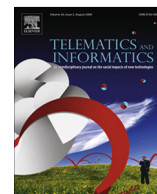




Contents lists available at ScienceDirect

Telematics and Informatics

journal homepage: www.elsevier.com/locate/tele

Are you addicted to Candy Crush Saga? An exploratory study linking psychological factors to mobile social game addiction

Cheng Chen, Louis Leung*

School of Journalism and Communication, The Chinese University of Hong Kong, Hong Kong

ARTICLE INFO

Article history:

Received 15 September 2015

Received in revised form 9 November 2015

Accepted 16 November 2015

Available online xxxx

Keywords:

Game addiction

Leisure boredom

Loneliness

Mobile social game

Self-control

Uses and gratifications

ABSTRACT

The purpose of this study is to explore the relation of psychological factors (including perceived gratifications, loneliness, leisure boredom, and self-control) to mobile social game use and addiction. The study data were gathered from 409 respondents in China. The exploratory factor analysis yielded a gratification structure of five factors (mobility, entertainment, sociability, achievement, and relaxation). According to Young's (1998) classic definition, 7.3% of the participants in the study sample were considered addicts. They were characterized as lonely, leisurely bored, and motivated by the mobile nature of the game. As expected, frequent players had a higher tendency to become addicts. In particular, loneliness and self-control were significant predictors of mobile social game addiction, whereas leisure boredom was linked to the intensity of game use. The limitations of the study and its implications for future research are discussed.

© 2015 Elsevier Ltd. All rights reserved.

1. Introduction

Game playing is an ancient behavior. Pre-historic humans may have used bones or pebbles to play games on the floor of a cave, whereas in the 21st century, the modality of game playing has moved from offline to online and from desktop personal computers (PC) to mobile devices. According to an annual report published by the China Internet Network Information Center (CNNIC, 2014), by the end of 2013, the number of online mobile game users in China had reached 215 million, a drastic increase over the 75.94 million reported in 2012. In contrast, the number of Internet game users grew relatively slowly from 335 million in 2012 to 338 million in 2013. These data indicate that online mobile games have the highest potential for growth and may surpass the PC in becoming the preferred game-playing platform in the future. Classic mobile games, such as Fruit Ninja, Angry Birds, Where's My Water, Temple Run, and Cut the Rope, are examples of this shift.

Led by the dramatic rise of social networking sites (SNS) in recent years, the mobile social game has changed the landscape of the game business. Mobile social games are defined as casual games that are created to play on portable devices, and they are integrated in social networking platforms to facilitate the user's interactions (Erturkoglu et al., 2015; Hou, 2011; Wei and Lu, 2014). Compared to console games and PC games, mobile social games can be characterized as easy to play, less time consuming, facilitating social interaction, and focusing on entertaining and casualness (Omori and Felinto, 2012).

Candy Crush Saga is one of the best-known mobile social games. It was launched by King Digital Entertainment on Facebook in the second quarter of 2012 and as a mobile application in the fourth quarter of 2012 (Candy Crush Saga, 2015). Candy Crush Saga became a phenomenon not only because it attracted 93 million daily players and 500 million

* Corresponding author.

E-mail addresses: chencheng0614@hotmail.com (C. Chen), louisleung@cuhk.edu.hk (L. Leung).

installs on mobile devices, but also because it generated a profit of US\$568 million in 2013 (Grubb, 2014). Specifically, Candy Crush Saga is a puzzle match-3 game in which players match candies in combinations of three or more to win points and overcome obstacles. Players progress through a colorful candy world with over 500 levels, each of which offers a different puzzle challenge. When it is integrated with Facebook, Candy Crush Saga shows the progress of Facebook friends on the game's level map, which fosters competition among the player's social network and pushes them to keep engaging in the game, sharing achievements, and requesting extra "lives"¹ and moves. With its guaranteed mobility and portability, Candy Crush Saga can be played on any device anytime and anywhere. Commuters who are immersed in playing Candy Crush Saga are frequently seen on public transit systems.

