Using Virtual Ethnography for Psychological and Social Problems in Children: Online Game Addiction

Yi-Sheng Wang, Ph.D.
Associate Professor
Department of Marketing & Distribution Management, Oriental Institute of Technology
Telephone: +886-2-77388000 ext. 5223

Abstract

Online video games are one of the most popular and commonly enjoyed forms of entertainment of our time, yet there's a lot of controversy around them. Not surprisingly, the ubiquitous nature of online video games coupled with children who do not always know when to stop playing, has resulted in parents who are concerned about child video game addiction. The purpose of this article is to review the growing problem of child online video game addiction. Using virtual ethnography for psychological and social problems in children. The article is intended primarily for parents and those who work with children who may be obsessed with online video games.

Keywords: Virtual ethnography, psychological and social, children, game addiction

Introduction

According to the Entertainment Software Association's (ESA) 2018 survey:65% of households have at least one member who plays online games three hours a week or more, and the average gamer is 35 years old. Of the "gaming" population, there are more adult women (31%) than boys under 18 (18%).Of people who play online games, 59% are male and 41% are female.

Online video games are one of the most popular and commonly enjoyed forms of entertainment of our time, yet there's a lot of controversy around them(Balakrishnan and Griffiths,2018).In the last decade, online video games have become the dominant form of entertainment worldwide – especially given the steady decrease in TV viewing habits. No longer confined to arcades or the home, today online video games can be found almost everywhere (Choi et al., 2018). Portable systems, smart phones, and tablets make gaming a possibility regardless of where you happen to be. Of course, home consoles and computers also remain popular gaming systems for children (Greenfield, 2018).

Not surprisingly, the ubiquitous nature of online video games coupled with children who do not always know when to stop playing, has resulted in parents who are concerned about child video game addiction (Han et al., 2012). Parents understandably worry when video games become the number one priority in a child's life. They may neglect hobbies, sports, friends, argue frequently with family members who try to limit gaming, and put little or no effort into schoolwork (Hussain et al., 2015).

The purpose of this article is to review the growing problem of child online video game addiction(Balakrishnan and Griffiths, 2018; Choi et al., 2018; Greenfield, 2018; Han et al., 2012; Hussain et al., 2015). The article is intended primarily for parents and those who work with young people who may be obsessed with online video games. Is online video game addiction a real problem for children? Why do some children become addicted to online computer games? What are the risk factors and warning signs for online video game addiction? What can parents do to help children addicted to online video games?

Literature Review

Online Games Target the Natural Interests of Children

There is no single factor that makes online video games so appealing to kids (or adults for that matter). Something about a game that is fascinating to one child may seem rather boring to another (Lee et al., 2015). The key is that no matter what the child happens to be interested in or engaged by…there is likely a video game that allows him or her to easily escape into this virtual world (Li and Wang, 2013).

Children who in past generations may have spent hours playing "cops and robbers" or "war" may today be fascinated with first person shooters like "Call of Duty" or "Halo"(Liu and Chang, 2016). Children that are interested in sports may today be more likely to live out their fantasies in aonline video game than on an actual field. Teens that are interested in fantasy worlds and exploration may be drawn to games like "World of War craft" rather than reading novels such as "Lord of the Rings". Children who would previously spend hours creating impressive structures out of Lego may now find greater appeal in a game like "Mine craft" which arguably allows for even greater creativity with much less effort(Nam, 2017).

online gaming, social connections, and the appeal of virtual worlds

The online components of most modern online video games adds not only to their general appeal and replay value, but also is thought to significantly increase the likelihood of addiction(Seok et al., 2018). During the first online video game boom of the 1980s, games were largely single-player activities designed to keep the player engaged with increasingly difficult hand-eye coordination challenges coupled with the goal of obtaining a high score (think Super Mario Brothers and Tetris). True, some young players did become obsessed with mastering the games, but the possibility that children or teens could truly become addicted to online video games really started when online gaming was introduced in the late 1990s and early 2000s(Stockdale and Coyne, 2018).

