

## The Relationship Between Addiction to the Online Game Mobile Legends Bang-Bang (MLBB) and Sleep Quality in Teenagers

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### Abstract

**Background:** Teenagers in Padang City have a high interest in online games, especially Mobile Legends Bang-Bang. **Objective:** The aim of research was to determine the relationship between online game addiction and sleep quality in teenagers of Padang. **Method:** A correlational quantitative approach was used for this research. The sample used 300 teenagers using purposive sampling technique. The sleep quality measuring tool by Buysse et.al (1989) contains 10 items consisting of 18 subjective questions and 6 observational questions. The online game addiction measuring tool contains 21 items with 3 questions for each aspect. Data analysis used Spearman's technique because the data distribution was not normal but linear for both variables. **Result:** The results show a significant relationship between online game addiction and sleep quality in teenagers, with  $p = 0.001 (< 0.05)$ . **Conclusion:** Thus, it can be concluded that the higher the level of online game addiction in teenagers, the lower the sleep quality they experience. This research also found differences in the level of online game addiction and sleep quality in terms of gender.

**Keywords:** Online game addiction; sleep quality; teenagers

### Abstrak

**Latar Belakang:** Remaja di Kota Padang memiliki minat yang tinggi pada game online khususnya Mobile Legends Bang-Bang. **Tujuan:** Tujuan penelitian dilakukan adalah mengetahui hubungan kecanduan game online dengan sleep quality pada remaja di Kota Padang. **Metode:** Pendekatan kuantitatif korelasional digunakan untuk penelitian ini. Sampel digunakan sebanyak 300 remaja melalui teknik purposive sampling. Alat ukur sleep quality oleh Buysse et.al (1989) terdapat 10 item terdiri 18 pertanyaan subjektif dan 6 pertanyaan observatif. Alat ukur kecanduan game online memiliki 21 item dengan 3 pertanyaan pada tiap aspek. Analisis data menggunakan teknik Spearman karena distribusi data tidak normal tetapi linier pada kedua variabel. **Hasil:** Hasil menunjukkan adanya hubungan signifikan antara kecanduan game online dan sleep quality pada remaja, dengan nilai  $p=0,001 (< 0,05)$ . **Kesimpulan:** Dengan demikian, dapat disimpulkan bahwa makin tinggi tingkat kecanduan game online pada remaja, maka makin rendah sleep quality yang mereka alami. Penelitian ini juga menemukan adanya perbedaan tingkat kecanduan game online dan sleep quality yang ditinjau dari jenis kelamin.

**Kata Kunci:** Kecanduan game online; kualitas tidur; remaja

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Adolescence is a transitional or transitional period for children towards adulthood. At this time there is very rapid growth and development both physical and mental (Diananda, 2018). Generally, teenagers need freedom to act, but they are afraid to take responsibility for what they have done and they easily feel doubtful in solving all their problems (Amanah et.al, 2023). According to Sastrawan et.al (2017), the quality of sleep is a multifaceted concept that includes both quantitative and qualitative elements. These elements encompass various aspects of sleep, including sleep duration, the time it takes to fall asleep, the frequency of waking up during sleep, and subjective factors such as the depth and satisfaction of sleep. The Sleep Foundation (2022) suggests that individuals aged 13-18 years need 7-8 hours of sleep per day. However, in reality, most Indonesians miss out on this crucial rest and recovery phase. Lack of sleep can result in poor work efficiency, low performance, traffic accidents, mental stress, depressed mood, and anxiety (Azizah et.al, 2021).

Adolescence is a developmental stage that will face various health problems such as low sleep quality. In Indonesia, sleep quality in teenagers is still far from being met, namely with a percentage of 63% (Keswara et.al, 2019). The average time and duration of sleep that teenagers need to sleep at night is 8-10 hours. However, this sleep duration can change to be shorter due to activity schedules at school and social activities which can result in sleep disorders such as insomnia (Sari et.al, 2021). The research conducted by Fenny et.al (2016) suggests that online game addiction is a significant factor that affects sleep quality, with their findings indicating that 40% of an individual's sleep quality can be attributed to online gaming. There exists a negative correlation between online game addiction and sleep quality, indicating that as levels of online game addiction increase, sleep quality tends to decrease, and vice versa. Online game addiction can stimulate the cerebral cortex and midbrain to continuously release neurotransmitters like dopamine and norepinephrine, keeping an individual awake throughout the night (Pratama et.al, 2022).

