

Chapter 13

Using Serious Games for Mental Health Education

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ABSTRACT

A significant number of research and experimentation efforts are currently underway to identify the effective ways of leveraging advanced gaming technologies towards the development of innovative training and education solutions for the mental health domain. This chapter identifies mental health training and education needs of modern “at risk” populations and discusses the potential of serious games as instructional interventions for addressing those needs. Special attention is paid to the importance of prevention training and ways to facilitate prevention by using serious games. Within the chapter, the authors cite a number of specific mental health-related serious game efforts and discuss design considerations for effective serious games.

INTRODUCTION

Using games within a medical domain has been a subject of a continuous debate during the last decade due to a rather fragmented nature of systematic research in this area as well a diverse spectrum of community perspectives on the effectiveness and potential implications of serious games applied for health education and training. Considering that medical community primarily relies on tradition

within its training and education methods, the medical domain has been one of the toughest areas for serious games to break into. However, new learning paradigms and modern gaming technology options continue to foster innovation within the education and training industry, and now we can observe games and immersive learning simulations being applied to a wide variety of medical training and education needs, ranging from medical equipment operations to mental health training. The latter one remains of a particular interest to researchers due to the significantly increasing demand for mental

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healthcare services in the U.S., specifically being attributable to high military deployment rates to Iraq and Afghanistan during the last few years.

This chapter is focused on discussing the use of serious games for psychological health education, with a particular emphasis on the prevention of mental health issues by way of providing effective game-based learning interventions targeted at the development of appropriate coping skills associated with certain sets of mental health risks. Starting with the review of the modern mental health training and education needs, the chapter will explore the value of prevention and how serious games can facilitate it. Special attention is paid to the design and development considerations of using gaming technology to develop effective immersive learning solutions for the mental health training and education purposes.

MODERN MENTAL HEALTH TRAINING AND EDUCATION NEEDS

The modern mental health training and education needs are very diverse, ranging from addiction-based disorders (e.g. alcoholism, gambling, and substance abuse) to psychological stress disorders, acute and post-traumatic, resulting from military and non-military stress-inducing events, such as combat stress, domestic violence, traumatic loss, sexual assault, economic hardship, etc. Although virtually everyone can be considered at risk of any of the above-mentioned stress inducers, the current composition of “at risk” populations for mental health disorders is largely represented by the military personnel and their families. Research has shown that deployment stressors and exposure to combat result in considerable risks of mental health problems, including Post-Traumatic Stress Disorder (PTSD), major depression, substance abuse, impairment in social functioning and in the ability to work, and the increased use of health care services.

According to a report issued by the Department of Defense Task Force on Mental Health in June 2007, the mental healthcare system of the U.S. armed forces is currently unable to meet the mental health needs of its service members. The task force concluded that military health system lacks the resources and fully trained staff to meet the mental healthcare needs for troops and their families. Social stigma represents the primary barrier to care with the current psychological screening procedures still unable to mitigate the bias against seeking mental health services. Family members have poor access to psychological health training and education due to insufficient availability of relevant training programs and general lack of coordination between military organizations dealing with mental health care of military personnel. Too much emphasis is currently placed on short-term treatment models, while not enough support is being provided for prevention purposes and long-term management of chronic disorders. The key recommendation made by the task force calls the Department of Defense to build a “culture of support for psychological health” by updating research and providing access to effective training and education about mental health to military personnel and their families throughout the entire military life continuum.

The Army Surgeon General’s Mental Health Advisory Team IV (MHAT IV) determined that combat stress, family separation, and multiple deployments have a significant impact on the mental health of the U.S. troops. During a series of structured evaluations, the MHAT IV (2006) concluded that mental health of troops was significantly undermined, with combat exposure and the length of deployment being the greatest influencing factors on mental health status. Troops facing high levels of combat were two to three times more likely to screen positive for anxiety, depression, acute stress, and other mental health problems. The report rules out a common belief that a previous deployment experience ‘inocu-

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