Suddenly, gaming was no longer a single player challenge focused on mastering and memorizing a series of jumps and button presses. They were multi-player gaming experiences in which the players themselves became an essential part of highly detailed, constantly evolving, user-created virtual worlds (Sussman et al., 2018). Gamers designed their own characters, started alliances with other players, created their own game objectives, and built digital universes that some

players found more enjoyable than living in the real world. These online universes became more than just games – they were now approaching fully-realized societies with towns, currency, classes, stores and services, histories and mythologies, political systems, and even law enforcement(Toker and Baturay, 2016).

ESA (2018) recommended that any screen time (whether it is television, computer games, console games, games on an iPad, etc.) should come only after children or teenagers have attended to other responsibilities (e.g., homework and/or household chores). The American Academy of Pediatrics recommends limiting a child's viewing of movies, watching TV, and playing online video games to one or two hours per day.

Although there is a "common sense" assumption that kids who play online video games do worse in school, the research generally does not support this conclusion (Balakrishnan and Griffiths, 2018). Simply being interested in and playing online video games (as most children and teen do) does not appear to negatively affect school performance. Most kids can play online video games without becoming addicted and their academic grades do not suffer as a result of occasional play (Choi et al., 2018).

However…for teens and children who are addicted to online video games and play much more than their peers, the research has consistently shown that obsessive and excessive play is associated with lower grades in school(Greenfield, 2018).

Children who are addicted to online games may lie to parents and family members about how often they play and about how long gaming sessions last. This is especially common if parents make the mistake of allowing a computer or gaming console in the child's bedroom (Han et al., 2012). Kids may tell their parents that they are doing homework when in fact they have been playing online video games for hours. To avoid detection, teens may even wake up in the middle of the night to play a favourite online game while parents are sleeping (Hussain et al., 2015).

Research Method

Qualitative methods are particularly useful for revealing the rich symbolic world that underlies needs, desires, meanings and choice (Wang, 2018; Calder, 1977). The novel, computer-mediated, textual, nonphysical, social-cue-impoverished context of online community may have hampered its rigorous investigation by researchers (Wang, 2016; Fetter man, 1989). Over the past several years, many anthropologists, sociologists and qualitative marketing researchers have written about the need to specially adapt existing ethnographic research techniques to the many cultures and communities that are emerging through online communications (Wang, Lee and Hsu, 2017; Grossnickle et al., 2000; Hagel et al., 1997; Hakken, 1999; Hammersley et al., 1995; Hirschman, 1986; Jorgensen, 1989; King, 1996).

"Virtual ethnography," or ethnography on the Internet, is a new qualitative research methodology that adapts ethnographic research techniques to the study of cultures and communities emerging through computer-mediated communications (Wang, Lee and Hsu, 2017; Kozinets, 1998). The

strength of "virtual ethnography" is its particularistic ties to specific online consumer groups and the revelatory depth of their online communications (Miller et al., 2000).

"Virtual ethnography" is based primarily upon the observation of textual discourse, an important difference from the balancing of discourse and observed behavior that occurs during in-person ethnography (Rheingold, 1993). Informants therefore may be presumed to be presenting a more carefully cultivated and controlled self-image (Kopytoff, 1986).

Over an 18-month period, the virtual ethnography study involved both participant and non-participant observation (Lincoln et al., 1985). The researcher 'worked' within the organization four days per week, and was provided office space, systems access, and access to all managerial levels for the entirety of the study(Mead, 1938). Virtual ethnography studies of this kind are acknowledged as being advantageous due to their capacity to understand complex scenarios, whereby a rich understanding of a particular phenomenon is needed (Wang, 2018; McCracken, 1988). In addition to the Steering Group meetings, like the Steering Group meetings described above, were all digitally recorded and the proceedings fully transcribed (Reid, 1996). These meetings lasted on average 3 to 5 h. The present study combined this virtual ethnography observation of management with the addition of a number of semi-structured interviews (Sherry, 1991). The interviews were: 51 implementation interviews, 35 interviews undertaken while was operational and 27 interviews. Each interview lasted approximately 60 to 90 minutes. Also, the virtual ethnography research design allowed additional data to be collected from adhoc and often spontaneous conversations within the organization with individuals at all levels and across all functions during the 18 month period, as noted(Wang, 2018; Jones, 1995). Some of this interaction was recorded in a research diary, which comprises of 250+ pages of notes, including 100+ pages of field notes (Calder, 1977).

