The Impact of Gender and Age on Game Addiction

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Abstract: Game addiction has rose a public concern in recent days. Current studies have revealed the impact of gender and age on game addiction from multiple aspects, encompassing variations in national contexts, cultural backgrounds, sample sizes, and methodologies. In addition, this literature review essay summarized the research process, methodologies, and results of 8 related researches in order to discuss the correlation between gender, age and game addiction. In conclusion, present studies indicate that male gender and young age are risk factors linked to game addiction. Males and young people are easier to be affected by game addiction. This results might suggest that the prevention of game addiction should focus more on young male population. Further, future longitudinal research is needed to reveal the causality effects of age- and gender- related variables on game addiction.

1 INTRODUCTION

Video games have become an important part of billions of people's lives nowadays. They have become a new media that influenced multiple fields, such as entertainment, socializing, or even education. But the addiction problem of this new media has emerged with its development. The World Health Organization (2020) has argued that severe addiction to video games is a mental disease and has been defined as Gaming Disordered (GD) in the 11th version of the International Classification of Disease (ICD-11). Although GD is not widespread, the WHO still alerts individuals who participate in games to pay attention to the length of time they devote to gaming. Besides, according to a report from the WHO (2024), 12% of the adolescents are at risk of game addiction. This suggests the importance of the understanding of video game addiction. Current studies show that there are differences in the degree of gaming addiction among different genders and age groups. Therefore, understanding how these two elements affect game addiction is important for preventing game addiction and, furthermore, Gaming Disordered. In this essay, the differences in game addiction between different genders and age groups will be discussed.

2 INTRODUCTION TO STUDY SUBJECT

In this essay, the impacts of two elements, gender and age, on video game addiction will be introduced. Except for that, several psychological behaviour dimension will be mentioned. They are trouble caused by game using, time that spent on game, gratification caused by game using, and economical profits which comes from game using.

2.1 Definition of Game Addiction

Generally, video game addiction is a subtype of internet addiction. Since internet addiction came to be acknowledged as a clinical disorder, the researchers studied game addiction as a subspecies of it. Except for that, such a kind of addiction was always attributed to the Massive Multi-user Online Role Play Game (MMORPG) (Graham & Joseph, 2014).

Some researchers (Lee, Zach, et al., 2015) claimed that the behavior and feature of MMOG addiction were concluded into these seven dimensions: Salience (e. g., game as the most important activity in gamers' lives), Mood Modification (e. g., the game could modify the gamers' mood), Tolerance (e. g., more and more amounts of time or resources used in the game), Withdrawal (e. g., feels unpleasant when discontinuing the game), Conflicts (e. g., problems

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caused by excessive playing of the game), Recurrent (e. g., a propensity to return to previous excessive game play pattern), and Uncontrollable (e. g., can not control the resources spent on games).

Such kinds of behaviors and features could lead to multiple negative influences on people's lives. For example, research points out that game addiction has a significant correlation with sleeping problems (Alghamdi, 2024). Djannah (2021) states that game addiction is able to cause health problems by making the problematic gamers delay eating and sleeping. Graham & Joseph (2014) also mentioned that game addiction may lead to poor academic performance and escapism. In some serious cases, it may even lead to seizures and death.

2.2 Game Addiction Scale (GAS)

GAS is a common method that has been widely used in game addiction research. Early research has developed a lot of kinds of scales (Wong & Hodgins, 2014). Although there might be differences in advantages and disadvantages between each kind of them, they generally built a conceptual approach to video game addiction from different aspects. Moreover, they also provided a lot of data for understanding video game addiction through application in previous research.

3 THE IMPACT OF GENDER ON VIDEO GAME ADDICTION

In this section, the previous research result of how gender affects video game addiction will be shown.

Gender was confirmed to have a correlation with game addiction in several previous studies. For example, Abolfotouh & Barnawi (2024) collected data from 737 adolescents through an online survey by using the GASA (Game Addiction Scale for Adolescents). The male-to-female ratio in the sample is 40. 8% : 59. 2%. Within the sample, 8. 3% were addicted gamers while 33. 4% were problem gamers. Further logistic regression analysis points out that male gender is significantly (OR=1. 36, p=0. 038) associated with game addiction.

