Analysis of Knowledge with Compliance in Implementing Protocols of COVID-19 in SMP Negeri 4 Sukoharjo's Students

Bangkit Ary Pratama[1*], Sri Saptuti Wahyuningsih[2]

[1] Poltekkes Bhakti Mulia Sukoharjo
[2] Poltekkes Bhakti Mulia Sukoharjo
[*]E-mail: ary.jurnal@gmail.com

ARTICLE INFO

ABSTRACT

Efforts to prevent the spread and increase in the number of COVID-19 sufferers were the implementation protocol of. Many people do not consistently implement it. Compliance in protocol of COVID-19 was absolutely a prerequisite for breaking the chain of transmission of COVID-19. This study aims to analyze knowledge with compliance in applying the protocols of COVID-19 in SMP Negeri 4 Sukoharjo's students. This research was a quantitative research with the type of correlation research. The population in this study were all students at SMP Negeri 4 Sukoharjo, totaling 766 students. The sample size were 50 students that used accidental sampling. The primary data source used the results of the questionnaire answers that have been tested for validity and reliability and the data analysis used Pearson Product Moment. The results of the statistical test showed p-value $(<0.001) < 0.05$, which means that there was a significant relationship between knowledge and compliance in implementing protocols of COVID-19. It was concluded that there was a significant relationship between the level of knowledge and compliance in implementing protocols of covid-19. One of the efforts that can be made to increase students' knowledge and compliance in implementing protocols of covid-19 is health education regarding protocols of covid-19, especially in the school environment.

INTRODUCTION

At the beginning of 2020, there was a new type of virus that spread at the whole world. It was SARS-CoV-2 and the disease caused by this virus was called coronavirus disease 2019 (COVID-19) (Nilsen et al., 2020). This disease was first discovered in Wuhan, Hubei Province, China at the end of 2019, precisely in December 2020. The beginning of the transmission of this virus cannot be determined whether it occurs between humans to humans. However, currently COVID-19 is still spreading rapidly in humans all over the world (Sari et al., 2020). Common signs and symptoms of COVID-19 infection include symptoms of acute respiratory distress such as fever, cough and shortness of breath. The average incubation period is 5-6 days with the longest incubation period being 14 days. In severe cases of COVID-19 it can cause pneumonia, acute respiratory syndrome, kidney failure, and even death (Kemendagri RI, 2020).

The increase in the number of cases took place quite quickly, and spread to various countries in a short time. As of November 1, 2020, WHO reported that the total global confirmed cases of COVID-19 were 45,942,902 cases with 1,192,644 deaths (CFR 2.6%) in 217 infected countries and 179 local transmission countries. COVID-19 cases are also increasing and spreading rapidly throughout Indonesia. On November 1, 2020, the Ministry of Health reported 412,784 confirmed cases of COVID-19 with 13,943 deaths (CFR 3.4%) (Kemenkes RI, 2020c).

Efforts to prevent the spread and increase in the number of COVID-19 sufferers, need to do as has been determined by WHO in March 2020 that all countries are required to take effective steps in order to reduce the transmission of the COVID-19 virus or commonly referred to as protocols of COVID-19 (Okon et al., 2021). Therefore, preventive measures against these types of infectious diseases must be carried out as quickly as possible in accordance with Law Number 6 of 2018 concerning Health Quarantine, where the community needs to limit social activities. The spread to the community can also be reduced, including by maintaining regular hand hygiene by washing hands with soap and always using a mask when going out and interacting by keeping a minimum distance of 2 meters (Kemenkes RI, 2020d).

Protocols of COVID-19 must become a habit for all Indonesian, without exception. There are still quite a lot of people who are not compliance in implementing protocols

of COVID-19. In fact, compliance with it is absolutely a prerequisite for breaking the chain of COVID-19 transmission (Indrayathi et al., 2021). The results of the BPS survey during September 7-14, 2020, showed that there were still 17 percent of respondents who believed that they would not be infected with COVID-19. This can have an impact on ignoring the COVID-19 health protocol (Kemenkes RI, 2020a).

