S Afr Gen Pract. 2024;5(4):152-154
https://doi.org/10.36303/SAGP.1207

S Afr Gen Pract
ISSN 2706-9613 EISSN 2706-9621

EDITORIAL

I see you: AVATAR therapy for auditory hallucinations

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A recent *Nature Medicine* article[1] delves into AVATAR therapy, a relatively novel concept that inspired a deeper investigation into avatars, their origins, evolving meanings, and therapeutic applications. This exploration reveals how the concept of an avatar has transformed from its historical and cultural roots to its contemporary use as a therapeutic tool and symbolic representation. Currently, the meaning of avatar is an embodiment of something else.[2] The term is derived from *avatara* which signified a divine descent into physical form, as seen in ancient Hinduism. When gods appeared in our world as human sages for instance, that human served as their avatar. Avatars thus represented the earthly incarnation of a powerful deity or spirit. The term later expanded to mean any manifestation in human form and, more broadly, any embodiment of an idea or philosophy, regardless of whether or not it took a human shape. Rapid advances in computer technology have facilitated the widespread use of these virtual characters. The digital entities, often with human-like features, but not necessarily, are operated either by people or through software programs.[3] Thus, an avatar may refer to the digital image or character that a person selects to represent themselves in an electronic setting.

This technological concept of avatars representing individuals in virtual spaces found vivid expression in James Cameron's 2009 science fiction film, *Avatar*, where humans remotely control tall, blue-skinned avatars to explore Pandora, a wonderfully lush alien moon. The avatars allow humans to connect with the 10-foot tall Na'vi people, the planet's indigenous inhabitants, and the story explores themes of identity, environmental preservation, and empathy across different species.[4] The most famous quote from this epic is likely, "I see you". This line, used by the Na'vi people as their greeting, signifies deep understanding, respect, and recognition of another's true self. It captures the central themes of connection, and seeing beyond the surface, resonating beautifully with audiences as an expression of unity and acceptance. The concept of avatars in real-world therapy may be equally transformative. In mental health, AVATAR therapy uses virtual reality to create a therapeutic bridge between patients and their inner experiences, offering a sophisticated platform for embracing their psychosis and reducing the distress caused by their auditory hallucinations.

Traditionally, voices in psychosis are internal, unseen forces that may feel insurmountable. One of the most compelling aspects is AVATAR's therapy's capacity to alter the patient's perception of their own mind. "I see you" resonates deeply with the principles of this therapy, where the act of seeing or acknowledging one's hallucinated voices in a structured, controlled environment is considered central to healing.[5] In AVATAR therapy, creating an avatar of the distressing voice allows patients to face, understand, and see these internal figures in a new way. This engagement may transform the relationship with their voices from one of fear or subjugation to one of empowerment and clarity.[6] Much like the Na'vi greeting, AVATAR therapy may promote a sense of empathy and connection, not with another species, but with a part of the self that has been causing distress. By bringing the hallucinated voice into the open through an avatar, patients can address it directly, recognise its influence, and ultimately reclaim control. Thus, "I see you" becomes a metaphor for the journey from fear to understanding, helping patients feel truly seen in the therapeutic process.

University College London's Prof Julian Leff, (1938–2021), a world leader in schizophrenia care, became intrigued by the notion that engaging in dialogue with persecutory auditory hallucinations, could help psychotic patients. This concept came to life when he and his team (2014) developed AVATAR therapy, using a computer program that enabled patients to design an avatar representing the entity they perceived as persecuting them.[5] In terms of the process, creating an avatar began with the patient's input, allowing them to define the appearance and voice of their hallucination as accurately as possible. In this highly personalised process, patients worked with therapists to choose features such as facial expressions, vocal tone, and even the specific phrases that the avatar might use. By digitally embodying the distressing voice, this avatar mirrored the characteristics of the patient's worst nightmare, bringing the hallucination into a controlled virtual space where the patient could engage directly with it. Thus, AVATAR therapy met patients within their reality, building a therapeutic alliance of empathy and understanding.[5] Once the avatar was created, therapy sessions involved structured dialogues between the patient and this virtual representation, facilitated by the therapist. The therapist could speak through the avatar using technology that modulated their voice to match the patient's perception of the hallucination. Through six 30-minute sessions, patients engaged in guided dialogues with the avatar, which the therapist adjusted to gradually transform it from hostile to supportive. A randomised crossover trial with

immediate and delayed therapy groups showed significant reductions in the voices' frequency, intensity, and perceived power. Some participants experienced complete cessation of voices. The findings of this pilot study suggested psychological mechanisms and origins for persecutory voices warranting further exploration.[5]