However, the popularity and prevalence of Candy Crush Saga also triggered many problems. Some players of this game reported that they had left their children stranded at school, abandoned housework, and even injured themselves as they tried to reach new levels (Dockterman, 2013). These anecdotes demonstrate that Candy Crush Saga can be addictive. Moreover, past research has found that excessive game playing may negatively affect the player's health and behavior, leading to poor academic performance (Leung and Lee, 2012), cognitive distortion (Li and Wang, 2013), low quality of interpersonal relationships (Huang et al., 2015), social anxiety (Lo et al., 2005), and sleep disturbances (Thomée et al., 2011).

According to the *Wall Street Journal* (2013), nearly 15 million people in Western countries were addicted to Candy Crush Saga of which 69% were female. This report not only changed the myth that game players are predominantly male but also demonstrated the tendency of Candy Crush Saga players to become addicted to the game (Billieux et al., 2013). Therefore, it is both timely and imperative to know the reasons that so many people become addicted to this game. Since Candy Crush Saga was launched, little research has been done on its effects on the players of this game. Thus, the present study is one of the few empirical investigations that focus on the relationships between psychological factors (i.e., gratification, loneliness, leisure boredom, and self-control) and mobile social game addiction. Based on the case of Candy Crush Saga, this study aims to deepen the understanding of the "at-risk" population and provide information that could be used to develop a program that prevents addiction.

2. Literature review

2.1. Uses and gratifications

According to Rubin (1994, p. 420), uses and gratifications (U&G) theory is grounded in five assumptions: "(1) media selection and use is goal-directed, purposive, and motivated; (2) people take the initiative in selecting and using communication vehicles to satisfy felt needs or desires; (3) a host of social and psychological factors mediate people's communication behavior; (4) media compete with other forms of communication for selection, attention, and use to gratify our needs or wants; and (5) people are typically more influential than the media in the relationship, but not always." Ruggiero (2000) pointed out that U&G theory provides a theoretical approach to gaining insight into the use of new communication technologies, such as cable television (Palmgreen and Rayburn, 1979), remote television control devices (Walker and Bellamy, 1991), VCRs (Lin, 1993), the Internet (Papacharissi and Rubin, 2000), and home computer use (Perse and Dunn, 1998).

With the rapid diffusion of games, scholars have applied the U&G theoretical perspective to examine a variety of games, including computer games (Colwell et al., 1995), video games (Jansz et al., 2010), online games (Li et al., 2015; Wu et al., 2010), online role-playing games (van Reijmersdal et al., 2013), social network site games (Huang et al., 2015; Zhou and Leung, 2012), and mobile social games (Wei and Lu, 2014). Previous studies that used the U&G theoretical perspective pointed out that social and psychological factors may drive people to play games. For instance, enjoyment, companionship, escapism, achievement, tension reduction, challenge, social interaction, killing time, arousal, and competition were gratifications associated with game playing (Chang et al., 2014; Colwell et al., 1995; Engl and Nacke, 2013; Jansz et al., 2010; Kim and Kim, 2010; Wei and Lu, 2014; Zhou and Leung, 2012). Because the mobile social game is a new game genre, one goal of this study is to explore a wide range of motivations for mobile social game playing, which users identify as unique.

2.2. Internet and mobile social game addiction

Traditionally, the concept of "addiction" is based on a medical model, which emphasizes psychological or bodily dependence on a physical substance. In recent years, scholars found that compulsive gambling (Morbilia, 1993), over-eating (Lesieur and Blume, 1993), and compulsive sexual behavior (Goodman, 1993) exhibited similar symptoms of substance dependence, which triggered a heated discussion on whether a broader range of behaviors should be considered "addiction." As a subset of behavioral addiction, the extended concept of "technological addiction," was defined by Griffiths (1996, p. 471) as "non-chemical addictions that involve human-machine interaction."

Young (1996, p. 238) claimed that addictive Internet use is "an impulse control disorder that does not involve an intoxicant" that is similar to pathological gambling. Adapting the criteria for pathological gambling in the Diagnostic and Statistical Manual of Mental Disorders-Fourth Edition (DSM-IV), Young (1996) developed a brief questionnaire that contained eight yes-or-no items that were used to diagnose addicted Internet users: (1) preoccupation with the Internet; (2) tolerance

¹ Lives in Candy Crush Saga context means health point (HP).

Download English Version:

<https://daneshyari.com/en/article/10343983>

Download Persian Version:

<https://daneshyari.com/article/10343983>

[Daneshyari.com](https://daneshyari.com)