

Anxiety Levels Related to the Impact of COVID-19 among Junior High School Students in Makassar Indonesia

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ABSTRACT

This study sought to identify the distribution of anxiety levels among students at SMP Negeri 12 Makassar, Indonesia, during the COVID-19 pandemic in 2020. A quantitative descriptive approach was employed, involving 287 students from Grades VII to IX who were selected through stratified random sampling. Information was obtained through an online questionnaire using the 14-item Hamilton Anxiety Rating Scale (HARS). The collected data were examined using descriptive statistical analysis and summarized as frequencies and percentages. The findings revealed that 196 students (68.3%) were categorized as having no anxiety, 53 (18.4%) had mild anxiety, 21 (7.3%) had moderate anxiety, and 17 (6.0%) had severe anxiety. Although the majority of participants showed no anxiety, approximately one-third (31.7%) experienced varying degrees of anxiety. These results underscore the relevance of school-based psychological support and counseling services in addressing students' mental health needs during public health emergencies. Nevertheless, because the study was conducted at a single school using a descriptive design, the findings cannot establish that the pandemic directly caused the anxiety experienced by the participants.

Keywords: COVID-19; Anxiety; Adolescents; Junior High School Students

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INTRODUCTION

The COVID-19 pandemic significantly altered public health conditions and educational practices across the world. Measures introduced to control the transmission of the virus, including restrictions on social activities and changes in school-based learning, affected the daily routines of children and adolescents (Panda et al., 2021). Previous studies have reported an increase in anxiety symptoms among children and adolescents during the COVID-19 pandemic, particularly in the context of school closures and more stringent public health restrictions (Ludwig-Walz et al., 2023). In addition to the physical health risks associated with the disease, these changes raised concerns about the psychological well-being of younger populations. School closures and wider lockdown measures were associated with adverse mental health outcomes among children and adolescents, although the effects of individual restrictions could not always be distinguished from the broader

circumstances of the pandemic (Viner et al., 2022). These circumstances demonstrate the importance of examining the mental health of students during public health emergencies, particularly when their educational and social environments undergo substantial changes.

Early adolescence is a critical developmental period characterized by changes in emotional regulation and social relationships. Disruptions to school activities and peer interactions during the COVID-19 pandemic may have affected adolescents' emotional well-being. Previous research has linked social isolation and loneliness to adverse mental health outcomes in children and adolescents (Loades et al., 2020). In addition, research examining the psychological consequences of COVID-19 restrictions has identified mental health concerns among young people, although the magnitude and nature of these difficulties vary across populations and studies (Panchal et al., 2023). Understanding anxiety in this age group is therefore relevant to identifying psychological support needs during periods of social disruption.

In Indonesia, the COVID-19 pandemic disrupted students' learning activities and social interactions, potentially affecting their psychological well-being. Variations in family support, learning resources, and individual coping responses may have contributed to differences in students' experiences. A systematic review by Octavius et al. (2020) explored the association between COVID-19 and adolescent mental health, emphasizing the importance of psychological well-being during the pandemic (Octavius et al., 2020). Local research is needed to understand students' anxiety during the COVID-19 pandemic. A preliminary online survey conducted from 29 June to 1 July 2020 involved 42 students from three public junior high schools in Tamalanrea District, Makassar, South Sulawesi. Moderate anxiety was most frequently reported among respondents from SMP Negeri 12 Makassar. Students' concerns included viral transmission, the suspension of face-to-face classes, physical distancing, and home-based learning. These preliminary findings motivated a more comprehensive assessment of anxiety among students at SMP Negeri 12 Makassar. However, the small sample limits the generalizability of the findings to the broader student population.

