BRIEF REPORT

Altered States of Consciousness: Evaluation of a voice-hearing simulation during an immersive art exhibition

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Aim: To improve public understanding of the subjective experience of auditory hallucinations and increase empathy towards individuals who hear voices and have other unusual sensory experiences.

Methods: This pilot study developed a new immersive art exhibition, Altered States of Consciousness, which gave members of the public an individualized voice-hearing simulation experience in 2 real-world settings—an art gallery and the London Underground. A total of 150 visitors completed visual analogue scales immediately before and after their experience of the exhibition.

Results: Post-exhibition, there were significant increases in understanding what it feels like to hear voices, compassion towards voice hearers, and comfort in talking about these experiences. Participants enjoyed the simulation, felt they learned from their involvement, and did not find it stressful.

Conclusions: The exhibition and voice-hearing simulation has further potential for public engagement and stigma reduction.

KEYWORDS
art exhibition, auditory hallucinations, mental health stigma, psychosis, simulation

INTRODUCTION

Auditory hallucinations are associated with psychotic disorders but studies show that voice hearing is common in people without psychiatric diagnoses. A cross-national analysis of over 30,000 people found 1 in 20 adults report “psychotic-like” experiences, such as hearing voices (McGrath et al., 2015) while, in children, a larger proportion have such subclinical experiences (Fisher et al., 2013; Garvalda, 2016). Data from mental health campaigns in England reveal that psychosis is challenging to destigmatize (Evans-Lacko, Corker, Williams, Henderson, & Thornicroft, 2014) and stigma is associated with poor outcomes for individuals with psychosis (Gronholm, Thornicroft, Laurens, & Evans-Lacko, 2017). However, a recent systematic review of definitions and assessments revealed psychotic experiences to be variously defined (Lee et al., 2016), and a recent British Psychological Society report aimed to normalize otherwise pathologized experiences such as voice hearing by highlighting a continuum of culturally varied ways that people interpret human experiences (Cooke, 2014).

Voice-hearing simulations demonstrate promising treatment applications for people with distressing auditory hallucinations and experiential training tools for non-voice hearing clinicians (Ando, Clement, Barley, & Thornicroft, 2011; Leff, Williams, Huckvale, Arbuthnot, & Leff, 2013; Orr, Kellehear, Armari, Pearson, & Holmes, 2013). Such specialist clinical applications tend to focus on distressing voice hearing and employ generic or pre-recorded “voices.” Given that the arts have been shown to be an effective way to increase public awareness and reduce stigma about mental health (Camic & Chatterjee, 2013), this study developed an immersive art exhibition, Altered States of Consciousness, which gave members of the public an individualized voice-hearing experience, in order to increase public awareness of voice hearing and other unusual sensory experiences. Our aim was to reduce stigma using a simulation in non-clinical, real-world settings. Our hypothesis was that this would improve public...
understanding of the subjective experience of voice hearing and empathy towards voice hearers.

2 | METHODS

Altered States of Consciousness was developed from an art-science brokerage event as part of the Arts, Health & Wellbeing Programme at King’s College London, UK (see www.alteredstates.io). There were 5 key development stages. First, consultation workshops were conducted with the Voice Collective, part of Mind in Camden, a London-wide project that supports children and young people who hear voices, see visions or have other unusual sensory experiences. In these workshops, Voice Collective members discussed their experiences of voice hearing with the development team. Second, actors were trained to perform "voices" based on voice "characterizations" that were developed collaboratively in the Voice Collective workshops. Third, artworks were sourced for their relevance for raising mental health awareness and reducing stigma. Fourth, a voice-hearing simulation was developed using the iPod audio guides for the exhibition and headphones. Fifth, a video installation of the London Underground was designed to simulate a stressful, paranoia-inducing environment that is over-stimulating yet familiar. This installation was developed in further consultation with the Voice Collective.

Participants comprised a convenience sample of invitees from King’s College London, local artists and respondents to advertisements in South-East London. At an initial briefing, participants were informed that the exhibition would provide visitors with an opportunity to have a perception-altering experience and asked to wear headphones throughout the exhibition. Participants then entered a 3-room art gallery, which included portraits (Figure 1), sculpture, and the immersive, visually distorting video installation of the London Underground. Participants were guided through the exhibition in groups of up to 10 people. An audio guide described the artworks but audio was repeatedly overlaid by "voices" performed live by professional actors. The actors performed the voice "characterizations" developed in the Voice Collective workshops and aimed to reflect the range of voice-hearing experiences, from positive to negative, through live enactment to participants via the audio guide head phones. Participants (N = 150) were assigned a unique, colour-coded audio guide and their physical description was covertly noted during the briefing and relayed to the actors. Actors could therefore tailor "voices" to participants who they viewed through gallery cameras from a concealed adjacent room.

