

Student mental health factors in terms of anxiety and depression

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Abstract. This research aims to reveal the mental health picture of middle and high school students in Greater Bandung. This research also analyzes the relationship between anxiety and depression on students' mental health. The subjects in this research were 1045 middle school (9) and high school (10-12) students. The research used a self-developed measuring instrument for mental health based on the theory of Bhugra., et al (2013). The depression measuring instrument used the Beck Depression Inventory (BDI). II), Anxiety measuring tool using the Hamilton Anxiety Rating Scale (HARS). The research results show that there is a significant relationship between students' mental health and the anxiety and depression they experience. Improving students' mental health can reduce their levels of depression and anxiety.

Keywords: anxiety, depression, mental health, students

1 Introduction

By enhancing their quality through instructional procedures and activities, schools, as one of the educational institutions, produce human resources [1]. Students' health profiles and behaviors are indicators of school quality, which is correlated with healthy schools [2]. In order to assess the caliber of instruction, it is crucial to understand the characteristics of mentally sound students. Students, however, deal with mental health difficulties on their own.

The World Health Organization defines mental health as the condition of well-being of a person who can work well, manage everyday stressors, be confident in his talents, and give back to his community [3]. A person in good mental health is one who does not exhibit any signs of mental illness. By employing stress processing techniques, mentally healthy people can go about their daily lives as usual [4].

As teenagers make the journey from childhood to early adulthood, their mental health may be impacted. In addition to biological development, social environment factors including family, peers, and school setting may also have an impact on their mental health [5]. It is expected of adolescents to be able to adjust to the changes they encounter, finish their developmental tasks

without difficulty so that they won't face challenges in their social lives, finish their developmental tasks effectively in preparation for the next stage of their lives, and feel content [6]. Mental health issues, such as anxiety and depression, are among the significant difficulties that some teenagers confront [7]. While co-occurring occasionally, anxiety and depression signify distinct forms of psychological discomfort [8]. However, mental health is emerging among teenagers due to the increasing number of teenagers who experience anxiety and depression over time [9].

Depression is a mental illness that is defined by enduring melancholy, hopelessness, and disinterest in once-enjoyable activities. Physical symptoms like exhaustion, insomnia, and hunger fluctuations can also result from it [10]. Depression is a prevalent issue among teenagers, often overlooked compared to its recognition in adults. Depressive symptoms in adolescents are given particular consideration due to the perception of heightened emotional sensitivity, excessive mood swings, and the fluctuating nature of emerging depressive symptoms [11] [12]. Depression in adolescents manifests in heightened cigarette use, elevated suicide rates, escalated substance abuse instances, diminished social functioning, and reduced academic achievement. Hence, it is crucial to identify and acknowledge the symptoms of depression in teenagers [13] [14].

The hallmark of anxiety as a mental health condition is excessive fear or worry about commonplace events. It may result in bodily symptoms like sweating, shaking, and an accelerated heartbeat [15] [16]. Anxiety arises from challenges to the foundational self-esteem of an individual [17] [18]. This anxiety is shared through interpersonal communication, becoming an integral aspect of daily life [19]. It serves as crucial alerts, providing valuable warnings for preserving self-equilibrium and safeguarding one's sense of self. Additionally, anxiety can directly impact the learning process by diminishing students' motivation to engage in learning activities. High levels of anxiety make it challenging for students to effectively participate in the learning process [20].

Anxiety and depression can manifest alone or in tandem, and they share certain symptoms, like irritability. Severe anxiety may lead to panic episodes and play a role in the emergence of serious depression. Anxiety symptoms can also be exacerbated or brought on by depression [21] [22]. In order to enhance mental well-being and promote seeking help for mental health issues, it is essential to recognize the influence of depression and anxiety symptoms. It is crucial to emphasize the importance of professional therapeutic assistance for improved mental health support [23].

According to research by [24], teens in Indonesia who were transitioning between the ages of 16 and 24 provided some intriguing information. The results of the study showed that when these youths confronted difficulties during this time, about 88% of them suffered symptoms of depression and about 95.4% of them experienced feelings of anxiety. Furthermore, almost 96.4 percent of research participants acknowledged that they felt unprepared to handle the stress brought on by their issues. According to the findings of other studies, emotional mental problems, including loneliness (44.54%), anxiety (40.75%), and suicide thoughts (7.33%), affect 60.17% of middle and high school pupils [25].

A person's mental health can be understood in three different ways: either as the absence of disease, as a state in which the organism is able to fulfill all of its activities, or as a balance both inside oneself and between one's physical body, social environment and mental health [26].

