Chapter 3

Playing for Better or for Worse?:
Health and Social Outcomes with Electronic Gaming

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ABSTRACT

Of the many of Information and Communication Technology (ICT) products, electronic games are considered as having great potential for improving health and social outcomes. This chapter considers the factors that may be involved in facilitating health and social outcomes and also those factors that might be considered risk factors by reviewing studies that have shown both positive and detrimental effects on people's physical and mental health. The authors also debate some research questions that remain unanswered and suggest guidelines for practitioners, researchers, and game designers.

INTRODUCTION

Electronic or digital games (i.e., video and computer games) are today some of the most popular of the various entertainment products among children, teenagers, and adults. The NPD Group (2011)—a global market research company—estimated the 2010 sales of all electronic game software (e.g., new physical electronic games, game rentals, digital downloads, subscriptions, mobile gaming) to be between $15.4 and $15.6 billion. Several market studies and surveys conducted in 2010 in the United States (US) and Europe reported that more than half of the population from these

regions is a gamer. For example, the Entertainment Software Association (ESA, 2010) reported that 67% of American households play electronic games, with 49% of players aged 18-49 years. In Europe, the Game Vision European Market Study prepared the last report for the Interactive Software Federation of Europe (ISFE, 2010) on the attitudes and buying habits of European consumers. The ISFE reported that in 2010 around 95.2 million of Europeans were gamers, based on estimates from data collected from individuals between 16-49 years of age from 18 European countries. The game systems are diverse (e.g., broadband Internet, consoles, computers, interactive TVs, mobile phones, Smart Phones, iPhones) providing users different modes of play and a variety of social contexts. Players can play alone or in groups, offline or online, and with real or virtual partners.

Electronic games are also no longer seen as merely entertainment. Their impact and effects on users are so broad that they have actually entered into our modern culture, gaining the attention of policy makers, researchers, educators, health care providers, caregivers, and parents. For example, the majority of parents in the US and in European countries now believe that electronic games have positive outcomes for their children (ESA, 2010; ISFE, 2010) and, compared to previous years, there is now more agreement that games can also help to keep users mentally and physically fit and that games are a valuable mechanism for spending time with the family (ISFE, 2010), which also shows the cultural acceptance of interactive gaming.

Based on existing literature, this paper will present a review of research on the overall effects of electronic games for health and social outcomes. We shall focus on published studies that showed positive and also negative consequences of gaming on people's physical and mental health. Finally, we shall debate research questions that remain unanswered and suggest some guidelines for practitioners and researchers in this field.

GENERAL OVERVIEW OF RESEARCH

Many studies have reported both negative and positive effects of playing with electronic games.

Detrimental effects on health that have been reported include concerns related to the overuse or even addictive use of electronic games (e.g., withdrawal, social isolation, depression, bad sleeping habits, waking-time tiredness, obesity, musculoskeletal disorders, visual problems, palmar hidradenitis). The content of video games has also been a matter of concern, especially regarding the cognitive, emotional, and behavioral effects of playing games that are considered morally objectionable because of their explicit violent or misogynistic messages. The increased belief in the power of games to influence individuals has also contributed to the use of this new entertainment as a mass medium to deliver all sorts of message, ranging from simple advertisement of brands to those involving religious and political issues.

There has also been a substantial interest in the educational, training, and preventive health uses of this interactive technology. Besides the use of available commercial games to provide cognitive distraction for pain and anxiety management, efforts have also been made in designing games for health-educational purposes. The benefits of these type of "serious games" have been reported in a wide range of areas, including physiotherapy, rehabilitation, health promotion, risk behavior prevention, development of cognitive, social and communication skills, and treatment of clinical disorders.

In order to include the broadest range of gaming experiences and outcomes, in this chapter we shall consider the following distinct (but interrelated) dimensions to address the specific effects of electronic games on users' health and social outcomes (as suggested by Gentile et al., 2009): the game structure, the mechanisms of game play, the amount of play, the context in which gaming takes place, and the game content.

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