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# BETWEEN STRESS LEVELS

*by* Bu Nurhid

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## Original Research Article

# RELATIONSHIP BETWEEN STRESS LEVELS AND ONLINE GAME ADDICTION IN ADOLESCENTS

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### Abstract

**Background:** Factors that trigger stress in adolescents are academic, interpersonal, and family stress. The teenager will feel happy just by playing various game online applications contained in smartphones, but the problems that were previously faced were not resolved.

**Objectives:** This study aimed to determine the relationship between stress levels and online game addiction in adolescents at Hidayatul Ummah High School Surabaya.

**Methods:** This study used an observational approach with a cross-sectional method. The population in this study were all students of classes X, XI, and XII, totaling 80 students. The sample size is 80 students with the Simple Random Sampling method. Data analysis using Spearman Rank test. The variables in this study are stress levels and online game addiction. The instrument used to measure stress level is a Perceived Stress Score (PSS) and Measurement of game addiction using the Indonesian Online Game Addiction Questionnaire.

**Results:** The results of data analysis using the Spearman Rank test with the results = 0.002 which means there is a significant relationship between stress levels and online game addiction in adolescents at Hidayatul Ummah High School Surabaya. The results in this study were the students of grades X, XI, and XII at Hidayatul Ummah High School Surabaya experienced a moderate level of stress with online game addiction in the category of severe addiction.

**Conclusion:** The level of stress with online game addiction carried out at Hidayatul Ummah High School Surabaya mostly experienced moderate stress levels and heavy category addiction to online games.

**Keywords:** Online game addiction, stress level, teenagers.

## INTRODUCTION

In this era of globalization, the problems experienced by teenagers are very complex and diverse. Adolescents who have difficulty in adjusting to their social environment, and there are still many facts in society that show the

inability of adolescents to adapt to the social environment and the development of the times is getting faster, it is not uncommon for people to experience stress due to their inability to adapt to the social environment (El-Azis & Rahayu, 2017).

Data from Riskesdas (Basic Health Research) 2018 shows the prevalence of emotional mental disorders as indicated by symptoms of stress, depression, and anxiety for ages 15 years and overreaching around 6.1% of the total population in Indonesia or equivalent to 11 million people (Kemenkes RI, 2018). The official website for Indonesian online games, iNews.id stated that based on data obtained from the Newzoo Global Games Market Report 2020, the amount of revenue from mobile gaming globally in 2020 increased by 13 percent and for online game players alone it exceeded 3 billion players until 2023. Based on the data According to statistics, there are 50.8 million online game users in 2020. This is inseparable from the work from home (WFH) policy and learning from home. So that it makes online game application users soar, it is even predicted to increase by 21.6 percent in 2025.

The rise of online games causes teenagers to want to play the game. Teenagers assume that by playing online games all feelings of tiredness and stress (whether it comes from themselves or parents, teachers, or others) can be reduced and even eliminate the stress, so gamers who are still beginners feel the positive impact of playing online game. If online games are played continuously without any self-control from the teenager, they will become addicted to online games. The game addiction phase is a situation where a player will find it very difficult to get out of the game (Wulan, Dani, & S, 2014).

Adolescents who experience problems or are in an environment full of stressors or stressors will try to get out to find a situation where they feel comfortable. Factors that trigger stress in adolescents are academic, interpersonal, and family stress. One way that teenagers can do this is to use game applications available on smartphones with the aim of refreshing. The teenager will feel happy just by playing various game applications contained in the smartphone, but the problems that were previously faced were not resolved. One of the applications used by teenagers in smartphones is online games (Setyatno, 2015).

To deal with someone who is experiencing stress, nurses must be able to facilitate adolescents who are experiencing stress, nurses must take nursing actions by the principles of stress management. A nurse's role in providing promised services promptly, accurately and satisfactorily, honestly, safely, appropriately, on time of availability. This means that a nurse can to serve each patient according to the time needed (Fauziah, 2016).