Emre Müezzin (2015) did further research discuss the gender's effects on game addiction by collecting samples from 131 North Cyprus high school students. The sample of the research contains 61. 8% (n=81) female students and 38. 2%% (n=50) male students. Data collection for the survey was carried out using the Online Game Addiction Scale, which is composed of three sub-components: troubles, success, and economic profit. They correspond to the level of trouble that is is caused by habits of playing online games, the level of relying on online games to satisfy one's sense of achievement, and the level of economic gain through playing online games and their impacts. All of the subscales follow the principle of "the higher score, the higher level." SPSS for Windows was used to analyze data. The analysis shows that in all three subscales, male students' average score is statistically significantly (p=. 000) higher than female students. In conclusion, male students have a higher score in the online game addiction index. The research points out that male high school students have a significantly greater probability of being affected by online game addiction, especially in the aspects of satisfying achievement, getting profits from online games, and getting in trouble because of playing online games.

All in all, the research reveals that online game addiction is more likely to affect male high school students. Despite valuable results and data provided by this research, some limitations should be noticed. First, the research only covered the online game category, so other game types, such as single-player games, are not included in this research. Second, the samples come from high school, so other age groups are not included in this research.

Research that contains a much larger scale of samples has been conducted by Rehbein & Mößle (2013). 4436 7th to 10th grade students from ten schools in Hanover, Germany were surveyed. There are 48. 4% male samples included within the total sample. Both the Video Game Addiction Scale and the Compulsive Internet Use Scale were used in this research. With sufficient sample size, the research argued that most video game addicts are male, and the number of video game-addicted girls is extremely small (n=9). This result could support the idea that males are the main body of video game addiction.

Another research study (Mentzoni et al., 2011) on video game addiction among the Norwegian population clearly defines the relationship between gender and video games. The sample consisted of 2,500 individuals between the ages of 15 and 40 who were sourced from the Norwegian National Registry. To show the situation of video game addiction, the seven-item version of the GASA was utilized. The scale contains seven items for all essential factors of the seven dimensions of game addiction. If the respondents endorse all of the items, they will be identified as game addicts. or those respondents who endorsed at least four items, they are classified as problem gamers. In order to explore the connection

between gender and video game addiction, the researchers use problem video game use and gender as an independent variable to conduct a crude and adjusted logistic regression analysis. Except for that, players were grouped in quartiles according to the time they spent on games per week from low to high to investigate the predictors of MMORPG preference. As a result, a significant gender difference in game use pattern. The majority of male respondents had a regular game playing habit, while the majority of female respondents did not. The investigation on MMORPG preference predictors shows that gender is a significant predictor. Male responders whose gaming frequency placed them in the highest quartile were the most likely to have a preference for MMORPGs. As for the result of game addiction prevalence, male gender is an important predictor. Within all respondents, there were only 4 individuals who were classified as game addicts, and all of them were male. Inclusion: game addiction was especially prevalent within the male gender. But because of the low number of addicts, researchers did not do further research on this group of people.

A research study study from Greece (Tsitsika, 2009) has suggested the same opinion from a different aspect. The research included 953 grades 9 and 10 high school students from the urban district of Attica, Greece. The sample consists of of 438 boys and 499 girls. They were asked to report their time spent on the internet per week. Then, the participants were divided into 5 groups according to the time period they devoted to internet use. The groups are The groups are non - users who spend 0 to 1 hour per week, low internet users who spend 1 to 3 hours per week, medium users who spend 4 to 10 hours per week, high internet users who spend 11 to 20 hours every week, and problem users who spend more than 20 hours every week. Except for that, the researchers also collected the the data about what they usually use the internet for, including gaming. The stepwise forward multivariate logistic regression analysis method has been used for the data analysis. The result shows that the absolute majority (98. 5%) of excessive male internet users use the internet for gaming, while females do not. This might suggest that male internet users were easier to fall into game addiction.

In conclusion, current studies state gender has a significant impact on game addiction prevalence. Game addiction is more likely to happen in males. Besides this valuable opinion provided by the studies, a common limit of them should be noticed. Generally, the studies use gender as a cross-sectional variable, so the longitudinal variables that relate to gender have not been covered by the research. For example, Mentzoni's research (2011) only covered how gender affects MMORPG addiction; other types of games are not included.

4 THE IMPACT OF AGE ON GAME ADDICTION

Age differences are also claimed to be connected with game addiction prevalent in the previous research. For example, the study of Rehbein & Mößle (2013) argued that younger students in 7th and 8th grade are more likely to be affected by game addiction than students in later school years. This result has already shown the trend of negative correlation between age and video game addiction prevalent.