Data Analysis

(1) Open coding. All instances of resistance were flagged as categories of recurring themes, in order to be directed by the phenomenon in question;
(2) Axial coding. Each of the categories was sub-coded to create subcategories;
(3) Selective coding. Each category of data derived from the first and second stages of coding were combined for each category in order to identify key findings (Wang, 2018; Spiggle, 1994).

All occurrences of resistance and type of justification defending them were examined. This was undertaken to try and explain how occurrences of resistance were explained and justified by those in the organization while undertaking a change management initiative to implement (Richards and Richards, 1994; Wang, 2018).

Research finding

Teens and children and who are becoming addicted to online video games will gradually lose interest in activities, sports, and hobbies they once enjoyed. Neglect of schoolwork is often the first sign that gaming habits are becoming unhealthy (Stockdale and Coyne, 2018; Wang, 2018).

However, as an interest in gaming evolves into an obsession and eventually into an addiction, even formerly enjoyable activities (sports, TV, music, clubs) lose their appeal. If a child's only interest is online computer games, this is a very good indication that his or her online video game habits are becoming excessive or unhealthy and that parents must take action to avoid or address online video game addiction (Nam, 2017; Wang, 2016).

Depending on their personalities and how parents previously enforced rules in other areas, kids who are addicted to online computer games will respond differently to limitations imposed by parents (Sussman et al., 2018; Wang, Lee and Hsu, 2017). In the early stages of online computer game addiction, children and teens may relying on bargaining ("I promise to finish all my homework if I can finish this one level - just few more minutes"). When constant bargaining becomes the norm and frustrated parents confront their children, they may respond by becoming defensive and try to rationalize excessive online video game habits ("I don't play as much as other kids" or "At least I'm not out drinking or using drugs"). When lying, bargaining, and becoming defensive no longer works, orders from parents to stop playing may be met with anger, hostility, swearing and insults, and even physical aggression. If your child becomes enraged or violent when he is required to stop playing, this is a very clear sign that there is a problem which needs to be addressed as soon as possible. The following proposition was made in this study based on the literature review and field data:

P1: Children who are addicted to online games and are then forced to go without them (either due to a ban from parents or being unable to play for some other reason) can become extremely irritable, anxious, or depressed.

This first sign of child online video game addiction is perhaps the most obvious one(Armstrong et al., 1996). Kids and adolescents become preoccupied with (usually) their favourite game. They think about it, read about it, and talk about it when they are not playing (and they take the first opportunity that arises to play again) (Balakrishnan and Griffiths, 2018).

Concentration and attention is diminished and they may daydream about the online game when they should be focused on other activities (e.g., listening to a teacher at school, completing homework, studying for a test, etc.). As the obsession progresses, kids may completely neglect their schoolwork or household responsibilities, miss deadlines, and no longer spend time with offline friends. The following proposition was made in this study based on the literature review and field data:

P2: Children who are addicted to online games are more likely to experience social phobia and have poor school grades.

A number of studies show that the more time kids spend engaged in sedentary behavior, the more likely they are to be overweight (Choi et al., 2018). One study of German children found that kids who spent less than 1.5 hours a day in front of a TV were 75% less likely to be overweight than kids who spent more than 1.5 hours in front of a screen(Greenfield, 2018).

This isn't surprising, since the more time people spend sitting in general, the more likely they are to be overweight. And that can have serious health consequences in the long run.The following proposition was made in this study based on the literature review and field data:

P3: The more time kids (and adults) spend in front of screens playing online games or watching TV, the more likely they are to be overweight or obese.

Some researchers who should know better have based their claim for the addictive nature of online video gaming on brain research (Han et al., 2012). If you do a little tooling around the Psychology Today blogs, you will find that one or more of my fellow bloggers are among those who have made this claim (Lee et al., 2015). Yes, indeed, functional brain imaging studies have shown that certain so-called "pleasure pathways" in the brain light up when gamblers hit the jackpot, and these same pathways also light up when online video gamers achieve some goal within the game(Liu and Chang, 2016). Well, of course they do! If they didn't, that would just mean that hitting the jackpot or achieving success in a game isn't pleasurable.

Everything that is pleasurable is pleasurable because of activity in pleasure centers of the brain. The following proposition was made in this study based on the literature review and field data:

P4: Online video games create addictions akin to drug addiction.