However, two prevalent mental health conditions that might impact a person's mood, thoughts, and behavior are anxiety and depression [27]. Therefore, a deeper examination of how depression and anxiety fit into the overall picture of students' mental health is required.

2 Method

1. Population and the method of sampling

Participants in this research were 1045 teenagers attending junior high school (grade 9) and senior high school (grade 10-12). The sample characteristics in this study were teenagers in the age range of 15-19 years and studying in Bandung Raya. The sampling technique uses a non-probability sample.

2. Instrumentation

Instrument Mental Health

Researchers developed a mental health measuring tool based on the mental health formulation of [28]. There are three dimensions that can be seen from the definition of mental health itself, namely being at peace with oneself, being able to carry out social interactions and roles, and recognition of the individual's psychological needs, which consists of 36 items. Has a fairly high reliability value, namely 0.925.

Instrument Depression

Depression measuring tools use the Beck Depression Inventory II. The validity of the BDI-II measuring instrument obtained an internal reliability result of 0.90 [29].

Instrument Anxiety

Anxiety measuring tool using the Hamilton Anxiety Rating Scale (HARS). The HARS scale has been proven to have high enough validity and reliability for measuring anxiety, namely 0.93 [30].

3. Process

First, based on [31]'s mental health concept, researchers created a measuring tool for mental health in this study. Next, select a depression and anxiety assessment tool. Researchers separate offline and online data collection methods. 1045 middle and high school students made up the student body. To pique students' interest, 25 randomly chosen students receive rewards in the form of electronic balances.

4. Data analysis

Data analysis uses descriptive and correlational data analysis use JASP Application. Descriptive research aims to offer a comprehensive understanding of the present circumstances [32]. Correlational research is geared towards identifying connections between variables and facilitating forecasts of future occurrences using existing knowledge. Correlation serves multiple purposes, including assessing prevalence, exploring relationships between variables, and predicting future events based on existing data and knowledge. While correlations have diverse applications, it's crucial to exercise caution during the design phase and data analysis.

This cautionary approach aids researchers in minimizing errors. The identification of key issues is a pivotal step, leading to focused discussions, and the proposal of various options for data analysis [33]

3 Results and Discussion

Students face mental health problems, this is very important so analysis is needed to find out the factors that influence it. This study examines demographic factors and variables of anxiety and depression. Problems like adjustment, disagreement with parents or friends, personal issues, academic difficulties, and other issues that can prevent children from realizing their full potential can even lead to stress and inhibit mental development [34]. Thus, research on mental health is necessary; multiple findings were made by this study. To begin, let's compare mental health according to age (see table 1).

Table 1. Table captions should always be positioned *above* the tables.

Cases	Sum of Squares	df	Mean Square	f	p
Age	119.802	4	29.950	0.246	0.912
Residuals	126436.309	1040	121.573		

Note. Type III Sum of Squares

Table 1 contains two rows. The Age variable's F value of 0.246 in the ANOVA test results indicates that there is no discernible difference between the averages of the various age groups. The null hypothesis cannot be rejected because, if true, there is a very high probability of obtaining a F value at least as great as that shown in the sample data ($p = 0.912$). The influence of age on mental health conditions is minimal, but it plays a significant role in the willingness to seek mental health assistance. Older individuals tend to be more open to seeking help for mental health issues [35].

Table 2. Description of the subject's age

Age	Mean	SD	N
15	70.047	10.486	150
16	69.102	11.081	383
17	69.365	11.218	427
18	69.300	10.643	80
19	67.200	12.194	5

Table 2 indicates that 475 of the study's subjects were 17 years old, on average. However, the average mental health score was between 67 and 70, indicating that there was no significant

difference in mental health at the 15–19 age range. Similarly, grades 10–11 in high school also showed no significant difference in mental health, indicating that there was no distinct health picture associated with this condition. Mental well-being is generally distributed uniformly, and various attributes exhibit a continuum corresponding to the level of education, indicating a reciprocal relationship between mental health and educational attainment [36]. Poor mental health was notably linked to school dropout in students pursuing both vocational and higher education [37].

Table 3. Analysis of mental health by gender

	t	df	p
KM	8.886	1.043	<.001

Note. Student's test

The t value of 8.886 in this instance suggests that the means of the two independent groups differ significantly. A p-value of less than 0.001 suggests that there is extremely little likelihood that the difference in the two groups' means happened by accident.

