

## Relationship between online game addiction and sleep quality in students

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### Abstract

This study aims to analyze and evaluate the relationship between online game addiction and sleep quality in students at senior high school 1 Lubuk Sikaping. The method used in this study is a quantitative method with descriptive and correlational research types. The sample in this study amounted to 30 students of class XII at senior high school 1 Lubuk Sikaping. The data were analyzed using descriptive analysis techniques and Pearson product moment correlation analysis with the help of the JASP version 16.3 program. The results of the study revealed that online game addiction of students at senior high school 1 Lubuk Sikaping is generally in the high category, and sleep quality in students at senior high school 1 Lubuk Sikaping is generally in the low category, and there is a significant relationship between online game addiction and sleep quality at students at senior high school 1 Lubuk Sikaping.

**Keywords:** Online game addiction, sleep quality

**How to Cite:** Silvia, F., Ifdil, I., Amalianita, B., & Muryono, S. (2022). Relationship between online game addiction and sleep quality in students. *Konselor*, 11(4), 145-151. doi:<https://doi.org/10.24036/02022114119673-0-00>



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## Introduction

Adolescence can be said to be a period of transition from childhood to adulthood (Illahi, Neviyarni, Said, & Ardi, 2018; Prayitno, 2006; Suryani, 2013). Adolescence also need to make an adjustment to the changes that arise at this time (Santilli, Nota, & Hartung, 2019; Santrock, 2011). In this period, adolescents are required to socialize so that they can mingle and adapt (Ifdil, Putri, & Amalianita, 2021; Utami, Ahmad, & Ifdil, 2017). Adolescents are also faced with developmental tasks that must be fulfilled (Denich & Ifdil, 2015; Fitri, Zola, & Ifdil, 2018). One of them is that teenagers need adequate and good sleep during their development (Prasetyaningtyas, Nasri, & Amalianita, 2020; Shochat, Cohen-Zion, & Tzischinsky, 2014).

Sleep is a biological process that is common to everyone (Berman et al., 2018). Sleep is a physical need that is often ignored by someone without realizing it (Cacioppo & Cacioppo, 2014; Prasetyaningtyas, et al., 2020). In this adolescent period in addition to food and vitamin intake, sleep is important in growth and development. That's how important it is to have good quality sleep, not least in this day and age (Potter, 2006). Advances in information technology make a change in people's lives (Amalianita & Nirawana, 2021; Harahap & Firman, 2021). Technological progress is marked by the emergence of various new technologies baru (Ifdil, Putri, et al., 2021; Sari, Ifdil, Sano, & Yendi, 2020). One of them is the internet with its entertainment media in the form of online games. The internet is one of the global communication and information networks used by millions of people around the world (Fadli, Amalianita, Zola, Situmorang, & Ifdil, 2021; Ifdil, Putri, et al., 2021). The world is currently experiencing very rapid and significant progress in all lines of life, including the development of online games (Abdi & Karneli, 2020).

Based on the results of the Mobile Marketing Association (MMA) study, the number of online game players in Indonesia reached 60 million people (Aziz, Setyawan, & Saddhono, 2021; Septian, Susilowati, & Zulkarnain, 2021). According to the results of the Decision Lab survey in 2018, the most online game

players in Indonesia are teenagers aged 16-24 years (Dewi & Natalia, 2021; Ningrum & Cahyono, 2022). Online games are games in the form of adventure, strategy setting, simulation and role playing that have rules of the game, so as to make players feel happy because they get satisfaction and can be accessed by many players, which are connected to the internet, via computers, laptops, cellphones, and tabs (Jannah, Mudjiran, & Nirwana, 2015). These teenagers do not realize the pleasure they feel when playing online games can have a negative impact in the form of addiction (Kurniasanti, Assandi, Ismail, Nasrun, & Wiguna, 2019). Addiction is a continuous involvement with an activity even though these things lead to negative consequences (Manic, 2022; Romadlan & Maududi, 2022; Vera & Netrawati, 2019).

A person's behavior is strongly influenced and stimulated by desires, needs, goals, and satisfaction, so it can be said that every activity carried out by a person always has a motive (Nasution, Suhaili, & Alizamar, 2017). In line with that, individuals who show symptoms of internet addiction and online games will lead to emotional mental problems (Fadli, et al., 2021). Based on a study conducted by Yustina (2021) in high school youth in the city of Ruteng, basically students who are addicted to online games tend to experience poor sleep quality. In this regard, the use of technology in counseling has grown very rapidly (Ardi, Yendi, & Ifdil, 2013). Therefore, school counselors can also play a role in alleviation that is carried out to reduce the level of addiction experienced by students (Amalianita, Firman, & Ahmad, 2021; Sandra & Ifdil, 2015).