Although the mental health consequences of the COVID-19 pandemic have been examined in previous international studies, the distribution of anxiety symptoms in particular school populations remains an important area of investigation. Evidence from broad reviews can establish the wider relevance of adolescent mental health concerns, but it cannot provide a substitute for data collected from individual schools and communities. Differences in participant characteristics, assessment procedures, and research settings may also influence the interpretation and comparability of findings. The Hamilton Anxiety Rating Scale (HAM-A), developed by Hamilton (1959), provides a structured assessment of anxiety through 14 items covering psychological and somatic symptoms. Nevertheless, the interpretation of scores depends on the scoring procedure, classification criteria, and suitability of the instrument for the population being assessed. These methodological considerations are especially relevant when anxiety symptoms are assessed among school-aged participants using an online questionnaire.

Although previous studies have examined the mental health consequences of the COVID-19 pandemic among children and adolescents, further evidence is needed to understand anxiety. Previous systematic reviews have primarily synthesized findings across different populations and geographical contexts, which may not fully capture the experiences of students in individual schools. In addition, describing anxiety severity alone may provide limited insight into how students respond to pandemic-related psychological challenges. Against this background, the present study investigated anxiety levels among students at SMP Negeri 12 Makassar, Indonesia, in 2020, during the COVID-19 pandemic.

This study contributes to the literature by providing school-specific evidence on anxiety levels among 287 junior high school students in Makassar, Indonesia, during 2020. The study may therefore contribute to a more contextual understanding of adolescent mental health during a public health emergency and provide preliminary evidence to inform further research and the development of appropriate school-based psychological support. The findings should be interpreted within the limitations of the study population, measurement procedures, and research design.

METHOD

Research Design

This study employed a quantitative descriptive design to examine anxiety levels related to the COVID-19 pandemic among junior high school students in Makassar, Indonesia. A descriptive approach was used to identify the distribution of anxiety levels and describe the characteristics of students experiencing different levels of anxiety. The study focused on the frequency and percentage of anxiety classifications without manipulating variables or establishing causal relationships. The findings were intended to provide a descriptive overview of students' anxiety during the COVID-19 pandemic.

Study Population and Sampling

The study was conducted at SMP Negeri 12 Makassar, a public junior high school in Makassar, South Sulawesi, Indonesia, in 2020. The study population comprised students enrolled in Grades VII, VIII, and IX. The school consisted of 33 classes, with 11 classes at each grade level. A total of 287 students participated in the study.

Participants were selected using a stratified random sampling technique. The student population was organized according to class attendance lists, and a random-number generator application was used to select participants. This procedure was intended to provide students with an opportunity to be selected randomly.

Data Collection Procedure

Data were collected in 2020 using an online questionnaire to assess anxiety symptoms associated with the COVID-19 pandemic. Anxiety was measured using the 14-item Hamilton Rating Scale for Anxiety (HRSA), also known as the Hamilton Anxiety Rating Scale (HAM-A), developed by Hamilton (1959). The instrument assesses a range of

psychological and somatic anxiety symptoms, including anxious mood, tension, fears, sleep disturbances, and physical manifestations of anxiety.

Responses to the 14 items were summarized using the categories recorded in the study dataset: no symptoms, one symptom, two symptoms, three symptoms, and four symptoms. Overall anxiety levels were subsequently reported in four categories: no anxiety, mild anxiety, moderate anxiety, and severe anxiety. The classification of participants was based on the scoring and categorization procedures applied in the original study.

The researcher carried out the adaptation of the Hamilton Anxiety Rating Scale (HARS) in several stages. In the first stage, the researcher did not re-translate the original scale, as the HARS instrument was already available in Indonesian and had been established as a reliable measurement tool by Nursalam (2008). In the second stage, the researcher made adjustments by comparing the original English version of the HARS with the Indonesian version to ensure the alignment of content and meaning for each item. Subsequently, in the third stage, the researcher engaged clinical psychology experts in an expert review process to evaluate and refine the instrument. In the fourth stage, the researcher conducted a pilot test with students from a school other than the primary research site. Validity test results indicated that all 14 HARS items were valid, with item correlation values ranging from a low of 0.405 to a high of 0.741. Furthermore, a Cronbach's Alpha reliability coefficient of 0.906 demonstrated that the instrument possessed excellent internal consistency. In the fifth stage, the researcher utilized the HARS scale having undergone this review and testing process to measure anxiety levels among the students.

