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Factors-Factors Influencing The Behavior of Preventing The Transmission of Covid-19 Students

Annisa Sekar Sari, Evi Widowati

Universitas Negeri Semarang, Indonesia

Abstract

The Covid-19 outbreak is an infectious disease caused by the Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV by-2). Corona virus has many variants, omicron is the variant that has the highest transmission rate. Students are part of the community who need to participate in preventing Covid-19 in the form of behavior to prevent transmission of Covid-19. The purpose of this study was to determine the factors that influence students' behavior to prevent the transmission of Covid-19. This type of research is quantitative with a cross-sectional study approach . The sample is set at 175 respondents with probability sampling technique . The instrument used is a questionnaire . Data were analyzed using the Chi-Square statistical test and Multiple Logistic Regression. The results showed that the variables female gender ($P < 0.05$; CI = 3.276), good knowledge ($P < 0.05$; CI = 7.369), and mother's education level Masters ($P < 0.05$; CI = 1.446) had the greatest influence of other variables. Suggestions need to increase student awareness to implement the Covid-19 health protocol as well as preventive support from parents, especially mothers in the context of preventing the transmission of Covid-19.

Keywords: Covid-19, High School Students, Influencing Factors, Transmission Prevention Behavior

INTRODUCTION

Covid-19 is an infectious disease caused by Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) with transmission of Covid-19 occurring from human to human directly by droplets or splashes and indirectly through contaminated objects or surfaces (Kemenkes RI, 2020). Mutated Covid-19 gave rise to various variants of Covid-19, namely Alpha with a transmission rate of 43-90% of the previous variant, Beta and an unknown transmission rate, Delta with a transmission rate of 30-100% of the previous variant, and Omicron with the highest transmission rate of 500% of other variants with mild symptoms so they are underestimated (Putri, 2022).

The incidence of Covid-19 cases increased rapidly , it was noted that in March 2022 WHO reported the number of cases globally of > 486.56 million and the death rate > 6.14 million . For Indonesia, the first reported cases of Covid-19 from March 2020 to March 2022 total > 6.01 million with a death rate of > 155 thousand (WHO, 2022). West Kalimantan Province is ranked the 20th highest Covid-19 case with a total of 63,977 cases and 1,126 deaths (Satuan Tugas Penanganan COVID-19, 2022). At the provincial level, Kubu Raya Regency is ranked the 2nd highest Covid-19 case after Pontianak City with a total of 6,243 cases and 133 deaths (Dinas Kesehatan Provinsi Kalimantan Barat, 2022).

IDAI states that the proportion of positive cases of Covid-19 in children aged 0-18 years is 12.5%, which means that 1 out of 8 positive cases of Covid-19 are children and the CFR (case fatality rate) of Covid-19 in children in Indonesia is the highest. in the world by 3% -5% (IDAI, 2021).

Kubu Raya Regency recorded the incidence of Covid-19 in school children as many as 489 people. Elementary school level had an incidence of 144 people, junior high school had an incidence of 117 people, and high school had an incidence of 228 people. Data on Covid-19 cases in school children in Kubu Raya Regency, the highest incidence was at the high school level (Dinas Kesehatan Provinsi Kalimantan Barat, 2022).

Data on the Covid-19 case in Pontianak City, which ranks first in the highest number of Covid-19 cases in West Kalimantan Province, recorded the incidence of Covid-19 in school children as many as 1,387 people

without any deaths. The elementary school level had an incidence of 486 people, the junior high school level had 364 people, and the high school level had 537 people. Data on Covid-19 cases in Pontianak City schoolchildren also show the highest incidence at the high school level (Dinas Kesehatan Provinsi Kalimantan Barat, 2022).

The need for student participation in preventing the transmission of Covid-19. Student participation in the form of behavior to prevent transmission of Covid-19 (Dewi F. K., 2021). Behavior to prevent transmission of Covid-19, namely the application of the Covid-19 health protocol to students before, during and after in the school environment (Hermawan & Rofiq, 2020). According to Skinner, behavior is a person's response or reaction to a stimulus or stimulus (Rachmawati, 2019), so that there are factors that influence the behavior itself, namely internal and external factors (Delfianda, 2012).

Taman Mulia High School carries out PTMT during Covid-19 according to the SKB 4 Ministerial guidelines. The results of the preliminary study show that the results of students' awareness are still lacking in preventing the transmission of Covid-19, namely the application of the Covid-19 health protocol such as using masks, keeping a distance, and not forming crowds. school.

From the description of the background that has been explained, the author is interested in conducting research on "Factors Influencing the Behavior of Preventing Covid- 19 Transmission in Taman Mulia High School Students, Kubu Raya Regency, After the Omicron Variant Surge in Indonesia" .

