

ADOLESCENTS MENTAL HEALTH DURING COVID-19 PANDEMIC

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ABSTRACT

Since the end of 2019, people in various countries, including Indonesia has experience the Covid-19 pandemic. The measures to prevent the spread of the Covid-19 from the government limited people's physical activity. In education, the policies leads to the implementation of Online Distance Learning for students ranging from elementary school to higher education levels. The purpose of this study was to obtain an overview of the mental health of adolescents during the Covid-19 pandemic and to identify sociodemographic factors that influence adolescent mental health. The study involved 205 participants aged 15-18 years. The data were collected using a validated General Health Questionnaire (GHQ-12) self-assessment measurement tool in Indonesian language adapted version. The results showed that 59.5% of adolescents experienced psychological problems in the form of psychological distress and social dysfunction. Girls and adolescents who experience changes in sleep hours have a greater tendency to experience psychological problems. Sothat during the pandemic, teenage girls need more attention than boys. In addition, sleep patterns also needto be considered to reduce impact on psychological distress and social dysfunction during the pandemic.

Key Word: COVID-19; Mental Health; Psychological Distress; Social Dysfunction

ABSTRAK

Sejak akhir 2019, pandemi Covid-19 dialami oleh berbagai negara termasuk di Indonesia. Langkah-langkah pencegahan penyebaran pandemi Covid-19 berdampak pada adanya pembatasan aktivitas fisik serta kebijakan penyelenggaraan Pembelajaran Jarak Jauh (PJJ) bagi siswa mulai dari jenjang sekolah dasar sampai perguruan tinggi. Tujuan penelitian ini adalah mendapatkan gambaran kesehatan mental remaja selama pandemi Covid-19 dan peran faktor-faktor sosiodemografi dalam memengaruhi kesehatan mental remaja. Penelitian melibatkan 205 partisipan dengan usia 15-18 tahun. Data didapatkan dengan menggunakan alat ukur *self-assessment General Health Questionnaire* (GHQ-12) yang sudah divalidasi di Indonesia. Hasil penelitian menunjukkan bahwa sebanyak 59,5% remaja mengalami permasalahan psikologis dalam bentuk *distress* psikologis dan disfungsi sosial. Remaja perempuan dan remaja yang mengalami perubahan jam tidurmemiliki kecenderungan lebih besar untuk mengalami permasalahan psikologis. Sehingga, selama pandemi remaja perempuan memerlukan perhatian yang lebih dibandingkan dengan laki-laki dan pola tidur juga perlu diperhatikan agar tidak berdampak pada distress psikologis dan disfungsi sosial selama pandemi.

Kata Kunci: COVID-19; Kesehatan Mental; Distress Psikologis; Disfungsi Sosial

INTRODUCTION

The Covid-19 pandemic has occurred throughout various countries. Covid-19 is an infectious disease caused by a new corona virus that was discovered at the end of 2019. Most people infected with the corona virus will experience mild to moderate respiratory illness and recover without requiring special treatment. Older people, and those with underlying medical problems such as cardiovascular disease, diabetes, chronic respiratory disease and cancer are

more likely to show more serious symptoms (WHO, 2020). Covid-19 was first confirmed in the city of Wuhan, China on December 31 2019. This virus then spread to various countries until on March 11 2020, the World Health Organization (WHO) designated Covid-19 in the Pandemic category (WHO, 2020). The spread of Covid-19 has also occurred in Indonesia, with the first case on March 1 2020. The case of Covid-19 in Indonesia itself has increased quite significantly. From data as of 30 June 2020, the number of confirmed cases in Indonesia is 56,385 cases with the number of deaths reaching 2,876 (Task Force for the Acceleration of Handling Covid-19, 2020).

Various efforts have been made to suppress the spread of Covid-19. WHO calls for the implementation of several fairly strict health protocols such as using masks, washing hands and social restrictions and physical activity. Several countries such as China, Italy, Spain, Malaysia and the Philippines have implemented a lockdown system. These countries close access to enter and leave the country. Whereas in Indonesia the implementation of the health protocol began in mid-March 2020, where almost all regions of Indonesia implemented a system of social restrictions and physical activity and the use of masks with the enactment of Large-Scale Social Restrictions (PSBB). In addition, the Government through the Ministry of Education and Culture also announced that teaching and learning activities in schools were closed, and determined learning through online media. This policy is in line with policies implemented in other countries. On 8 April 2020, schools in 188 countries were closed. According to UNESCO, more than 90% of registered students (1.5 billion children) worldwide are currently not undergoing education (Lee, 2020).