As per Sastrawan et.al (2017) sleep quality is a complicated peculiarity including quantitative and subjective parts of rest, for example, length of rest, time expected to nod off, recurrence of enlivening from rest, as well as emotional viewpoints like profundity and profundity of rest. According to the Sleep Foundation (2022), they found that individuals aged 13-18 years need 7-8 hours of sleep a day. However, in reality, most of the population in Indonesia is missing the rest and recovery phase which has extraordinary benefits. Lack of sleep can cause poor work efficiency, low performance, traffic accidents, mental stress, depressed mood and anxiety. Based on the results of research by Handriana et.al (2021), it was found that less than half (42.5%) of teenagers in Baturuyuk Village, Dawuan District, Majalengka Regency had poor sleep patterns. This unfortunate rest design in teens is brought about by these young people not having the option to deal with their timetables well and playing an excessive number of web based games which brings about them being sleepless. Apart from that, Fitri et.al (2020) said that using a smartphone for too long can affect sleep quality.

Sleep quality is a state of sleep carried out by an individual that can produce fitness and freshness when he wakes up (Nashori et. Al, 2005). The impact caused by low quality sleep can be a problem later in life, such as in terms of emotions or other psychological health. For example, mood disorders (depression or anxiety), decreased cognitive function and memory assessment (Sathanarayana et.al, 2016). One variable that can influence sleep quality is dependence on online games. Naturally, this is consistent with the findings of Fenny et.al (2016), who discovered that playing online games affects 40% of a person's sleep quality. The connection between online game addiction and sleep quality is negative, and that implies that the higher the degree of online game addiction, the lower the singular's sleep quality, as well as the other way around. Addiction to online games can stimulate the cerebral cortex and midbrain to continuously release the neurotransmitters dopamine and norepinephrine, making a person awake all night (Pratama et.al, 2022).

Teenagers are considered more susceptible to online game addiction compared to adults. Adolescence is also synonymous with the stigma of a problematic period which allows experiments on new things to become problematic behavior later in life (Hurlock, 1998). This results in teenagers who are addicted to online games becoming less interested in other activities, feeling anxious when they cannot play online games (Jannah et.al, 2015), decreased academic achievement, reduced social relations, and have health problems (Ghuman et.al, 2015). According to Putra et.al (2019), teenagers are one of the primary audiences for online games. This is due to the high level of curiosity experienced by teenagers. Online games have a tendency to make players lose track of time, forget to sleep, forget about tasks, forget about work, and also eat and drink

(Amanda, 2016). The results of the APJII survey (2022) stated that internet users aged 13-18 years contributed to using the internet as much as 98.64%. Internet users in online game applications account for 14.23%, which is ranked fourth after online shopping.

Online games are a sort of computer game that must be played on the off chance that a gadget that will be utilized to play internet games is associated with the web (Darwis et. al, 2020). At present, the World Health Association or WHO has assigned internet game fixation as a psychological problem (WHO, 2020). Research discussing the impact of smartphone addiction states that sleep disturbances are a form of physical impact felt (Mulyadi, 2016). Nursyifa et.al (2020) explained that playing online games excessively can result in lack of sleep which can impact health problems. This can happen because individuals who are already addicted will be willing to use up their sleep just to be able to play online games. King et.al (2019) made sense of that there are a few factors that can impact online game addiction, including individual contrasts, outer factors, and gaming related factors. If a person plays online games for 2-10 hours per day or 30 hours per week, they are said to be addicted (Griffiths, 2000). Yee (2002) depicts the attributes of people who are dependent on web based games, including feeling restless, effortlessly baffled, more profound when they quit messing around, feeling remorseful on the off chance that they don't play web based games, playing consistently despite the fact that they don't feel as energizing not surprisingly, being viewed as peculiar or something wrong by family members or dear companions, issues emerging in mingling, and having monetary issues made by hitting a financial dead end due being utilized to play web based games.

In accordance with the existing title, the online game that will be the target of research is Mobile Legends Bang-Bang (MLBB). Mobile Legends Bang-Bang is one of the many types of Multiplayer Online Battle Arena (MOBA) which is in the "popular" category and is ranked first in the Play Store application. This game, intended for cell phones, has game principles that emphasis in one of the two groups who should battle to reach and annihilate the adversary base while safeguarding their own base. In past examination, there was likewise notice of contrasts in the degree of online game addiction and sleep quality in youngsters concerning orientation. In Aulia et.al (2023) research, it was shown that most of the research respondents were male, with a percentage of 81.9%. A person's level of online game addiction can also be influenced by gender. This is because men prefer online games that have quite varied levels of difficulty and present various challenges in them. Aside from that, contrasts in an individual's degree of sleep quality are likewise impacted by orientation.

