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## The Relationship between *Internet Gaming Addiction* and Sleep Quality in the *Mobile Legend Bang-Bang Online Game Community*

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**Abstract:** Moment Indonesia is experiencing this development very technological \_ fast , wrong One development such technology \_ The fastest growing thing in Indonesia is online gaming. Research This own objective For know is there is connection between internet gaming addiction and quality Sleep on mobile legend bang-bang online game community . Study This use method quantitative . Respondent on research This as many as 100 people from the legend mobile online game community . Election respondent use purposive sampling technique , namely with set criteria certain as sample research . Data processing uses Pearson Product Moment correlation for prove hypothesis . From the results obtained that its sig (2-tailed ) value is 0.002. Which means  $0.002 < 0.025$  then  $H_0$  is rejected and  $H_a$  accepted so that obtained results exists connection between internet gaming addiction and quality sleep .

**Keyword:** Internet Gaming Addiction, Quality Sleep, Online Gaming Community.

### INTRODUCTION

In the digital era, *online games* have become a favorite thing for some people. This is in line with the increasing number of people using *online games* in Indonesia. Based on data from Statista, the number of *online game players* in Indonesia in 2020 reached 54.7 million. The number of *online game* players increased by 24% compared to 2019, which was 44.1 million. This also causes the portion of *online game downloads* in Indonesia to be the largest in Southeast Asia. In 2020 in Southeast Asia, the largest *online game download* is in Indonesia, which is 30%. The second position is Vietnam at 22%, the Philippines (16%), Thailand (15%), Malaysia (8%), and the smallest proportion of *online game* downloads is Singapore, namely 1%.

Researchers conducted an initial survey by distributing several questions via *Google Form* to 18 people who were members of the *online gaming community* and conducting interviews with one subject. From the results of interviews with one subject and the answers

of 18 subjects on *Google Form* , the researcher decided to take the research subject, namely the *Bang-Bang Mobile Legends online game community* .

Apart from the benefits, *online games* can also be detrimental to individuals who have difficulty controlling themselves when playing *online games* , namely individuals who experience addiction to *online games* . In DSM-5 *internet gaming addiction* is called *Internet Gaming Disorder (IGD)*. The problem of *online game* addiction is a psychological problem that is included in the third part of the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5). *Internet gaming addiction* is excessive use of computers or *smartphones* which results in social and emotional problems (Lemmens et al., 2015). Kus et al. (2012) suggested that *internet gaming addiction* is associated with various psychophysiological and mental effects with different adverse consequences. *Internet gaming addiction* in DSM-5 is associated with several detrimental consequences including disrupting sleep activities, damaging the reality of life, work, education, socialization, and relationships.

The bad consequences of playing *online games* are that they can affect health, one of which is sleep problems. Sleep problems that can occur are poor quality sleep and can cause stress and depression if it is severe (Lam, 2014). Sindhi's research (2013) explains the relationship between the frequency of playing *online games* and fulfilling sleep needs. This research states that there is a relationship between the frequency of playing *online games* and fulfilling the need for sleep. It can be seen that the higher the frequency of playing *online games* , the less the fulfillment of the need for sleep.

Sleep quality is identified as sleep maintenance, sleep initiation, sleep depth, dreams, awakening after sleep, condition after falling asleep, effect of sleep on daily life, amount of sleep and sleep satisfaction (Yi, Shin, and Shin, 2006). According to Kozier, Berman, and Snyder (2016) sleep quality is a subjective characteristic that is determined by how the individual is when they wake up from sleep, whether the individual wakes up feeling energetic or not, while sleep quantity is the amount of time the individual is asleep. Buysse, Reynolds, Monk, et al. (1989) suggests that sleep quality is a complex phenomenon individual .

Sleep problems can affect one's bodily functions because sleep is an important basic need for everyone. During sleep, there is a restoration of normal activity levels and a normal balance that occurs in the nervous system, as well as restoring the normal natural cycles of biological processes for all individuals (Kozier, Berman, and Snyder, 2016). One of the sleep problems that can occur is a condition in which a person experiences poor sleep quality.

The study entitled " *Sleep Quality And Elevated Blood Pressure In Adolescents* " conducted by Javaheri and Cleveland (2008) from *the Case Western Reserve School of Medicine* involving 238 teenagers, where in this study showed a decrease in sleep quality, one of the factors the cause is playing *online games* .