Various studies have shown that disease outbreaks such as the outbreaks of SARS in 2003, H1N1 in 2009 and Ebola in 2014 can affect mental health. Psychological impacts associated with disease outbreaks include depression (Ko, Yen, Yen, & Yang, 2006), stress and anxiety (Taha, Matheson, & Anisman, 2014), and post-traumatic stress disorder (Shultz, Baingana, & Neria, 2015). Psychological problems that occur as a result of health-related disasters affect not only adults, but also children and adolescents. It was found that a number of parents who were quarantined or isolated stated that their children started using mental health services during or after quarantine with the most common diagnoses being acute stress disorder, grief, anxiety and post-traumatic stress (Sprang & Silman, 2013). The various forms of disturbance that have arisen as a result of facing the pandemic mentioned above include problems of psychological distress and social dysfunction. Psychological distress itself is

defined as an emotional state characterized by depression (loss of interest, sadness and hopelessness) and symptoms of anxiety (tense and restless). Manifestations of psychological distress are exposure to stressful events that threaten physical and mental health, the inability to deal with the stressor and the emergence of emotional turmoil due to being unable to overcome it (Drapeau, Marchand, & Beaulieu-Prévost, 2011). While social dysfunction is the inability of a person to be able to meet social demands and carry out social roles that are owned appropriately (Stanghellini & Ballerini, 2002).

Research on the impact of the Covid-19 pandemic on mental health has been carried out in several countries using online methods through forms distributed on social media or on online survey platforms. Research in Spain shows that 72% of research subjects aged 18 years and over experience psychological distress during Covid-19. The greatest number of people suffering from psychological distress are women and subjects who are younger are at risk of experiencing a higher level of distress (Gómez-Salgado, Andrés-Villas, Domínguez-Salas, Díaz-Milanés, & Ruiz-Frutos, 2020). Another study was also conducted in China 2 weeks after Covid-19 spread. The study was conducted on participants aged 14-35 years. The results showed that almost 40.4% of the participants had psychological problems and 14.4% showed symptoms of Post Traumatic Stress-Disorder (PTSD). The factor of a low level of education, having PTSD symptoms and negative coping strategies will make a person more susceptible to experiencing psychological problems (Liang et al., 2020).

The existence of social restrictions and physical activity and the closure of schools for adolescents are factors that can affect adolescent mental health (Fegert, Vitiello, Plener, & Clemens, 2020; Lee, 2020; Zaharah & Kirilova, 2020). Mental health is defined as a state of well-being in which individuals are aware of their own abilities, can cope with the normal stresses of life, can work productively and fruitfully and are able to make a contribution to their community. Mental health is something that is important for every individual because it is related to behavior at all stages of life (WHO, 2004).

Mental health is important for adolescents, especially related to lack of quality sleep, difficulty focusing, often forgetting and can make teenagers demotivated in learning so that learning becomes less (Fitria & Ifdil, 2020; Nurkholis, 2020). From searches carried out through searches through the Google Scholar journal portal, GARUDA, PubMed and Research Gate in the search period from June to July 2020 using the keywords "mental health" "mental health" "teenagers" "adolescent" and "Indonesia" have not been found research related to the

description of mental health in adolescents during the Covid-19 Pandemic in Indonesia. Data regarding the mental health condition of adolescents and the sociodemographic factors that influence it is important to know so that it can be used as data by teachers and schools related to online learning as well as by mental health practitioners regarding interventions for adolescents during the Covid-19 pandemic. Therefore, this study aims to: (1) get an overview of mental health in a sample of adolescents during the Covid-19 pandemic. (2) identify the characteristics and role of sociodemographic factors in influencing adolescent mental health during the Covid-19 pandemic

METHOD

This study uses a quantitative survey research method. This method provides a quantitative or numerical description of trends, attitudes or opinions in a population by studying a sample of that population. This is done using a cross-sectional approach where data is only collected once (Creswell JW, 2018). The criteria used are adolescents aged 15-18 years, registered as high school/vocational high school students in the city of Bandung and have access to the internet. Participant screening using respondent drive sampling. This method is accomplished by recruiting participants through word of mouth, often through social media and other informal channels (Gosling & Mason, 2015). Data collection was carried out from 24 August to 15 September 2020. A total of 205 participants were obtained. Data is collected via a Google form link which is distributed via social media such as Instagram and Twitter, as well as in group chats.