This is explained in a study by Nashori et.al (2005) which states that there are differences in the living habits of men and women when it comes to spending time at night. The existence of a form of habit of giving permission to men to be able to come home late at night creates differences in sleep management between men and women. Boys have poor sleep quality compared to girls. Boys have a tendency to go to bed earlier, they fall asleep later, have shorter sleep duration and less efficient sleep habits (Haryati, Yunaningsi, & Raf, 2020) A common habit in Indonesian society is to give men a chance to go home until late at night. This tolerance for late-night activities is what gives rise to the existence of men's sleep control and dream behavior. Men feel more free to spend their evenings than their dreams. As a result, men feel like they don't have any problems when they start sleeping at very late times.

## **Method**

### **Sample or Population**

There are thousands of populations in the study in one city, so the research sample taken was 300 teenagers with certain characteristics. Sampling method used is non-probability sampling, with purposive sampling technique, because certain considerations and characteristics (Sugiyono, 2017). Characteristics of the research sample there are teenagers who live in the city of Padang, teenagers who have problems at school, such as in terms of academics or behavior, because achievement is related to sleep quality and is addicted to online games, skipping hours sleep at night from 23.00 WIB to 04.00 WIB 3-5 times a week, teenagers who play around 15 to 20 hours per week, and have been playing online games for approx six months..

## Data Collection

In carrying out this research, researchers used questionnaires as a data collection tool. The research instrument applied to measure sleep quality variables is the Pittsburgh Sleep Quality Index (PSQI), which has been translated by the researchers themselves. Researchers translated the measuring instrument items and discussed them with supervisors and lecturers who are experts in statistics so that the measuring instruments used could be tested on teenagers outside the research sample area. Sleep quality is measured using seven dimensions, including aspects of subjective sleep quality, sleep latency, sleep duration, habitual sleep efficiency, sleep disturbance, use of sleeping medication, and daytime dysfunction with a total of 24 items. It consists of 18 subjective questions and 6 observational questions. All items in this measuring tool have a positive orientation. The scale used is a 0-3 Likert scale (0 = Not in the last month; 3 = Three or more times in one week) for the dimensions of sleep latency (5a), sleep disturbance, use of sleeping medication, and daytime dysfunction. For subjective sleep quality dimensions (0 = Very Good; 3 = Very Bad), sleep latency (2) ( $0 \leq 15$  minutes;  $3 > 60$  minutes), sleep duration ( $0 > 7$  hours;  $3 < 5$  hours), and finally habitual sleep efficiency ( $0 > 85\%$ ;  $3 < 65\%$ ). The higher the total score indicates the lower the quality of sleep, and vice versa. The results of the trial test carried out using SPSS 27 for Windows showed that the validity test of the 10 intuitive items of the global quality scale was found to be 10 items with 18 subjective questions and 6 observational questions totaling 24 valid questions with a discrimination index value of 0.404 - 0.868. The Cronbach's Alpha reliability coefficient was obtained at 0.916 after conducting trials on subjects that were similar to the results of the research sample.

The subsequent examination instrument used to gauge online game addiction factors is the Game Addiction Scale (GAS), which has been converted into Indonesian by specialists. This measuring tool includes 7 dimensions consisting of 21 items, with each 3 question items representing 1 dimension, and has a positive orientation. The type of scale used is a 1-5 Likert scale. The online game addiction score is determined in light of the complete score, where a higher score shows a more elevated level of enslavement experienced by the respondent, as well as the other way around. By utilizing GAS, this exploration can introduce an exhaustive image of the degree of online game addiction in teenagers, give a top to bottom comprehension of perspectives that might impact compulsion, and improve the examination of its relationship with sleep quality. The validity test of the 21 items for the online game addiction scale found 21 valid items with a discrimination power index value of 0.352 - 0.812. The Cronbach's Alpha reliability coefficient was obtained at 0.934 after conducting trials on subjects that were similar to the results of the research sample.

After carrying out the try out session, the researcher continued by collecting data in the field. This step is carried out by distributing questionnaires in the form of questionnaires to respondents according to the sample characteristics that have been determined previously. Data collection was carried out directly by visiting various schools in Padang City. The questionnaire was distributed and filled in by respondents who were students from various schools who were part of the research population. By having researchers directly in the field, this method makes it possible to ensure the accuracy of data collection and facilitates direct interaction with respondents. Through this process, it is hoped that the data obtained can reflect actual conditions and provide a more detailed picture of online game addiction and sleep quality among teenagers in Padang City.

