

## Chapter 69

# Healthy Avatars, Healthy People: Care Engagement Through the Shared Experience of Virtual Worlds

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### **ABSTRACT**

*Recent literature shows that new technologies can be used to promote patient engagement. The present contribution focuses on Virtual Worlds (VWs), namely virtual environments that multiple users can experience together thanks to the use of avatars. Indeed, VWs offer interesting opportunities for patient engagement interventions on two levels. On the individual level, customized avatars are known to have relationships with users' inner experience and Self-conception, so that they may constitute a peculiar additional tool for psychological assessment. Moreover, they are able to promote healthy behaviors thanks to a strong vicarious reinforcement (Proteus effect). On the collective level, VWs constitute an ideal platform to support the emergence of collective flow states (Networked Flow) which are related to the patients' creative activity and well-being. The present contribution deepens these phenomena, presenting VWs as an innovative and interesting tool for the patient engagement interventions of the future.*

### **INTRODUCTION**

In this chapter we will discuss the role of new technologies for patient engagement, according to the model of patient engagement of Barelo, Graffigna, Vegni and Bosio (2014), Graffigna and Barelo (2015), Barelo and Graffigna (2014). In details, we will focus on a specific virtual reality tool called Virtual Worlds (VWs), in order to show their implications for healthcare, from both an individual and a group perspective.

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The model of patient engagement (PHE) (Graffigna, Barello & Triberti, 2015) depicts a picture of the process in which a patient is involved during his/her everyday life experience of disease management. This process emerged as multi componential and dynamic because it regards the whole people's life, which is embraced in all its complexity.

In details, it is the conjunction of emotional (ability to cope with stress and negative emotions due to illness), cognitive (looking for adequate information regarding one's own illness and comprehending all its implications) and behavioral dimensions (adopting adaptive behaviors; adhering to treatment and medication) of people's lives that is responsible for their health engagement (Graffigna & Barello, 2015). The synergy among these dimensions influences patients' ability to adapt to the situation and to interpret personal disease as a normal experience of life which can be included in the broader perspective of existence.

Further, the model suggests that the above-mentioned process of patient engagement is composed of four phases whose synergy is necessary for a patient to benefit from all the resources provided by the healthcare system:

1. **Blackout:** It refers to the feeling of emotive, cognitive and behavioral blackout in which a patient is involved after the occurrence of a critical event, usually receiving the diagnosis.
2. **Arousal:** The name of this phase reflects its own main feature. Indeed, patients become more "activated", but as the terms "arousal" suggests, it is a general activation that does not lead to adopting adaptive coping strategies.
3. **Adhesion:** Even though the patients become more competent both regarding their health and the treatment rules they have to follow, they are still passive in complying with medical prescriptions because they don't understand deeply the meaning of the actions suggested by the medical professionals.
4. **Eudaimonic Project:** Patients are perfectly aware of their condition and accept it and all its implications. In other words, and in order to summarize this complex process, patient initially experience a state of complete disengagement, then they move to a phase of activation (i.e., arousal), adhesion, in which they are still passive, to the building of their personal "eudaimonic project" in which the person is able to reframe disease into normal everyday life (Graffigna & Barello, 2015).

But, how can this model be so effective in healthcare contexts? Which is the added value that this model can provide?

First, the application of this model in health contexts allows facing the increased demand for health which concerns this period of time in which, thanks to the new discoveries and treatments in medicine, survival leading has been increased and there are more aged people than in the past (Graffigna, Barello, Wiederhold, Bosio, & Riva, 2013). This means that people are more likely to suffer for chronic diseases, a type of pathological situation which entails substantial costs for healthcare system.

According to this model, a chronic patient would become able to activate and maintain adaptive behaviors devoted to the management of the situation (behavioral component); to look for adequate information and cognitively structure both the management of the disease and the adherence to the therapy (cognitive component); to cope with the illness-related stress and negative emotions, and also to recover the ability to positively project his/her own life in the future (emotional component) (Barello et al., 2014; Graffigna, Barello, Libreri, & Bosio, 2014).

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