



## ARTICLE

### THE RELATIONSHIP OF ONLINE GAME ADDICTION TO CHANGES IN EMOTIONAL REGULATION OF MEDICAL FACULTY STUDENTS AT MARANATHA CHRISTIAN UNIVERSITY

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#### ABSTRACT

Online games are a type of game that can be played on various devices and connected to the Internet network so that it can be used to play online games, if played continuously with a long intensity can cause a person to be addicted to online games and have an impact on mind disorders and emotional and mental health. Faculty of Medicine students have a busy schedule, so they play online games to overcome the boredom. This study is to determine the relationship between online game addiction and changes in emotional regulation of Maranatha Christian University Medical students. This study used an analytical method with a cross sectional research design with a total research sample of 132 students. The results of the spearman correlation test where the p value = 0.001 is obtained, meaning that there is a very significant correlation between online game addiction and emotional regulation. The r value is 0.688, which means that there is a strong relationship between online game addiction and emotional regulation and has a positive pattern. There is a strong relationship between online game addiction and emotional regulation in Maranatha Christian University Medical faculty students class of 2021 and 2022.

**Keywords:** Online games, Addiction, Emotional regulation

#### АБСТРАКТ

Онлайн-игры — это тип игр, в которые можно играть на различных устройствах, подключенных к сети Интернет, чтобы можно было играть в онлайн-игры. Если играть в них непрерывно с большой интенсивностью, это может привести к зависимости от онлайн-игр и повлиять на психические расстройства, а также эмоциональное и психическое здоровье. Студенты медицинского факультета имеют плотный график, поэтому они играют в онлайн-игры, чтобы преодолеть скуку. Цель данного исследования – определить взаимосвязь между зависимостью от онлайн-игр и изменениями в эмоциональной регуляции у студентов медицинского факультета христианского университета Маранафа. В исследовании использовался аналитический метод с перекрестным дизайном исследования, общий объем выборки составил 132 студента. Результаты теста корреляции Спирмена показали, что значение  $p = 0,001$ , что означает наличие очень значимой корреляции между зависимостью от онлайн-игр и эмоциональной регуляцией. Значение  $r$  составляет 0,688, что означает, что существует сильная взаимосвязь между зависимостью от онлайн-игр и эмоциональной регуляцией, которая имеет положительную тенденцию. Существует сильная взаимосвязь между зависимостью от онлайн-игр и эмоциональной регуляцией у студентов медицинского факультета христианского университета Маранафа 2021 и 2022 годов выпуска.

**Ключевые слова:** Онлайн-игры, Зависимость, Эмоциональная регуляция

## INTRODUCTION

Online games are one type of game that can be played on various devices, including computers, cellphones, game consoles, laptops, and other gaming devices that can be connected to the internet data network so that they can be used to play online games. Among teenagers there are several online games that can be played such as Mobile legends which are in great demand. Mobile legends games have a very significant development and are very popular among teenagers, especially among men, this game is not limited by the playing time, so it can be played within 24 hours non-stop, but in reality this makes them experience addiction in playing games compared to people who only play the game in a reasonable time. This addictive behavior can cause significant psychosocial impairment and decline known as Internet Gaming Disorder (IGD).<sup>1</sup>

Online gaming addiction is a form of addiction caused by rapidly developing internet technology, so it is referred to as internet addiction disorder. Current technological advances can cause a person to experience addiction, where an example is addiction to computer games.<sup>2</sup> WHO states that game disorder is a disorder caused by three addictive behaviors or a disorder caused by habit or addiction.<sup>3</sup>

Emotional is something related to the way a person shows emotional feelings, where emotionally a person's ability to use emotions effectively and be able to control themselves.<sup>4</sup> The emotions that each person has are different, which usually appear as an emotional outburst in a very short period of time.<sup>5</sup> Based on James Lange's theory, emotions are the result of the perception of bodily states (feel emotion is the perception of bodily states), according to Gross, emotion regulation is a process to shape one's emotions and a way to express emotional expression. Meanwhile, according to Thompson, emotion regulation is a person's ability to change emotional reactions to behave according to situations and conditions.<sup>6</sup>

According to Mita Annisa's research, the correlation result is 0.923, which means that this study has a very strong relationship between the independent variable and the dependent variable. Furthermore, the R-square value is 85.2, which

means that there is an influence of online game addiction as an independent variable on emotions as the dependent variable of 85.2%.<sup>2</sup> Therefore, online games have a big impact on changes in a person's emotions such as loss of control, anger, irritability, and emotionality when playing, if this behavior is carried out continuously, it can damage the character of the player.

## MATERIAL AND METHODS

This study used a cross-sectional design with analytic methods. In this study using the whole sampling technique where the entire population was used as a sample, namely students of the Faculty of Medicine class of 2021 and 2022, totaling 134 people who met the inclusion criteria. Active students of the faculty of medicine class of 2021 & 2022 male gender, Playing online games since 3 months ago. Willing to fill out the questionnaire. Age range 19-22 years.