## Data Analysis

Information investigation is completed after all information from the estimating instruments have been gathered. Information things are assembled, introduced, and determined for speculation testing (Sugiyono, 2013). The information investigation procedure for this examination is relationship test investigation. Connection is a factual procedure to perceive how and how solid the connection between two factors is. The kind of relationship for this exploration is Spearman (Winarsunu, 2009). Research data analysis was processed using SPSS 27 for Windows.

## Result

The subjects in this study consisted of 300 teenagers. Respondent data based on gender included 118 male teenagers and 182 female teenagers. Data based on schools are as follows: SMPN 26 Padang with 35

participants, SMPN 22 Padang with 35 participants, MTsN 4 Padang with 10 participants, MTsN 7 Padang with 10 participants, SMP Pembangunan Laboratorium UNP Padang with 15 participants, SMP Maria Padang with 15 participants, SMAN 8 Padang with 40 participants, SMAN 12 Padang with 40 participants, SMKN 5 Padang with 20 participants, SMKN 9 Padang with 25 participants, MAN 1 Padang with 15 participants, SMA Kartika 1-5 Padang with 20 participants, SMK Kartika 1-2 Padang with 20 participants. The following provides a general overview of respondents in this study categorized by age, gender, and duration of online gaming.

Table 1. Descriptive Statistical Data

Category	S	N	%	Mean		SD	
				OGA	SQ	OGA	SQ
<b>Educational Level &amp; Age</b>	SMP (13-15 Years)	120	40%	65.13	24.36	12.66	6.93
	SMA (16-18 Years)	180	60%	65.46	24.66	12.68	6.89
<b>Total</b>		<b>300</b>	<b>100%</b>				
<b>Gender</b>	Male	118	39%	66.13	24.17	13.35	6.76
	Female	182	61%	64.81	24.77	12.19	7.00
<b>Total</b>		<b>300</b>	<b>100%</b>				
<b>Playing Duration</b>	1-3 Hours	58	19%	46.90	29.66	4.92	5.98
	3-5 Hours	135	45%	62.56	25.23	4.03	5.14
	> 5 Hours	107	36%	78.82	20.89	6.22	7.30
<b>Total</b>		<b>300</b>	<b>100%</b>				

Explanation: OGA: Online Game Addiction & SQ: Sleep Quality

Based on the table above, there are a total of 120 teenagers (40%) aged 13-18, with 65.13 as the mean score for online game addiction and 24.36 as the mean score for sleep quality among those aged 13-15. Meanwhile, 180 teenagers (60%) aged 16-18 have a mean score of 65.46 for online game addiction and 24.66 for sleep quality.

Furthermore, it is likewise known that the complete number of respondents in this study is 300 teenagers, divided into two genders: male teenagers constitute 39% or 118 individuals out of the total respondents, with a mean score of 66.13 for online game addiction and 24.17 for sleep quality. Meanwhile, female teenagers make up 61% or 182 individuals of the total respondents, with a mean score of 64.81 for online game addiction and 24.77 for sleep quality.

Finally, it can be observed that out of the total respondents, 58 teenagers (19%) who played online games for 1-3 hours had a mean score of 46.90 for online game addiction and 29.66 for sleep quality. Meanwhile, 135 teenagers (45%) who played online games for 3-5 hours had a mean score of 62.56 for online game addiction and 25.23 for sleep quality. Lastly, 107 teenagers (36%) who played internet games for over 5 hours had a mean score of 78.82 for online game addiction and 20.89 for sleep quality.

For the hypothetical mean of sleep quality, it is 24, while the empirical mean for sleep quality is 24.5. As for the hypothetical mean of online game addiction, it is 63, and the empirical mean for online game addiction is 65.3. The categorization of the sleep quality scale falls into the moderate category, with 139 teenagers (46%) as respondents. Meanwhile, for the categorization of the online game addiction scale, it also falls into the moderate category, with 130 teenagers (43%) as respondents.

Table 2. Normality Test

Variable	Asymp. Sig (2-tailed)	Exp.
Sleep Quality	0.001	Abnormal
Online Game Addiction	0.200	Normal

The researcher tested normality using the One Sample Kolmogorov-Smirnov analysis in this study. The exploration information can be thought of as typically circulated if the Asymp. Sig esteem is more noteworthy than 0.05, and alternately, if the Asymp. When the sig value is less than 0.05, the data are thought to be abnormal. In view of the table over, the consequences of the ordinarieness test involving the One Example Kolmogorov-Smirnov for both broke down information yielded a p-worth of 0.001 for sleep quality, it isn't typically dispersed to demonstrate that the information. Meanwhile, the p-value for online game addiction is 0.200, suggesting that the data is normally distributed.

