

Self-efficacy and COVID-19 prevention behaviour among adolescents: A cross-sectional study

Autoeficacia y comportamiento de prevención de COVID-19 entre adolescentes: un estudio transversal

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SUMMARY

Introduction: COVID-19 has become a serious epidemic in Indonesia, even in the corners of the earth. Every day COVID-19 patients continue to increase, and almost all circles of society are exposed to the virus regardless of age and gender. In dealing with conditions such as the current pandemic, it is necessary to have self-efficacy in good adolescent prevention practices. The purpose of this study was to determine the relationship between self-efficacy and the practice of preventing COVID-19 in adolescents.

Methods: A descriptive correlational study was conducted among 232 senior high school students in Lumajang, Indonesia. Quota sampling was used to recruit the respondents. The data were collected using general self-efficacy and COVID-19 preventive behaviour among adolescents. The univariate analyses in the form of frequency and percentage. Furthermore, bivariate analyses with the Spearman Correlation Test were performed for data analysis.

Results: The results of this study indicate that the majority of Persatuan Guru Republik Indonesia (Indonesian: Teacher's Union of the Republic of Indonesia) (PGRI) high school students' self-efficacy levels are in the moderate category, with a total of 120 (51.7 %), while most COVID-19 prevention practices are 129 respondents (55.6 %). The results of the Spearman correlation test show a positive relationship between self-efficacy and the practice of preventing COVID-19, as evidenced by a significant value of 0.0001 ($p < 0.05$) and a correlation value of 0.903. The strength of relationship in this study is strong.

Conclusion: High self-efficacy can affect prevention practices that can be done well because the higher self-efficacy, the person could act with confidence and be more careful in acting, for example, such as carrying out preventive practices to reduce the transmission of COVID-19. Strategies to improve self-efficacy may be beneficial in increasing positive behaviour toward COVID-19.

Keywords: COVID-19, preventive practices, self-efficacy.

DOI: <https://doi.org/10.47307/GMC.2022.130.s5.4>

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Recibido: 11 de septiembre 2022

Aceptado: 30 de septiembre 2022

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RESUMEN

Introducción: La COVID-19 se ha convertido en una grave epidemia en Indonesia, incluso en los rincones de

la tierra. Cada día siguen aumentando los pacientes de COVID-19, y casi todos los círculos de la sociedad están expuestos al virus sin importar la edad y el género. Ante condiciones como la actual pandemia, es necesario tener autoeficacia en buenas prácticas de prevención adolescente. El propósito de este estudio fue determinar la relación entre la autoeficacia y la práctica de prevención del COVID-19 en adolescentes.

Métodos: Se realizó un estudio descriptivo correlacional entre 232 estudiantes de secundaria en Lumajang, Indonesia. Se utilizó el muestreo por cuotas para reclutar a los encuestados. Los datos fueron recolectados utilizando la autoeficacia general y el comportamiento preventivo de COVID-19 entre adolescentes. Los análisis univariados en forma de frecuencia y porcentaje. Además, se realizaron análisis bivariados con la prueba de correlación de Spearman para el análisis de datos.

Resultados: Los resultados de este estudio indican que la mayoría de los niveles de autoeficacia de los estudiantes de secundaria del Persatuan Guru Republik Indonesia (Indonesio: Sindicato de Maestros de la República de Indonesia) (PGRI) se encuentran en la categoría moderada, con un total de 120 (51,7 %), mientras que la mayoría de las prácticas de prevención del COVID-19 son 129 encuestados (55,6 %). Los resultados de la prueba de correlación de Spearman muestran una relación positiva entre la autoeficacia y la práctica de prevención del COVID-19, evidenciada por un valor significativo de 0,0001 ($p < 0,05$) y un valor de correlación de 0,903. La fuerza de la relación en este estudio es fuerte.

Conclusión: La alta autoeficacia puede afectar las prácticas de prevención que se pueden hacer bien porque a mayor autoeficacia, la persona podría actuar con confianza y ser más cuidadosa al actuar, por ejemplo, como realizar prácticas preventivas para reducir la transmisión de COVID-19. Las estrategias para mejorar la autoeficacia pueden ser beneficiosas para aumentar el comportamiento positivo hacia el COVID-19.

Palabras clave: COVID-19, prácticas preventivas, autoeficacia.