To be more specific, Festl et al. (2012) did research in the same country with Rehbein & Mößle, in German. The research also contains a sufficient sample size of 50,000 individuals aged 14 and over. The data was collected by German standard computer-assisted telephone interviewing, and the Game Addiction Scale (GAS) was used in data collection. The researchers also estimated a multi-group structural equation model to test the latent variable of how personality traits correlated to age. The personality traits included three different aspects; they are social competence, self-efficacy, and anger aggression. Preliminary analysis confirmed the correlation between age and game addiction. Then, the researchers divided the respondents into three groups. They are teenagers whose ages fall between 14 and 18, younger adults whose ages fall between 19 and 39, and older adults aged more than 40. Although this result may be caused by the different preferences between younger adults and older adults, the research claims that adolescents easier to be affected by game addiction than the older adults ($p<0.05$). In the aspect of age and personality traits, problematic game use has a significant correlation with low levels of sociability and a sense of insufficient social support in adolescents than adult gamers ($p<0.05$).

To sum up, the research verified that age and game addiction are negatively correlated. However, to draw a causal conclusion, more longitudinal data and analysis are needed.

Another study done by Vollmer et al. (2014) reveals a stronger correlation between age and game addiction. 741 teenagers aged 11 to 16 from different schools in Istanbul participated in the study. Computer Game Addiction Scale (CGA scale) was

used to test the level of CGA symptoms of individuals. The result of the bi-variate Pearson's correlation analysis shows that age has a strong negative (p=-0. 022) correlation with game addiction; this leads to the conclusion that younger adolescents report higher CGA.

A research study from Norway supported this opinion. 24,000 people, randomly chosen from the Norway's official national population register (NPRN), constitute the sample. The ages of participants are 16-74 (Wittek et al., 2016). The GASA was used in the questionnaire to test the level of game addiction. Pearson product‐moment correlation analysis was used for data analysis. The participants have been divided into 3 age groups of 16 to 30, 31 to 50, and 51 to 74. Compared to the people whose age is in group 16 to 30, being in the other two groups shows a significant negative correlation with game addiction in crude and adjusted analysis. The researchers claim that The youngest age group had a higher likelihood of belonging to the addicted group compared to the other two groups. To be specific, 2. 9 times more than the middle age group and 4 times more than the oldest group. In summary, being young in age is an essential factor for game addiction. But the researchers warned that the game, as a new phenomenon, may have an influence on this conclusion.

In summary, age was shown to be negatively correlated with game addiction in current studies. This suggests younger individuals may be easier to fall into game addiction. Lots of research mentioned the need for longitudinal data analysis, and this suggests age can not simply be a reason for game addiction. More research on other factors related to age, which might influence game addiction, is needed. For example, game preferences, cultural background, and social needs differ between different age groups.

5 DISCUSSION AND SUGGESTION

All in all, current studies have covered different cultures or country backgrounds, sample populations, and study methodologies. They generally indicate a correlation between gender, age, and game addiction. Male gender was suggested to be a strong factor in game addiction, while young age is another strong factor. This correlation may be influenced by multiple factors. For example, Festl et al. (2012) point out that the high percentage of game addiction among young people may be caused by the greater amount of leisure time and a lesser burden of work or family obligations. According to another investigation carried out by Jahantigh & Nourimoghadam (2023), a correlation was found between the problematic game use in adolescents and the cognitive-avoidance behavior of their mothers. The Pearson's correlation analysis in this study shows that there is a significant ($p<0.001$) correlation between mother's cognitive avoidance and adolescents' anxiety. The researchers claim that this result has led to a significant indirect effect on game addiction (β =0. 04~0. 06).

The general result and conclusion of current studies may suggest that the prevention of game addiction should focus more on the young population of the male gender. The result of the research on the correlation between age and game addiction shows that the adolescents and younger adults aged 11 to 39 are much easier to fall into game addiction than the other age groups. Among adolescents and young adults, an inverse relationship between age and game addiction still holds. This suggests being in a school age is an important factor for game addiction.

In addition, the prevention from schools and parents is essential for people of this age. A study on cyber violence and bullying recommended that educators and families build a common prevention on adolescent problematic gaming (Hidayat et al., 2022). Another research study (Greenfield, 2022) shares the same opinion as this study. The researcher states that in those cases where patients are children, adolescents, or young adults, the treatment must be made based on the motivation and resources of the patient and family. The research focus on college school students also suggests that by enhancing self-control capabilities and family functionality, symptoms of game addiction can be mitigated. (Zhou & Xing, 2021). Besides, some researchers claim that it is necessary to differentiate the prevention of game addiction based on gender since males are more likely to be influenced by game addiction than females (Durakhatice et al., 2022).

Besides, researchers also claim that gender and age, as a cross-sectional variable, can not be considered as causally related to game addiction. There are plenty of longitudinal variables related to gender and age that might influence game addiction causally, for instance, cohort effects, personality (Wittek et al., 2016), gaming preferences (Mentzoni et al., 2011), and so on. In addition, there is a need for research in those fields. So, future research may focus on how those cross-sectional factors within gender and age affect game addiction. Except for that, a larger sample population

can be expanded, for example, from a gender and age perspective on game addiction prevalence in Asia, South America, or other different cultural groups.