METHODS

Participant

Quantitative research with a cross-sectional study approach and probability sampling technique so that 195 respondents were obtained. The participant exclusion criteria are as follows: (1) students are not willing to be respondents; (2) the questionnaire sheet was not filled in completely; (3) one or both parents have died . After carrying out the criteria, 175 student respondents were obtained.

Research Instruments and Variable Definitions

The research instrument is a questionnaire. Independent variables include age (1 = <16 years, 2 = 16 years, 3 = 17 years, 4 = 18 years, 5 = > 18 years), gender (1 = male, 2 = female), class (1 = X (ten), 2 = XI (eleven), 3 = XII (twelve)), Knowledge of Health Protocols and Covid-19 Vaccination (1 = Good: percentage >75%, 2 = Fair: 56% - 75%, 3 = Less: percentage < 56%), educational level of father and mother (1 = not attending school, 2 = Elementary school/equivalent , 3 = Middle school/equivalent , 4 = SMA/equivalent , 5 = D1/D2/D3 , 6 = D4/S1 , 7 = S2 , 8 = S3) , father and mother's occupation (1 = not working, 2 = professional and technical personnel (doctors, lecturers, teachers, lawyers, engineers) , 3 = Public employees (PNS) general public, BUMN/private employees) , 4 = Managers of state institutions, companies, and institutions , 5 = Entrepreneurs/entrepreneurs , 6 = Public service workers (couriers, transportation drivers, ojol, waiters, cashiers, etc.) , 7 = Laborers/farmers , 8 = Others) . The dependent variable is good or bad behavior of the respondent which is classified according to the total score of the statements submitted by the respondent (1 = Good: percentage ≥ 75% score and 2 = Bad: percentage < 75% score).

Statistic analysis

All statistical analyzes were performed using SPSS version 23.0. The chi square test was used to determine the relationship between the independent variables and the dependent variable with $P < 0.05$ and to select the independent variables for logistic regression analysis. Independent variables with $P < 0.25$ were included in multiple logistic regression analysis with backward stepwise (likelihood ratio) . The backward stepwise method (likelihood ratio) is a method that will issue variables one by one from the least significant to significant variables. Finally, independent variables that have a significant influence on the behavior of preventing the spread of Covid-19 are identified using Exp(B) or Prevalence Ratio (PR) with a 95% secret interval (CI) (Dahlan, 2019).

RESULT AND DISCUSSION

Sample Distribution

A total of 175 respondents were involved in the study. The majority of respondents who took part in this study were 17 years old (30.86%), male (52.57%), class X (ten) (54.86%), good knowledge predominated (76%), education high school father/equivalent (25.14%), mother high school education/equivalent (22.86%), work of father laborer/equivalent (20.57%), mother does not work (21.14%), and bad behavior of respondents is more dominate (53.71%).

Chi Square Test

Table 1. Chi Square Test Results

Variable	Category	Good n	Good %	Bad n	Bad %	P-value
Age	<16 years	22	46,8	25	53,2	
	16 years	22	43,1	29	56,9	
	17 years	26	48,1	28	51.9	0.953
	18 years	8	44,4	10	55,6	
	>18 years	3	60	2	40	
Gender	Man	35	38.0	57	62.0	0.021
	Woman	46	55,4	37	44,6	
Class	X (ten)	43	44.8	53	55,2	
	XI (eleven)	26	59,1	18	40,9	0.081
	XII (twelve)	12	34,3	23	65,7	
Knowledge	Good	75	56,4	58	43,6	
	Enough	3	13.0	20	87.0	0.00
	Not enough	3	15,8	16	84,2	
Father's Education Level	No school	6	50.0	6	50.0	
	SD/equivalent	6	28,6	15	71.4	
	Middle school/equivalent	9	39,1	14	60,9	
	SMA/equivalent	16	36,4	28	63,6	0.128
	D1/D2/D3	7	50.0	7	50.0	
	D4/S1	12	52,2	11	47,8	
	S2	13	68,4	6	31,6	
	S3	12	63,2	7	36,8	
Mother's Education Level	No school	6	54.5	5	45.5	
	SD/equivalent	6	25.0	18	75.0	
	Middle school/equivalent	6	23,1	20	76.9	
	SMA/equivalent	18	45.0	22	55.0	0.013
	D1/D2/D3	7	50.0	7	50.0	
	D4/S1	19	65.5	10	34.5	
	S2	11	64,7	6	35,3	
	S3	8	57,1	6	42,9	
Father's occupation	Doesn't work	5	45.5	6	54.5	
	Professional and technical personnel (doctors, lecturers, teachers, lawyers, engineers)	21	72,4	8	27,6	
	General employees (public civil servants, BUMN/private employees)	13	50.0	13	50.0	
	Managers of state institutions, companies and institutions	9	50.0	9	50.0	0.040
	Entrepreneur / entrepreneur	8	44,4	10	55,6	
	Public service workers (couriers, transportation drivers, ojol, waiters, cashiers, etc.)	8	50.0	8	50.0	
	Laborer/peasant	10	27,8	26	72,2	
	Etc	7	33,3	14	66,7	
Mother's job	Doesn't work	11	29,7	26	70,3	
	Professional and technical personnel (doctors, lecturers, teachers, lawyers, engineers)	11	64,7	6	35,3	
	General employees (public civil servants, BUMN/private employees)	11	52,4	10	47,6	
	Managers of state institutions, companies and institutions	13	56.5	10	43.5	0.277
	Entrepreneur / entrepreneur	9	56,3	7	43,7	
	Public service workers (couriers, transportation drivers, ojol, waiters, cashiers, etc.)	6	42,9	8	57,1	
	Laborer/peasant	7	41,2	10	58,8	
	Etc	13	43,3	17	56,7	