The role of nurses as educators explains to parents about the changes that occur in adolescents when they are exposed to online game addiction and changes in time, nature and explains the signs of addiction in adolescents to a high level of addiction and provides health education to someone who is addicted to online games. to be wiser in using technology in the internet field, especially in online games. In addition, the role of nurses in online game addiction is as a role model, because we as nurses are the nation's next generation in the health sector, therefore we must be able to encourage or improve the level of health starting from ourselves as role models. The nurse also explained the interests and problems faced by adolescents (Pratama, Widianti, & Hendrawati, 2019). One of the mental disorders that can occur in online game addicts is stress. Therefore, the authors are interested in examining whether there is a relationship between stress and online game addiction in adolescents at Hidayatul Ummah Senior High School Surabaya.

## **METHODS**

### *Study Design*

This study used an observational approach with a cross-sectional method.

### *Setting*

This research was conduct in Hidayatul Ummah Senior High School on 5 July – 8 August 2021.

### *Research Subject*

The population in this study were all students of classes X, XI, and XII, totaling 80

students. The sample size is 80 students with Probability Sampling technique with the Simple Random Sampling method. The criteria inclusion: All of student in Hidayatul Ummah Senior High School, student who play games with a duration of more than 30 – 60 minutes, criteria exclusion: Student who do not fill out the questionnaire completely.

#### *Instruments*

The instrument used to measure stress level is a Perceived Stress Score (PSS). The individual scores on the PSS could range from 0 to 40, which were grouped into 3 groups. 1) Low stress: Scores ranging from 0-13. 2) Moderate stress: Scores ranging from 14-26. 3) High perceived stress: Scores ranging from 27-40. PSS has a reliability score of 0.81 and reliability of 0.781 (Ramesh Bhat, M., Sameer, M. K., & Ganaraja, B.2012)

Measurement of game addiction using the Indonesian Online Game Addiction Questionnaire. The Indonesian Online Game Addiction Questionnaire has good item-total correlation (ranging from 0.29 to 0.55) and acceptable reliability ( $\alpha=0.73$ ). It is also moderately correlated with the participant's longest time record to play online games ( $r=0.39$ ;  $p<0.01$ ), average days per week in playing online games ( $\rho=0.43$ ;  $p<0.01$ ), average hours per days in playing online games ( $\rho=0.41$ ;  $p<0.01$ ), and monthly expenditure for online games ( $\rho=0.30$ ;  $p<0.01$ ).

#### *Data Analysis*

Data analysis using Spearman Rank test. The variables in this study are stress levels and online game addiction.

#### *Ethical Consideration*

This research with ethical clearance number 038/027/VII/EC/KEP/Lemb.Candle/2021.

## **RESULTS**

### *Characteristics of Respondents based on Gender, Age, Stress Level, and Addiction Level on Online Games*

**Table 1.** Distribution of Respondents Characteristics based on Gender, Age, Stress Level, and Addiction Level on Online Games in the Hidayatul Ummah Senior High School on 5 July – 8 August 2021.

No	Characteristic	Frequency (n)	Percentage (%)
1	Gender		
	Male	32	40%
	Female	48	60%
2	Age		
	Early teens	10	12.5%
	Middle teens	43	53.8%
	Late teens	27	33.8%
3	Stress level		
	Low	9	11.3%
	Moderate	58	72.5%
	High	13	16.3%
4	Game online addiction		
	Heavy addiction	61	76.3%
	Mild addiction	19	23.8%
	Total	80	100%

Sources: Primary Data of Questionnaire, 2021.

The results on table 1 showed that most of the students' sexes were female with a frequency of 32 (60%). Most of the students were in middle teens with a frequency of 43 (53.8%). At the stress level, most of the students, 58 respondents (72.5%) were at moderate stress level. Meanwhile, on the parameter of online game addiction, most of the students, 61 respondents (76.3%) experienced severe addiction to online games.

### *Relationship between Stress Level and Addiction Level on Online Games using Spearman Rank Test*

Table 2 showed that from 80 respondents, 54 respondents (93.1%) with moderate stress levels with severe addiction, and as many as 4 respondents (6.9%) with moderate stress levels

with a mild addiction. From the output obtained, the correlation coefficient shows several 0.355, which means that the level of strength of the relationship between the stress level variable and online game addiction is positive so that the relationship between the two variables is in the same direction, thus it can be interpreted that the higher the level of stress felt by students, the more severe it is. addiction to online games caused.