INTRODUCTION

COVID-19 remain a global threat that causes mortality and morbidity among global citizen (1). The country with the highest COVID-19 cases is the United States, with the number of confirmed cases as of April, 357 036 out of 1.2 million more infected worldwide. Meanwhile, China, the first transmission of COVID-19, was the fifth country with the highest number of COVID-19 cases, with

a total of 83 654. In Southeast Asia, the country with the highest number of deaths in Malaysia. As of April 10, 2020, the total number of cases that have been confirmed positive is 4 228, with 67 patients dying and 1 608 recoveries (2). On May 8, 2020, the number of cases due to COVID-19 was 3 679 499 people, and 254 776 people died in 215 countries (3). Indonesia with a total of 12.776 COVID-19 cases and a total of 930 people who died (4).

Indonesia was in 3rd place in Southeast Asia on April 10, 2020, with a total of 3 293 confirmed positives, a death rate of 280 patients, and 252 patients with total deaths having recovered. DKI Jakarta ranked highest in Indonesia with valid COVID-19 cases on April 10, 2020, and there were 1 706 patients with a total death of 154 patients (2). According to information on the COVID-19 in East Java, as many as 14 941 people tested positive for COVID-19, people under monitoring (ODP) reached 30 516, patients under surveillance (PDP), as many as 11 923 people, patients who have recovered 5 779 people (5). In Lumajang District, East Java Province, 686 people were confirmed positive for COVID-19, 621 people recovered, and 63 patients died (6).

As a result, COVID-19 has made all activities that initially brought together many people now limited physical, and social contact, such as learning at school, which was initially carried out face-to-face to online learning (online learning), and workers are working from home, so worship is currently allowed. Stay at home (7-10). This is certainly felt by children when learning online (online), which is caused by a lack of mastery of technology, and limited internet costs for communication and socialization between teenagers and their teachers (11-13). Adolescence can be said to be a transition period from childhood to adulthood with the age of 12 to 15 years, even up to 20 years. Changes in adolescence include physical changes, mindsets, personality, and behaviour, and identity development will continue to run in adolescence (14-16). During the transition period, full of temptations, teenagers often experience emotions, anxiety, and discomfort.

Therefore, teenagers must go through and accept all the changes around them to adapt well (7). Distance learning implemented during the pandemic period requires adaptation for

teenagers because previously, they met face-to-face and could interact more freely, but during the pandemic period, teenagers need time to adapt to new changes that affect their ability to understand learning materials. In addition, during the pandemic, teenagers have a period of vacation that cannot be determined when it will end, making them feel bored (11).

Preventive action is an effort to eliminate potential causes or unexpected situations implemented in health services and the community. Preparedness must be developed among teenagers against COVID-19 because young people are familiar with and good at using social media to get information about COVID-19 knowledge. Preparedness is a person's readiness to deal with problems or disasters that come and carry out various kinds of effective prevention (17). The prevention practices that adolescents commonly carry out in the community are following guidelines for washing hands properly, spraying disinfectants, utilizing media platforms to support public health communication, social media campaigns, and school communication can be effective methods for students to receive appropriate information. with age (18). Teenagers must have adequate knowledge during the COVID-19 pandemic even though they are not at high risk of being infected with the COVID-19 virus. Using information facilities such as newspapers, TV, and government directives effectively is the key to increasing public knowledge and awareness about COVID-19 virus infection and its consequences (19,20).

Effective management is by applying Self Efficacy to adolescents for COVID-19 prevention practices. Self-Efficacy is a general concept that refers to the extent to which people believe that they can overcome problems or stressors that are being experienced and require the ability to control motivation Self-efficacy also requires beliefs about the ability to have a direct influence on the actions taken and how much effort has been passed as well as how long he refuses to take preventive action (19).

In addition, adolescents have low self-efficacy because when faced with problems, they have fewer coping strategies compared to adults, as is the case during the current COVID-19

pandemic; therefore, it is essential to support adolescents during difficult times and build their mental health so as not to be disturbed (1,21). A preliminary study found high rates of depression (23 %), anxiety (19 %), and (52 %) experiencing moderate levels of worry (22). Therefore, the purpose of this study is to find out the relationship, namely so that adolescents have self-defence for themselves and can carry out activities or activities normally even though they are still in the scope of the COVID-19 pandemic. Based on the above review, the researcher wants to conduct a study entitled "The Relationship between Self-Efficacy and COVID-19 Prevention Practices in Adolescents".

METHODS

Research design

This research used a descriptive-analytic research method with a cross-sectional approach. This study used quota sampling with a sample of 232 students at Senior High School in Lumajang District, East Java Province, Indonesia. The inclusion criteria were willing to be participants. Data were collected using a questionnaire that had been translated into Indonesian.