At this time, behavior change and public awareness are very important. Compliance with protocols of COVID-19 can break the chain of transmission and reduce the spread of COVID-19 (Kemenkes RI, 2020b). In handling COVID-19, the government cannot act alone, so collaboration between the media, the public, business actors, and academics is needed to carry out their roles. In the academic field, the role of all citizens of educational institutions such as in schools is very much needed, especially high schools because at this level efforts are starting to take place face-to-face learning (Kemendikbud RI, 2020). Therefore, all school residents, especially students, must know about the COVID-19 health protocol which is one method to prevent transmission and reduce the spread of COVID-19. This study aims to analyze knowledge with compliance in

implementing protocols of COVID-19 in SMP Negeri 4 Sukoharjo's students.

METHODS AND MATERIALS

This research was a quantitative research with correlation research. The population in this study were all students at SMP Negeri 4 Sukoharjo, totaling 766 students. The sample that used was 50 students. The sampling technique used was accidental sampling, namely students who were present at the time of data collection. The data sources used are primary data in the form of answers from questionnaires and secondary data in the form of student data obtained from the school administration including the total number of students in SMP Negeri 4 Sukoharjo. The data collection technique used in this study is to collect primary data using a structured questionnaire. Before being used, the questionnaire must be tested for validity and reliability.

The results of the validity test of the knowledge questionnaire about protocols of COVID-19 showed that all questions on the questionnaire were valid for use in research which was $r_{hitung} > r_{tabel}$ (0.468) and the reliability test result was 0.932, which means that the questionnaire is reliable or can measure the variables to be studied.

researched. Meanwhile, the results of the validity test of the compliance questionnaire in implementing protocols of COVID-19 showed that the questionnaire was valid for use in research which was $r_{hitung} > r_{tabel}$ (0.468) and the reliability test result was 0.965, which means that the questionnaire is reliable or can measure the variables to be studied.

This test was conducted on 20 respondents. Secondary data in this study were obtained from interviews with counseling guidance teachers regarding the number of students and the schedule for conducting the research. The primary data obtained were then analyzed using univariate (frequency distribution formula) and bivariate (Pearson Product Moment) formulas. The relationship between variables was analyzed using the Pearson Product Moment analysis model used to determine the relationship between knowledge and compliance in implementing protocols of COVID-19 in SMP Negeri 4 Sukoharjo's students.

RESULTS AND DISCUSSION

Characteristics of respondens in this study consisted of gender, resources, knowledge about protocol of COVID-19, and compliance in implementing protocol of COVID-19.

Table 1. Characteristics of Respondens

Variable	Criteria	f	%
Gender	1. Male	14	28
	2. Female	36	72
Source of information	1. Social media	40	80
	2. Papers	2	4
	3. Electronic media	8	16
Knowledge	1. Good	45	90
	2. Low	5	10
Compliance	1. Compliance	42	84
	2. Non-compliance	8	16

Characteristics of respondents by gender indicate that most of the students are female. Barnas and Ridwan (2019) suggested that from the outset there were differences in the two sexes what might be called the initial conditioning matrix. Regarding this, it may be assumed that there is a biological basis that allows the two sexes to develop different behaviors. From a biological point of view it seems acceptable that there are dispositional differences that cause different behavioral lessons between male and female students so that it will also affect students' knowledge, attitudes, and behavior related to the COVID-19 health protocol (Guzek & Skolmowska, 2020).

The sources of information used by students in obtaining information in this study related to the COVID-19 health protocol were obtained from various media

including social media, papers, and electronic media where most students got information from social media such as whatsapp, twitter, facebook, Instagram. (Sari et al., 2020) stated that various information about COVID-19 can be accessed through various media platforms such as social media, papers and electronic media. Social media is a source of all information, social media has a very strong impact in shaping the process of socialization and people's behavior, social media is one of the forces in shaping national identity during the current pandemic, and many people assume that social media is part of life (Khalesi et al., 2021).

Knowledge is something that is captured through the five senses, namely sight, hearing, smell, touch and feeling towards an object so that it can be understood and understood by someone. Based on the results of the study, most of the respondents have good knowledge. The results of this study are in accordance with the research of Alhumaid et al. (2021) which shows that the majority of respondents have good knowledge about preventing COVID-19 infection. The factors that influence knowledge are education, exposure to information, experience and the environment (Smith et al., 2020). The level of education possessed by the respondent

can affect the knowledge he has where the respondent is now still in school at the junior high school level, besides that the educational or school environment will also make it easier for respondents to receive information such as from class teachers. In addition, the use of cellphones as a tool in distance learning allows respondents to exchange information through social media installed on their cellphones such as through WhatsApp, Twitter, Facebook, Instagram.