A request for a research ethics letter from the Faculty of Medicine at Maranatha Christian University was made to conduct research on medical students in the 2021 and 2022 batches. Data collection for research by distributing questionnaires in the form of google forms, after the data is obtained, it will be analyzed by spearman correlation analysis with the help of SPSS software.

## RESULT

### Respondent Characteristics

**Table 1** Distribution of Research Subjects Based on Number of Batches

Variable number of batches	Number Responden
Class of 2021	68
Class of 2022	64

Based on table 1, it is found that the number of 2021 students who filled out the questionnaire completely and in accordance with the criteria were 68 students and the 2022 batch filled out the questionnaire completely and in accordance with the criteria were 64 students.

**Table 2** Distribution of Research Subjects by Type of Online Game

Online game type variable	Amount (n=132)	Percentages (%)
Massively multiplayer online role playing games	14	10,6
Massively multiplayer online first-person shooter games	31	23,5
Massively multiplayer online real-time strategy games	21	15,9
Multiplayer online battle arena	57	43,2
Simulation games	21	6,8

Based on table 2, the majority of Maranatha Christian University medical students class of 2021 and 2022, where the type of game that is widely played is Multiplayer Online Battle Area there are 57 students (43.2%).

**Table 3** Distribution of Research Subjects Based on Reasons for Playing

Variable reasons for playing online games	Amount (n=132)	Persentase (%)
For entertainment	47	35,6
Stress with tasks	25	18,9
Bored/tired	32	24,2
For leisure time	28	21,2

Based on table 3, the majority of medical students at Maranatha Christian University class 2021 & 2022, the number of respondents who chose to play online games for entertainment was 47 students (35.6%).

**Table 4** Distribution of Research Subjects Based on Length of Play

Variable length of time playing online games	Amount (n=132)	Percentages (%)
3 month	30	22,7
3-5 month	45	34,1
> 6 month	57	43,2

Based on table 4, the majority of medical students at Maranatha Christian University, class of 2021 and 2022, have played online games for more than 6 months, namely 57 students (43.2%).

**Table 5** Distribution of Research Subjects Based on Online Game Addiction

Online game addiction variable	Amount (n=132)	Percentages (%)
Not Addicted	69	52,3
Addicted	63	47,7

Based on table 5, the use of online games from 132 samples of research respondents, the majority did not experience addiction in using online games, namely 69 students (52.3%).

**Table 6** Distribution of Research Subjects Based on Online Game Addiction

Emotional regulation variable	Count (n=132)	Percentage (%)
Strong Emotional Regulation	79	59,8
Weak Emotional Regulation	53	40,2

Based on table 6 emotional regulation of 132 samples of research respondents, the majority had strong emotional regulation, namely 79 people (59.8%).

This bivariate analysis describes the effect of online game addiction on emotional regulation in Faculty of Medicine students. The results of the analysis are presented in table 7 below:

**Table 7** Analysis of the Effect of Online Game Addiction on Emotional Regulation in Medical Students Class of 2021 and 2022

Variable	Median	Minimum	Maksimum	P Value
Online gaming addiction	55,50	24	88	0,001
Emotional regulation	50,50	16	70	

Based on table 7, the statistical test results show that there is a very significant correlation between online game addiction and emotional regulation, where the p value = 0.001 is obtained. The r value is 0.688, which means that there is a strong influence between online game addiction and emotional regulation and is positively patterned, meaning that the higher the online game addiction, the weaker the emotional regulation or vice versa, the higher the non-addiction, the stronger the emotional regulation.

## DISCUSSION

### Types of Online Games

Based on data analysis of the majority of medical students at Maranatha Christian University class of 2021 and 2022, where the type of game that is widely played is Multiplayer Online Battle Area there are 57 students (43.2%). Multiplayer Online Battle Area games are games that are more in demand among teenagers where examples of games are Mobile Legends, League of Legends, DotA.<sup>2</sup>

The results of this study are in line with research conducted by Amran where the type of online game that is in great demand is the Mobile Legends game, where Mobile Legends is a type of game that belongs to the Multiplayer Online Battle Area genre. The advantages of this type of game can be played continuously and have small data storage, so it can be played via cellphone.<sup>7</sup>

### Reasons for Playing Online Games

Based on data analysis of the majority of 2021 and 2022 Maranatha Christian University medical students, the reasons for playing online games where the number of respondents who chose to play online games for entertainment were 47 students (35.6%). According to Halawa's research where most students who play online games to fill their free time are 42 students. For some teenagers, playing online games is a very fun activity, where they can play these online games to entertain or as an entertainment tool to divert their busy lives.<sup>8</sup>

