

Correlation between Sleep Quality That Influences the Mental Health of Global Islamic School (GIS) Students in The Covid-19 Pandemic

Rindang Wahjuningtias

Universitas Indraprasta PGRI Jakarta, Indonesia

rindangwahjuning@gmail.com

Abstract

Sleep is one of the factors of optimal health and vitality. Sleep quality is the measurement on how well you are sleeping, whether your sleep is restful, restorative, and healthful. Addressing sleep problems early-on is important to help protect your overall health. An underlying sleep disorder or a medical condition might be playing a role in your sleep issues. With the COVID-19 pandemic implementation of lockdown, people's sleep quality has begun to be disturbed and mental disorders have increased in Indonesia. To find out if sleep quality, mental health, and pandemic in Senior High School GIS Students are related to each other. The type of the study in this paper is quantitative research. To convene the data, the author handed out an online questionnaire to 50 students of Senior High GIS. Pearson's correlation statistical test had a significant result that there was a relationship between the effect of COVID-19 Pandemic on sleep quality and mental health. Sleep quality can be affected to the mental health by the effect of COVID-19 Pandemic.

Keywords

sleep quality; mental health; covid-19 pandemic



I. Introduction

Sleep is one of the factors of optimal health and vitality. Sleep quality is how well a person can sleep in other words, whether sleep activities can be carried out quietly, healthy, or not. This is different from sleep satisfaction, which refers to more about how a person feels about the sleep they get. Whether restful, happy, comfortable or satisfied. There are many negative effects of poor sleep quality, some of which can have a major impact on mental and emotional health.

Each individual has different sleep needs, this is also influenced by the age of each individual, so that each individual should be able to meet their respective sleep needs in order to carry out activities properly. (Potter, AP, Perry, 2011).

According to Wicaksono (2012), things that can cause boredom and can affect poor sleep quality include the bad environment in which you live and the monotony of variations in your environment, including changes in your environment or habits, besides that fatigue is another factor. Other factors that can affect a person's sleep quality (Wicaksono, 2012). The outbreak of this virus has an impact of a nation and Globally (Ningrum et al, 2020). The presence of Covid-19 as a pandemic certainly has an economic, social and psychological impact on society (Saleh and Mujahiddin, 2020). Covid 19 pandemic caused all efforts not to be as maximal as expected (Sihombing and Nasib, 2020).

Meanwhile, major changes have occurred since the emergence of Corona Virus Diseases 2019 (COVID19), so that almost all countries in the world have entered the

COVID19 pandemic. Corona virus (SARS-CoV-2) is the virus that causes COVID-19. This virus has infected millions of people in almost all countries in the world, including Indonesia. Based on data from the World Health Organization (WHO), Covid-19 cases in the world reached 219 million cases and in Indonesia as many as 4.2 million cases (WHO, 2020).

As a result of the high number of cases in Indonesia, this has a big impact, which not only has an impact on the environment, but also greatly affects the mental health of people from various age groups and groups, even this can affect the mental health of adolescents. mainly students who are currently studying at the final level, namely High School (SMA), which has never happened before (Cascella, Clelia., Pampaka, 2020).

The pandemic caused by COVID-19 is related to several stress factors that can have a negative effect on sleep quality and people's mental health. The COVID-19 virus has resulted in widespread mental health problems and sleep disturbances, which can be the result of stressors emerging during the pandemic.

Several previous studies described them by Deshinta (2009) Students and college students are very vulnerable to poor sleep quality as evidenced by research where there are 220 students from a total of 287 students at SMA Negeri 1 Tanjung Morawa have poor sleep quality. (Deshinta, 2009). Research conducted by Listiani (2005) shows that respondents who face problems with sleeping patterns at night can feel tired and feel sleepy during the day so they cannot concentrate on learning so that it can cause the value of students to decline. (Listiani, 2005).

From the results of research that has been carried out previously, it proves that 63.6% of the total respondents are indicated to face cases of their mental health (Iqbal and Rizqulloh, 2020). The research is supported by the results of a survey of people in the US who are facing a mental health crisis due to the COVID-19 pandemic. The survey, which linked 1,226 respondents, was conducted on March 25 to 30, 2020. The results showed that 45% of people over the age of 18 said that the COVID-19 pandemic had affected their mental health, and 19% said that COVID-19 had an impact on their mental health. great for mental health (Foundation, 2020).