Following the normality test, the researcher proceeded to conduct a linearity test with the aim of determining whether the data exhibits a linear relationship. This is observed through the significant linearity value obtained from the test. Data is considered linear when the linearity value is  $>0.05$ , and vice versa. From the table above, it tends to be seen that the p-esteem created after the test is directed is  $<0.001$ , indicating that the data has a linear relationship.

Table 3. Linearity Test

	Df	Mean Square	F	Sig
Linearity	1	3235.4	90.1	$<0.001$

After completing the linearity test, the researcher proceeded to conduct a hypothesis test to determine whether the statistically significant level of the generated coefficient could be accepted or rejected. The results of the hypothesis test indicate that the correlation coefficient is  $-0.497$  with a significance level of  $<0.001$ . This result suggests that  $H_0$  is dismissed, and  $H_1$  is acknowledged.

Table 4. Hypothesis Test

Spearman Correlation	Sig. (2-tailed)
$-0,497$	$<0,001$

In addition to testing the correlation between online game addiction and sleep quality, this study also examined the differences in the levels of online game addiction and sleep quality among adolescents based on gender. The analysis technique employed was the independent t-test, a statistical test used to determine the comparison of two independent groups when the dependent variable's data scale is ordinal or interval/ratio. The results revealed that the Sig. (2 Tailed) value for online game addiction was 0.001, and the Sig. (2 Tailed) value for sleep quality was 0.001.

Table 5. Test of Different Levels of Online Game Addiction and Sleep Quality in Adolescents Based on Gender

Variable	Levene's Test Sig.	T-Test. Sig (2-tailed)	Exp.
Sleep Quality	0.52	0.001	There is a Difference
Online Game Addiction	0.64	0.001	There is a Difference

In this way, it very well may be presumed that there are contrasts in the degrees of web based online game addiction and sleep quality among young people in light of orientation, as the two factors have Sig. ( 2-tailed) values less than 0.05.

## **Discussion**

This study expects to decide the relationship between's online game addiction and sleep quality among teenagers. The exploration is centered around youths dwelling in Padang City, using purposive examining as the testing method. Also, the review intends to explore the presence of online game addiction and sleep quality among youths. The consequences of the relationship test in this review show a huge and negative connection between's online game addiction and sleep quality among youths. This shows that people encountering online game addiction will generally dislike the nature of their rest. In light of the speculation test results, it is observed that  $H_0$  is dismissed, and  $H_1$  is acknowledged.

The physiological need crucial for adolescents is sleep. One of the impacts resulting from high online game addiction is the decline in sleep quality. Adolescents typically require a sleep duration ranging from 7 to 8 hours per day. However, in reality, most adolescents tend to postpone their sleep at night. Buysse et.al (1989) defines sleep quality as the duration, latency, amount of sleep arousal, and subjective aspects of sleep, such as its depth or restfulness. The discoveries of this study line up with the exploration by Jelita et.al (2023), indicating that adolescents generally have low sleep quality. This is attributed to the use of gadgets at night to engage in online gaming. Another study with similar results is the research by Pramesti et.al (2023), stating that online game addiction is closely related to sleep quality in adolescents. Addicts to online games tend to play games for longer periods of time, neglecting other activities, such as sleep. Additionally, Aulia et.al (2023) likewise tracked down a huge relationship between's online game addiction and sleep quality in teenagers.

In light of the discoveries of this review, it tends to be seen that people dependent on online games are bound to encounter low sleep quality around evening time, essentially because of their commitment to internet gaming. This outcome is reliable with the examination led by Jelita et.al (2023), which suggests that students prefer playing online games at night due to the stronger internet connection during those hours. Exposure to the light emitted by smartphones, laptops, or other electronic devices can affect the circulatory system regulating the disrupted sleep cycle and lead to the disappearance of drowsiness (Chung et.al, 2020). Additionally, this can impact the melatonin hormone, responsible for inducing sleep and restoring physical energy during sleep. Melatonin is produced in the dark and quiet environment. When individuals play online games, the light emitted from smartphones is received by the eyes, influencing their circadian rhythm, which has greater sensitivity and significantly affects their sleep (Haibannisa et.al, 2022).