Compliance is a term used to describe a person's behavior in implementing protocols of COVID-19. Based on the results of the study, most of the respondents were obedient in implementing protocols of COVID-19. The results of this study are in accordance with the research of Mushidah and Muliawati (2021) which showed that the majority of respondents were not obedient in using masks as an effort to prevent COVID-19 infection due to some respondents having low knowledge about COVID-19. Compliance is a positive behavior shown by students when they comply with and apply protocols of COVID-19. Factors influencing adherence depend on many factors, including knowledge, motivation, perception, and belief in disease control and prevention efforts, environmental variables, quality of health instructions, and

ability to access available resources (Jabbari et al., 2020). Meanwhile, non-compliance is a condition when a person wishes to comply, but there are a number of factors that hinder adherence to health advice given by health workers (Montezuma et al., 2021).

Table 2. Normality Test

		Knowledge	Compliance
N		50	50
Normal Parameters[a,b]	Mean	72,9400	16,0200
	Std. Deviation	13,78910	3,21025
Most Extreme Differences	Absolute	,111	,120
	Positive	,093	,108
	Negative	-,111	-,120
Test Statistic		,111	,120
Asymp. Sig. (2-tailed)		.174[c]	.070[c]

Data analysis using Pearson Product Moment can be done if the data normality test has been carried out. The normality test of the data uses the Kolmogorov-Smirnov which serves to determine the normality of the data distribution to be used. Table 2 shows that knowledge data with compliance in implementing the COVID-19 health protocol has a normal distribution of data. This can be seen from the results of the normality test of the knowledge level data, it is known that the p value (0.174)> 0.05, meaning that the knowledge data is normally distributed. Meanwhile, the compliance data has a normal distribution of data. This can be seen from the results of the normality test of the compliance data, it is known that the p value (0.070)> 0.05, it means that the compliance data is normally distributed.

The statistical test used to test the hypothesis is the Pearson Product Moment and the results show that there is a relationship between the level of knowledge and compliance in implementing protocols of COVID-19. Table 3 shows that the value of p(<0.001)<0.05. This shows that there is a significant relationship between the level of knowledge and compliance in implementing protocols of COVID-19.

Table 3. Pearson Product Moment Test

		Knowledge	Compliance
Knowledge	Pearson Correlation	1	.761**
	Sig. (2-tailed)		,000
	N	50	50
Compliance	Pearson Correlation	.761**	1
	Sig. (2-tailed)	,000	
	N	50	50

**. Correlation is significant at the 0.01 level (2-tailed).

One of the government's efforts to prevent the spread and increase in the number of COVID-19 sufferers as determined by WHO in March 2020 that all countries are required to take effective steps in order to reduce the transmission of the COVID-19 virus called protocols of COVID-19. COVID-19 (Vally, 2020). In accordance with Law Number 6 of 2018 concerning Health Quarantine, where the community needs to limit social activities. The spread to the community can also be reduced, including by maintaining regular hand hygiene by washing hands with soap and always using a mask and interacting by maintaining a minimum distance of 2 meters. All of this needs to be done because COVID-19 can be easily transmitted through the respiratory tract (droplets from an infected person, through coughing or sneezing) and through contact with contaminated surfaces (Levkovich, 2020).

Based on statistical calculations using the SPSS Statistics 22 application, a p-value $(<0.001)<0.05$ indicates that there is a statistically significant relationship between the level of knowledge and compliance in implementing protocols of COVID-19. The results of this study are in line with research conducted by Miller et al. (2021) where a person's level of knowledge about COVID-19 is related to preventive behavior against COVID-19 with a p value of <0.05. The COVID-19 health protocol is an effort to prevent the transmission and spread of COVID-19. A good level of knowledge can encourage a person to have good preventive behavior. Knowledge of the COVID-19 health protocol disease is very important so

as not to cause an increase in the number of COVID-19 cases. A person's knowledge of COVID-19's protocols can be interpreted as the result of knowing from the patient about how to prevent the transmission and spread of COVID-19.