Sleep is a basic need that is needed to balance the body in order to function normally, so the need for adequate sleep is around 6-8 hours a day. This sleep quality can be said to be good if it does not show signs of sleep deprivation and also does not experience problems in sleep such as sleep disturbances. The prevalence of sleep quality disorders in the world is shown through data taken globally, ranging from 15.3%-39.2%. Meanwhile, data in Indonesia shows that about 63% of the quality of sleep in adolescents is less fulfilled, namely <7 hours every night (Sonda, Wariki and Kuhan, 2021). Among the Indonesian population who experience sleep disorders are about 10% experienced by teenagers out of a total of 28,053 million people (11.7%) in Indonesia who experience sleep disorders. This is due to changes in lifestyle and daily routines which are one of the factors that cause teenagers to experience fatigue, especially during the COVID-19 pandemic.

The implementation of the lockdown during the COVID-19 pandemic has caused changes in lifestyle and daily routines which are one of the factors that cause teenagers or school students in particular to experience fatigue so that it can interfere with the sleep process which results in poor sleep quality. Things that can be affected by the disruption of sleep quality include reducing the concentration of students in absorbing knowledge and learning, fatigue and health disorders can affect mental health which can ultimately affect the academic achievement of a student. (Pinalosa L, Dhawo MS, 2020).

Based on the background and previous research, this study focuses on the theme of How Sleep Quality Can Affect Mental Health of Global Islamic School (GIS) High School Students during the COVID-19 Pandemic. It is hoped that the results of this study can support the role of sleep quality in maintaining mental health, where scientific research evidence can be one of the media to improve physical and mental health to prepare for future global crises, in addition to dealing with uncertainty in the conditions of the COVID-19 pandemic.

The aims of this study were to evaluate sleep disturbances with the spread of COVID-19 during the pandemic, to evaluate the psychological impact related to the pandemic and to find out the perceptions of GIS students about sleep quality during the pandemic.

II. Research Method

2.1 Research Design

This study uses a quantitative research design, with the data collection process carried out through sorting and reporting the results of research using studies through questionnaires distributed via the web and writing surveys to collect information. This research utilizes contextual analysis to retrieve data that will be accounted for.

2.2 Study Object

In this study, the object of research is the respondents who are students in grades 10, 11, and 12 of SMA Global Islamic School (GIS).

2.3 Data Source

To collect data, the authors distributed online questionnaires to each respondent. The results are analyzed and presented in a table.

2.4 Data Collection Method

The online questionnaire consists of 4 parts, the first part contains 3 questions and the other 3 sections contain 10 questions each. The first part requires respondents to fill in basic information. The second part contains questions about the sleep quality scale. The third section contains questions about mental health. While the last part contains questions about the COVID-19 pandemic. The author distributes questionnaire links to respondents through social media such as line, twitter, and direct messages on instagram. Respondents filled out the questionnaire and re-submitted it for analysis by the authors.

2.5 Data Analysis Techniques

After getting the results of the online survey, the authors assessed the answers and categorized the respondents' sleep quality and mental health during the COVID-19 pandemic.

2.6 Validity Test

Validity test was selected based on the method used by Gray et al. (2020) who conducted research on the analysis of sleep quality and mental health during the pandemic and the implementation of the lockdown in Morroco (Grey, I., et al., 2020)

The validity test was carried out by testing the correlation between the value of each question and the total score of the questionnaire. Test the validity of this questionnaire will be computerized and processed statistically. A valid questionnaire can be a measuring tool

to calculate something to be assessed in research and can give the same results if the questionnaire information is taken repeatedly. The validity test used is Pearson's correlation coefficient, with the basis of the validity test:

- Comparison of values between $r_{\text{Calculation}} > r_{\text{Table}} = \text{Valid}$
- Comparison of values between $r_{\text{Calculation}} < r_{\text{Table}} = \text{Invalid}$

Where to find the r_{Table} value with $N=50$ at 5% significance is the distribution of the statistical r_{Table} value. So the value of r_{Table} is 0.279.

With Significance Value (Sig.)

- If the significance value $< 0.05 = \text{Valid}$
- If the significance value $> 0.05 = \text{Invalid}$

Based on the validity test that has been carried out on 10 questions distributed to 50 GIS students, an r_{Table} value of 0.279 is obtained, with a value of $r_{\text{Calculation}} > r_{\text{Table}}$ so that the questionnaire questions used are valid and can be used in research.

III. Result and Discussion

The data collection process was carried out from January 29, 2022 to January 31, 2022 using a google form distributed through social media. The samples used in this research are students of SMA Global Islamic School (GIS) grades 10, 11, and 12. The data used is primary data from the results of filling out questionnaires by participants who have participated in this research. Research characteristics data can be seen in table 1. below.

Table 1. Data Characteristics of Respondents

Characteristics	Total	(%)
Gender		
Man	18	36.0
Woman	32	64.0
Class		
10	22	44.0
11	8	16.0
12	20	40.0

This research consisted of 50 participants with the largest group based on gender being the female group with 32 students (64%), while the male group was 18 students (36%). Based on the students who filled out the questionnaire, there were 22 students in grade 10 (44%), followed by grade 11 students with 8 (16%), and grade 12 students consisting of 20 students (40%).

