

DEPRESSION DUE TO INTERNET OR GAME ADDICTION AMONG STUDENTS IN FACULTY OF MEDICINE IN UNIVERSITY UDAYANA

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Abstract: The Internet has, in any case, changed the way we relate to our environment and our planet in common. One of today's huge phenomena is online gaming. One can play any game in online gaming so long as there's internet connection. One gets in contact with friends online and also gets an opportunity to associate with individuals who they haven't known some time recently but met online. With online gaming, they have access to any games and at the cybercafé there's no need to rent games. Online games can be exceptionally addictive and in terms of physical and mental wellbeing the addiction can too have a serious effect on them. But this addiction can lead to Internet Gaming Disorder, if without any supervision over their behaviour. This study is a descriptive study with cross sectional method. Data is obtained by using the Development of Indonesian Online Game Addiction Questionnaire and The Beck Depression Inventory-II questionnaire and it is given out to random medical students which follows the inclusion and exclusion criteria studying in the University of Udayana. The prevalence of students addicted to online games are 50,0%. There no correlation between age, gender, batch, online game addiction, hours spent online gaming and depression. Depression due to game addiction among students in faculty of medicine in University Udayana have a prevalence of 50,0%. There is no significance between hours spent online gaming and depression.

Keywords: game addiction, depression, online gaming, hours spent.

1. INTRODUCTION

With the nonstop improvement of the spread of internet access in a huge number, it becomes an everyday source of entertainment globally. Progresses in technology has changed our lives in a number of ways, including the way we communicate, the way we do business, the way we live socially, and individual lives, send a message to a companion, buy an item, discover directions to your destination or basically remain in contact with friends and without the Internet, it can be very challenging. The Internet has, in any case, changed the way we relate to our environment and our planet in common. Apart from the obvious uses of the internet including file sharing and electronic mails, the internet also serves numerous other purposes, such as a social media entertainment site such as You Tube, Instagram, Facebook and many more. It moreover invites individuals using the internet for online shopping, perusing online books, assignments and online games. Online games are known as a common source of excitement presented for all ages, especially among young individuals.¹

One of today's huge phenomena is online gaming. One can play any game in online gaming so long as there's internet connection. One gets in contact with friends online and also gets an opportunity to associate with individuals who they

haven't known some time recently but met online. With online gaming, they have access to any games and at the cybercafé there's no need to rent games. Together

with the benefits, in spite of the fact that, there are a couple of downsides of playing online games where youngsters have little control over their behaviour. Online games can be exceptionally addictive and in terms of physical and mental wellbeing the addiction can too have a serious effect on them. But this addiction can lead to Internet Gaming Disorder, if without any supervision over their behaviour.

A condition for further investigation is Internet Gaming Disorder (IGD) according to the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5). However, the American Psychiatric Association (APA)² did request an additional research due to absence of proof. According to DSM-5, it notes that the Internet Gaming Disorder is most dominant in adolescent boys aged between 12 to 21. IGD is more dominant in Asian countries serving in Europe and North America.³

The criteria used to diagnose this issue are, overly enthusiastic with Internet gaming, when they are unable to play Internet games they experience emotions such as anxiety, grumpiness or sadness, increased resistance in which more time was required to play the games, the individual attempted to avoid or control Internet game but failed to do so, the individual lost motivation in hobbies that gives them pleasure, an individual kept on overuse Internet games, in spite of knowing how much they have an impact on a individual's life, lies are made up to others about their use of Internet games, the individual uses Internet games to reduce discomfort or embarrassment, an escape from reality so that they won't have to deal with their emotions, and surely the individual has jeopardized relationships and opportunities due to Internet games.⁴

A similar trend too happens in Indonesia, taking after the increase of internet accessibility. Online games are played on computer consoles, mobile gadgets or electronic games. An individual will be able to take risks from online games in Indonesia that are produced by gaming companies or the internet. To break the previous 150-hour record, a game, a well-known one such as the Indonesian World Record Museum (MURI) held an event involving hundreds of participants, most of these games were online games that also had a record of certain activities or unique ones. in Indonesia.⁵

This research focused essentially on addressing human psychological variables such as depression and personality traits of self-control, and how these factors relate to online game addiction. Game addicts would accept interpersonal connections are overwhelming, and tend to avoid others and use the Internet as an alternative to real-life relationships. Internet addicts are for the most part pulled in by social interaction and interactive games, such as multiplayer online role-playing game (MMORPG).⁶

Therefore, my research is to find out why medical students are addicted to online games in Bali, specifically first year medical students in the Faculty of Medicine in the University of Udayana in Denpasar.