Knowledge has an important role in determining behavior because knowledge will form beliefs in perceiving reality and provide a basis for decision making and determining one's behavior towards certain objects (Zhang et al., 2020). These conditions will affect the individual in behaving. A person's knowledge about protocols of COVID-19 with compliance in implementing protocols of COVID-19 has a very important role in reducing the incidence of COVID-19 (Gustavsson & Beckman, 2020). Everyone must know, know, learn and understand everything related to protocols of COVID-19 which includes procedures or steps that must be taken and adhered to in order to prevent infection with COVID-19. Knowledge related to COVID-19 health protocols can help a person in making choices when entering a new normal life (new normal era) (Sari et al., 2020).

CONCLUSIONS AND SUGGESTIONS

Based on the results of research and discussion on the analysis of knowledge with compliance in implementing protocols of COVID-19, it was concluded that there was a significant relationship between the level of knowledge and compliance in implementing protocols of COVID-19. One of the efforts that can be made to increase students' knowledge and compliance in implementing protocols of COVID-19 is health education regarding protocols of COVID-19, especially in the school environment, because the risk of transmission and spread of COVID-19 will increase when face-to-face learning begins.

REFERENCES

Alhumaid, S., Mutair, A. Al, Alawi, Z. Al, Alsuliman, M., Ahmed, G. Y., Rabaan, A. A., Tawfiq, J. A. Al, & Omari, A. Al. (2021). Knowledge of infection prevention and control among healthcare workers and factors influencing compliance : a systematic review. *Antimicrobial Resistance & Infection Control*, *10*(86), 1–32. https://doi.org/10.1186/s13756-021-00957-0

Barnas, S., & Ridwan, I. M. (2019). Perbedaan Gender dalam Pengetahuan , Sikap dan Perilaku Mahasiswa Pendidikan Fisika. *DIFFRACTION: Journal for Physics Education and Applied Physics*, *1*(2), 34–41.

Gustavsson, J., & Beckman, L. (2020). Compliance to Recommendations and Mental Health Consequences among Elderly in Sweden during the Initial Phase of the COVID-19 Pandemic-A Cross Sectional Online Survey. *International Journal of Environmental Research and Public Health*, *17*(5380), 1–10.

Guzek, D., & Skolmowska, D. (2020). Analysis of Gender-Dependent Personal Protective Behaviors in a National Sample : Polish Adolescents ' COVID-19 Experience (PLACE-19) Study. *Int J Environ Res Public Health*, *17*(5770), 1–22.

Indrayathi, P. A., Januraga, P. P., & Pradnyani, P. E. (2021). Perceived Social Norms as Determinants of Adherence to Public Health Measures Related to COVID-19 in Bali, Indonesia. *Front Public Health*, *9*(646764), 1–8.

Jabbari, P., Taraghikhah, N., Jabbari, F., Ebrahimi, S., & Rezaei, N. (2020). Adherence of the General Public to Self-Protection Guidelines During the COVID-19 Pandemic. *Disaster Med Public Health Prep*, *November 2020*, 1–4.

Kemendagri RI. (2020). *Pedoman Umum Menghadapi Pandemi COVID-19 bagi Pemerintah Daerah: Pencegahan, Pengendalian, Diagnosis, dan Manajemen*. Kementerian Dalam Negeri Republik Indonesia.

Kemendikbud RI. (2020). *Buku Saku: Pedoman Edukasi Perubahan Perilaku* (Issue September 2020). Kementerian Pendidikan dan Kebudayaaan Republik Indonesia.

Kemenkes RI. (2020a). *Apa Yang Harus Dilakukan Masyarakat? Untuk Mencegah Penularan Covid-19*. Kementerian Kesehatan republik Indonesia.

Kemenkes RI. (2020b). *Menghadapi COVID-19: Buku Panduan Anti Panik*. Kementerian Kesehatan Republik Indonesia.

Kemenkes RI. (2020c). *Pedoman Pencegahan dan Pengendalian Coronavirus Disease 2019 (COVID-19) Edisi Juli 2020*. Kementerian Kesehatan Republik Indonesia.