In a study of more than 1300 adult online video gamers (age 18 to 43), Andrew Przybylski and his colleagues at the University of Rochester found that a small percentage of them, who played many hours per day, described themselves as obsessively engaged--they felt that they didn't just "want" to play, but "needed" to play(Li and Wang, 2013). These players, when they stopped a session of playing, did not feel refreshed and energized as other players did, but felt tense and unhappy(Seok et al., 2018). The extensive questionnaires used in this study also revealed that these "obsessed" players were, in general, those whose basic psychological needs--their needs for freedom, competence, and social relationships--were not being met in real life (Toker and Baturay, 2016).

So, if your child or another loved one seems obsessed about online video games and unhappy outside of the games, don't jump to the conclusion that the games are cause of the unhappiness. The following proposition was made in this study based on the literature review and field data:

P5: Talk with your loved one and try to find out what might be missing or wrong in other aspects of his or her life and whether or not you can help to solve that problem.

In some studies, gamers show an increased ability to pay attention while filtering out distractions (Hussain et al., 2015). One review of research on online videogame players found that people who played shooter games were better able to filter out distractions while engaged in attention-demanding tasks. The players were less distracted by other visual information than non-gamers in several studies the researchers analyzed. The same abilities weren't necessarily found in gamers who played other types of games, though (Hagel et al., 1997).

Researchers studying the effects of gaming have asked gamers and non-gamers to complete a new motor-skills task that they hadn't seen before. They found that neither group was necessarily better than the other at the start, and both groups improved at the task over time. But the group that played online video games became significantly more accurate by the end of the experiment. The following proposition was made in this study based on the literature review and field data:

P6: It's not just online vision — action games seem to boost hand eye-coordination for adults and kids.

Researchers who tracked Canadian high schoolers found that kids who played sports video games were more involved in sports (Han et al., 2012). When kids started playing those games, they also became more likely to play real-life sports more in the future (Hussain et al., 2015).

The researchers think that the games provided knowledge of the sport, which gave the children confidence that helped them get more involved in real life. The following proposition was made in this study based on the literature review and field data:

P7: Kids who play sports online video games are more likely to play sports.

Since many games include some puzzle-solving requirements, researchers have speculated that games could improve problem-solving skills and change the way people teach (Lee et al., 2015).

In one study of "World of War craft" players, researchers found improved problem-solving capacity, but they weren't sure whether the game made people better at solving problems or whether those people were drawn to the game in the first place(Li and Wang, 2013).

Another study tracked kids who played strategy and role-playing games (like "Civilization V" or "Fable") and found they developed improved problem-solving abilities over the next year, indicating there may be some link. The following proposition was made in this study based on the literature review and field data:

P8: The online video games could improve problem-solving capacity.

In one study, researchers found that playing what they call "action" games (like "Call of Duty" or "Destiny") can lead to an improved visual acuity and ability to find objects in a distracting setting(Liu and Chang, 2016). A review of similar research found that the improvements gamers experience are as effective as formal courses designed to increase visual processing ability(Lee et al., 2015).

Researchers have found that online videogame players can outperform non-gamers on visual tasks, and several studies have shown that online video games can "train" visual processing skills in ways that translate to other activities. The following proposition was made in this study based on the literature review and field data:

P9: Online games, especially those involving shooters, are associated with improved visual processing abilities.

Conclusion and Discussion

The WHO's classification of gaming disorder is a big move. It potentially opens up treatment options and services for those experiencing the ailment. It also signals to national and local governments that it's being considered seriously by a major health organization. The question of online video game addiction has invariably been brought up by parents over the past 30 years. Although rare, people do die playing online video games — often during binges of extended play, sometimes lasting days on end. In 2015, a Taiwanese man died of cardiac arrest after a three-day gaming session at an internet cafe. Last February, a popular American video game streamer died while attempting a 24-hour live stream of the game "World of Tanks."Sensational incidents like these may or may not be indicative of video game addiction or gaming disorder, but they have nonetheless raised the profile of gaming as a risky activity when undertaken for prolonged periods of time. In 2013, the American Psychiatric Association (APA) classified "internet gaming disorder" in their DSM-5 as a "condition for further study." Such a classification means that the disorder isn't officially recognized by the APA but does warrant more research.