Based on what the researchers described above, research on *internet gaming addiction* and sleep quality already exists, but none has focused on criteria that are in accordance with *the Diagnostic and Statistical Manual of Mental Disorders Fifth Edition (DSM-5)* both in sampling techniques and in instruments. measurement. Therefore, researchers are interested in conducting further research regarding the relationship between *internet gaming addiction* and sleep quality in the *mobile legend bang-bang online gaming community* .

## METHODS

This study uses a quantitative research method with a correlational quantitative design. The population in this study is the *online mobile legend bang-bang game community*, while the sample in this study is 100 people. The sampling technique was *purposive sampling* with the subject criteria, namely having played *the online mobile legend bang-bang game* for more than one year and playing more than 4 hours a day

The independent variable in this research is *internet gaming addiction*, measured using a scale that was adapted by Mursyad in 2019 from the *internet gaming disorder scale* by Lemmens et al. (2015). The dependent variable in this study, sleep quality, was measured using a scale modified by the researchers from the *Pittsburgh Sleep Quality Index (PSQI)* adaptation scale.

The data analysis used in this study is a parametric statistical technique using the *Pearson Product Moment correlation* to see the relationship of the two variables with interval or ratio data types (Winarsunu, 2009). Quantitative data from the results of the questionnaire will be analyzed and percentaged. Data analysis was performed using *the SPSS for Windows program*.

## RESULTS AND DISCUSSION

### Results

Respondents obtained in this study amounted to 100 people consisting of 78 men and 22 women. Respondents aged 12-18 years were 7 people and over 18 years were 93 people. Based on the results of the hypothesis testing, it was found that *the sig(2-tailed) value* was 0.002. This means that  $0.002 < 0.025$ , then  $H_0$  is rejected and  $H_a$  is accepted so that the results show a relationship between *internet gaming addiction* and sleep quality. The *Pearson correlation* value was obtained at 0.311, meaning that the higher *the internet gaming addiction*, the worse the quality of sleep in the *mobile legend bang-bang online gaming community*.

Based on the research results, the empirical *mean of internet gaming addiction* is 16.25 and the hypothetical *mean of internet gaming addiction* is 13.5. In general, the empirical *mean score for internet gaming addiction* is greater than the hypothetical *mean* ( $16.26 > 13.5$ ). This shows that *internet gaming addiction* in the *mobile legend online game community is bang-bang* higher than research suggests. Based on the categorization, 11 respondents (11%) had a mild level of *internet gaming addiction*, 51 respondents (51%) had a moderate level of *internet gaming addiction*, and 38 respondents (38%) had a severe level of *internet gaming addiction*.

Based on the research results, the empirical *mean* of sleep quality is 11.43 and the hypothetical *mean* of sleep quality is 10.5. In general, the empirical *mean score* for sleep quality is greater than the hypothetical *mean* ( $11.43 > 10.5$ ). This shows that the quality of sleep in the *mobile legend bang-bang online game community* is higher than research estimates. Based on the categorization, 19 respondents (19%) had a good level of sleep quality, 38 respondents (38%) had a poor level of sleep quality, and 43 respondents (43%) had a very poor level of sleep quality.

On sleep quality, the researchers briefly highlighted some of the results of interest to the respondents, namely regarding responses about time to fall asleep while lying in bed, sleep duration, subjective assessment of sleep quality, and daytime dysfunction.

**Table 1. Responses about Time to Fall asleep when Lying Down in bed**

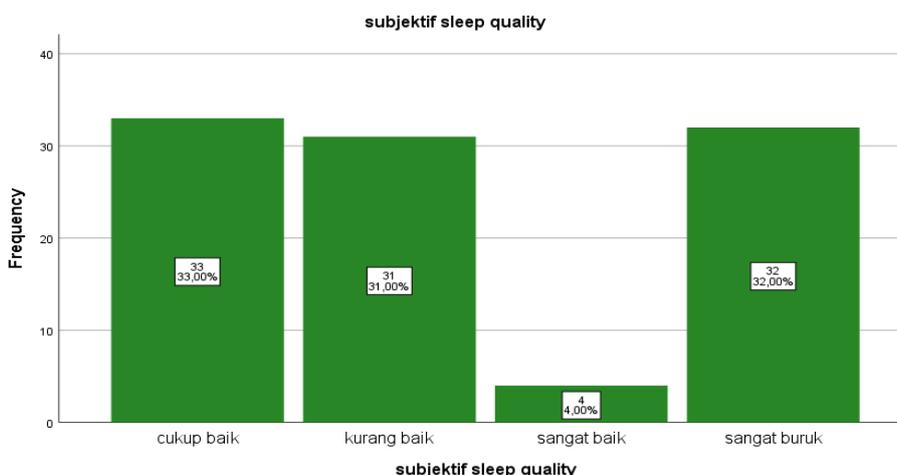
	Frequency (F)	Percentage (%)
15 minutes	20	20%
16 - 30 minutes	20	20%
31 - 60 minutes	24	24%
More than 60 minutes	36	36%
Total	100	100%