Independent variables that have a significant relationship with the value of P value < 0.05, namely gender, knowledge of health protocols and Covid-19 vaccination, mother's education level, and father's occupation. Independent variables that have a p value <0.25 are eligible for the multiple logistic regression test, namely gender, class, knowledge of health protocols and Covid-19 vaccination, mother's education level, father's education level, and father's occupation.

Multiple Logistic Regression Test

Table 2 . The selection results of the backward method of Multiple Logistic Regression Test : LR at step 4

Free Variables	B	SE	Wald	df	Sig.	Exp(B)	95% CI Lower	super
Gender			9,630	1	0.002			
Woman	1,187	0.382				3,276	1,548	6,931
Knowledge			17,281	2	0.000			
Enough	-0.273	0.950				0.761	0.118	4,902
Good	1,997	0.699				7,369	1,872	29,009
Mother's Education Level			15,930	7	0.026			
SD	-1,626	0.861				0.197	0.036	1,063
JUNIOR HIGH SCHOOL	-1,816	0.877				0.163	0.029	0.908
SENIOR HIGH SCHOOL	-0.703	0.777				0.495	0.108	2,271
D1/D2/D3	-0.302	0.904				0.739	0.126	4,343
S1	0.197	0.820				1.218	0.244	6,074
S2	0.369	0.907				1,446	0.244	8,553
S3	-0.158	0.895				0.853	0.148	4,934

The results of table 2 are step 4 which is the result of the selection of independent variables from step 1 to step 4 which contains the independent variables with the greatest contribution in influencing students' behavior to prevent transmission of Covid-19. The sig value on the variables of gender, knowledge, and education level of the mother is 0.02; 0.000; 0.026

Gender Against Behavior of Covid-19 Transmission Prevention of Taman Mulia High School Students After the Omicron Variant Surge in Indonesia

The results of the study for the hypothesis of the influence of gender on behavior to prevent the transmission of Covid-19, with the Chi Square test obtained p value = 0.021; p <0.05 which means there is a relationship and fulfills the multiple logistic regression test to determine the effect between variables because p value = 0.021; p < 0.25. The results of the multiple logistic regression test showed that female gender had a CI value of 3.276, meaning that female students influenced the behavior of preventing the transmission of Covid-19 3.276 times better than male students.

According (Silaya, 2016)to psychological studies, women are more obedient in complying with regulations than men, so it is likely that women are better at implementing the Covid-19 health protocol which has a positive impact on behavior to prevent the transmission of Covid-19. L. Green's theory states that gender is included in the enabling factors that contribute to influencing health behavior. Females have a tendency to behave well compared to males, so they are more concerned about environmental conditions and their health (Sari, et al., 2020).

This research is in line with research (Chen, et al., 2020)which states that female students are 1.12 times more affected by excellent hand washing during the Covid-19 pandemic compared to male students (95% CI = 1.03-1.22, p < 0 , 05). The results of this study are also in line with research which states that women are 1.57 better at carrying out preventive behavior than men (95% CI = 1.46-1.69, p <0.001) (Wachira, Laki, Chavan, Frimpong, & Kingori, 2022).

This research is also in line with research (Sari, et al., 2020)which stated that female respondents had good Covid-19 prevention behavior of 88.90%, while male respondents had good behavior to prevent Covid-19 transmission of only 76.88% (p value = 0.000). Other studies that are in line with the results of the research binary logistic regression test (Ningsih, Eka, & Danal, 2021)show a significant influence between gender, namely the female sex 1,941 is more influential than the female sex (95% CI: 0.898-4.195, p = 0.027).