### Length of Time Playing Online Games

Based on data analysis, the majority of medical students at Maranatha Christian University class of 2021 and 2022 have played online games for more than 6 months, namely 57 students (43.2%). According to research conducted by Febriandari, based on the length of time playing online games, the most respondents have more than 24 months as many as 37 respondents (74%), this causes adolescents to know more about online games and how to play and can be at risk of addiction. Lemmens said that someone can be said to be addicted to playing online games if they have been playing online games for at least 6 months since they started playing.<sup>9</sup>

### Online Game Addiction

Based on data analysis of the use of online games from 132 samples of research respondents, the majority did not experience addiction in the use of online games, namely 69 students (52.3%), which means that there were only 63 students (47.7%) who experienced addiction to playing online games. In line with Sriadiatmaji's research where data analysis was obtained on addiction to the use of online games from 114 respondents, the majority did not experience online game addiction as many as 93 respondents (81.6%).<sup>10</sup>

In Baidawi's research, it is said that students do not experience addiction in playing online games because they are able to limit the time in playing online games, besides that they also do a lot of coursework, participate in activities on campus and do other activities. students who play online games only aim to reduce boredom, stress on assignments and to fill spare time.<sup>11</sup>

The cause of a person experiencing addiction to online games is due to a loss of self-control over playing time and feeling the need to play games increasing in number, emotional instability if there is a reduction in time to play games, and withdrawal symptoms, namely someone who wants to stop playing online games but he is unsuccessful and will cause the desire to play again. Factors that do not affect online game addiction are time compliance, friends who have a positive impact, being able to relate to the social environment, good parenting, and fast self-control.<sup>12</sup>

### Emotional Regulation

The results showed that students who have strong emotional regulation have the most answers, namely 79 students out of 132 respondents (52.3%). These results explain that students have the ability to control emotions, feelings and behavior possessed by a student. Mahrita's research shows that a high level of emotional regulation has the most respondents, namely 38 respondents (73.1%), so it can be concluded that MAN 3 Banjarmasin Class X students who play online games are able to control and understand the emotions that arise and are able to manage them.<sup>13</sup>

According to Astuti, emotional regulation is an individual's ability to control emotions, feelings and thoughts that the individual has, if a person can control his emotions well, he will find it easy to forgive and reduce the anxiety, anger and depression he feels. Emotion regulation can be seen when someone is emotional and the way someone expresses their emotions.

A person's ability to handle their emotions effectively will have a positive impact on their physical, behavioral and social relationships. Adolescents who are unable to control their emotions well tend to have an aggressive nature that can harm others and themselves.<sup>14</sup>

### Analysis of the Relationship between Online Game Addiction and Emotional Regulation

The results obtained a probability value of 0.001 which is smaller than 0.05 ( $p=0.001 < 0.05$ ), it can be concluded that there is a very significant correlation between online game addiction and changes in emotional regulation in students of the Faculty of Medicine, Maranatha Christian University. The correlation value is 0.688, which means that there is a strong influence between online game addiction and emotional regulation and is positively patterned, meaning that the higher the GAS score of online game addiction, the weaker the emotional regulation DERS score. This is in accordance with research conducted by I Gusti Ayu entitled "The relationship between online game addiction and children's emotional changes at SMP Negeri 2 Denpasar". The results of the correlation test analysis show that there is a relationship between online game addiction and emotional changes with a p value of 0.001 and a correlation value of 0.606, which means that the higher the level of addiction experienced by students, the higher the emotional changes.<sup>11</sup>

In contrast to Sriadiatmaji's research on online game addiction with emotional intelligence where the probability value is 0.490 which is greater than 0.05, which means that there is no relationship between online game addiction and the emotional level of students at the Faculty of Medicine, Islamic University of Bandung, where there are still factors related to addiction other than emotions such as learning achievement.<sup>10</sup> According to Made's research, the results of the correlation coefficient in the hypothesis test have a moderate level of relationship, namely-



0.550 with a negative relationship direction (0.400-0.599), which means that the higher the intensity of playing online games, the lower the emotional intelligence.<sup>15</sup>

Online game addiction can be caused because they play it continuously and do not care about the time to play, which if done can cause problems in their health and can also have an impact on emotions that are unstable, uncontrollable and easily irritated which will cause disruption of their emotional regulation.<sup>5</sup>

In Winanda Nata's research, said that emotional regulation can control and direct us in acting and limit ourselves when playing online games which will make the duration of playing online games lower, where this shows that emotional regulation can be a controller of the desire to continue playing online games, the higher a person's emotional regulation, the lower the intensity in playing online games or vice versa the lower the emotional regulation, the higher the intensity in playing online games.<sup>16</sup>

## CONCLUSION

Based on the results of the research that has been done, it can be concluded that online game addiction is related to emotional regulation in students of the Faculty of Medicine, Maranatha Christian University Bandung.

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## DECLARATIONS

The author contributed to ideas, as well as ideas and thoughts in writing this scientific journal. the author states that in this study there are no conflicts that occur

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