

Chapter 55

Choices in Gamification of Therapy for PTSD

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ABSTRACT

Effective treatments for Post Traumatic Stress Disorder (PTSD) already exist in the form of cognitive processing therapy (CPT) and prolonged exposure therapy (PE). However, common symptoms of PTSD, like depression and avoidance, make finding and engaging patients in these treatments difficult. We have designed SAGA, an online game to help veterans suffering from PTSD. SAGA works to illustrate and educate players about effective therapy so they can successfully engage in evidence-based treatment. SAGA allows players to create and repeatedly edit stories to illustrate how exposure therapy works. This chapter presents the game design choices made to motivate and engage players with PTSD and reports the results of a small pilot study. We also present the design of our upcoming clinical trial, which will determine SAGA's effectiveness in changing attitudes toward evidence based PTSD therapy.

INTRODUCTION

While effective treatments for PTSD already exist, Campbell et al. (2007) report that common PTSD complications such as substance abuse, anger, and depression, in addition to mundane barriers such as finding daycare, distance, missing work, and monetary costs, complicate individual patients' ability to effectively engage in treatment. To help combat these challenges, we developed SAGA: Sequential Art via Game Assist, in conjunction with clinical psychologists, as an online game with the goal to provide education about PTSD, illustrate therapy approaches and attempt to improve players' attitudes toward evidence-based therapy, specifically Prolonged Exposure (PE) therapy (Powers, Halpern, Ferenschak, Gillihan, & Foa 2010).

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SAGA is not an alternate treatment approach. Rather, SAGA attempts to educate players and encourages them to engage in evidence-based treatment with a therapist. By using an online game, we hope to provide an avenue for people who avoid evidence-based therapy. An online game can reach a large audience for low cost, and provides an easy first step for patients as compared to attending an in-person treatment session. An engaging game can also mitigate some of the factors that prevent patients from effectively completing treatment, since even those who start treatment often receive less than the desired amount of evidence-based treatment (Seal et al., 2010; Shiner et al., 2013).

As an online game, SAGA represents a unique tool that can reach patients avoiding traditional treatment. For example, Rizzo et al. (2009) found many Veterans would prefer a technology-based treatment rather than evidence-based therapy; in fact, they avoided the stigma associated with mental health treatment by referring to treatment as “VR” rather than treatment.

Online games scale to support millions of players. If the educational and attitude adjustment capabilities of SAGA show promise in the clinical trial, the game can provide benefits to a large population at a reduced cost. SAGA leads players through a series of exercises that illustrate effective therapy and motivates them to engage with a therapist. SAGA exercises illustrate PE therapy (Foa, Hembree, & Rothbaum, 2007), asking players to repeatedly write and draw a comic of a traumatic event.

In order to create software that can be used by a broad user base, we choose to limit SAGA’s game features to the basic capabilities of most Internet browsers. It was important that we did not require special drawing hardware or software that could prevent some from playing. Removing sophisticated hardware and software has the benefit of simplifying the game interface, but at the cost of lowering the quality of art the players can produce. However, our goal was not to produce high quality art, but to engage players in the memories the art represents. Unlike art therapy (Malchiodi, 2012), SAGA concentrates on the repeated editing or recreating of an image to provide exposure therapy.

This chapter discusses the specific game mechanics designed to overcome the motivational problems that PTSD represents, such as how to prevent writer’s block and how to let players control the intensity of their experience. We also report some early results from our completed pilot study and present our plan for the upcoming clinical trial that will assess the effectiveness of SAGA in clinical settings.

BACKGROUND AND RELATED WORK

Using the definitions from Barak et al. (2009), SAGA falls into a web-based intervention that incorporates web-based education and self-guided web-based therapeutic interventions. While SAGA provides exposure exercises, it strives to keep players’ anxiety level low to illustrate the concept of exposure exercises rather than to provide therapeutic benefit. SAGA also attempts to function as a gateway to a person receiving in-person help, an approach described by Barak and Grohol (2011).

Lange et al. (2003) provided a treatment for PTSD over the Internet in the form of structured writing assignments using a form of exposure therapy. They saw significantly larger reductions of PTSD symptoms in the treatment group. However, 44 people out of the 122 in the treatment group did not complete the treatment. In post-study surveys, 29.5% of those who dropped out reported that writing about their stressful events was too much of a burden (Lange et al., 2003). We hypothesize that the game nature of SAGA, combined with the option to start with low intensity memory engagement, will reduce the drop out rate experienced in other studies.

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