Addiction is defined as compulsive behavior to engage in an activity regardless of the potential consequences (Young, 2009). Lemmens et.al (2009) depicts online game addiction habit as exorbitant and urgent utilization of computer games or PC games, prompting social or close to home issues from now on. According to the findings of this study, respondents typically have moderate to high levels of addiction to online games. The findings of this study align with the research conducted by Rizal et.al (2022) on teenagers in Padang City, which revealed that the addiction to online games among teenagers falls into the category of very high. Based on the descriptive data, it is evident that there is a very high usage of online games among teenagers in Padang, with 5-6 hours or more per day, involving a total of 162 respondents. Another study supporting these results is conducted by Jelita et.al (2023), analyzing the level of online game addiction among high school students in SMA Negeri 1 Kupang. The study found that 31.5% of students were addicted to online games, impacting their daily lives. This addiction is attributed to teenagers who cannot control their behavior and impulses to play online games, indicating a likelihood of developing online game addiction.

King et.al (2019) states that online game addiction can be attributed to individual differences such as gender. Males are more susceptible to online game addiction because they tend to engage more intensely and for longer durations in online gaming. Additionally, adolescence is identified as a significant individual difference factor, as this life stage is more vulnerable to developing online game addiction. Outside factors, for example, peer impact from a gaming companion, represent a gamble of online game addiction. This is on the grounds that people might have a more prominent probability of ceaseless gaming solicitations and

commitment. The last variable, the sort of game (constant procedure and pretending games), has a close relationship with online game addiction. Features offered in games, such as point acquisition, rewards, and rare items, are correlated factors associated with game addiction.

This study also yielded another finding, indicating differences in the level of online game addiction based on gender, as evidenced by the average scores of males and females. Aulia et.al (2023) outlined their findings, uncovering that most of respondents in their review were male, constituting 81.9% of the participants. This aligns with the perspective of King et.al (2019), who suggested that gender can influence online game addiction in individuals. The majority of male adolescents tend to favor online games due to the challenging levels and various other exciting elements within the games. Playing online games with peers anytime and anywhere further contributes to their enjoyment. Generally, current preferences for online games among males involve those that incorporate strength and battles, providing an appealing experience for them (Febriandari et.al, 2016).

Another notable finding is that adolescent girls tend to have better sleep quality contrasted with adolescent boys. This is backed up by the findings of Nashori et.al (2005), who reported differences in sleep quality between males and females. The factor contributing to the variance in sleep quality between males and females lies in the difference in lifestyle habits during nighttime. A common practice in Indonesian society is to tolerate males returning home late at night. This tolerance for nighttime activities results in contrasts in rest the executives among guys and females. Males feel more at liberty to use their nighttime hours compared to females. Consequently, males may not perceive any issue with initiating sleep during the late hours.

## **Conclusion**

Research on the relationship between sleep quality and addiction to the game Mobile Legends: Bang Bang among teenagers in Padang City found that there was a significant correlation between the two. Teenagers who are more addicted to gaming tend to have poorer sleep quality. This research used quantitative methods involving 300 teenagers, using sleep quality measurement instruments from Buysse et al. and the addiction measurement tool from Lemmens et al. The results showed that the higher the level of gaming addiction, the lower the quality of their sleep. In light of the exploration discoveries and speculation testing led by the analyst on online game addiction and sleep quality among youths in Padang City, it very well may be reasoned that the degree of online game addiction among teenagers in Padang City falls into the moderate to high classification. In the mean time, the sleep quality level among youths in Padang City goes from moderate to low. Furthermore, there is a huge relationship between's online game addiction and sleep quality among young people in Padang City.

## **Suggestion**

For the research subjects, it is recommended to reduce online game playing due to its impact on sleep quality levels and the resulting physiological and psychological effects. For schools, it is suggested to incorporate health programs into student activities or extracurricular activities at the Adolescent Information and Consultation Center. This intervention is expected to modify negative behaviors related to online game playing. Additionally, organizing health education sessions on coping with online game addiction is advised. For future researchers, it is recommended to consider using a different sleep quality measurement tool that may be easier to apply and calculate. Regarding the limitations of this study, analysts are encouraged to focus harder on and investigate the financial foundation of respondents. This will ensure that the obtained data is more reliable with the desired specifications. Furthermore, researchers are encouraged to have a more controlled selection of the desired respondent types. Additionally, future studies should focus on the quality of the selected schools, as higher-quality schools may have a lower likelihood of indicating problems among adolescents, including online game addiction issues.



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