study by Kerst and colleagues [3] showed that clinicians are open to apply digital technology, yet very few of them know what is available. Even more, only 21% of clinicians in that study had ever used an app in treatment. This is demonstrative of a large research-to-practice gap, with an average duration of 15 years before new developments reach the clinic. Several steps can be taken to accelerate the implementation process. First, there is a lack of good-quality empirical studies to demonstrate efficacy and effectiveness of digital tools [2]. The evidence base thus needs to be strengthened. Second, most apps are tailor-made, specifically developed for a study or a specific setting. This hampers scale up to use in wider routine mental health care. Apps preferentially should be developed for wider implementation. To reach this, technological barriers need to be tackled such as how to integrate the collected data in existing hospital systems to guarantee data privacy and safety. But equally important, all the relevant stakeholders should be involved in the development of the technology, so that apps can be adapted to the needs of patients and clinicians, resulting in a responsible and sustainable innovation [4]. In addition, we need regulations at the national and international level to provide leverage for an integrated and responsible use of digital apps in mental health care. Therefore, rather than developing ever more apps, we need large-scale and interdisciplinary efforts to strengthen implementation and foster scale-up of digital technology in wider routine clinical practice.

A second important question is what digital technology can or should bring to the field of mental health care. Most studies to date are mainly aimed at transferring existing psychological therapies to the people's daily life [2]. Most smartphone apps deliver Cognitive-Behavioral Therapy in real life, outside the clinical setting. Although this may lower the threshold for treatment, making this more cost-effective and available for a larger group of people, the question remains whether digital technology can contribute in bringing a more radical change to mental health care [2, 3].

Over the last years, digital phenotyping has been pushed to the fore as a potential game changer [5]. The main idea is that passively harvesting information from a smartphone can inform models predicting for example who is about to come depressed, thus creating a 'digital phenotype' of depression. Although this seems appealing to many, the question is whether this is revolutionary different from the current practice. One of the problems in psychiatry is that patients are still often treated as a passive recipient of care, being told by their clinician what is wrong with them and what they should do about it. Replacing the clinician with a machine learning algorithm will not shift mental health care towards a person-centered approach with the service user as an active and empowered actor in his or her treatment process.

To make service users actively engaged with their treatment and involved in a process of shared decision-making, they need to have access to relevant and qualitative

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information that they can use to base decisions on [6, 7]. Digital tools offer a unique opportunity to collect that information. Digital apps, based on structured diary methods such as the experience sampling method [8], provide the means to systematically collect self-report data on thoughts, feelings, symptoms, as well as context in the flow of daily life. Based on these real-time longitudinal data, potentially strengthened with passive sensing information, meaningful patterns of variation in symptoms as well as relevant risk and resilience factors can be identified for each individual person. This provides both clinician and service user with a much better understanding of the problems as well as potential personalized targets for treatment [8]. Using digital tools in this way puts the field of psychiatry nicely in line with the communication of the European Research Commission on Digital Health and Care, emphasizing that digital health should empower service users to monitor their health, adapt their life-style and provides them with a tool to interact as active partners with their clinical carers. Digital tools may thus aid in pushing psychiatry towards a true person-centered care, where the service user is a central and active partner in his or her own treatment process. As patients will be empowered to be actively engaged in their treatment, this may also reduce self-stigma which has been shown to have malignant effects on outcome [9]. Digital tools may thus play a crucial role in gearing treatment more towards the specific needs of an individual, as such personalizing psychiatric health care. In addition, in identifying relevant patterns of behavior and symptoms, it may inform us about and tailor treatment to the true nature of the mental health problems, which is the goal of precision medicine [10].

To conclude, let us use these unprecedented times to more widely implement digital tools in routine mental health care, based on evidence from large-scale multidisciplinary implementation studies. If digital tools can push the field of psychiatry towards personalized and precision medicine, with the service user at the heart of his or her care, this may genuinely change the game.

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