The American Academy of Pediatrics (AAP) is reiterating its long-standing appeal for parents to keep children away from violent movies and online video games. "Although there is broad scientific consensus that virtual violence increases aggressive thoughts, feelings, and behaviors, there has been little public action to help mitigate children's exposure to it," an AAP report, published today in the journal Pediatrics, states. The authors point to decades of research that they say shows a link between exposure to online violent video games and increased aggressive tendencies. They also express frustration at the scepticism many maintain about the significance of that link.

References

Armstrong, Arthur and Hagel, John, III (1996), "The Real Value of On-Line Communities," Harvard Business Review, May-June, 134-141.

Arnould, Eric J. and Melanie Wallendorf (1994), "Market-Oriented Ethnography: Interpretation Building and Marketing Strategy Formulation," Journal of Marketing Research, 31 (November), 484-504.

Balakrishnan, J. and Griffiths, M.D. (2018). Loyalty towards online games, gaming addiction, and purchase intention towards online mobile in-game features. Computers in Human Behavior, 87, 238-246.

Calder, Bobby J. (1977), "Focus Groups and the Nature of Qualitative Research," Journal of Marketing Research, 14, 353-364.

Choi, J., Cho, H., Lee, S., Kim, J. and Park, E.C. (2018). Effect of the Online Game Shutdown Policy on Internet Use, Internet Addiction, and Sleeping Hours in Korean Adolescents. Journal of Adolescent Health, 62(5), 548-555.

ESA (2018). Entertainment Software Association. Essential Facts about the Computer and Video Game Industry 2018. http://www.theesa.com/article/essential-facts-computer-video-game-industry-2018/

Escobar, Arturo (1994), "Welcome To Cyberia: Notes on the Anthropology of Cyberculture," Current Anthropology, 35 (June), 211-231.

Fetterman, David M. (1989), Ethnography: Step by Step, Vol. 17, Applied Research Methods Series. Newbury Park, CA: Sage.

Greenfield, D.N. (2018). Treatment Considerations in Internet and Video Game Addiction: A Qualitative Discussion. Child and Adolescent Psychiatric Clinics of North America, 27(2), 327-344.

Grossnickle, Joshua and Oliver Raskin (2000), The Handbook of Online Marketing Research: Knowing Your Customer Using the Net, New York: McGraw-Hill.

Gunn, Angela (2000), "Net Ethics: Should you say who you are online?" Yahoo! Internet Life, December, 78.

Hagel, John and Arthur G. Armstrong (1997), Net Gain: Expanding Markets Through Virtual Communities, Boston, MA: Harvard Business School.

Hakken, David (1999), Cyborgs@Cyberspace?: An Ethnographer Looks to the Future, New York: Routledge.

Hammersley, Martyn and Paul Atkinson (1995), Ethnography: Principles in Practice, 2nd Edition, New York: Routledge.

Han, D.H., Kim, S.M., Lee, Y.S. and Renshaw, P.F. (2012). The effect of family therapy on the changes in the severity of on-line game play and brain activity in adolescents with on-line game addiction. Psychiatry Research: Neuroimaging, 202(2), 126-131.

Hirschman, Elizabeth (1986), "Humanistic Inquiry in Marketing Research: Philosophy, Method, and Criteria," Journal of Marketing Research, 23 (August), 237-249.

Hussain, Z., Williams, G.A. and Griffiths, M.D. (2015). An exploratory study of the association between online gaming addiction and enjoyment motivations for playing massively multiplayer online role-playing games. Computers in Human Behavior, 50, 221-230.

Jones, Stephen G. (1995), "Understanding Community in the Information Age," in Cybersociety: Computer-mediated Communication and Community, ed. Stephen G. Jones, Thousand Oaks, CA: Sage, 10-35.

Jorgensen, Danny L. (1989), Participant-Observation: A Methodology for Human Studies, Vol. 15, Applied Research Methods Series. Newbury Park, CA: Sage.

King, Storm A. (1996), "Researching Internet Communities: Proposed Ethical Guidelines for the Reporting of Results," Information Society, 12 (2), 119-127.