Self-Efficacy

In this study, using the General Self-efficacy Scale (GSE) questionnaire, the researchers took a questionnaire from the research (23). This research instrument consists of 10 questions with answer choices strongly disagree, disagree, agree, and strongly agree. Then for the category of assessment based on the score is low: < 20, moderate: 20 – 30, and high: 30. The reliability test results show the Cronbach alpha is 0.923.

Preventive Practice

To prevent COVID-19, researchers adopted a questionnaire from the journal preventive behaviors related to COVID-19 among high school students: a cross-sectional web-based survey consisting of 10 question items. This questionnaire uses an attitude questionnaire consisting of 3 components of clean and healthy

living behaviour: applying masks during the COVID-19 pandemic, implementing social distancing, and regularly washing hands properly and correctly. In addition, a modified Likert Scale measured preventive behaviour related to the COVID-19 score. Preventive behaviour related to the COVID-19 score is categorized as good if the total score reaches more than 75 %, moderate if it is equal to 75 %, and poor if the total score only reaches 75 % or less (24). The results of the reliability test show Cronbach's alpha are 0.802.

Data analysis

This study measures the relationship between self-efficacy and the practice of preventing COVID-19 in adolescents. Using the Spearman Correlation test, the bivariate test was conducted to determine the relationship between self-efficacy and the practice of preventing COVID-19 in adolescents.

Ethical consideration

The research ethics was obtained from the UMM Ethics Committee from the University of Muhammadiyah Malang (No.E.5.a.006/KEPK-UMM/I/2022).

RESULTS

Table 1 shows that the results of the characteristics of respondents based on gender obtained the most are women, namely 137 (59.1 %) respondents. The age in the table shows that most respondents are 16 years old, with a total of 102 (44 %) people. Then the results of the most class characteristics are class XI with 118 (50.9 %) respondents.

The results of the self-efficacy description of 232 respondents showed that most respondents had moderate self-efficacy with a total of 120 (51.7 %) respondents (Table 2).

Table 3 shows that 129 (55.6 %) respondents have moderate prevention practices from the number of respondents as many as 232 people.

Table 1
Characteristics of respondents

Characteristic	Frequency (n)	Percentage (%)
Gender		
Male	95	40.9
Female	137	59.1
Age (Years)		
15	23	9.9
16	102	44.0
17	95	41.0
18	8	3.4
19	4	1.7
Class		
X	114	49.1
XI	118	50.9
Total	232	100.0

Table 2
Self-Efficacy Level Among Senior High School Students About COVID-19

Category	Frequency	Percentage (%)
Low	17	7.4
Moderate	120	51.7
High	95	40.9
Total	232	100.0

Table 3
Level of Preventive Practices for PGRI 1 Lumajang Senior High School Students About COVID-19

Category	Frequency	Percentage (%)
Poor	8	3.4
Moderate	129	55.6
Good	95	40.9
Total	232	100.0

As shown in Table 4, the cross-tabulation results of 232 respondents showed that adolescents' self-efficacy during the COVID-19

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pandemic had moderate self-efficacy with a total of 120 students. While the results of the cross-tabulation of preventive practices during

the COVID-19 period, most adolescents had moderate prevention practices, with a total of 129 students.

Table 4
Cross Tabulation Between Self-Efficacy with Preventive Practices COVID-19

			Preventive Practices			Total
			Poor	Moderate	Good	
Self-Efficacy	Low	n	8	6	3	17
		%	3.4	2.6	1.3	7.3
	Moderate	n	0	120	0	120
		%	0.0	51.7	0.0	51.7
	High	n	0	3	92	95
		%	0.0	1.3	39.7	40.9
Total	n	8	129	95	232	
	%	3.4	55.6	40.9	100	

The results of the Spearman correlation test between self-efficacy and prevention practices obtained a correlation coefficient of 0.903 with a significant value of 0.0001. These results indicate a value of less than 0.05 ($p < 0.05$). There is a significant relationship between self-efficacy and prevention

practices. Furthermore, the strength of the relationship is very strong, i.e. $r = 0.903$, and positively correlated, which means that the higher the level of self-efficacy in adolescents, the better prevention practices implemented by adolescents during the COVID-19 pandemic (Table 5).