Participants self-reported their demographic characteristics, and completed pre-/post-exhibition measures of their mood and attitudes towards voice-hearing and unusual experiences. Participants were asked if they, or anyone they know, experience voices, visions or other unusual sensory experiences; 100-point visual analogue scales (VASs), similar to those used previously in immersive simulation research (Freeman et al., 2008; Valmaggia et al., 2007), measured current happiness and stress, participants’ understanding of what it feels like to hear voices, how compassionate they felt towards people who hear voices or see visions, and how comfortable they would be talking to a friend, colleague or family member about their experience of voices or visions. VAS questions were adapted from the Attitudes to Mental Illness survey (http://content.digital.nhs.uk/pubs/attitudestomo11). Post-exhibition, participants completed VAS, measuring how much they felt their attitude towards people with unusual sensory experiences had changed as a result of the exhibition; how real they found the unusual sensory experiences; and how much they enjoyed and learned from the exhibition. Text boxes were provided for participants to give qualitative feedback to a series of open-ended questions. The full questionnaires are provided in Appendix S1. After the exhibition, participants received a small group debriefing to discuss their experiences with psychologists and researchers. Analyses were conducted using SPSS, v22 (Chicago, Illinois) and thematic analysis was used to extract the major themes arising from the qualitative data.

3 | RESULTS

A total of 107 (72.3%) participants were female; 112 (75.2%) were 35 or under; 132 (88.6%) were of white British or white other ethnicity; 119 (80.4%) were employed, 24 (16.2%) were students and 5 (3.4%) were retired. A total of 63 participants (43.2%) had experienced voices, visions or unusual sensory experiences, or knew someone that had (37.0% had not; 19.9% were unsure). Table 1 provides an overview of the pre-/post-exhibition measures. Post-exhibition, there were significant increases in understanding what it feels like to hear voices (large effect), compassion towards people who hear voices (medium effect) and comfort talking to people who hear voices (small effect).

Participants’ qualitative feedback reported “how disruptive the experience of hearing voices can be” (#7) and that voice hearing can be “intrusive and distracting” (#17), “frustrating and debilitating” (#11), and “lead to feelings of anxiety and paranoia” (#23) and the sense that “these experiences can’t always be rationalized” (#115). This experience “helped [them] to be more understanding” (#22) and led to “greater understanding…and compassion” (#31). Participants could be “surprised about how compelling [they] found the voice” (#37), and wrestled with obeying or defying voices: some “noticed [themselves] fighting the voice more and more as [they] went along” (#91), while another
participated commented “even when actively trying to disobey my voice, I found myself feeling more paranoid of those around me” (#122). Some participants observed that it can be “very difficult to separate yourself from a voice” (#54) and noted how voices could “affect the physical body” (#44), making some feel “wobbly” (#41). Others highlighted the “diversity of voices” (#121) by commenting that “there are different levels of severity in hearing voices” (#86), “that voices in your head aren’t necessarily intense or crazy” (#87), “are not necessarily a voice of ‘evil’” (#114) and “could be a positive one and something [one] could relate to” (#53) or “humorous” (#117).

Current happiness decreased (small effect) while change in stress was not significant (Table 1). Post-exhibition, mean (SD) attitude change (76.01 [15.61]), how real the voices seemed (60.26 [18.81]), enjoyment (79.08 [15.97]) and amount learned (71.08 [16.81]) all indicated positive evaluation. Participants reported that they felt “more informed... and would like to know more” (#43) and that the exhibition gave them a “clearer idea of the kinds of things someone might hear and how it could impact on day-to-day experience” (#130). Others commented that “it has made me realize that it is not as ‘nonhuman’ and ‘not normal’ as it is generally thought of” (#48), and “I have even more compassion towards these individuals and it will give me a new insight into friends who experience voices” (#94).

4 | DISCUSSION

The aim of this study was to improve public understanding of the subjective experience of voice hearing and empathy towards voice hearers. The results demonstrate the acceptability of the simulation and indicate positive changes in public attitudes towards auditory hallucinations. Our hypothesis that understanding of the subjective experience of voice hearing and empathy would increase was supported. A key strength of the study is that participants deemed the voice-hearing simulation acceptable: stress did not increase, while happiness reduction was small and remained high overall. Importantly, participants enjoyed and felt they learned from the experience, suggesting the exhibition has further potential for public engagement, education and stigma reduction. Limitations include lack of follow-up measuring longer-term effects, lack of a comparison group, utilization of brief untested scales and the unrepresentativeness of the sample: participants were disproportionately white, female and under 35; and, due to convenience sampling, may disproportionately work in the arts or mental health, which may indicate predisposition to higher baseline empathy. Moreover, due to space constraints, we were unable to provide here full details of the theoretical rationale or broader critical evaluation of the exhibition; an unpublished comprehensive report is available from the authors on request.

Future research may seek to improve immersion, in terms of how “real” participants perceive “voices,” given that highly immersive simulations appear to increase empathy in the related field of virtual reality, with novel interventions developed for experiential understanding of dementia (www.awalkthroughdementia.org), humanitarian crises (https://with.in/watch/clouds-over-sidra) and environmental issues (Ahn et al., 2016). The implications for understanding and empathy demonstrated in this study also suggest Altered States of Consciousness could have important training applications for clinicians, similar to virtual and augmented reality medical simulations (Barsom, Graafland, & Schijven, 2016).

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REFERENCES


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