2. MATERIALS AND METHODS

This study uses a retrospective descriptive design with approach of cross sectional to determine the number of students addicted to online gaming according to age of 18-21, gender, batch, amount of time spent and online game addiction based on students from Faculty of Medicine in Denpasar from September 2020 until November 2020. The sample for this study is students below 21 years old who spend their time playing online games in the Faculty of Medicine in University of Udayana. Samples were taken based on inclusion criteria and exclusion criteria. The inclusion criteria were respondents who are willing to participate in this research, respondent aged between 18-21 years old, respondent who are and can communicate verbally, respondent who are from Faculty of Medicine in University of Udayana, respondents who play online games. The exclusion criteria was respondent who does not fill complete data. The sample collection in this study was carried out by consecutive sampling.

The data that has been collected is carried out with univariate descriptive and bivariate Chi square test by using SPSS 22 software. The collected data will be processed and presented in the form of a diagrammatic table, or distribution chart with explanation. The dependent variable in this research is the presence rate of depression and the independent variable is the time spent on online gaming. Numerous who endure from depression encounter steady sentiments of disappointment and misery, and lose intrigued in once enjoyed pastimes. Separated from the mental issues actuated by depression, individuals can moreover have a physical side effect counting constant pain or stomach related issues. Moreover, the time spent which is more than 2 hours per day and at least 6-12 hours per week to prove that a person is addicted to online gaming. The confounding variables is gender and ethnic because there are only two genders involved and the subjects that are targeted in

this study are the students who are studying in the medical faculty of University of Udayana. This research has received ethical eligibility permission from the Research Ethics Commission (KEP) of the Faculty of Medicine, Udayana University with letter number 2095/UN14.2.2.VII.14 / LT / 2020.

3. RESULTS AND DISCUSSION

The data of this study was collected in the month of October 2020 period until November 2020. The total number of respondents were 238 medical students' batch 2017, 2018, 2019 and 2020 of the Faculty of Medicine, Udayana University based on the inclusion criteria and exclusion criteria were 238 people. The results of the research data obtained were then processed, and data analysis was carried out through the SPSS system version 22. The characteristics of the research subjects are presented in tabular form and given an explanation. Due to the pandemic situation throughout the whole world, University of Udayana closed its doors to all students studying in campus. The questionnaires were distributed through Google form and given to their class leaders through the app known as Line that is very popular among students and to be distributed in their group chat and followed up. The language used to communicate with students is Indonesian language. The grammar given was simple and accurate. Therefore, it was easy for them to fill up the questionnaire that was given to them. They were able to understand the questions rose. The data of the students was kept secret and private. Therefore, it was concluded that the students were able to understand and fill up the questionnaire that was given to them. The survey used is valid.

Characteristics of Respondents

Based on table 5.1 two hundred and seventeen undergraduate medical students from the medical faculty of University Udayana were randomly selected for this study. The data was taken from undergraduate medical students from the batch of 2017, 2018, 2019 and 2020. The total number of students who participated in this research is 238. The number of students that has answered the questionnaire are 93 students from the batch of 2017, where 43 of them are male and 50 of them are female, bringing a valid percentage of 39.1%. Next, the batch of 2018 that had answered the questionnaire are 44 male and 29 females, bringing the total of 73 people with a percentage of 30.7%. In the batch of 2019, a total number of 29 people have answered this questionnaire whereby 16 of them were male and 13 of them were female bringing a percentage of 12.2%. Finally, in the batch of 2020, 43 of them have responded to this questionnaire and a total of 21 male and 22 females, bring a valid percentage of 18.1%.

Table 1: Gender and batch

	Batch	Gender		Total
		Male	Female	
	2017	43	50	93
	2018	44	29	73
	2019	16	13	29
	2020	21	22	43
	Total	124	114	238

Table 2: Frequency of Gender

	Frequency	Percent
Male	124	52.1
Female	114	47.9
Total	238	100.0

Characteristics of medical students to the online game addiction

From the results collected through the questionnaire, it shows that the respondents were predominately male with a frequency of 124 people (52.1%) and the remaining were females 114 (47.9%). The highest prevalence in the table 5.3 below shows that 119 students which is 50% out of 238 students that filled out the questionnaire whereas 48 (20,2%) students show no signs of online game addiction and 71 (29,8%) of the students show mild game addiction in the faculty of medicine in this university.

