Virtual Reality Dances About Adolescent Bipolar Disorder: Accommodating Patient and Audience Concerns

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Abstract

Adolescent bipolar disorder (ABPD) is a stigmatized condition [1] benefitting from early intervention [5]. Increased education and understanding of the condition could help with patients getting the treatment and support they need [6]. One possible way to communicate this experience to non-patients is through the use of dance movement and virtual reality (VR). This position paper includes an overview for a prototypical dance VR pathography based on phenomenological studies and future developments. Potential issues in deploying the prototype include the cost of equipment requirements and audience reach. Furthermore, there are concerns regarding protecting patient privacy and overwhelming viewers through an immersive experience.

Author Keywords

Medical humanities; phenomenology; pathography; somatic dance; empathy

ACM Classification Keywords

Virtual reality; media arts; performing arts; patient privacy; psychology

Introduction

Adolescent bipolar disorder (ABPD) is a mood disorder that was previously thought to only occur in adults [7]. Longitudinal studies since the early 1990s confirm that this is not the case and that early intervention is beneficial [5]. In order for treatment to be fully effective, however, a patient also needs empathy and support from family, friends, and other key individuals (e.g. caregivers, educators) [6].

The author is currently investigating the use of dance to create pathographies for a virtual reality (VR) environment using data from phenomenological studies of ABPD as well as patient anecdotes. The purpose of this pathography is to help patients communicate their experiences to non-patients by showing physical feelings that anyone might experience. Empathy for the patient would ideally be generated by re-framing experiences that are normally seen as exclusively felt by a select population into something that is relevant for most.

Background

For the purposes of this research, the term 'phenomenology' refers specifically to the research methods used by medical researchers (e.g. scientists and medical practitioners) and medical humanists (e.g. writers, philosophers and artists) to describe the experiences of having a particular illness. The related term "auto/pathography" as defined by Hawkins [8] refers to patient narratives about experiencing illness. Similar to the word "biography," a pathography is generally created by someone observing the patient's experience and an autopathography is created by the patient about

their own experience.   The original definition of pathography, seen in Dunglison's 1853 *Medical Lexicon,* included a description of disease and a specific reference to writers or artists and creative work [1].

In 2005, the author choreographed a dance solo, *Empty Shell Over Borrowed Time*, about coming to terms with initial diagnosis of ABPD. This piece was followed by seven more dance pathographies created from 2006 -2015. Each work was based on the emotions and experiences of an actual patient but not necessarily performed by said patient. Over time, the author realized that each dance was actually a pathography.

Some of the works were accidental pathographies and others were purposely designed as such. Written audience feedback in 2010 and informal verbal feedback in 2015 showed that there was concern about revealing one's self as a patient by attending a performance, assumptions by the audience that the topic was not relevant to their personal situation, and preconceptions about what being bipolar should look like. This raised the question of whether the viewing experience should become a more private one with the narrative showing more facets of the illness.

The author then revisited the choreographic process decided to use data from phenomenological studies of ABPD to create a more structured and abstract narrative. The following symptoms were selected from various reports [2, 4, 9]: irritability, racing thoughts, anger/aggressiveness, and elated mood. The symptoms were selected for their suitability to be expressed through physical movement. This data was supplemented by anecdotes from reports by Carlson [3] and Craney [4]. VR was chosen as the performance environment in order to address viewer privacy concerns and so as to create a more immersive experience.

VR Prototype
In Spring 2018, the author produced a dance VR pathography prototype using the five identified symptoms. It is the first of three sections based on over 10 years worth of choreographic experiments. The prototype features five 3D stick figure animations using motion capture data. During the rest of 2018, the author will engage in user testing to collect feedback for refining the prototype.
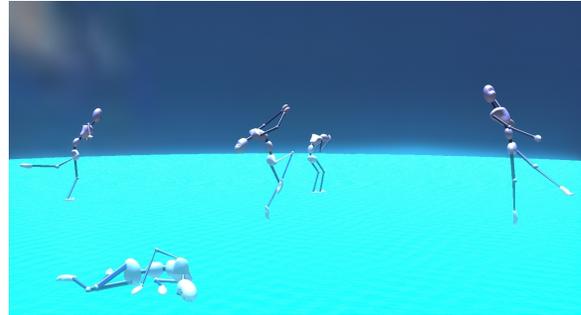

Figure 1 Mock-up of the prototype

Deployment Challenges
The most immediate challenge for deployment is that the pathography requires a full VR headgear set up in order for viewers to interact with it properly.   Second, finding the right audience requires effective networking but mental health or other relevant organizations may not always be willing to collaborate due to patient privacy or lack of resources.

Maintaining control over the deployment is also essential due to social stigma. Internet trolling, social media misinterpretation and mass media distortion are but a few concerns should the prototype attract attention. In some ways, it is more manageable than remaining in obscurity.

Patient Privacy Concerns
The greatest concern amidst all the challenges, however, is still patient privacy. From the audience perspective, there may be fear about "outing" one's self as a bipolar patient or related to a patient. From the choreographic side, collecting and using anecdotes is essentially collecting patient data that is subject to certain laws depending on location.

Conclusion
Although the primary purpose of creating the prototype is to encourage empathy and understanding of ABPD, sharing the experience of patients is a sensitive matter due to stigma. Improper distribution could also lead to further misunderstandings if placed in the wrong context. One example would be where a viewer develops apathy for an ABPD patient due to being overwhelmed by an immersive experience. A potential consequence would be that the viewer might think that a patient has no hope of getting better or that it is best to not get involved.

For the general public, VR is generally presented as a tool for simulations or an entertainment vehicle. The reality for creators, however, is that VR is just like any other medium in that it can affect how viewers perceive a sensitive concept, environment, or other type of experience. The outcome may be positive, negative or neutral, but regardless of that outcome, this impact needs to be taken into account by creators working in VR.

Acknowledgements

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