Virtual Reality in Art Therapy

Abstract

Literature Review

Virtual reality (VR) refers to interactions between humans and computer-generated simulations of three-dimensional images or environments using specialized sensors and visual tools and processes (Lanier, 2017). VR has been used predominantly to create engaged human interaction in simulated environments. Applications using VR for commercial computer gaming, education and training in the military, and the fine arts have been available since the 1980s (Schroeder, 1993). Prominent areas of VR in mental health have been exposure therapy, pain distraction, and assessment (Rizzo, 2015). Virtual reality exposure therapies have been found to effectively address acrophobia or fear of heights (Emmelkamp et al., 2002), animal phobias (Morina, Ijntema, Meyerbroker, & Emmelkamp, 2015), symptoms of post-traumatic stress disorder (Botella, Serrano, Baños, & Garcia-Palacios, 2015; Rizzo, Hartholt, Grimani, Leeds, & Liewer, 2014) and paranoid delusions (Freeman et al., 2016). Additionally, VR games are being used to help individuals with empathy and therapeutic skill-building (Law, 2015).

To date, only a few practitioners of VR in art therapy are known to the authors (Hacmun, Regev & Salomon, 2018; Lohrius, 2017) and they highlight that VR has the potential to help participants “see” and experience a new media that challenges the traditional laws of the physical world and materials. VR has the potential to help patients with sensory, cognitive, and motor-related disabilities who are unable to use traditional art media in therapeutic ways or who need alternative options for creative self-expression (Carlton, 2016; Choe, 2016; Ehinger, 2016; Hacmun et al, 2018; L’Esperance, 2016).

Methods
In this presentation, we will present findings from two studies focusing on virtual reality artmaking tools as well as their relevance to art therapy practice and research. The first study, a pilot qualitative study of healthy adult participants (n=17, ages 18-65), utilized tools including an HTC VR VIVE headset and remotes, and Tilt Brush by Google, a digital painting tool to create three-dimensional images in VR. This pilot study included an interdisciplinary team of art therapists, students, counselors, and an engineer familiar with virtual reality technology; highlighting the need for creative arts therapists to work with engineers and technology experts to achieve effective use of the technology.

The second study, an arts-based heuristic inquiry, investigates embodied experiences of virtual painting within CyberPaint (Crispin, 2017). Methods of art-based research (McNiff, 2011; Chilton, Gerber, & Scotti, 2015) and heuristic inquiry (Moustakas, 2014), and their roles in deepening understanding of virtual artmaking for art therapy practice, will be highlighted.

Findings and Implications

Findings from the pilot qualitative study indicate that virtual artmaking in Tilt Brush can help reduce inhibitions, activate full body movements, and enhance mood and creative play exploration among participants. Qualitative analysis of the data indicates that creating in a virtual environment mirrored the developmental aspects of learning a new art media, encouraged kinesthetically led embodied expression, while also challenging participants perceptions of art and art media. Most participants reported enjoying the experience especially the novelty of the environment and the opportunity to experience an imagined space without constraints of the physical world (e.g., moving through objects and creations).

The unique characteristics of VR have the potential to encourage participants to experience and rehearse scenarios in a safe environment with the help of a facilitating therapist. Findings
from the arts-based heuristic inquiry identify embodied qualities of artmaking in VR (*immersion, kinesthetic engagement, aesthetic experience, affective response, physiological side effects, and a lack of tangibility of virtual media*). Intersections between virtual and tangible art media, and their implications for art therapy, will be discussed. Both studies identify the need for further research to understand the outcomes of VR for short-term and long-term health and well-being.

**References**


