Editorial

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The scope of metaverse in enhancing telepsychiatry training and digital literacy among psychiatrists

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The uptake of telemedicine in healthcare continues to gain popularity and widespread acceptance, particularly in the field of psychiatry. In the wake of robust evidence showing that telepsychiatry practices can improve health outcomes and increases patient satisfaction, policymakers, payers, and providers are increasingly considering ways to incorporate them. The effectiveness of telepsychiatry to provide reliable diagnosis and accurate assessment of cognitive, depressive, anxiety, and psychotic disorders[1–5] has been proven. It has also been shown that treatment effectiveness and adherence as well as patients' satisfaction were similar with video conferencing and in-person follow up.[6] In the future, the metaverse may exist parallel to "conventional reality" as a confluence of virtual reality (VR), mixed reality (MR), and augmented reality (AR).[7] The metaverse refers to a three-dimensional virtual environment where avatars can engage in social and collaborative activities.[8] It is a vastly expandable, persistent network of linked virtual worlds which unifies the physical and digital worlds, allowing people to engage in a setting supported by artificial intelligence (AI), MR and extended reality, VR, and AR—all of which are enhanced by practically limitless data.

Many medical centers and organizations have already begun using VR, AR, MR, and AI-based technologies to teach doctors and medical staff by simulating real-world procedures and providing cellular-level detail of the human body.[9] A major challenge is that psychiatrists are not sufficiently trained in telepsychiatry, and those in lower-income countries lack the infrastructure for technological exposure. Due to technological and financial challenges encountered when applying digital psychiatry, most of the mental health workforce lacks the necessary theoretical or practical training to conduct remote consultations safely and effectively. This is especially true for those coming from LMICs. Most nations lack curricula-specific training requirements for psychiatry trainees to show proficiency in digital skills that might be regarded as necessary for good clinical practice, including the abilities and competencies required to provide and deliver mental health interventions using digital tools.[10–12] The inadequate training seems to be a consequence of participants' general lack of knowledge in this area of psychiatry, which may then determine a poor attitude and false beliefs about digital tools and interventions in terms of their benefits, target populations, and target mental health disorders, as well as their evidence-based efficacy and effectiveness. Indeed, as previously published studies have already shown, practitioners' knowledge may significantly affect their attitudes toward offering and recommending digital psychiatry interventions, which in turn may indirectly affect patients' views of and decisions toward digitally oriented mental health care.[10]

The result is a digital literacy gap among psychiatrists across the globe. In addition to helping psychiatrists bridge this gap, the metaverse offers opportunities for highly immersive medical education and training. Psychiatry residents are often not familiar with telemedicine or its applications in general during their training, in the context of a lack of telehealth curricula offering hands-on experience.[12,13]

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The aim of this article is to provide recommendations for considering the metaverse as a platform for telepsychiatry training and improve digital literacy in the psychiatry workforce. Additionally, this article highlights the challenges to scaling metaverse-based telepsychiatry to a global scale.

The metaverse, through its employment of virtual reality, can prove to be an enriching resource for psychiatry trainees in terms of education, consultation, diagnosis, and treatment.[14] The use of simulations to portray common psychiatric problems not only increases exposure but also enhances physicians' confidence, assessment and ability to deal with a variety of presentations as well as other professionals.[15] This learning modality can help psychiatrists understand their patients better by eliciting greater emotional awareness and empathy as it can provide insight into the other's perspective.[16,17] A better grasp on individuals' reception of their approach can help highlight aspects of practice that need to be improved, making the training experience more robust. For newcomers, tutorials can be conducted in the metaverse with the aim of introducing more psychiatrists to the potential of telepsychiatry. These tutorials can include segments by experts in public speaking and leading technical teams who can address frequently encountered challenges to online consultation such as communication and technological anxiety.[18] Conferences hosted by psychiatrists with successful experience with these technologies can illustrate the best practices pertaining to consultations. Experts in the field can use the platform to debunk myths such as the perception that telepsychiatry and its outcomes are inferior to or less reliable than in-person psychiatric consultations.[19]

The metaverse can also serve as a meeting hub for the many bodies governing telepsychiatry practices in different parts of the world, allowing them to learn from each other's frameworks and potentially devise an effective and uniform set of regulations to bolster the quality of services provided to patients, even in low-income or middle-income countries.[20] Moreover, the diverse network of psychiatrists formed as a result of activities in the metaverse can be harnessed to identify obstacles in establishing the necessary digital infrastructure required for this field of work in low-income countries which may have high burdens of psychiatric illness, prevalent stigma against seeking mental healthcare, and limited accessibility of in-person healthcare services.[21,22] This can also make metaverse a valuable framework and tool for the training of professionals in such countries.

Many limitations exist in applying the metaverse to the telepsychiatry training curricula. The concept of VR in healthcare settings has been examined in many acceptance studies using theoretical frameworks such as the Technology Acceptance Model which looks at the perceived usefulness of the software at a user level.[23] Studies have shown two main reasons for the exclusion of VR use in healthcare settings: time constraints and the overcomplicated nature of this technology.[24] Apart from the nature of the software, users' willingness to incorporate this tool is an additional, important barrier in healthcare settings. The majority of current patient visits, especially in psychiatry, are still conducted via direct face-to-face interactions. Another significant barrier is the financial aspect, as hardware to use this technology is expensive. As an example, an average Oculus Quest 2 headset costs from $300 to $600. Ensuring data privacy continues to be an additional major deterrent the adoption of technology. On par with the surge of digital health services during the COVID-19 pandemic, the healthcare sector has been one of the most vulnerable to cyber attacks.[25] Furthermore, the metaverse is an evolving model of care delivery and does not fully represent the real-world environment for training purposes. The impact of this approach on training psychiatrists is not well-studied compared to in-person education.

Conclusion

In conclusion, there is a widespread need for accessible training interventions in resource-limited settings, as well as for enhancing the current model of telepsychiatry practices worldwide. The potential applications of the metaverse in enhancing telepsychiatry training and digital literacy among psychiatrists continue to be an evolving paradigm of innovation in healthcare. Further research, policies, funding, and equitable implementation of metaverse-based psychiatric training are warranted to address the challenges of the psychiatry workforce and alleviate the global mental health burden.

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