### **ORIGINAL ARTICLE**

# Relationship Between COVID-19 Preventive Measures and Adolescent Anxiety Levels During the Transition Period

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#### **ABSTRACT**

**Introduction:** Anxiety is one of the psychological effects of the COVID-19 epidemic on adolescents. The study examines the connection between teen anxiety during a pandemic and Covid-19 transmission prevention. **Methods:** Using a cross-sectional approach, this is descriptive correlation research. 168 Indonesian high school students in grades 7 through 12 made up the study's entire sample. It was done through inadvertent sampling. The tool utilized was a questionnaire with 13 questions about adolescents' understanding of Covid-19, including 10 questions about transmission anxiety. **Results:** In the transitional phase, teenagers' anxiety was linked to the avoidance of Covid-19 transfer, according to a Spearman rank analysis (p 0.034; 0.05). **Conclusion:** Adolescents may feel anxious when they adapt to new routines. This is significantly related to actions taken to stop the spread of Covid-19.

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#### **INTRODUCTION**

A particular virus called coronavirus disease (Covid-19) has spread like wildfire over many nations, including Indonesia. According to the World Health Organization (WHO), the newly identified coronavirus (1) is an infectious disease known as COVID-19. Up to this point, human-to-human transfer has been the primary mode of COVID-19 transmission. The COVID-19 epidemic has affected a wide range of people, including young children, adolescents, and the elderly. This pandemic also affects people physically, socially, and psychologically (2). If a person visits a location with a group of sick people or comes into close contact with an infected person within 14 days, they are considered at risk (3).

Since March to the present, the proportion of Indonesia's population that is COVID-19-infected has been rising daily. As of June 2020, COVID-19 had affected 456 city districts, with 32.132 (48.5%) infected

and 30,785 (46.5%) recovered.. The typical age at which COVID-19 instances occurred was 25–34 years old (11,500 cases), followed by 35–44 years (10,500 cases), 45–64 years, and 15–24 years (6,000 cases) (4). In order to prevent COVID-19 cases, teens are one of the age groups that are being targeted.

From a psychological perspective, adolescents differ from children and adults in age. Adolescents frequently go through more severe emotional states. Teenagers need to completely participate in events at home because of the COVID-19 epidemic. This syndrome runs counter to how adolescents develop, which is to always want to experience the outside world. Teenagers are more likely than other age groups to avoid social isolation at this time. Teenagers frequently lack knowledge of pandemic occurrences and are constantly up-to-date on myth-making and social media trends. Teenagers experience anxiety as a result of this conduct, which makes it challenging for them to take COVID-19 transmission prevention measures. One of the effects noticed by the community is anxiety around the spread of COVID-19 (5).

This is consistent with one study that shows anxiety in adolescents can range from mild to quite severe.

Anxiety is one of the psychological effects of the COVID-19 epidemic on adolescents, in addition to its physical effects (6). Another study (7) found that living in an urban environment, being a woman, and having a medical history are risk factors for anxiety and depression during the COVID-19 epidemic. Adolescents, residents of urban areas, and those who have coexisting conditions will feel the psychological effects more acutely (8). The phenomenon highlights the need for identifying anxiety behavior in teens as a risk age and the necessity for preventive measures.

#### **MATERIALS AND METHODS**

Cross-sectional methodology and a descriptive-correlative design were utilized in the study. 168 samples from Indonesian high schools were used to collect the data. On samples that satisfied the inclusion requirements, the sampling technique was applied through unintentional sampling. Using a tool in the form of a questionnaire that is sent after receiving an authorization sheet, research data will be collected from students. The questionnaire is divided into four sections: a demographic one, one on

Table I : Distribution of Respondent Characteristic Analysis

Variable	Respondent (168)	
	n	%
Age (Year)		
15	20	11.9
16	38	22.6
17	59	35.1
18	31	18.5
19	12	7.1
20	8	4.8
Gender		
Male	32	19
Female	136	81
Information display		
Television	93	55.4
Social Media	7	4.2
Family	67	39.9
Other	1	0.6

COVID-19 knowledge, one on COVID-19 prevention behavior, and one on COVID-19 anxiety. Identity, age, and information exposure made up the respondents' demographic information. The validity and reliability of the statement-based questionnaire on COVID-19 prevention strategies and adolescent anxiety levels have been examined (9,10). Data collection on respondents took place while Indonesia was under COVID-19 pandemic lockdown. We adopted the questions used in a previous report (9) about anxiety levels regarding symptomatic aggravation and virus transmission to others. The COVID-19 Preventive Measures are the independent variable in this study, and the adolescents' anxiety levels are the dependent variable.

