Chapter 7
A Gamification Update to the Taxonomy of Technology and Mental Health

Madeline R. Marks
University of Central Florida, USA

Amanda C. Tan
University of Central Florida, USA

Clint Bowers
University of Central Florida, USA

ABSTRACT

Mental health providers cannot ignore the importance of utilizing technology in this era of the internet of things. This chapter reaffirms the need for mental health providers and software developers to work in concert with each other when developing technology for mental health. The authors also articulate the importance of the patient and the patient's role in connecting technology to the equation. As researchers and practitioners, the goal should be to create technology that will encourage repeated and continuous use of said technology and not just technology acceptance in order to move the field forward toward the provision of low-cost, effective mental health services.

INTRODUCTION

Mental health providers cannot ignore the importance of utilizing technology in this era of the "Internet of Things." This chapter reaffirms the need for mental health providers and software developers to work in concert with each other when developing technology for mental health. We also articulate the importance of the patient and the patient's role in connecting technology into the equation.

DOI: 10.4018/978-1-5225-7489-7.ch007

BACKGROUND

The Problem

Marks and Bowers (2014) developed a taxonomy that allowed mental health providers to understand how technology, can benefit patients as well as direct the provider to the proper platform depending on the aspect of the patient's mental health requirements. A taxonomy was developed that included classifications of disorders with specific disorders from the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (*DSM-5*), delivery platform i.e., mobile device, personal computer, and video game console, and the four classifications of mental health services (e.g., Training, Therapy, Assessment, and Prevention). This taxonomy guided developers to focus on building mental health technology (mHealth) that revolve around a particular sector. Further, the taxonomy capitalized on the similarities between providers and developers in achieving the end-goal of repeated and continued use of their respective product (therapeutic services and software). However, the previous taxonomy did not account for the different motivational strategies employed to reach the end-goal; in the design and development of mHealth providers and developers focus on two different factors. Providers focus on delivering evidenced-based treatments driven by underlying mechanisms of action (MOA); whereas, developers focus on delivering usable and entertaining technology. Compounding this disparate approach between providers and developers is the failure to take into account the patient perspective. The present chapter presents a revised taxonomy that represents the integration of MOA, usability and entertainment, engagement to create gamified technology for the purpose of increasing, repeated and continued engagement with the technology, by the end-user. The taxonomy has been revised to reflect the change of including the end-user and integration of gamification. Additional changes have been made to the taxonomy to better represent this new focus. These include changes to the component of Training, which is now called Psychoeducation; Assessment, which has been removed from the taxonomy because the focus of technology for assessment is not for the end-user. All changes have been made in an effort to better synthesize the newly added information afforded by considering the end-user, in pursuit of creating repeated and continuous engagement with mHealth.

To better understand the disparate approaches between providers and developers and how the end-user will be incorporated, an explanation of each motivational target of the triad is warranted.

Provider

The mental health provider's goal is clear: it is to help a patient improve upon a targeted domain that is interfering with the patient's quality of life. Mental health providers agree that motivation is a key component to attendance and participation in treatment. Without motivation, therapeutic processes cannot take place nor be effective. At each step of the therapeutic process the mental health provider guides the patient through the therapeutic process, and works with the patient to determine the pace of progression to end goals. It is through clinical experience that is informed by research, that the provider makes these crucial decisions.

The therapeutic process involves the general components of 1) establishing a therapeutic alliance, 2) establishing what is the patient's commitment to change, conducting a behavioral analysis, coordinating treatment objectives, 3) executing treatment and maintaining motivation, monitoring progress, and 4) planning for treatment termination by generalizing skills (Rosenbaum & Horowitz, 1983). These steps