



Game Addiction: an Analytical Study Based on Sample of Gamers

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GAME ADDICTION: AN ANALYTICAL STUDY BASED ON SAMPLE OF GAMERS

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Abstract – Gaming is a popular entertainment source irrespective of all ages. But, attention received factor is ‘Addiction’. This research aims in analysing the factor attracting male and female players and calculating percentage of gamers in the addiction phase using statistical analysis without taking age limit into consideration. The DSM-V (Diagnostic and Statistical measure of mental disorder) questionnaire which is clinically evaluated questionnaire for Internet gaming disorder criteria is used in this research. The measure consists of 9 items with 5 points as designation. Basic statistical techniques and graphs are taken into consideration for analysis and result.

Keywords – Internet Gaming Disorder, DSM-V, Addiction

Introduction

According to psychology, addiction is a complex condition which dispute harmful consequences when a person engages himself/herself in the use of substances or behaviour. The game addiction started its origination from evolution and its ease of accessing technology. It is a great thing to enjoy things but at the same time it leads to the adverse effect when it crosses the limit. “At what point does this thing become addiction?” this is the question the expertise and researchers are still trying to answer. For example, a 20 year old boy died from nerve damage after prolonged play over 45 days. It is also reported that the employees are deviating from work environment to the game world. Among children and adolescence, games have become a leisure activity. Beautiful graphics, realistic characters, images and sophisticated game system has become attractive to the gamers which are mainly due to technology improvement. These are all the grounds behind this research.

Among the adolescents, the popularity of game is shocking. Childhood upbringings, peer influences, pressures at school and family issues are all factors that have a strong connection with the effects of gaming on individuals [1]. As the coin has two sides, gaming has both advantage as well as disadvantage. Mental exercise, recursive improvement and proactive thinking, increase in amiability, enhanced interpretability, and increase in mental activities are the good aspects with regard to gaming. Whereas increase in emotional arousal, decrease in self-control, delay in response, social solitary factor, commercialism and addiction are the drawbacks.

Related Works

- 1. Irene Lai Kuen Wong and Millicent Pui Sze Lam [2]:** investigates the gaming behaviour and addiction at the internet cafe among the adolescence with the help of Chinese Interview guide and to explore perceived benefits and harms associated with the activity by using thematic analysis technique. Sample of 13 male high school students aged between 12–15 years 13.6 years as mean age were interviewed at two Internet cafes. Number of participant involved in this study is very less and females were not included in this study. These could be taken as future scope.
- 2. Luca Milani, Giuseppe La Torre, Maria Fiore, Serena Grumi, Douglas A. Gentile, Margherita Ferrante, Silvia Miccoli & Paola Di Blasio [3]:** investigates the difference between sub-clinical problematic video game use and clear internet gaming disorder by focusing students attending primary and secondary schools in Italy as participants. Descriptive statistic, MANOVAs method, hierarchical regressions were mainly used for analysis. The advantage of this study is that they could collect the data from different region of Italy. But, they were not in the position to collect longitudinal data. This can be included in the future research for a longitudinal method in order to better represent the developmental course of this proposed disorder.
- 3. Charlotte Thoresen Wittek, Turi Reiten Finseras, Stale Pallesen, Rune Aune Mentzoni, Daniel Hanss, Mark D. Griffiths, Helge Molde [4]:** aims to get an insight as to how individuals that are at risk of becoming addicted gamers can be identified. IBM SPSS statistic (version 2) was used as tool to analyse the collected data with the help of questionnaire. Even though, video game addiction was negatively associated with conscientiousness and positively associated with neuroticism, method to differentiate between different types of games was not considered in this study.
- 4. S.M Grusser, R. Thalemann & M.D. Griffiths [5]:** investigates addictive potential of gaming and also the relationship between excessive gaming and aggressive attributes and behaviour. Two online questionnaires were used to collect the data and statistical concepts like ANOVA, linear regression, Chi-square distribution were implemented. Main advantage of this study was, they were able to categories different gamers. But, weak evidences for excessive gaming and aggressive behaviour were seen. Finding percentage of relationship between excessive gaming and aggressive behaviour can be considered as future scope.