Kemenkes RI. (2020d). *Pedoman Perubahan Perilaku Penanganan Covid-19*. Kementerian Kesehatan Republik Indonesia.

Khalesi, S., Vandelanotte, C., Thwaite, T. L., Alley, S. J., Williams, S. L., To, Q. G., Fenning, A. S., & Stanton, R. (2021). How are COVID-19 knowledge and concern associated with practising preventive behaviours in Australian adults? *Australian and New Zealand Journal of Public Health*, *26 September 2021*, 11–13.

Levkovich, I. (2020). The Impact of Age on Negative Emotional Reactions, Compliance With Health Guidelines, and Knowledge About the Virus During the COVID-19 Epidemic : A Longitudinal Study From Israel. *Journal of Primary Care & Community Health*, *11*, 1–10.

Miller, L. M. S., Gee, P. M., Katz, R. A., & Miller, L. M. S. (2021). The Importance of Understanding COVID-19 : The Role of Knowledge in Promoting Adherence to Protective Behaviors. *Front Public Health*, *9*(581497), 1–8.

Montezuma, Y. Y., Stoneman, C. D. G. K., Wanigaratne, S., Li, X., Vanderhout, S. M., Borkhoff, C. M., Birken, C. S., Maguire, J. L., & Anderson, L. N. (2021). The social determinants of health as predictors of adherence to public health preventive measures among parents and young children during the COVID-19 pandemic : a longitudinal cohort study. *Canadian Journal of Public Health*, *112*(Mei 2021), 552–565.

Mushidah, & Muliawati, R. (2021). Pengetahuan dan Sikap dengan Kepatuhan Penggunakan Masker sebagai Upaya Pencegahan COVID-19 pada Pedagang UMKM. *Jurnal Ilmiah Permas: Jurnal Ilmiah STIKES Kendal*, *11*(1), 35–42.

Nilsen, P., Seing, I., Ericsson, C., Andersen, O., Stefánsdóttir, N. T., Tjørnhøj-thomsen, T., Kallemose, T., & Kirk, J. W. (2020). Implementing social distancing policy measures in the battle against the coronavirus : protocol of a comparative study of Denmark and Sweden. *Implement Sci Commun*, *77*(1), 1–10.

Okon, U. A., Onche, C., Ajisegiri, S. W., Katchy, U., Onyema, P., Uwazie, C., Anastasia, I., Abdullahi, A., & Balogun, M. S. (2021). Knowledge, risk perception and adherence to COVID-19 prevention advisory among police officers in Makurdi Metropolis Benue State , 2020. *Pan Afr Med J*, *38*(199), 1–18.

Sari, D. N. A., Setyawan, A., Supriyadi, & Purwitaningtyas, R. Y. (2020). Pengetahuan Mahasiswa Baru Keperawatan tentang Protokol COVID-19. *Jurnal Keperawatan*, *12*(4), 711–718.

Sari, D. P., Sholihah, N., & Atiqoh. (2020). Hubungan Antara Pengetahuan Masyarakat dengan Kepatuhan Penggunaan Masker sebagai Upaya Pencegahan Penyakit COVID-19 di Ngronggah. *Infokes*, *10*(1), 52–55.

Sari, N. N., Yuliana, D., Hervidea, R., & Agta, A. (2020). Protokol Kesehatan COVID-19: Sebagai Upaya Pencegahan COVID-19 di Area Kerja Pada Karyawan Perkantoran di Bandar Lampung. *Jurnal Peduli Masyarakat*, *2*(4), 173–180.

Smith, L. E., Aml, R., Lambert, H., Oliver, I., Robin, C., Yardley, L., & Rubin, G. J. (2020). Factors associated with adherence to self-isolation and lockdown measures in the UK : a cross-sectional survey. *Public Health*, *187*(6 September 2020), 41–52.

Vally, Z. (2020). Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information. *Public Health*, *187*(Oktober 2020), 67–73.

Zhang, M., Zhou, M., Tang, F., Wang, Y., Nie, H., Zhang, L., & You, G. (2020). Knowledge, attitude, and practice regarding COVID-19 among healthcare workers in Henan, China. *Journal of Hospital Infection*, *105*(April 2020), 183–187.