6 CONCLUSION

To sum up, existing research has identified a correlation among age, gender, and game addiction. Regarding gender, the prevalence of game addiction is greater in males compared to females. In terms of age, young individuals are more likely to be addicted to games than the elderly.

This result suggests the prevention of the game addiction should be more focused on male teenagers and young adults. Due to the relatively high prevalence of game addiction among school-aged students, schools and parents play an important role in the prevention.

For the future research, the relationships between longitudinal variables, which are related to gender and age, and game addiction are needed. Except for that, research on the prevalence of more uncovered countries, regions, minority populations, and cultures is also needed.

REFERENCES

Abolfotouh, M. A., & Barnawi, N. A. (2024). Prevalence and prediction of video gaming addiction among Saudi adolescents, using the Game Addiction Scale for Adolescents (GASA). Psychology Research and Behavior Management, 17(000), 3889–3903

Alghamdi, D. A., Alghamdi, F. A. G., Abusulaiman, A., Alsulami, A. J., Bamotref, M., & Alosaimi, A., et al. (2024). Video game addiction and its relationship with sleep quality among medical students. Journal of Epidemiology and Global Health, 14(3)

Djannah, S. N., Tentama, F., & Sinanto, R. A. (2021). Game addiction among adolescents and its' health impacts. International Journal of Public Health Science, 10(3)

Durakhatice, Y., Demrhanesra, K., & CitilMahmut. (2022). Examining various risk factors as the predictors of gifted and non-gifted high school students' online game addiction. Computers and Education, 177, 104378

Graham, M., & Joseph. (2014). Narrative therapy for treating video game addiction. International Journal of Mental Health and Addiction, 12(6), 701–707

Greenfield, D. (2022). Clinical considerations in internet and video game addiction treatment. Child and Adolescent Psychiatric Clinics of North America, 31(1), 99–119

Hidayat, Z., Permatasari, C. B., & Mani, L. (2022). Cyber violence and bullying in online game addiction: A phenomenological study. Journal of Theoretical and Applied Information Technology, 100(5), 1428–1440

Jahantigh, H., & Nourimoghadam, S. (2023). The mediating role of anxiety in the relationship between mothers' cognitive avoidance and adolescents' digital game addiction. International Journal of High Risk Behaviors and Addiction, 12(3), 9

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

Mentzoni, R. A., Brunborg, G. S., Molde, H., Myrseth, H., Skouverae, K. J. M., & Hetland, J., et al. (2011). Problematic video game use: Estimated prevalence and associations with mental and physical health. Cyberpsychology Behavior and Social Networking, 14(10), 591–596

Müezzin, E. (2015). An investigation of high school students' online game addiction with respect to gender. Turkish Online Journal of Educational Technology, 2015(special issue)

Rehbein, F., & Mle, T. (2013). Video game and internet addiction: Is there a need for differentiation? Sucht, 59(3), 129–142

Ruth, Festl, Michael, Scharkow, Thorsten, & Quandt. (2012). Problematic computer game use among adolescents, younger and older adults. Addiction, 108(3), 592–599

Tsitsika, A., Critselis, E., Kormas, G., Filippopoulou, A., Tounissidou, D., & Freskou, A., et al. (2009). Internet use and misuse: A multivariate regression analysis of the predictive factors of internet use among Greek adolescents. European Journal of Pediatrics, 168(6), 655

Vollmer, C., Randler, C., Horzum, M. B., & Ayas, T. (2014). Computer game addiction in adolescents and its relationship to chronotype and personality. SAGE Open, 4(1), 1–9

Wittek, C. T., Finserås, T. R., Pallesen, S., Mentzoni, R. A., Hanss, D., & Griffiths, M. D., et al. (2016). Prevalence and predictors of video game addiction: A study based on a national representative sample of gamers. International Journal of Mental Health and Addiction

Wong, U., & Hodgins, D. C. (2014). Development of the Game Addiction Inventory for Adults (GAIA). Addiction Research, 22(3), 195–209

World Health Organization. (2020). Addictive behaviours: Gaming disorder. World Health Organization. https://www.who.int/news-room/questions-and-answers/item/addictive-behaviours-gaming-disorder

World Health Organization Regional Office for Europe. (2024). Teens, screens and mental health. https://www.who.int/europe/news/item/25-09-2024-teens--screens-and-mental-health

Zhou, X., & Xing, J. (2021). The relationship between college students' online game addiction, family function and self-control. Health