5. **Daniel Loton, Erika Borkoles, Dan Lubman & Remco Polman [6]:** to examine the mediating role between one measure of video game addiction engagement and mental health having an international sample of 552 adult participants where male participants are of age 24.9 years having 52.3 % Australian participants. This study was successful in providing partial support for the distinction between video game addiction and engagement. However, longitudinal studies are required to confirm the directionality of relationships in the analysis was specified as future scope in this paper.
6. **Susana Jiménez-Murcia, Fernando Fernández-Aranda, Roser Granero, Mariano Chóliz, Melania La Verde, Eugenio Aguglia, Maria S. Signorelli, Gustavo M. Sá, Neus Aymamí, Mónica Gómez-Peña, Amparo del Pino-Gutiérrez, Laura Moragas, Ana B. Fagundo, Sarah Sauchelli, José A. Fernández-Formoso and José M. Menchón [7]:** studied the prevalence of video game use and addiction in gambling disorder patients and then they compared the result with non-video game user in relation to their gambling behavior. The result obtained in the gambling disorder with the observed prevalence of video game was 37.3 percent, video game use was 22.3 percent and video game addiction was 15 percent. There showed positive linear trends for video game level and game disorder severity and other measures of general psychopathology. The Analyses were carried out with SPSS20 for Windows. Logistic Regression and ANOVA were the main statistical technique used. Final result was, game disorder patients were young players and were more dysfunctional personality traits, and more general psychopathology.
7. **Nazmus Saquib Ph.D, Juliann Saquib Ph.D [8]:** aims to assess the prevalence of addiction to video games and its correlation with mental health in a sample of expatriate high school students of Saudi Arabia of a particular region called Al-Qassim. Study was done by survey methodology. The survey was conducted in 2016 among 276 students enrolled in ninth through twelfth grades in the International Schools in Al-Qassim. The result obtained after the analysis was, addiction to video games was strongly associated with psychological distress. Analyses were carried out with SPSS version 22. Descriptive statistic, Chi-square test, logistic regression etc. were the statistical methods used. Future studies can be carried out in investigate other potential correlates of distress such personal traits, family relations, and academic performance.

- 8. Hee Joung Seok, Jeoung Min Lee, Chi-Yong Park, Ji Young Park [9]:** aims to explore adolescents' motivations for internet games, how their lives are affected, how they perceive internet games, what they gained and lost, and how they made sense of internet gaming addiction. This study made use of photo-voice tool which allows them to record their own life experiences and opportunities to tell their story. The participants reported serious symptoms of internet game addiction, which negatively affected their psychological health and self-identity. They also reported that they were aware of how internet games negatively affected their daily lives, academic performance, and family relationships worsened once they became addicted to internet game. Few limitations with respect to this study are:
- Number of participants was small therefore drawing a result from small samples will not be very accurate.
 - South Korean place is only considered.
 - Study did not consider the level of severity in internet gaming addiction, which might vary by individuals.
- 9. Maria Hafeez, Muhammad Dawood Idrees, And Jung-Yong Kim [10]:** aims to access the feasibility of mobile game addiction system based on discriminating parameter selection. The methodology for collecting the EEG data was by using BIOPAC MP 150 equipment with data acquisition software. For the effective outcome of the research, they used statistical methods like cross correlation, Frequency and time domain analysis and binary regression. The research can be extended to understand the nature of flow under variable conditions for quantitative distinction between addicted and non-addicted subjects which may be applied for individuals who need to enhance to focus the cognitive ability.
- 10. Aviv Malkiel Weinstein, Ph.D [11]:** describes the measure of dopamine which is released during game playing by making use of brain image. Basic statistic techniques were used for the analysis. The result found was, psycho-physiological mechanisms underlying computer game addiction are mainly stress coping mechanisms, emotional reactions, sensitization, and reward. The research concluded by showing the reduced dopamine response to stimuli associated with their addiction which is most likely due to sensitization.

Proposed Methodology

Questionnaire design for data collection, ethical consents and validation of the questionnaire from experts is carried out in this research. The procedure used to retrieve the data is by using a social media platform named Whatsapp. Firstly, DSM-5 questionnaire which is clinically evaluated questionnaire is made into form format using Google-Form then it was circulated through Whatsapp platform. The questionnaire includes different measures of Internet addiction symptoms and general information about the participants' background namely name, gender, name of the game and playing hours. Later data analysis technique is applied to the collected data with the help of Google data studio.

Questionnaire

The questionnaire used for analysis is based on the DSM V (Diagnostic and Statistical measure of mental disorder) Internet Gaming Disorder criteria. The DSM V had 9 questionnaire where (1=not really, 2=very seldom, 3=seldom, 4=often and 5=extremely often) as designation. General information about the participants' background namely name, gender, name of the game and playing hours, attracting factor in the game were additional information added to the questionnaire. 4(Often) and 5(extremely often) answers were classed as positives.