The correlation test used is Pearson's correlation coefficient. Where this test aims to know the level of relationship between variables expressed by the correlation coefficient (r). With the basic value of decision making:

- If the significance value $< 0.05 = \text{Correlated}$
- If the significance value $> 0.05 = \text{Uncorrelated}$

With the degree of correlation:

- Pearson Correlation Value 0.00 to 0.20 = No Correlation
- Pearson Correlation Value 0.21 to 0.40 = Weak Correlation
- Pearson Correlation Value 0.41 to 0.60 = Medium Correlation
- Pearson Correlation Value 0.61 to 0.80 = Strong Correlation
- Pearson Correlation Value 0.81 to 1.00 = Perfect Correlation

3.1 Correlation between Sleep Quality and Mental Health

Based on the research that has been done, it was found that the relationship between sleep quality and mental health is moderately correlated with an r value of 0.538 with a significance level of 1% (0.01) which was tested using the Pearson Correlation Test statistical test which can be seen in Table 2 below. this.

Table 2. Correlation between sleep quality and mental health

Parameter	Test	Sleep Quality	Mental health
Sleep Quality	Pearson Correlation	1	0.538**
Mental health	Pearson Correlation	0.538**	1
** Correlation relationship with significance level 0.01 (2-tailed)			

3.2 Correlation between Mental Health and the COVID-19 Pandemic

Based on the research that has been done, it is found that the relationship between mental health and the COVID-19 pandemic is strongly correlated with an r value of 0.734 with a significance level of 1% (0.01) which was tested using the Pearson Correlation Test statistical test which can be seen in Table 3 below.

Table 3. Correlation between mental health and the COVID19 pandemic

Parameter	Test	Mental health	COVID19 pandemic
Mental health	Pearson Correlation	1	0.734**
COVID19 pandemic	Pearson Correlation	0.734**	1
** Correlation relationship with significance level 0.01 (2-tailed)			

3.3 Correlation between Sleep Quality and the COVID-19 Pandemic

Based on the research that has been carried out, data obtained that the relationship between sleep quality and the COVID-19 pandemic is moderately correlated with an r value of 0.513 with a significance level of 1% (0.01) which was tested using the Pearson Correlation Test statistical test which can be seen in Table 4 below.

Table 4. Correlation between Sleep Quality and the COVID19 Pandemic

Parameter	Test	Mental health	COVID19 pandemic
Mental health	Pearson Correlation	1	0.513**
COVID19 pandemic	Pearson Correlation	0.513**	1
** Correlation relationship with significance level 0.01 (2-tailed)			

The results show that mental health can be affected during the current COVID19 pandemic which causes sleep quality to be disrupted as well. Statistical analysis test using the Pearson Correlation test found an r -value of 0.538 the effect of sleep quality on mental health, an r -value of 0.734 the effect of the COVID-19 pandemic on mental health and an r -value of 0.513 between the effect of the COVID-19 pandemic on sleep quality, and the p -value of the three $<0, 05$. This means that the hypothesis in this research is accepted because there is a strong relationship between the COVID-19 pandemic, mental health, and sleep quality.

Sleep and mental health are closely related. Sleep quality and sleep problems can cause mental health changes, but mental health conditions can also worsen sleep problems. Because how deep and how long they sleep can trigger certain psychological conditions. Sleep deprivation may often be a symptom or consequence of a psychological condition, but sleep problems have also been implicated in different mental disorders including depression and anxiety. According to research by Idrissi et al, 2020, 827 people, mostly women, experienced sleep problems and mental health disorders such as insomnia (56%) and anxiety (30%). The study concluded that sleep plays an important role in mental health. Besides that, (Janati Idrissi A, et al 2020).

The Covid-19 pandemic period that has occurred until now has had a major contribution to aspects of life. One of the things that are affected is mental health. People's mental health levels decrease, they are irritable, anxious, afraid, often daydreaming, aloof and stressed. Fear of infection, physical and social restrictions and quarantines have an effect on disrupting the need for play in children, losing jobs in adults, decreasing income and socializing limitations in the elderly. People are confined in a monotonous environment, thus increasing boredom which leads to high stress levels (Febriani et al., 2021).

Several things that happened during the COVID-19 pandemic had a psychological impact on society (WHO, 2020). The status of a global pandemic or epidemic shows that the spread of COVID-19 is fast, causing the government to implement Work From Home (WFH), social distancing, and others. (Rosyanti L, 2020). This sudden condition makes people unprepared to deal with it both physically and psychologically (Sabir, 2016).