AVATAR therapy has been the focus of several studies since its inception. A notable randomised controlled trial by researchers from King's College London in 2017[7] demonstrated its effectiveness in reducing distress caused by persistent auditory verbal hallucinations compared to standard counselling in 150 patients with schizophrenia spectrum or affective disorder with psychotic symptoms. Published in *The Lancet Psychiatry* in 2018, it demonstrated that AVATAR therapy significantly reduced the severity of auditory hallucinations compared to supportive counselling after 12 weeks. However, the differences between the two therapies diminished by 24 weeks, as both showed sustained improvements in distress and appraisal of voices over time. This study was pivotal in establishing the therapeutic potential of AVATAR therapy for psychosis and auditory hallucinations.

More recently, the AVATAR2 study, completed in 2024, involved 345 participants across multiple National Health Service (NHS) sites in the UK.[1] This randomised study tested both brief (6 sessions) and extended (12 sessions) versions of the therapy, combined with standard treatment against standard treatment alone, confirming its efficacy in alleviating symptoms and distress associated with hearing voices.[1] The *Nature Medicine* article describes the phase 2/3 trial results at 16 and 28 weeks. Findings show that both treatments significantly reduced voice-related distress and severity at 16 weeks. Additionally, the extended 12-week iteration showed sustained reductions in voice frequency across both time points. Secondary outcomes, including improvements in well-being, recovery, and reductions in anxiety and depression, were more pronounced in the 12-week group, suggesting that this duration is the preferred protocol due to its clinically significant results. No serious adverse events were directly attributed to the therapy. This study underscores AVATAR therapy's potential as a beneficial, technology-driven intervention for managing auditory hallucinations in psychosis.[1]

As Franco et al. (2021) highlight, although virtual reality is widely accessible in recreational contexts, therapeutic applications in clinical settings have been limited.[8] Yet AVATAR therapy may be changing that by becoming feasible in real-world scenarios, making it a potential game-changer in mental healthcare. Studies report that patients not only experience reduced voice-related distress but also feel empowered, as the therapy helps shift the power dynamics between themselves and their hallucinations.[7,9] Currently, a study funded by the Wellcome Trust is underway to adapt and test the feasibility and acceptability of AVATAR therapy in India and Ethiopia. This research aims to culturally tailor the intervention to these regions, assessing its practical implementation and potential impact. The study builds upon the success of AVATAR2, and seeks to develop a scalable global model for deploying this digital mental health treatment. The study will continue until 2027 and includes efforts to integrate Artificial Intelligence for automated dialogues, which could enhance scalability by reducing the need for specialised training for therapists. These trials could provide critical insights into addressing psychosis-related auditory hallucinations in diverse cultural contexts. In addition, the National Institute for Health and Care Excellence (NICE) has recommended this digital health technology for psychosis, bringing it into mainstream medicine in the UK.

In practice, AVATAR therapy's potential extends beyond psychosis. It could be adapted for use in other chronic mental health conditions where confronting internalised fears or voices is beneficial. In fact, its use in child and adolescent mental health services demonstrates its adaptability, with preliminary case studies suggesting that virtual reality avatars could facilitate deeper engagement in young patients.[10] This adaptability is desirable, as mental health services strive to find solutions that address the individual complexities of each patient. Yet, challenges remain. Virtual reality equipment requirements, therapy room setups, and limited training for therapists pose logistical hurdles that hinder widespread adoption, especially in under-resourced health systems.[11] Nevertheless, the growing body of positive evidence, including large-scale trials like AVATAR2, emphasises that the benefits of reduced distress, improved mental well-being, and enhanced patient autonomy may outweigh these barriers. Furthermore, future innovations—such as integrating Artificial Intelligence for between-session support—could further enhance the therapy's accessibility and efficacy.

As mental healthcare increasingly embraces digital innovation, avatar therapy has potential to close the gap between clinical need and technological capabilities. This therapy may not only offer relief to those suffering from persistent hallucinations but also represents a seismic shift in how we approach mental healthcare—one that is person-centred, yet technologically savvy. As more studies continue to explore its impact, AVATAR therapy could be positioned to become a staple in the modern therapeutic landscape, marking a hopeful step forward for individuals living with psychosis and other chronic mental health challenges.

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