To ensure methodological transparency, the final manuscript should specify the scoring procedure, the cut-off points used to determine each anxiety category, and whether the instrument underwent translation or validation for the study population. These details should reflect the actual procedures implemented during data collection.

Data Analysis

The data were analyzed using descriptive statistics, specifically frequency distributions and percentages. The analysis was conducted to describe participants' demographic characteristics, including age and sex, and to summarize responses to each of the 14 anxiety assessment items. The distribution of overall anxiety levels was also calculated to determine the number and proportion of students classified as having no anxiety, mild anxiety, moderate anxiety, or severe anxiety.

Percentages were calculated by dividing the number of participants in each category by the total sample size of 287 and multiplying the result by 100. The findings were presented in tables showing the frequencies and percentages for each variable. The analysis was limited to descriptive statistics; therefore, the results were used to characterize the anxiety levels of the study participants rather than to establish causal relationships or statistical associations between variables.

Ethical Considerations

This study received ethical approval from the Health Research Ethics Committee of the Faculty of Public Health, Hasanuddin University, Indonesia, on October 20, 2020

(Approval No. 8030/UN4.14.1/TP.02.02/2020). Ethical considerations were particularly important because the study involved junior high school students, who were predominantly minors. The study procedures should also ensure the protection of participants' confidentiality and privacy throughout data collection and analysis. Parental or legal guardian consent and student assent should be reported in accordance with the procedures documented in the original study.

FINDING AND DISCUSSION

RESEARCH RESULT

This section presents the findings on anxiety levels among junior high school students at SMP Negeri 12 Makassar during the COVID-19 pandemic. The results are presented descriptively and discussed in relation to previous studies to provide a broader understanding of students' psychological responses to the pandemic.

Table 1: Frequency Distribution of Respondents by Age among SMP Negeri 12 Makassar Students in 2020

No	Age (years)	Count	Percentage
1	12	9	3.2
2	13	125	43.6
3	14	73	25.4
4	15	73	25.4
5	>15	7	2.4
Total		287	100.0

Source: Primary data, 2020.

Table 1 shows that the age group with the highest percentage among SMP Negeri 12 Makassar students is 13 years old (43.6%).

Table 2: Frequency Distribution of Respondents by Gender among SMP Negeri 12 Makassar Students in 2020

No	Gender	Count	Percentage
1	Male	106	36.9
2	Female	181	63.1
Total		287	100.0

Source: Primary data, 2020

Table 2 shows that the highest percentage among students at SMP Negeri 12 Makassar was found in the female group (63.1%).

Table 3. Frequency Distribution of Respondents' Anxiety Levels Regarding the Impact of Covid-19 among Students at SMP Negeri 12 Makassar in 2020

No	Anxiety Level	n	%
1	No Anxiety	196	68.3
2	Mild Anxiety	53	18.4
3	Moderate Anxiety	21	7.3
4	Severe Anxiety	17	6.0
Total		287	100.0

Source: Primary data, 2020

As shown in Table 3, the assessment of 287 students at SMP Negeri 12 Makassar in 2020 revealed differences in anxiety severity. Most participants, comprising 196 students (68.3%), were categorized as having no anxiety. Mild anxiety was identified in 53 students (18.4%), while 21 students (7.3%) experienced moderate anxiety and 17 (6.0%) were classified as having severe anxiety. In total, 31.7% of the participants reported some degree of anxiety. These results indicate that although the majority of students had no reported anxiety, a considerable proportion experienced anxiety at varying levels during the COVID-19 pandemic.

DISCUSSION

Interpretation of Findings

This research assessed anxiety levels among 287 students at SMP Negeri 12 Makassar, Indonesia, during the COVID-19 pandemic in 2020. The results showed that 68.3% of participants had no anxiety, whereas 18.4% experienced mild anxiety, 7.3% moderate anxiety, and 6.0% severe anxiety. Overall, nearly one-third of the students (31.7%) fell into an anxiety category. These findings demonstrate that varying levels of anxiety were reported within the study population. Nevertheless, the descriptive nature of the research and the absence of pre-pandemic data or a comparison group mean that the observed anxiety cannot be attributed directly to Covid-19.