Table 4. Comparison of health by gender

Group	N	Mean	SD	SE	Coefficient of variation
KM Laki-laki	424	72.884	10.752	0.522	0.184
Perempuan	621	66.939	10.530	0.423	0.157

In this study there were more female research subjects with 621 subjects and 424 male subjects. It is clear from this table that the male group has a higher average variable value than the female group. Furthermore, compared to the female group, the male group's standard deviation is higher. In the meantime, the male group's coefficient of variation is smaller than the female group's. Women have a lower mental health risk than men. Men have a higher mental health risk and this impacts the learning process [38].

Table 5. Correlation Test

Variable		Dep	Kec	KM
1. Dep	Pearson r	-		
	p-value	-		
2. Kec	Pearson r	0.536	-	
	p-value	<.001	-	
3. KM	Pearson r	-0.662	-0.605	-
	p-value	<.001	<.001	-

The Pearson correlation value is always in the range of -1 to 1, where a perfect negative linear correlation between two variables is represented by a value of -1, a perfect positive linear correlation by a value of 1, and no linear correlation between two variables is represented by a value of 0. The following conclusions can be drawn from the Pearson correlation table between the variables depression, anxiety, and mental health.

The depression and anxiety variables have a moderately positive correlation, with a correlation value of 0.536 and a p-value of less than 0.001. The research results show that anxiety and depression have a significant relationship, this is in accordance with other supporting research [39] [40] [41]. Depression and anxiety rank among the prevalent mental health issues. The global focus on mental disorders is growing as they significantly contribute to fatigue, immense academic pressure, and overwhelming stress [42] [43] [44].

The coexistence of depression and anxiety can elevate impairment and healthcare utilization in individuals, surpassing the impact of each disorder individually. The manifestation of depressive symptoms is frequently linked to an unfavorable prognosis and considerable adverse effects on environmental functioning. The strength and persistence of depressive symptoms over extended periods are closely tied to the quantity and intensity of anxiety symptoms, emphasizing their correlation rather than a specific anxiety diagnosis [45] [46] [47].

Concerning students and their experiences with anxiety and depression, students with anxiety may achieve academic success, although their anxiety levels remain moderate. In contrast, students experiencing depression do not see any impact on their academic achievements [48] [49] [50]. Additionally, anxiety and depression can influence not only academic performance but also have repercussions on their educational and social aspects. [51] [52].

The depression variable and the mental health variable exhibit a strong negative correlation, with a correlation value of -0.662 and a p-value of less than 0.001. Depression is a long-lasting and incapacitating condition that typically starts in childhood or early adulthood [53]. Teenagers face a heightened vulnerability to depression. Experiencing depression during adolescence raises the likelihood of facing depression in later stages of life [54]. Various studies consistently indicate that adolescent depression amplifies the chances of developing anxiety disorders in adulthood [55]. Additionally, apart from influencing mental health, depression in adolescents also has repercussions on physical health [56] [57].

Moreover, those experiencing depression in adolescence face an increased likelihood of encountering major depressive disorder, suicidal ideation, and attempts as they mature [58]. This situation highlights a direct correlation, indicating that elevated levels of depression in individuals are associated with lower mental health [59] [60] [61]. To deal with depression students can learn to recognize and deal with stress. Students can take part in health promotions on how to deal with stress. Stress recognition and coping skills empower students to avoid falling into depression. Active participation in health promotion initiatives equips them with effective strategies to conquer stress [62] [63].

With a correlation value of -0.605 and a p-value of less than 0.001, there is a moderately negative correlation between the mental health and anxiety variables. Anxiety profoundly affects students, impacting their mental health, social connections, emotions, and academic success [64] [65] [66]. It stems from difficulties in social problem-solving, distorted cognitive thinking,

family conflicts, feelings of isolation from parents and peers, a helpless attribution style, gender-related factors, and perceptions of criticism from teachers [67] [68] [69] [70].

Addressing anxiety in educational settings is crucial to promote optimal academic outcomes [71]. The findings underscore the need for comprehensive strategies to support students' mental health alongside their academic pursuits [72]. Acknowledging and managing mental health challenges can contribute significantly to creating an environment conducive to learning and academic success [73].

4 Conclusions

This study concludes that a correlation exists between students' mental health and the presence of anxiety and depression. A positive mental health status is associated with lower levels of anxiety and depression, while students with heightened anxiety or depression tend to exhibit poorer mental health. Notably, female students often face more significant mental health challenges due to their openness, leading to noticeable symptoms of anxiety and depression. In contrast, male students generally exhibit better mental health. However, in cases where male students encounter issues related to anxiety and depression, the impact is more pronounced compared to female students. This is attributed to the fact that female students typically have greater access to mental health services

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