Sociodemographic data that will be collected in this study are gender, age, changes in sleeping hours, changes in sports activities, school hours in distance learning and time used for screen time.

To measure psychological distress, the General Health Questionnaire -12 (GHQ-12) has been validated in Indonesian (Idaiani & Suhardi, 2006). This measuring instrument has a Cronbach's alpha reliability value of 0.67-0.77 and validity testing using CFA yields the results of two factors described in GHQ-12, namely psychological distress and social dysfunction (Idaiani & Suhardi, 2006). The results of calculating the reliability of the GHQ-12 measuring instrument in this study showed a Cronbach's alpha reliability value of 0.758. The GHQ-12 is a screening tool with a self-assessment method where participants can fill in the questions on

this measuring tool independently. Participants will be asked to compare their current condition with the items on the measuring instrument. GHQ-12 consists of 12 questions and 4 answer choices namely; better than usual, the same as usual, less than usual and very less than usual. Scoring is done by giving a score of 0 to 3 on each item. The minimum possible score is 0 and the maximum score is 36. The higher the score, the higher the tendency for psychological problems. The cut-off used in this study is 11.

The analysis will be carried out using the statistical software SPSS 22.0. Descriptive analysis was made by analyzing the distribution of scores, the average and the standard deviation of the participants' scores obtained from filling out the measuring instrument. Furthermore, the score from the GHQ-12 will be related to sociodemographic data using the Mann-Whitney differential test

RESULTS AND DISCUSSION

A total of 205 adolescents participated in this study, 28.8% of the male participants and 71.2% of the female participants. Based on the age of the participants, most of the participants were 17 years old (42%) and 16 years old (33.7%).

Table 1. Sociodemographic data

| Sociodemographic | | Frequency (Percentage) |
|----------------------------|---------------------|------------------------|
| Gender | Male | 59 (28,8%) |
| | Women | 146 (71,2%) |
| Age | 15 | 28 (13,7%) |
| | 16 | 69 (33,7%) |
| | 17 | 86 (42%) |
| | 18 | 22 (10,7%) |
| Changes in Sleep Hours | Less than usual | 73 (35,6%) |
| | longer than usually | 59 (28,8%) |
| | The same as usual | 73 (35,6%) |
| Changes in sports activity | Less than usual | 111 (54,1%) |
| | longer than usually | 34 (16,6%) |
| | The same as usual | 60 (29,3%) |
| PJJ duration | 4 hours | 48 (23,4%) |
| | 5 hours | 67 (32,7%) |

| Sociodemographic | | Frequency (Percentage) |
|--|---------------------|------------------------|
| | 6 hours | 47 (22,9%) |
| | 7 hours | 27 (13,2%) |
| | 8 hours | 16 (7,8%) |
| Change the duration of the screen time | Less than usual | 3 (1,5%) |
| | longer than usually | 186 (90,7%) |
| | The same as usual | 16 (7,8%) |

From the data above, it was found that changes in sleep activity during the Covid-19 pandemic were divided into 3 changes in activity, namely less than usual, more than usual and the same as usual. From the data obtained, as many as 35.6% of participants slept less than usual, as much as 28.8% longer than usual and 35.6% had the same sleep time as before the Covid-19 pandemic. In sports activities, where 111 participants or as many as 54.1% experienced a change in the time for sports activities to be less than usual. During the Covid-19 pandemic, youth learning activities at school were shifted to using online methods or known as PJJ. Judging from the duration of PJJ undertaken each school day, 48 participants or 23.4% underwent PJJ for 4 hours, 67 participants or 32.7% underwent PJJ for 5 hours, 47 participants or 22.9% underwent PJJ for 6 hours, 27 participants or 13.2% underwent PJJ for 7 hours and 16 participants or 7.8% underwent PJJ for 8 hours. From this data, most of the participants underwent PJJ for 4-6 hours per day during the school day. In screen time activity, during the Covid-19 pandemic as many as 186 participants or 90.7% experienced a change in screen time activity to be longer compared to pre-pandemic screen time activity (table 1).

Described in table 2 it was found that out of 205 adolescents, as many as 59.5% or 122 adolescents experienced psychological problems, and as many as 40.5% or 83 adolescents did not experience psychological problems.