In terms of participant characteristics, students aged 13 years constituted the largest group (43.6%), while females accounted for 63.1% of the respondents. Although these figures describe the demographic profile of the participants, they do not indicate whether age or sex was related to anxiety, as the study did not examine anxiety levels across demographic subgroups.

Relationship to Previous Literature

The results of this study can be viewed in relation to earlier research on the mental health of children and adolescents during the COVID-19 pandemic. Analyzed data from 80,879 young people and estimated that 20.5% experienced clinically elevated anxiety symptoms (Racine et al., 2021). Although the proportion of students with some level of anxiety in the present study was 31.7%, direct comparison should be made cautiously because the studies used different assessment methods, criteria, and participant populations. Nevertheless, both studies highlight the importance of monitoring anxiety among young people.

An increase in anxiety symptoms among children and adolescents during pandemic-related school closures in Europe (Ludwig-Walz et al., 2023). Similarly, identified associations between school closures during lockdowns and changes in children's and adolescents' mental health (Viner et al., 2022). These findings provide a broader context for understanding student anxiety during periods of educational disruption, although the differences in research settings limit direct comparisons.

Evidence from other reviews also emphasizes the psychological challenges experienced by young people during the pandemic. Panda et al. (2021) documented psychological and behavioral difficulties associated with lockdown and quarantine (Panda et al., 2021), while Nearchou et al. (2020) identified anxiety and depression as important concerns among children and adolescents (Nearchou et al., 2020). These findings support the need to consider students' mental health during public health emergencies.

Furthermore, Loades et al. (2020) reported that loneliness and social isolation were associated with negative mental health outcomes among children and adolescents (Loades et al., 2020). Potential psychological difficulties related to confinement and disrupted social interactions (Guessoum et al., 2020). However, because the present study did not specifically assess these factors, their contribution to anxiety among students at SMP Negeri 12 Makassar remains uncertain.

Limitations of the Study

Several factors should be taken into account when interpreting the results. First, the research involved students from only one junior high school in Makassar, so the findings may not represent students from other schools or locations. Second, the descriptive cross-sectional design captured anxiety levels at a specific time and did not allow conclusions about causation or changes over time.

Furthermore, the use of an online questionnaire may have affected responses because of differences in participants' comprehension, willingness to report symptoms, or access to digital resources. The interpretation of anxiety levels also depends on the scoring system and classification thresholds applied to the Hamilton Anxiety Rating Scale (Hamilton, n.d.).

Finally, the study did not include a pre-pandemic comparison group or investigate the relationships between anxiety and demographic, family, or social factors. Therefore, the

findings describe anxiety levels among the participating students but cannot determine whether the pandemic itself caused their anxiety.

Implications for Practice and Future Research

The results highlight the need for schools to support students' mental health during public health crises and changes in learning arrangements. Possible approaches include mental health awareness programs, school counseling, and referral services for students who need additional support. Brooks et al. (2020) also emphasized the importance of providing reliable information and appropriate psychological support during quarantine. These approaches should be adapted to the needs of Indonesian students and evaluated for effectiveness (Brooks et al., 2020).

Further studies should involve students from different schools and regions to obtain a more comprehensive understanding of adolescent anxiety. Researchers could also investigate factors such as age, sex, family support, learning environments, and social isolation. Longitudinal studies and evaluations of school-based interventions would help identify changes in anxiety over time and determine which support strategies are most beneficial.

CONCLUSION

This study found that most of the 287 students at SMP Negeri 12 Makassar experienced no anxiety during the COVID-19 pandemic (68.3%), while others reported mild (18.4%), moderate (7.3%), or severe anxiety (6.0%). These findings highlight the importance of school-based mental health support. Future research should involve students from multiple schools and examine factors associated with anxiety, as well as the effectiveness of psychological support programs.

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