**Table 2.** Relationship between Stress Level and Addiction Level on Online Games using Spearman Rank Test in the Hidayatul Ummah Senior High School on 5 July – 8 August 2021.

Stress Level	Game Online Addiction		Total n (%)
	Heavy addiction n (%)	Mild addiction n (%)	
Low	4 (44.4%)	5 (55.6%)	9 (100%)
Moderate	54 (93.1%)	4 (6.9%)	58 (100%)
High	11 (15.4%)	2 (15.4%)	13 (100%)
Total	61 (76.3%)	19 (23.7%)	80(100%)
Rank Spearman Test		P= 0.002	

Sources: Primary Data of Questionnaire, 2021.

**DISCUSSION**

Stress is caused by teenagers' negative thoughts on the demands of learning and pressures in life By Rahmawati's research (2016). In general, stress always appears in life, the problem is how well teenagers can to adapt and deal with it. Stress itself is not a threatening thing but can have an impact on the body and health if left unchecked. To overcome stress in adolescents, it is recommended that parents pay more attention to the behavior or activities of children and try to be open to each other so that the child's problems can be resolved (M. Anugrah Maulana, Erti I. Dewi, 2020).

Kumia, D. (2017) classifying two categories of coping mechanisms that are commonly used, namely adaptive coping mechanisms and maladaptive coping mechanisms. Adaptive coping mechanisms are mechanisms that support the function of integration, growth, learning, and achieving goals. The categories are talking to other

people, solving problems effectively, relaxation techniques, balanced and constructive exercises. Maladaptive coping mechanisms are coping mechanisms that inhibit integration functions, break down growth, and tend to dominate the environment. The category is avoidance, do not want to eat/eat a lot. An individual in solving problems differs from one another, some are adaptive and maladaptive, where an adaptive way will suppress negative behavior forms while a negative way will increase risk in the form of negative behavior. One of the first reasons is because of the attitude of the family that makes their children less attentive because parents are too busy taking care of their work, and secondly, because the pressure of parents is demanded to be by the wishes of the parents which is contrary to their wishes and creates pressure on the individual.

By Diananda's research, A. (2019) explains that there are problems that arise from excessive online gameplay activities, including stress, lack of concern for social activities, financial health, and other important life functions. The more often a person plays online games can cause the person to become addicted. addicted players will feel there is nothing left to do but play online games (Novrialdy, 2019).

Based on the results of the study in table 2, in line with research conducted by McClelland (2015) states that online game addiction can be a means to produce pleasure. if online game players stop playing games, it can cause unpleasant feelings, stress, anxiety, and depression and if online game players play again, players will increase the intensity of playing. They admit that because of the many assignments given by school teachers, and parents who are busy with their respective jobs (Wahyuningsih et al., 2019).

Adolescents are very easily influenced by peers who want to participate in causing problems, for example experiencing addiction to online games. The behavior of someone who always plays online games who forgets the time can disrupt productivity in adolescents such as disrupting sleep patterns, spending money for

one school for the need to play online games, emotional changes that result in role conflict can lead to teenagers being addicted to online games. online game addiction behavior pattern disorder characterized by mental disorders and prioritizing playing online games over other activities in daily life.

## CONCLUSION

The level of stress in adolescents affects addiction to online games, so it takes the role of nurses as educators and gives direction to parents to implement appropriate parenting styles for children.

## SUGGESTIONS

This research can be continued in providing education and how to handle online game addiction in adolescent.

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## DECLARATION OF CONFLICTING INTEREST

The authors have consented and no conflicting interests.

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## AUTHOR CONTRIBUTION

**Nur Hidaayah:** Conceptualization, methodology, writing-original draft.

**Esti Yunitasari:** Software, validation, and formal analysis.

**Hanik Endang Nihayati:** Investigation, resources, and data duration.

**Ratna Yunita Sari:** Visualization, project administration.

**Imamatul Faizah:** Writing-review and editing.

**Hilliyatul Aulia Makhsusoh:** Funding acquisition.

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