The problem of sleep disorders is not only experienced by students in general. There is a change in behavior while going through the COVID19 pandemic, causing students to have to change learning methods through online which causes many assignments given by their respective teachers. The number of burdens received by students is possible to be one of the causes of the time taken for rest. This will affect students' sleeping hours, apart from academic factors there are also social activity factors, the influence of technology also greatly affects students' sleeping hours. (Tinambunan et al., 2021).

Mental health includes our emotional, psychological and social well-being. It affects the way we think, feel, and act. It also helps us to decide how we handle stress, relate to others, and make choices. Mental health is important at every stage of life, from childhood and adolescence to adulthood. Poor sleep may often be a symptom or consequence of a psychological condition, but sleep problems are also thought to cause different mental problems including depression and anxiety (Febriani et al., 2021).

Troubles and anxiety are normal reactions to threatening and unexpected situations such as the coronavirus pandemic. Possible stress-related reactions in response to the coronavirus pandemic include changes in concentration, irritability, anxiety, insomnia and reduced productivity. In addition to the threat by the virus itself, quarantine measures, which are carried out in some countries, have negative psychological effects and result in increasing stress symptoms. The severity of symptoms depends on the duration and extent of quarantine, feelings of loneliness, fear of being infected with the disease, adequate information, and stigma (Brooks et al., 2020).

Therefore, addressing sleep problems early on is important to help protect a person's overall health. One effort that can be done is to make changes to your lifestyle that can encourage restful sleep or go to the doctor for further help.

3.4 The Impact of Pandemic Conditions on Sleep Quality

Before entering the pandemic period, our bodies move a lot that we don't even realize. For example, walking to the office, walking to public transport stations, walking to restaurants, and much more. However, during the pandemic, many activities have been lost due to changing circumstances. We all know that physical activity helps us sleep better.

Teenagers in pandemic conditions usually spend a lot of time on their gadgets and social media, including at night. This can also disrupt and disrupt the sleep process which makes sleep quality and sleep patterns worse and you have to rest without a burden on your mind. In fact, when they want to sleep, they are still struggling with social media for a long time so that it has an impact on sleep quality (Woods and Scott, 2016).

In a study conducted by Nurniati (2018), most of the respondents are active users of social media (66.9%) so it takes a long time to fall asleep from the usual time because of the sophistication provided by today's smartphones which causes teenagers to experience poor sleep quality. with a percentage (54.7%). Research conducted by Armaya (2017), based on the results that the overall number of gadget use in the high category had poor rest quality as many as 35 people (62.5%). So it can be concluded that technology is available when it cannot be managed, thus causing poor sleep quality which can affect your health.

According to research from Youssef Althiabi (2021) stated that parental anxiety during the Covid-19 pandemic rose significantly than before the pandemic. (Althiabi, 2021). Mental health problems caused by the Covid-19 pandemic in older people are related to depression and loss of self-confidence. Previous research has also shown that psychological distress is higher in adults in the UK than 18 year olds (Febriani et al., 2021).

The duties and demands of the profession on adults become a burden on the mind to choose to stay away from socializing with other people or at risk of contracting Covid from their partners. Meanwhile, the level of anxiety, depression, and sleep quality in young people is higher than in older people (Febriani et al., 2021). Children and adolescents have a lot of dependence on their parents. Isolation of people with COVID-19 will cause children to be separated from their parents, causing anxiety and disrupting sleep needs.

Groups of teenagers and students are more at risk of mental health impacts due to the pandemic and are at high risk of psychological and mental health problems due to the pandemic (Febriani et al., 2021). The stress and pressures faced by children and adolescents make them more prone to emotional and mood swings (Huang Y, 2020). Separation between parents in children, will increase stress, children become angry, easily emotional and unstable.

In this uncertain condition of the COVID19 pandemic, it is important for Guidance and Counseling teachers to understand and provide guidance and counseling services to students in their schools. So that BK teachers can monitor the mental health of their students in dealing with and adapting to the many changes that have occurred during the COVID-19 pandemic.

IV. Conclusion

Based on research that has been conducted on 50 respondents, it can be concluded that sleep quality affects the mental health of GIS (Global Islamic School) High School Students. moderate correlation and a significant relationship between mental health effects on sleep quality, the effect of the COVID-19 pandemic has a correlation with the mental health level of GIS high school students based on the results of the Pearson correlation test with a value of 0.734 and a significance level of 0.000 (p value < 0.05) which means that

there is a strong and significant correlation between the effects of the COVID-19 pandemic on mental health, and the COVID-19 pandemic has indeed affected the sleep quality of GIS SMA students based on the results of the Pearson correlation test, the value is 0.513 and the significance level is 0.000 (p value <0.05), which means that there is a moderate correlation and a significant relationship between the effects of the COVID-19 pandemic. - 19 on sleep quality.

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