Chapter 25

Virtual Reality as a Tool for Mental Health and Conscious Living and Death:

Immersive Contemplative Approaches to Existential Anxieties

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ABSTRACT

In this chapter, the authors look at the possibilities of impact of VR in the mental health and wellness area through the lens of contemplative practices and immersive experiences. The area of existential anxieties is often stigmatized or difficult to address directly. Death is the most transformative journey possible but may not be viewed this way. Immersive experiences designed to encourage and allow for non-dual experiences can support this transition. They are difficult to design since non-dual experiences by their very nature are both deeply personal and yet totally impersonal at the same time. Yet, the authors examine how existential anxieties are the perfect framework for a non-dual experience. The wellness app StarflightVR serves as an explorative tool. We mention a past study in this area, which revealed that it is possible to mitigate depression by addressing anxiety on a daily basis through this immersive contemplative VR experience. The authors build on this study with existential fear mitigation examined through an online workshop experience and StarflightVR.

INTRODUCTION

In this chapter, we first focus on Virtual Reality (VR), and its positive impacts on mental health. It has been shown to have therapeutic benefits, offering a bridge between transpersonal psychology and the latest technology (Carvalho, Freire, & Nardi, 2010; Chirico et al., 2016; Cukor, Spitalnick, Difede, Rizzo, & Rothbaum, 2009; Diers et al., 2015; Freeman et al., 2014; Glantz, Rizzo, & Graap, 2003). VR has been

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shown to improve quality of life (Anderson, Rothbaum, & Hodges, 2001), reduce post-traumatic stress disorder (PTSD) (Cukor et al., 2015), and to be effective as a tool in psychotherapy (Rizzo, 2010). The use of VR to work with anxiety disorders is ideal because of its immersive quality. Immersion can be defined by the ability to get into a different point of view. It has also been defined as taking on another story: "A Zen-like state where your hands just seem to know what to do, and your mind just seems to carry on with the story" (Brown & Cairns, 2004).

Immersion is especially promising if mixed with testing physiological mechanisms of the anxiety response as well. Physiological measures such as heart rate, brain waves changes, respiration rate, and skin conductance in response to a virtual environment can be easily and objectively measured. This in turn contributes to an objective assessment of anxiety and depression (Wilhelm & Roth, 2001).

VR may well prove to be a major mental health tool in the future. Immersive virtual environment technology has already been used in therapy for phobias (Côté & Bouchard, 2008; Wiederhold et al., 2002), stress (Bouchard, Baus, Bernier, & McCreary, 2010, Riva et al., 2006; Villani, Preziosa, & Riva, 2006), anxiety (Harris, Kemmerling, & North, 2002; Repetto & Riva, 2011), exercising (Bryanton et al., 2006), and memory problems (Brooks & Rose, 2003; Klinger, Chemin, Lebreton, & Marié, 2006). Additionally, the effects of VR on anxiety symptoms has been examined. In their study, Gorini et al. (2010) concluded that VR for relaxation represents a promising approach in the treatment of general anxiety disorder (GAD). This is because VR enhances the quality of the relaxation experience through the elicitation of the sense of presence generated within the immersive experiences. Slater et al. (1994) define presence as a psychological sense of being in a virtual environment. This sense of presence is that which supports the quality of the relaxation. These types of studies underline the fact that clinical cases such as GAD can also benefit from the VR treatments.

Over the past few decades, VR has been used successfully in a myriad of psychotherapeutic applications. For example, VR has a long history of use for the treatment of PTSD within exposure therapy (Cukor et al., 2015) which reintroduces the patient to the traumatizing event. VR-based therapies allow the clinician to present compelling and controllable scenarios which can be immediately stopped or deescalated if patients become too anxious during treatment (Kwon, et al., 2009).

VR is also useful for habit training within behavioral therapy. Iribarren, Prolo, Neagos, and Chiappelli (2005) listed the following evidenced-based psychotherapeutic methods for treatment of PTSD: Cognitive-behavioral psychotherapies (i.e., systematic desensitization, relaxation training, biofeedback, cognitive processing therapy, stress inoculation training, assertiveness training, exposure therapy, combined stress inoculation training and exposure therapy, combined exposure therapy and relaxation training, and cognitive therapy), psychological debriefing, pharmacotherapy, and eye movement desensitization reprocessing therapy (EMDR). According to Iribarren et al., evidence-based practice (EBP) is a clinical approach requiring that decisions about health care be based on the best available, current, valid, and relevant evidence. These practices are a conglomeration of the best available resources in clinical treatment (Dawes et al., 2005).

Conversely, VR is also useful in the mental health arena due to its ability to generate a relaxing experience that stimulates the senses while it integrates with the polyvagal system (Porges, 1995, 2009). Porges is vastly cited in this field for his polyvagal theory. The polyvagal theory proposes that the evolution of the mammalian autonomic nervous system provides the neurophysiological substrates for adaptive behavioral strategies. It further proposes that physiological state limits the range of behavior and psychological experience. This vagal integration therefore, can help to provide a deep sense of relaxation and give patients the ability to build vagal muscle. This in turn facilitates autonomous stress

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