Kircaburun, K., Jonason, P.K. and Griffiths, M.D. (2018). The Dark Tetrad traits and problematic online gaming: The mediating role of online gaming motives and moderating role of game types. Personality and Individual Differences, 135(1), 298-303.

Kozinets, Robert V. (1998), "On Netnography: Initial Reflections on Consumer Research Investigations of Cyber culture," in Advances in Consumer Research, Volume 25, ed., Joseph Alba and Wesley Hutchinson, Provo, UT: Association for Consumer Research, 366-371.

Kopytoff, Igor (1986), "The Cultural Biography of Things: Commodification as Process," in The Social Life of Things: Commodities in Cultural Perspective, Arjun Appadurai, Ed. Cambridge, England: Cambridge University, 64-91.

Lee, Z.W.Y., Cheung, C.M.K. Chan, T.K.H. (2015). Massively multiplayer online game addiction: Instrument development and validation. Information & Management, 52(4), 413-430.

Li, H. and Wang, S. (2013). The role of cognitive distortion in online game addiction among Chinese adolescents. Children and Youth Services Review, 35(9), 1468-1475.

Lincoln, Yvonna S. and Egon G. Guba (1985), Naturalistic Inquiry, Beverly Hills, CA: Sage.

Liu, C.C. and Chang, I.C. (2016). Model of online game addiction: The role of computer-mediated communication motives. Telematics and Informatics, 33(4), 904-915.

Mead, George Herbert (1938), The Philosophy of the Act, Charles W. Morris (Ed.), Chicago, IL: University of Chicago Press.

McCracken, Grant (1988), The Long Interview, Beverly Hills, CA: Sage.

Miller, Daniel and Don Slater (2000), The Internet: An Ethnographic Approach, Oxford: Berg.

Nam, T. (2017). Who is dating and gaming online? Categorizing, profiling, and predicting online daters and gamers. Computers in Human Behavior, 73, 152-160.

Panagiotidi, M. and Overton, P. (2018). The relationship between internet addiction, attention deficit hyperactivity symptoms and online activities in adults. Comprehensive Psychiatry, 87, 7-11.

Reid, Elizabeth (1996), "Informed Consent in the Study of On-line Communities: A Reflection on the Effects of Computer-mediated Social Research," Information Society, 12 (2), 119-127.

Rheingold, Howard (1993), the Virtual Community: Homesteading on the Electronic Frontier, Reading, MA: Addison-Wesley.

Richards, T. and L. Richards (1994), "Using Computers in Qualitative Analysis," in Norman Denzin and Yvonna Lincoln (Eds.) Handbook of Qualitative Research, Thousand Oaks, CA: Sage, 445-462.

Seok, H.J., Lee, J.M., Park, C.Y. and Park, J.Y. (2018). Understanding internet gaming addiction among South Korean adolescents through photovoice. Children and Youth Services Review, 94, 35-42.

Sherry, John F., Jr. (1991), "Postmodern Alternatives: The Interpretive Turn in Consumer Research," in Handbook of Consumer Research, ed.

Spiggle, Susan (1994) "Analysis and Interpretation of Qualitative Data in Consumer Research," Journal of Consumer Research, 21 (December), 491-503.

Stockdale, L. and Coyne, S.M. (2018). Video game addiction in emerging adulthood: Cross-sectional evidence of pathology in video game addicts as compared to matched healthy controls. Journal of Affective Disorders, 225(1), 265-272.

Sussman, C.J., Harper, J.M., Stahl, J.L. and Weigle, P. (2018). Internet and Video Game Addictions: Diagnosis, Epidemiology, and Neurobiology. Child and Adolescent Psychiatric Clinics of North America, 27(2), 307-326

Toker, S. and Baturay, M.H. (2016). Antecedents and consequences of game addiction. Computers in Human Behavior, 55, 668-679.

Wang, Y.S. (2018). Addiction by design: Using netnography for user experiences in female online gambling game. International Journal of Human-Computer Interaction, 34(8), 774-785.

Wang, Y.S. (2016). Customer value of LINE mobile services: The study of adolescents in three East Asian cities. Journal of Child & Adolescent Behavior, 4(3), 294-304.

Wang, Y.S. Lee, W.L. and Hsu, T.H. (2017). Using netnography for the study of role-playing in female online games: Interpretation of situational context model. Internet Research. 27(4), 905-923.