#### **Ethical Clearance**

This article has passed ethical clearance from the Health Research Ethics Committee, Bani Saleh High School of Health Sciences, Department of Nursing, STIKES Bani Saleh, Indonesia, with Ethical Approval No. 162/KEPK/STKBS/VI/2021 dated June 8, 2021.

#### **RESULTS**

According to Table I's analysis of the study's findings, 59 respondents (35.1% of the total) were under the age of 17, and 136 respondents (81%) were of the female sex. As many as 93 respondents (55.4%) said they first learned about COVID-19 from television.

According to the study's findings, which are presented in Table II, there is a correlation between preventive measures and anxiety in transitional-age adolescents with a P value of 0.034. The value of R denotes the strength and direction of the relationship as well as its magnitude. This indicates a negative direction of connection and a magnitude of 16.4% between preventive measures and anxiety. Negative refers to the direction of the link between the two moving in the opposite direction; for example, anxiety will diminish as preventive measures grow and vice versa.

Table II: Relationship between Covid-19 Preventive Measures and Anxiety in Adolescents

	Variable   Dependent	
Variable Independent	Anxiety Covid-19	
	R.	P value
Preventive Covid-19	-164	0.034

#### **DISCUSSION**

#### **Characteristics of Respondents**

According to Table I's age characteristics, the teenagers who responded ranged in age from 15 to 20 years old. The age of the majority of adolescent respondents was 17 years, accounting for 35.1% of the total 168 respondents, according to Indonesian Ministry of Senate No. 25 of 2015, which defines adolescents as those between the ages of 10 and 18 years. However, the World Health Organization defines adolescents as those between the ages of 10 and 24 (1). Adolescent growth is characterized by a process of identity exploration and a lack of parental supervision for dangerous behavior. Adolescents have the ability to transform their lifestyles into healthy behaviors throughout their lives (3).

A group of people that interact in a place or have particular qualities that are owned and form a part of the community are considered adolescents as an aggregate at risk. The lack of community control over the adverse effects that may occur can affect the state of the risk group in a group. Lack of regulations, subpar public education, and inadequate awareness of dangers may be to blame for this. Adolescents at a developmental stage who are seeking identity will readily imitate their peers' actions (3). Additionally, anxiety and sadness affect adolescents between the ages of 12 and 21 (11). This is corroborated by a study (9) which shows adolescents are more likely than adults to experience COVID-19's psychological effects. Physical activity among adolescents is one strategy for reducing risk. Increased self-confidence, positive self-concept, reduced anxiety, reduced stress all significantly correlate with physical activity (9).

## The Relationship of Preventive Actions to Prevent Covid-19 with Adolescent Anxiety Levels Facing the Transition Period

Table II shows that the significant level of the association between teenage anxiety and COVID-19 preventive measures has a P value of 0.034. This is consistent with the findings (11) that anxiety in teenagers, particularly during the COVID-19 pandemic at the student level, occurs more frequently without the typical signs and symptoms of anxiety. Teenagers' lack of awareness of the possibility of COVID-19 transfer is only one of many habits they have that can increase their likelihood of experiencing anxiety-provoking situations. Teenagers are less likely to acquire information in this situation and are less likely to take preventative steps (8). The fact that teenagers lived with their parents had a large demographic impact on anxiety, according to (12). Anxiety is more likely to occur in adolescents who live alone or with COVID-19-infected family members. Teenagers' access to news and information is another

risk factor that can contribute to anxiety; therefore, every broadcast that includes news about COVID-19 can raise students' anxiety levels (13).

According to the findings of statistical testing, there is a substantial link between adolescents' anxiety and their understanding of COVID-19. These findings concur with research (15) that asserts there is a connection between students' anxiety and their level of knowledge. The desire of people to follow preventive guidelines, such as social withdrawal and hand washing to vaccinate, has a significant impact on anxiety (15). According to (16), both men and women who neglect to take preventative measures at different ages will be more likely to experience depression.

#### **CONCLUSION**

Based on the study's findings, it can be concluded that improving confidence in the healthcare system and its staff requires solid understanding and information regarding prevention. Social networking and telemedicine adaptation are both urgently needed. Despite the fact that attitudes are positive and anxiety levels are mild, there is still a knowledge gap on COVID-19 prevention, so it is imperative to fill it.

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