Table 5
The Relationship Between Self-Efficacy and COVID-19 Prevention Practices in Adolescents

			Self-Efficacy	Preventive
Spearman's rho	Self-efficacy	Practices Correlation Coefficient	1.000	0.903**
		Sig. (2-tailed) N	232	0.0001 232
	Prevention practices	Correlation Coefficient	0.903**	1.000
		Sig. (2-tailed) N	0.0001 232	232

DISCUSSION

The factors influencing a person's high and low self-efficacy in tasks vary widely. This is

caused by several factors that affect the perception of individual abilities, including gender, age, education level, and experience (25). In this study, adolescents had a moderate level of self-efficacy, with the number of respondents

as many as 120 (51.7 %) students. Several studies state that self-efficacy is very important for students to do their study assignments and deal with situations or conditions. However, in reality, many students still have low self-efficacy because they lack self-confidence and believe in their ability to deal with problems that are being experienced or are happening (26). Students who have low self-efficacy will only be passive and wait for the COVID-19 pandemic to end soon and do not try to improve their ability to adapt to a condition or learning process that is currently happening. During the developmental period, adolescents who have moderate self-efficacy tend to be hesitant in making decisions related to their future and still focus on their goals in the present. Adolescents with high self-efficacy will be more sensitive to some new information, such as the prevention of COVID-19 and about the world of work or career, so they can plan and visualize the desired future (27). In contrast, students with high self-efficacy in research (18) aid that students were able to overcome problems, keep positive thinking, and think creatively in dealing with problems or conditions being faced, including during the COVID-19 pandemic.

The results obtained on prevention practices carried out by students during the COVID-19 pandemic, the majority had moderate prevention practices with a total of 129 (55.6 %) students, good prevention practices with as many as 95 (40.95 %) students, and bad prevention practices. as many as 8 (3.4 %) students. Practice is an action whose main element is an attitude, but attitude cannot necessarily be realized in action (28). Factors that influence practice include reinforcing factors (self-support), predisposing factors (knowledge, attitudes, actions), and enabling factors (facilities and infrastructure) (28). Research conducted by a previous study at Tasikmalaya, also said that some teenagers still cannot carry out preventive practices against COVID-19 properly or practice moderately because they lack a sense of concern for paying attention to health protocols (29). Even though you already know that washing your hands with soap is recommended, cover your mouth when sneezing and coughing. However, many students are reluctant to carry out these healthy habits to comply with health protocols to protect the environment so that they are not easily

exposed to the COVID-19 virus. Some teenagers are said to have low practice because there are still those who imitate the hygiene behavior of their parents but are not accompanied by an understanding of the benefits for themselves and the surrounding environment, so it is necessary to deliver health information with specific targets for adolescents to strengthen understanding and maximize compliance. Adolescents who have a high level of practice because they have received information on knowledge and behavior of prevention well, they have compliance with practicing proper and clean hand washing. In a study (Chen et al., 2020) it was said that adolescent girls were more obedient to the recommendations for hand washing and did not want to take the risk of the impact of COVID-19 compared to male adolescents who were still unable to comply with the importance of washing their hands (30).

Spearman correlation test is a test that aims to determine whether there is a relationship between knowledge and attitude. Improving prevention practices implemented by teenagers during the COVID-19 pandemic. The practice of preventing COVID-19 can be driven by many factors, one of which is self-efficacy (31). Bandura describes that self-efficacy determines how people feel, think, motivate themselves, and behave (32). Research by Garrod, Marshall, dan Jones shows that self-efficacy is essential in individual decisions to take preventive action against the disease (33). Self-efficacy and prevention practices are important in preventing COVID-19 in adolescents because self-efficacy plays a positive role for adolescents during the COVID-19 pandemic in maintaining optimism and mental health (21). Another study reported that perceived self-efficacy has a positive and significant correlation to cues to action (34).

There are still many students who have low self-efficacy because they lack self-confidence and believe in their ability to deal with problems that are being experienced or are happening (26). Therefore, this study obtained results if students have moderate self-efficacy as many as 129 students and moderate practice as many as 120 students. Even though they have moderate self-efficacy, this level is above. Therefore, it is still categorized as good because students are still trying to pay attention to the problems that are currently happening. Faced and trying to get through also learn to solve a difficult condition.

CONCLUSION

In conclusion, more than half of students' self-efficacy levels regarding COVID-19 are moderate. The level of Student prevention practices regarding COVID-19 is moderate. There was a relationship between knowledge and attitude, the results were that there was a positive relationship between self-efficacy and the practice of preventing COVID-19 in adolescents. A person's ability to act with confidence and with greater caution can be influenced by their level of self-efficacy. For instance, carrying out preventive measures to lessen the transmission of COVID-19 can be affected.

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