Table 2. Categorization of Mental Health

| SCORE | CATEGORIES | FREKUENCES | PERCENTAGE |
|-------------|-------------------------------------|------------|------------|
| $x \geq 11$ | Experiencing Psychological problems | 122 | 59.5 |
| $x < 11$ | No psychological problems | 83 | 40.5 |
| | Total | 205 | 100 |

These results indicate that the proportion of adolescents who experienced psychological problems during the Covid-19 pandemic was relatively higher compared to adolescents who did not experience psychological problems. These results are in line with several studies conducted in several countries where teenagers have a tendency to develop psychological problems during the Covid-19 pandemic (Gómez-Salgado et al., 2020; Liang et al., 2020).

Table 3. GHQ-12 score

| NO | VARIABLE | M(SD) |
|-------------|--|--------------|
| 1 | Less able to concentrate | 1,47 (0,74) |
| 2 | It's hard to sleep because of worry | 0,72 (0,95) |
| 3 | Feeling less involved in various things that play a role | 1,08 (0,77) |
| 4 | Inability to make decisions | 1,05 (0,60) |
| 5 | Feeling constantly under pressure | 1,31 (1,08) |
| 6 | Feeling unable to overcome your difficulties | 1,15 (1,05) |
| 7 | Unable to enjoy daily activities | 1,35 (0,81) |
| 8 | Not able to bear the problem | 1,20 (0,66) |
| 9 | Feeling unhappy and depressed | 1,15 (1,08) |
| 10 | Loss of confidence | 0,99 (1,06) |
| 11 | Thinking that you are useless | 0,92 (1,11) |
| 12 | Feeling less happy | 1,13 (0,73) |
| Total Score | | 13,53 (7,01) |

The psychological problems that arose in adolescents during the Covid-19 pandemic were related to psychological distress and social dysfunction. Table 2 shows that item 1 is "unable to concentrate", item 7 "can't enjoy daily activities" and item 5 "feels constantly under pressure" is the item that has the highest value. Most likely it occurs because teenagers experience anxiety (Fitria & Ifdil, 2020), there are restrictions on physical activity and school closures for teenagers (Fegert et al., 2020; Lee, 2020; Zaharah & Kirilova, 2020).

Table 4. Cross Tabulation Data

| SOCIODEMOGRAPHIC | | FREQUENCY (PERCENTAGE) | PSYCHOLOGICAL PROBLEMS | |
|------------------|------|---------------------------|---------------------------|----|
| | | | YES | NO |
| Gender | Male | 59 (28,8%) | 27 | 32 |

| SOCIODEMOGRAPHIC | | FREQUENCY (PERCENTAGE) | PSYCHOLOGICAL PROBLEMS | |
|--|---------------------|---------------------------|---------------------------|----|
| | | | YES | NO |
| | Women | 146 (71,2%) | 95 | 51 |
| Age | 15 | 28 (13.7%) | 11 | 17 |
| | 16 | 69 (33.7%) | 50 | 19 |
| | 17 | 86 (42%) | 56 | 30 |
| | 18 | 22 (10,7%) | 17 | 5 |
| Changes in Sleep Hours | Less than usual | 73 (35,6%) | 51 | 22 |
| | longer than usually | 59 (28,8%) | 44 | 15 |
| | The same as usual | 73 (35,6%) | 27 | 46 |
| Changes in sports activity | Less than usual | 111 (54,1%) | 75 | 34 |
| | longer than usually | 34 (16,6%) | 18 | 16 |
| | The same as usual | 60 (29,3%) | 29 | 31 |
| PJJ duration | 4 hours | 48 (23,4%) | 33 | 15 |
| | 5 hours | 67 (32,7%) | 40 | 27 |
| | 6 hours | 47 (22,9%) | 27 | 20 |
| | 7 hours | 27 (13,2%) | 15 | 12 |
| | 8 hours | 16 (7,8%) | 7 | 9 |
| Change the duration of the screen time | Less than usual | 3 (1,5%) | 1 | 2 |
| | longer than usually | 186 (90,7%) | 118 | 68 |
| | The same as usual | 16 (7,8%) | 3 | 13 |