Based on the results of interviews with school counselor at senior high school 1 Lubuk Sikaping, information was obtained that there were many cases of students sleeping late because of playing online games, and many students also chose not to go to school without explanation. When asked the reason why they did not go to school without explanation by the guidance counselor, they admitted that they felt tired after playing online games until late at night, and did not have time to rest and sleep quality. This is very bad and can be detrimental to students. Therefore, good sleep quality affects the readiness and enthusiasm of students to take part in the learning process at school. Students who like to play online games, to become addicted tend to forget about resting time and there is a decrease in the quality of their sleep. This study aims to analyze and evaluate the relationship between online game addiction and sleep quality in students at senior high school 1 Lubuk Sikaping

## Method

The method used in this study is a quantitative method with descriptive and correlational research types. The sample in this study was selected using a purposive sampling technique (Creswell, 2002; Sugiyono, 2011; Tashakkori & Creswell, 2008). The sample in this study were students of class XII at senior high school 1 Lubuk Sikaping as many as 30 students. Data were collected by administering online game addiction instruments and sleep quality instruments arranged according to a Likert scale to class XII students at senior high school 1 Lubuk Sikaping. The data were analyzed using descriptive analysis techniques and Pearson product moment correlation analysis with the help of the JASP version 16.3 program.

## Results and Discussion

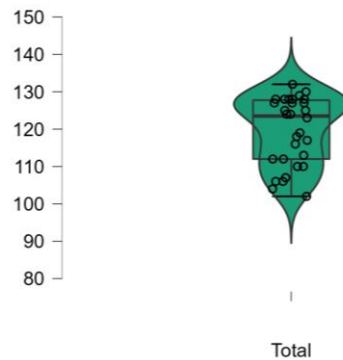
The description of online game addiction data on students at senior high school 1 Lubuk Sikaping, while the data obtained can be seen in table 1 as follows:

**Table 1 <Addiction Frequency Distribution Game Online n=30>**

Category	Interval	Frequency	%
Very High	$\geq 125$	13	43,33
High	101-124	17	56,67
Moderate	77-100	0	0
Low	53-76	0	0
Very Low	29-52	0	0
<b>Total</b>		<b>30</b>	<b>100</b>

Based on table 1, it is known that the online game addiction experienced by students is mostly in the high category with a total of 17 people with a percentage of 56.67%. Then 13 people were addicted to online games with a very high category with a percentage of 43.33%. This shows that students' online game addiction is mostly in the high category.

Furthermore, the visualization of student Game Online data can be seen in Figure 1.



**Figure 1 < Online Game Addiction Boxplots>**

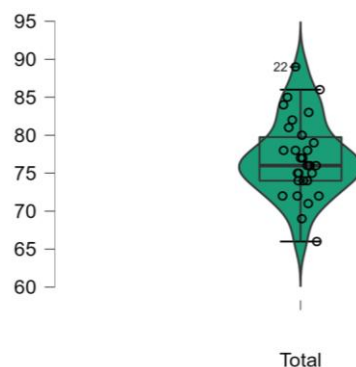
Based on table 1, the results show that online game addiction experienced by students at senior high school 1 Lubuk Sikaping is generally in the high category with a frequency of 30 students. Among them are 13 students who experience very high online game addiction with a percentage of 43.33%, 17 students who experience high online game addiction with a percentage of 56.67%, and there are no students who experience moderate, low, and very low online game addiction. . This means that the online game addiction of students at senior high school 1 Lubuk Sikaping is generally in the high category.

The description of sleep quality data on students at senior high school 1 Lubuk Sikaping, while the data obtained can be seen in table 2 as follows:

**Table 2 <Frequency Distribution of Sleep Quality n=30>**

Category	Interval	Frequency	%
Very High	125	0	0
High	101-124	0	0
Moderate	77-100	14	46,67
Low	53-76	16	53,33
Very Low	29-52	0	0
<b>Total</b>		<b>30</b>	<b>100</b>

Based on Figure 2, it is known that the sleep quality of students is mostly in the low category with a total of 16 people with a percentage of 53.33%. Then 14 people have moderate sleep quality with a percentage of 46, 67%. This shows that the sleep quality of students is mostly in the low category. Furthermore, the visualization of student sleep quality data can be seen in Figure 2 below.



**Figure 2 <Boxplots of Sleep Quality in Students>**

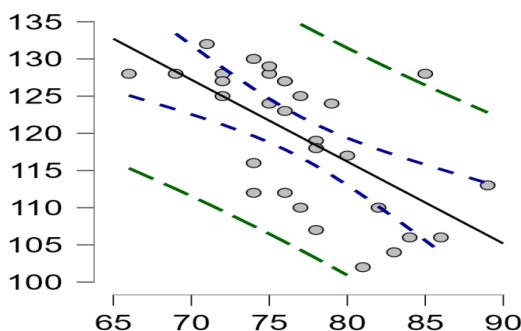
Based on table 2, the results show that the sleep quality of students at senior high school (SMAN) 1 Lubuk sikaping is generally in the low category with a frequency of 30 students. Among them are 14 students who have moderate sleep quality with a percentage of 46.67%, 16 students who have low sleep quality with a percentage of 53.33%, and there are no students who have very high, high, and very low sleep quality. This means that the sleep quality of students at senior high school (SMAN) 1 Lubuk sikaping is generally in the low category.

