Chapter XXII
Changing Health Behavior Through Games

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ABSTRACT

This chapter discusses how proven health communication theories can be used in electronic games to affect behavior change. After discussing the need for effective health communication and reviewing the current trends in online health-seeking behavior, it argues that games provide a unique opportunity for users to interact with health information, practice health behaviors, and become immersed in meaningful content. Through exploration of the elaboration likelihood model, social cognitive theory, and stages of change theory, this chapter will discuss how games can be used to change perceptions, attitudes, and actions relating to health behaviors. Examples of how these health communication theories have been used in both public health research and games will be given. At the conclusion of this chapter, readers will have an understanding of several health communication theories and the related techniques that can be used to design persuasive games for behavior change.

GAMES AS MORE THAN JUST ENTERTAINMENT

Imagine if we were twenty-five years into the development of the American cinema, and the only thing the mainstream media said about film was that it was sometimes overly violent...in a few years we will look back at the media neglect of games with the same shock and wonderment. Henry Jenkins (cited in Beck & Wade, 2006)

While movies may always fall under the broad category of "entertainment," films have been used to address the most serious of subjects in a thoughtful and influential manner. Looking beyond the thrill of competition and beauty of graphics, games have the potential to have as much impact on our society as film and the immersive nature of game-play provides a unique opportunity for education and persuasive communication.

The new genres of 'serious games', 'games for health', and 'games for change' can address issues

affecting the health and well-being of players while still remaining fun. The gaming elements of challenge, risk, defeat, and success can be applied to content that conveys information, teaches a lesson, models an activity, and ultimately, changes a behavior. In addition, while printed materials, videos, and classroom instruction can provide a great deal of didactic content in a single sitting, persuasive and interactive video games have the potential to expose the player to meaningful content thousands of times (Lieberman, 2001). Games displayed at 2005 Serious Games Summit in Washington, DC, address a variety of topics, including participating in government and politics, conflict in the Middle East, genocide in Darfur, and public diplomacy (Musgrove, 2005). These topics, and countless others not named here, are reflective of important issues in today's society and the movement to create games in this new serious games genre has created new possibilities for communicating persuasive messages. For persuasive games that aim to state an argument, affect an attitude, or change a behavior, health is an important and natural issue to address.

Health is a common thread in today's media. It is one of few human conditions that is important to people of all ages, races, ethnicities, incomes, and geographical locations. The world, and particularly the U.S., is in need of health information that is accurate, relevant, and timely so that individuals can better prevent an illness, manage a disease, or treat a condition. Games as persuasive technologies may be a new concept but delivering health messages that are tailored to meet the needs and interests of target audiences, structured in accordance with proven health communication theories, and delivered in a format that is accessible and appropriate for the user are not. Using these elements of effective communication, virtually any medium can be used to elicit behavior change.

Through exploration of the growing need for effective health communication and the increasing prevalence of the Internet as the primary source of health information, this chapter will demonstrate the need for games for health. The elaboration likelihood model, social cognitive theory, and the stages of change model will be discussed and this chapter will demonstrate how games can be used to change perceptions, attitudes, and actions relating to healthy behaviors. Examples for how these theories have been applied both to public health campaigns and game designs will be given. In addition, the concluding sections on implications for game designers and forecasts of future trends in health communication will provide actionable steps to creating effective games for health. At the conclusion of this chapter, readers will have an understanding of several health communication theories and the related techniques that can be used to design persuasive games for behavior change.

THE RIGHT TIME FOR GAMES

To understand how health and electronic games fit together, we must first explore the tremendous need for effective health communication in the United States and the growing use of the Internet to find accurate health information. As chronic diseases become more prevalent nationwide, people are increasingly turning to the Internet to get health information, and a growing segment of this population is looking to non-authoritative sources when making health decisions. The rise in electronic health information and the trend of using search to find 'people like me' is creating a culture more accepting of new interactive forms of health information, such as games.

A Country in Need of Behavior Change

It is hard to deny that the United States is desperately in need of healthier behaviors. While Americans today can expect to live longer than previous generations, increased longevity is

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