From the results of cross-tabulations of psychological problem data by gender group, in the female participant group, 95 of the 146 female participants experienced psychological problems and the other 51 participants did not experience psychological problems. Whereas in the male group, 27 of the 57 male participants experienced psychological problems and the other 32 participants did not experience psychological problems. From the results of the different test using the Mann-Whitney which can be seen in table 5, the results obtained showed

that there were significant differences in the two sex groups ($p < 0.05$) where the female sex group had a greater tendency to experience psychological problems. Referring to previous research, this also happened in a study conducted in Spain during the Covid-19 pandemic (Gómez-Salgado et al., 2020). When exposed to stressors such as during the Covid-19 pandemic, although the numbers are small, the results show that the HPA (Hypothalamic Pituitary Adrenal) Axis system will secrete more or more sensitive ACTH (Adrenocorticotrophic Hormone) compared to men so that it is easier to produce cortisol which has an impact on the emergence of psychological stress (Verma, Balraha, & CS, 2011). In addition, women also have a vulnerability to experience depression and anxiety which are influenced by responses to stress, social expectations and experiences (Altemus, Sarvaiya, & Neill Epperson, 2014).

Table 5. Mann-Whitney Difference Test

| VARIABLE | | Z | SIG. | INFORMATION |
|------------------------|---------------------|---------|------|-----------------------------------|
| Gender | Male | - 2,543 | 0,01 | There are significant differences |
| | Female | | | |
| Changes in Sleep Hours | Less than usual | - 4,874 | 0,00 | There are significant differences |
| | longer than usually | | | |
| | The same as usual | | | |

Looking at the age group, after cross-tabulation with the categorization of psychological problems in almost all age groups, more participants experienced psychological problems except for the 15-year-old group (table 4). Apart from age and gender, data is also collected regarding changes in activity during the Covid-19 pandemic. In the group of changing sleep hours, from the results of the cross-tabulation, it was found that most teenagers experienced changes in their sleeping hours during the Covid-19 Pandemic. In the group of adolescents who had changes in sleeping hours (either sleeping hours increased or decreased) the number of adolescents who experienced psychological problems was more than adolescents who did not experience psychological problems. A different test was carried out using the Mann-Whitney in two groups, namely participants who experienced changes in sleeping hours (increased or decreased) and did not experience changes in sleeping hours which can be seen in table 5. There was a significant difference ($p < 0.05$) in the two groups where the group that

has a change in sleep hours has a higher tendency to experience psychological problems. Changes in sleep hours such as late bedtime and lack of sleep in adolescents during the Covid-19 pandemic can be affected by screen time that is longer than usual and no activity leaving the house to go to school in the morning. Changes in sleep hours, such as lack of sleep hours or irregular sleep duration, can make it easier for teenagers to experience psychological problems (Gupta et al., 2020).

Cross-tabulation (table 4) was carried out on changes in sports activity with a tendency to experience psychological problems, 75 participants experienced psychological problems in 111 participants who experienced changes in the time of sports activity to be less than usual. During the Covid-19 pandemic, restrictions were placed on physical activity outside the home as well as various health protocols that could deprive youth of the opportunity to engage in outdoor sports activities. In addition, with the holding of Distance Learning (PJJ) youth are also no longer doing routine sports which are usually done every week on the regular learning schedule at school. Reduced prolonged sports activity can be associated with negative physical and mental health conditions such as loss of muscle and cardiorespiratory fitness, weight gain, psychosocial problems and even poor academic performance (Xiang, Zhang, & Kuwahara, 2020).

Cross-tabulation of PJJ ratios with a tendency to have psychological problems showed that in each group of learning hours, more participants experienced psychological problems than participants who did not experience psychological problems. After cross-tabulation, the results showed that 118 of the 186 participants who spent longer screen time experienced psychological problems. Suggestions for future research are to dig deeper into the duration of hours in PJJ activities and the effect of length of screen time on adolescent mental health during a pandemic.

CONCLUSION

Based on the research conducted, it can be said that most teenagers experience psychological problems during the Covid-19 Pandemic. Teenagers experience psychological problems related to psychological distress and social dysfunction such as feeling unable to concentrate, feeling under pressure and not being able to enjoy daily activities. Adolescent girls and adolescents who experience changes in their sleeping hours (either longer or less than usual) have a greater tendency to experience psychological problems. Thus, during a pandemic,

female adolescents need more attention compared to boys and sleep patterns need to be considered so that they do not have an impact on psychological distress and social dysfunction during the Covid-19 pandemic.

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