The questionnaire circulated to undergraduates was:

Sl.no	Questionnaire	About
1	Name	Name of the participant
2	Age	Participant were given option to select their age as less than 18, 18-23,23-30 or more than 30.
3	Gender	Gender of the participant
4	Name of the game	Name of the game the participant like to play like LUDO, Pub-G, free-fire, candy crush etc.
5	Playing hour in a day	Number of hours the participant play in a day. Less than a hour, 2 to 3 hour

		or more than 3 hours were the option provided.
6	What component in the game attracts you the most?	Option provided to answer this questionnaire includes challenges, rewards, visuals, music etc.
7	Do you often think of video games even when you are away from your games console/PC/ mobile phone?	Preoccupation with playing
8	Do you often get withdrawal symptoms when you are not able to play?	Withdrawal symptoms when not playing
9	Do you find that you have to increase your playing time to get the desired enjoyment?	Tolerance
10	Have you attempted to cut down your playing time or even stopping because you feel it is getting out of hand?	Unsuccessful attempts to reduce or stop playing
11	Have you neglected other activities(work/social/study) because of video games?	Gives up other activities to play
12	Do you continue playing even though it's causing harm to you? (failing in studies, Insomnia, being late to work, relationship problems etc)	Continues playing despite problems caused by it
13	Have you ever had to conceal or lie about the extent of your playing time?	Deceives or covers up playing
14	Have you used video games as a way to cope with everyday stress or to help with your negative mood states?	Plays to escape adverse moods
15	Have your relationship, studies or work been affected because of you are playing too much?	Risks or loses relationships or career opportunities because of excessive playing

Analysis & Result

The number of participants for the research is 96. The overall age of the sample were of less than 18, 18-23,23-30 or more than 30 in which 86.5% fall under 18-23 range, 6.3% fall under less than 18 category, 5% under 23-30 and 2.1% for more than 30 age. This research included both male and female for the analysis. Therefore more number of participants participated in answering the questionnaire was females. About 53.1% were female and 44.8% were male. Two participants were not willing to reveal their gender. The question regarding playing hours in a day resulted that 60.4% of the participants played less than an hour which is a good sign where as 7.3% participants played more than 3 hours a day and 32.3% were under the range of 1 to 3 hours a day. Challenges was the main attracting component for about 51% participants and vote was for Visuals(18.8%) and third vote for rewards offered in game(12.5%).

For question 1, regarding preoccupation with playing, 14 (14.6% where 10.4% for 4th designation and 4.2% for 5th designation) answered yes. For question 2, 8(8.3% where 5.2% for 4th designation and 3.1% for 5th designation) suffers from withdrawal symptoms when away from their games console.

For question 3, 8(8.3% where 7.3% for 4th designation and 1% for 5th designation) has to increase their playing time in order to get the same enjoyment (hence indicating tolerance). For question 4, 25(26.1% where 16.7% for 4th designation and 9.4% for 5th designation) gamers had felt that perhaps they were playing a bit too much and had tried to cut down the hours. For question 5, 13(13.5% where 10.4% for 4th designation and 3.1% for 5th designation) samples have neglected other aspects of their lives such as work, relationship and studies.

For question 6, despite gaming obviously causing harm to their social life, 11(11.4% where 8.3% for 4th designation and 3.1% for 5th designation) still persist with the habit. For question 7, 9(9.4% where 5.2% for 4th designation and 4.2% for 5th designation) felt the need to lie about the extent of their gaming habit to others.

For question 8, 32(33.3% where 20.8% for 4th designation and 12.5% for 5th designation) use gaming as a way to distress themselves. This is possibly by activating the Dopamine reward system when engaging in gaming hence giving it the most significant response out of the 9 questions. For question 9, 11(11.5% where 7.3% for 4th designation and 4.2% for 5th

designation) of the samples had difficulties with their relationships attributed to excessive gaming.

Conclusion

Games are the form of media that is also associated with negative health consequences. As the coin has two faces, gaming also have advantages as well as disadvantages. When they are played in mindfulness and moderation they act as the source for the stress relief and a catalyst for mental health improvement and social skill development. But, when played for a prolonged amount of time, it leads to addiction. This can take hold on its players and it can ruin their health, education, future. Gaming addiction has the capability of disrupting one's mental and social health. The only way to stay away from addiction is by managing time, indulging in outdoor activities and aware about the sign of gaming addiction.

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