Table 3: Online Game Addiction

Online Game Addiction	Frequency (no)	Percentage (%)
Online Game Addiction		
Normal	48	20.2
Mild Game Addiction	71	29.8
Game Addiction	119	50.0
Total	238	100

Characteristics of medical students to depression

From the table 5.4 below, 19 students (8,0%) do not suffer from depression. However, 56 students (23,5%) suffer from mild depression, 118 students (49,6%) suffer from moderate depression, and finally, 45 students which is equivalent to 18,9% suffer from severe depression.

Table 4: The Beck Depression Inventory-II

	Frequency (no)	Percentage (%)
The Beck Depression Inventory-II		
Minimal depression	19	8.0
Mild Depression	56	23.5
Moderate Depression	118	49.6
Severe depression	45	18.9
Total	238	100

Correlation between age, gender, batch, online game addiction, time spent playing online games and depression

The relationship between the level of depression between age, gender, batch, online game addiction and hours spent on online games is also studied. The results of the study are shown in table 5.5 below. have not shown significance when chi square is calculated. The highest prevalence of students suffering from moderate depression can be found among men in the table below when the correlation between depression and gender is calculated. However, the p value is not significant when chi square is calculated. The highest age and batch recorded to be suffering from depression are students that are aged 21 who are currently in the batch of 2017. A correlation between online game addiction and depression cannot be found in the table below. Finally, a total amount of 2-3 hours spent playing online games have been recorded that does not have a relationship between depression among students.

Table 5: Correlation between age, gender, batch, online game addiction, time spent playing online games and depression

	The Beck Depression Inventory-II				p value
	Minimal	Mild Depression	Moderate Depression	Severe Depression	
Gender					
Male	10	29	65	20	p= 0.686
Female	9	27	53	25	
Age					
18 years old	5	12	19	4	p= 0.358
19 years old	5	9	10	7	
20 years old	6	13	32	11	
21 years old	3	22	57	23	
Batch					
2017	4	20	51	18	p<0,05
2018	6	15	37	15	
2019	2	8	12	7	
2020	7	13	18	5	

Online Game Addiction

Normal	6	10	23	9	p= 0.456
Mild Game Addiction	5	18	36	12	
Game addiction	8	28	59	24	

Time Spent playing online games

≤1 hour	2	17	40	14	p= 0.269
2 hours – 3 hours	11	16	42	15	
4 hours – 5 hours	2	11	23	8	
≥ 5 hours	4	12	13	8	

General Overview

Majority of this research respondents were men with a percentage of (52,1%). In contrast with those with low use, individuals with excessive Internet use reported more psychopathology. Young adults dependent to online gaming reported increased depression and anxiety in a new study, and felt more socially disconnected. The link between addiction to mobile games and mental wellbeing may be due to the social segregation that comes about from spending too much time gaming, which in turn contributes to psychological well-being being undermined.⁷

Authors from the University of Brawijaya found that the intrinsic and extrinsic are grouped into motivation. Intrinsic motivation comes from inside individuals, whereas external factors are used to determine extrinsic motivation. Male players are regularly more defenseless than their female partners to the harmful impacts of internet gaming. The difference in thought processes for playing internet games is accepted to be the reason why internet gaming addiction among male players is more predominant.⁸

Online game addiction

In this research, a total of 119 students are addicted to online games. The highest frequency recorded for students with online game addiction in this research is 50,0%. However, there is no significance between online game addiction and depression. A result has been found by Li Chen, et al at a Chinese undergraduate university in Chongqing, China however, differs from the results in this research. On weekdays, their participants reported spending an average of 25.61 ± 73.60 minutes per day playing video games. On weekdays, a add up to of 31 participants reported spending over 180 minutes playing online diversions. Members recorded a weekend normal of 49.96 ± 128.60 minutes of computer gaming per day. A total of 85 members reported investing over 180 minutes per weekend playing online games. A total of 101 members played online games on weekends each day for 90 to 120 minutes. On weekdays, participants reported investing an average of 66.07 ± 154.65 minutes per day playing mobile games. A total of 66 members detailed spending over 180 minutes on weekdays playing mobile games. Most members play versatile games each day on weekdays for 90 to 120 minutes. On ends of the week, members reported investing a normal of 91.82 ± 172.94 minutes per day playing mobile games. A total of 151 members detailed spending over 180 minutes on weekends playing mobile games. The larger part of members (208 members) went through 90 to 120 minutes playing ordinary versatile diversions on ends of the week.⁹