Responses about the time to be able to fall asleep when you are lying in bed are interesting things to note. From the results obtained, more than 50% of respondents needed more than 30 minutes to be able to fall asleep after lying down.

**Table 2. Sleep Duration Responses**

	Frequency (F)	Percentage (%)
Not enough from 5 hours	49	49%
5 - 6 hours	15	15%
6 - 7 hours	26	26%
More from 7 hours	10	10%
Total	100	100%

Responses regarding sleep duration where the total sleep duration does not include the time it takes to fall asleep need to be considered to see whether the time it takes to fall asleep will reduce sleep duration. This is related, there are more than 50% of respondents have a sleep duration of less than 6 hours.



**Figure 1. Response Bar Chart on Subjective Assessment of Sleep Quality**

Responses regarding respondents' opinions regarding subjective assessment of sleep quality where in this study the results showed that more than 50% of respondents considered that they had poor or very poor sleep quality.

**Table 3. Responses about Daytime Dysfunction**

	Frequency (F)	Percentage (%)
No Once	19	19%
1x deep a week	7	7%

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2x deep a week	33	33%
≥3x deep a week	41	41%
Total	100	100%

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Responses regarding daytime dysfunction are considered important because it is to see whether a person's sleep quality will affect their activities during the day. From the results of the study more than 75% of respondents experienced daytime dysfunction.

## Discussion

*Pearson Product Moment* correlation analysis in this study resulted that  $H_a$  was accepted and  $H_o$  was rejected. This means that there is a relationship between *internet gaming addiction* and sleep quality in the *mobile legend bang-bang online gaming community*. The relationship between *internet gaming addiction* and sleep quality in the *mobile legend Bang-bang online gaming community* shows a positive relationship. This means that the higher the *internet gaming addiction*, the worse the quality of sleep that occurs in the *mobile legend bang-bang online gaming community*.

This is in line with research by Sindhi (2013) where the research shows that there is a relationship between the frequency of playing *online games* and fulfilling sleep needs. In Sindhi's (2013) research, it was stated that the higher the frequency of playing *online games*, the less fulfilled the need for sleep.

Apart from that, it is also in continuity with research entitled "*Sleep Quality and Elevated Blood Pressure in Adolescents*" conducted by Javaheri and Cleveland (2008) from the *Case Western Reserve School of Medicine* involving 238 teenagers, where this study showed a decrease in sleep quality, which was one of the factors. the cause is playing *online games*.

Kus et al. (2012) suggested that *internet gaming addiction* is associated with a variety of psychophysiological and mental effects with different detrimental consequences. *Internet gaming addiction* in the DSM-5 is associated with several detrimental consequences, including disrupted sleep activities, damaging the reality of life, work, education, socialization, and relationships. An obsession with playing *online games* can cause aggressiveness, damaged relationships, stress, decreased academic performance, verbal memory problems, feelings of aloneness and hopelessness, and obstacles to adapting. In addition, the psychosomatic effects that can occur are sleep problems and others.

So, in general the results of this study show that there is a relationship between *internet gaming addiction* and sleep quality which focuses on the *mobile legend bang-bang online gaming community* who have been playing for more than 1 year and use *mobile legend bang-bang* for more than 4 hours a day. It is significant that the more severe the *internet gaming addiction*, the worse the quality of sleep in the *mobile legend bang-bang online gaming community*.

## CONCLUSION

Based on the results of research and hypothesis testing obtained by researchers regarding the relationship between *internet gaming addiction* and sleep quality in the *Bang-Bang Mobile Legend online gaming community*, it was concluded that in general the level of *internet gaming addiction* in the *Bang-Bang Mobile Legend online gaming community* is in

the moderate category. . In general, the level of sleep quality in the *legend bang-bang mobile online game community* is in the very bad category. Then, there is a significant relationship between *internet gaming addiction* and sleep quality in the *mobile legend bang-bang online gaming community* , which states that the higher the tendency for *internet gaming addiction* , the worse the sleep quality.

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