Knowledge of Covid-19 Health Protocols and Vaccination Against Behavior to Prevent Covid-19 Transmission of Taman Mulia High School Students After the Omicron Variant Surge in

Indonesia

The results of the study for the hypothesis of the influence of knowledge on behavior to prevent transmission of Covid-19, with the Chi Square test results obtained p value = 0.000; p <0.05 which means there is a relationship and fulfills the multiple logistic regression test to determine the effect between variables because p value = 0.000; p < 0.25. The results of the multiple logistic regression test showed that good knowledge had a CI value of 7.369, meaning that students with good knowledge influenced the behavior of preventing the transmission of Covid-19 7.369 times better than students with less knowledge.

Knowledge is information that a person has. According to L. Green knowledge is the initial factor, with better knowledge it will have a positive impact on behavior (Mayasar, Ikalius, & Aurora, 2021). With good knowledge regarding health protocols and Covid-19 vaccinations will influence behavior to prevent transmission of Covid-19 for the better.

This research is in line with research on students in northwestern Ethiopia which stated that students with good knowledge implemented Covid-19 prevention measures better [AOR: 5.173 95% CI: (2.276, 11.755)] than students who had no knowledge (Yesuf & Abdu, 2021). This research is also in line with research that describes high knowledge about Covid-19 (β = 0.148) in the working-age population in Thailand influencing better Covid-19 prevention behavior and is very important in fighting the Covid-19 pandemic (Nanthamongkolchai, Taechaboonsermsak, Tawatting, & Suksatan, 2022).

This research is in line with research which states that there is an influence of knowledge about Covid-19 on clean and healthy living behavior which is included in the behavior of preventing the transmission of Covid-19 in students (Ambarwati, Kristiningtyas, & Wijayanti, 2021). This research is also in line with research (Sari & Budiono, 2021)that knowledge about Covid-19 is the factor that most influences behavior to prevent transmission of Covid-19 (p value = 0.000; PR = 0.054; 95% CI = 0.017-0.176).

Mother's Education Level on Prevention Behavior of Covid-19 Transmission in Taman Mulia High School Students After the Omicron Variant Surge in Indonesia

The results of the study for the hypothesis of the effect of the mother's education level on the behavior of preventing the transmission of Covid-19, with the Chi Square test , the results obtained were p value = 0.013; p <0.05 which means there is a relationship and fulfills the multiple logistic regression test to determine the effect between variables because p value = 0.013; p < 0.25. The results of the multiple logistic regression test showed that the education of Masters mothers had a CI value of 1.446, meaning that students with Masters education influenced the behavior of preventing the transmission of Covid-19 1.446 times better than students whose mothers did not attend school.

The results of research on the mother's education level influence the behavior of preventing the transmission of Covid-19. According to research by Noghani et al (2007) the level of education has a positive effect on the level of quality of life, although not much. These results are in line with the study of Barbareschi et al (2011) which stated that there were significant differences between patients with high and low education, especially in emotional problems and the physical domain. Patients with higher education have a better quality of life over time. The level of education can influence a person's mindset so that it greatly impacts all aspects of a person's life (Dewi E. U., 2020). The level of education influences the mindset that is directly significant to the pattern of parenting towards children. Besides that, the mindset with mothers who have a high level of education, has an awareness of the vulnerability and severity of Covid-19. So as to have a better understanding to know about public health measures and their effectiveness, and consequently higher perception and adherence about the benefits of wearing masks which are included in the prevention behavior of Covid-19 transmission. Encourage mothers to strengthen children's safety education, which results in better mask wearing rates (Chen, et al., 2020)

The results of this study are in line with research (Chen, et al., 2020)which stated that the mother's educational background was junior high school or bachelor's degree (PR = 1.87, 95% CI = 1.05−3.33, P <0.05) and postgraduate and above (PR = 2.28 , 95% CI = 1.12-4.65, P < 0.05) had better mask wearing behavior than mothers with elementary school education and below. The behavior of wearing a mask is included in the behavior of preventing the transmission of Covid-19 . The results of this study are in line with research (Chinawa, et al., 2021)which states that mothers with higher education (48.9%) have a better perception of Covid-19 than mothers with secondary education (37.0%) (x^2 = 5.444, p = 0.020).

CONCLUSION

Based on the results of research on the factors that influence the behavior of preventing the transmission of Covid-19 in students after the surge in the Omicron variant in Indonesia at Taman Mulia

High School, Kubu Raya Regency, the conclusions are as follows: There is an influence of gender on the prevention behavior of Covid-19 transmission of Taman Mulia High School students after the spike in the Omicron variant in Indonesia.

There is an influence of knowledge about the Covid-19 health protocol and vaccination on the behavior of preventing the transmission of Covid-19 at Taman Mulia High School students after the spike in the Omicron variant in Indonesia. There is an effect of the mother's education level on the prevention behavior of Covid-19 transmission of Taman Mulia High School students after the spike in the Omicron variant in Indonesia.

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