Depression due to online games

In this research, 118(49,6%) respondents have been suffering from a moderate level of depression. On the basis of addictions that moreover work as behavioural and emotional control techniques, the contribution of depression as an IGD risk factor can be demonstrated. Young people, for example, have been shown to seek for online video games to achieve positive emotions, such as being in charge and being valued by others, causing their playing time to increase as a way to address offline depression.¹⁰

Similar studies suggest that the findings of the correlation between game addiction and depression are too in line with the hypothesis of displacement in terms of Internet usage, which argues that consumers of digital devices have spent much of their time in online settings instead of offline and have endured as a result of their current relationships. These researchers propose that, relative to ladies, guys who were addicted to mobile games showed up to experience more social anxiety and depression. Young men tended to need social abilities relative to young women, were more socially disconnected, and revealed less about themselves in offline contact environments. Typically, also an explanation why men are more likely to be drawn to a virtual environment like video games as the online world is more relaxed and can give a greater sense of security.¹¹

According to Pradeep, gaming disorders are on an increase, leading to psychosocial disorders, anxiety, depression, mood disorders, sleep disorders, migraine, lack of social exercises, and academic impairment for students. These students had trouble dealing with their studies since they spent more time playing games and less time learning, sleeping and other activities.¹²

Correlation between gender, age, batch, online game addiction, time spent and depression

The results of the chi square analysis of this study showed no significant relationship between gender, age, online game addiction, time spent and depression. However, there is a significance in batch with depression. According to Li Chen et. al, computer and mobile games were played by around 30 percent and 70 percent of the participants, respectively. Around 63.7 percent of their respondents are included players of computer and mobile games. Among medical undergraduate students, their research reported high gaming rates. Additionally, among these undergraduate students, mobile games are more well-known than computer games. There's more academic pressure and longer educational years for medical undergraduate students than for other college students. Computer and smartphone games give a way of relaxing for medical undergraduate students. Medical students' online game time and the factors impacting this time can change from those affecting students in other majors. Among game addiction symptoms, escape from negative emotions such as anxiety, sadness and anger were the only critical thing connected to depression. This research proposes that Internet games may be used by adults with online game addiction and sadness to break free from negative feelings.⁹

Research Limitations

The limitation of this study is that information in this research use questionnaire which is very dependent of the honesty of the respondent to bear a correct yet accurate result. This research involves a specific population group which is the medical students of University Udayana, in which the result may or may not be applied to the general population. The environmental factor that has caused online addicts to be depressed is yet to be carried out in this research. Due to this pandemic, communications among students have reduced, hence it took longer time than necessary to compile 238 data of students to fill out the questionnaire. Moreover, the p value in this research is not significant due to the fact that the sample targets were focused primarily on the medical students studying in university of Udayana and that there is no relationship between depression and online game addiction.

4. CONCLUSION

One of today's huge phenomena is online gaming. However, when the players prioritise gaming over other abnormally, they become exposed to Internet Gaming Disorder. A person suffering from this may also face problems such as, family problems, social problems, poor academic problems, significant weight gain or weight loss, sleep disruptions, skipping meals, mood changes, financial problems, poor work performance and health problems.

Internet Game Addiction is measured based on, gender, number of hours spent and depression due to online gaming among students that are studying in the Faculty of Medicine in the University of Udayana, where the data will be collected in the form of questionnaire based on the Development of Indonesian Online Game Addiction Questionnaire and The Beck Depression Inventory-II.

The prevalence of online game addiction is 50,0%. There is no correlation between gender, age, batch, online game addiction, time spent and depression for online gaming.

5. RECOMENDATION

It is necessary to do further descriptive research related to the device used for online games by students' which is could affect the strong relationship that is formed with the addiction, to increase the number of samples so that the research becomes more representative, to include environmental factors that causes depression among online gamers, and to improve the communication among students to obtain the data in a quicker way

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