Furthermore, to determine the relationship between online game addiction and sleep quality in students at senior high school (SMAN) 1 Lubuk sikaping, hypothesis testing was carried out using the Pearson product moment correlation analysis technique. The following are the results of the calculation of the correlation coefficient which can be seen in table 3 as follows:

**Table 3 <Correlation of Online Game Addiction (X) with Sleep Quality in Students (Y)>**

		Pearson's r	P
Online Game Addiction	Sleep Quality in Students	-0.621	001

Furthermore, the visualization of the relationship between Online Game Addiction with Sleep Quality in Students can be seen in Figure 3 below.



**Figure 3 <Correlation Plot Relationship of Online Game Addiction with Sleep Quality in Student>**

Based on table 3 the results of data processing using the JASP version 16.3 program, it can be stated that there is a significant relationship between online game addiction and sleep quality in students at senior high school 1 Lubuk Sikaping with a correlation coefficient of -.621 with a p value of 0.001 smaller than the 0 significance level. .05. This proves that the hypothesis which states that there is a relationship (correlation) between online game addiction and sleep quality in students at senior high school 1 Lubuk Sikaping is accepted.

Online game addiction has enormous consequences, because teenagers usually forget about other activities, one of which is sleeping And also based on online game addiction is at risk of causing sleep problems including experiencing insomnia, short sleep duration, and poor sleep quality (Babushkina, Belokopytova, Grachev, Meko, & Vaganov, 2017; Turner, Johnston, Kebritchi, Evans, & Heflich, 2018). The time that should be used to rest is actually spent playing online games, if it is severe it can also cause stress and depression that can harm the students themselves (Hossin, Islam, Billah, Haque, & Uddin, 2022; Kaplan MD et al., 2022; Nguyen, Yang, Lee, Nguyen, & Kuo, 2022).

From the results of research data conducted at senior high school 1 Lubuk Sikaping,, it shows that there is a relationship between online game addiction and sleep quality in students. It is clear from the acquisition of a high percentage of online game addiction experienced by students at senior high school 1 Lubuk Sikaping, meaning that some students at senior high school 1 Lubuk Sikaping have severe addiction to online games. Most students experience severe addiction to online games, namely by the level of intensity of playing online games that is excessive to the point of forgetting the time, more concerned with playing online games than daily activities that should be done, as well as various problems experienced by

(Relationship between online game addiction ... )

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students due to addiction to playing online games (Ifdil, Amalianita, Fadli, Zola, & Putri, 2021; Qiu et al., 2022; Suryahadikusumah & Kurniasari, 2020).

While the percentage of sleep quality obtained by students at senior high school 1 Lubuk Sikaping is low, meaning that some students at senior high school 1 Lubuk Sikaping have poor sleep quality. Most of the students have poor sleep quality, namely a decrease in sleep quality caused by insufficient sleep time, psychological disorders that cause insomnia, to decreased physical conditions due to not getting good sleep quality (Amalianita & Ifdil, 2021; Prasetyaningtyas, et al., 2020; Putrikitita & Sari, 2020). Where a high level of addiction to online games can affect the quality of sleep in students, so that the quality of students' sleep becomes low and less than optimal. This can have a negative impact on the lives of students to the growth and development of these students. Judging from the overall respondents, there are still students who have a very high level of online game addiction, besides that, judging by the average sleep quality of students at senior high school 1 Lubuk Sikaping, there are still those who have sleep quality in the medium category or good enough so it still needs to be considered and improved in order to get good quality sleep and more leverage than before (Kharisma, Fitriyasaki, & Rahmawati, 2020; Tahir et al., 2021).

## Conclusion

Based on the findings and discussion of the results of research on online game addiction with sleep quality in students, the following conclusions can be drawn: online game addiction of students at senior high school 1 Lubuk Sikaping is generally in the high category, sleep quality in students in senior high school 1 Lubuk Sikaping is generally in the low category, and there is a significant relationship between online game addiction and sleep quality in students at senior high school 1 Lubuk Sikaping. Based on the results of research, discussion, and conclusions that have been put forward, there are several suggestions can be recommended as a follow-up to this research, namely as follows: For school counselor, the results of this study can be taken into consideration in preparing services to be provided to students, both classical services or individual counseling services for students. For students, making the results of this study a useful knowledge new so that students should not play online games where playing online games will cause addiction which affects the sleep quality of students. For further researchers, further researchers can continue further and broader research, related to online game addiction variables, and sleep quality variables in students. Thus, the results of further research can deepen, clarify, and provide new ideas and findings.

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