Jurnal Ilmu Kedokteran dan Kesehatan Masyarakat
ATHTHIB
Email: aththibjurnal@gmail.com | Alamat: Cot Cut, Kec. Kuta Baro, Kabupaten Aceh Besar, Aceh

THE RELATIONSHIP BETWEEN KNOWLEDGE AND CLEAN AND HEALTHY LIVING BEHAVIOR AS A PREVENTION OF COVID-19 AMONG UNIVERSITY STUDENTS

Muhammad Yassir [1]

[1] Universtas Gunung Leuser Aceh

Correspondence email : yassir@gmail.ac.id

Abstract

Background: Covid-19 is an acute respiratory infection caused by SARS-CoV-2, first identified in Wuhan, China, in December 2019. The number of cases increased rapidly worldwide, leading WHO to declare it a global pandemic on March 12, 2020. In Indonesia, as of December 15, 2020, there were 629,429 confirmed cases with 19,111 deaths. Efforts to control Covid-19 transmission require not only government intervention but also active community participation, including the practice of Clean and Healthy Living Behavior (PHBS). Objective: This study aimed to determine the relationship between knowledge and PHBS as a preventive measure against Covid-19 among medical students class of 2019 at Universitas Gunung Leuser. Methods: This research employed an analytical descriptive method with a cross-sectional design. Data were collected using online questionnaires from medical students class of 2019 at Universitas Gunung Leuser. Results: The findings revealed that the majority of students had good knowledge and demonstrated positive behavior regarding Covid-19 prevention and PHBS. However, statistical analysis showed no significant relationship between knowledge and PHBS in preventing Covid-19. Conclusion: Although medical students exhibited good knowledge and behavior, knowledge was not significantly associated with PHBS in preventing Covid-19. Further interventions are needed to strengthen the translation of knowledge into consistent preventive practices.

Keywords: Covid-19, Knowledge, Clean and Healthy Living Behavior

INTRODUCTION

Coronavirus Disease 2019 (Covid-19) was first identified in Wuhan, China, in December 2019. This disease is caused by a novel virus named Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) (Ministry of Health, 2020; Yulia, 2020). Covid-19 is a zoonotic disease, which means it can be transmitted from animals to humans. The common symptoms include fever, cough, and shortness of breath. In severe cases, Covid-19 can cause pneumonia, acute respiratory distress syndrome, kidney failure, and even death (Putri, 2020). The incubation period of Covid-19 ranges from 2 to 14 days, with an average of 5.1 days (Singla, Singla, & Singla, 2020; Tubara et al., 2021).

The number of Covid-19 cases increased rapidly in a short period of time, requiring urgent prevention and treatment. According to WHO, Covid-19 was declared a global pandemic on March 12, 2020 (Nugroho et al., 2020; Putri, 2020). In Indonesia, the first two confirmed cases were reported on March 2, 2020, followed by additional cases in the same week. Since then,

the number of positive cases has continued to rise. As of December 15, 2020, there were 629,429 confirmed cases and 19,111 deaths (Covid-19, 2020; Putri, 2020).

The prevention and control of Covid-19 are not solely the responsibility of the government, but also require active participation from all elements of society. Preventive measures include the use of masks, social distancing, handwashing with soap, and maintaining personal as well as environmental hygiene. These practices are part of the Clean and Healthy Living Behavior (Perilaku Hidup Bersih dan Sehat/PHBS) program promoted by the Indonesian government since 2016 (Rosidin, Rahayuwati, & Herawati, 2020).

PHBS refers to daily health practices that individuals carry out to improve their health and quality of life. PHBS for Covid-19 prevention includes proper handwashing with soap and clean water, consuming nutritious food, exercising regularly, not smoking, maintaining a clean environment, and ensuring adequate rest (Andriansyah & Rahmantari, 2013; Izzah, 2020; Ministry of Health RI, 2020).

Medical students, as future doctors, are expected to apply and promote PHBS, especially in the context of preventing Covid-19 during the pandemic. Adequate knowledge and correct implementation of PHBS are crucial not only for their personal health but also to support community health promotion efforts. Based on this background, this study was conducted to analyze the relationship between knowledge and Clean and Healthy Living Behavior as a prevention of Covid-19 among medical students of the 2019 class at Universitas Gunung Leuser, in 2020.

METHOD

This study employed a descriptive analytic design with a cross-sectional approach to determine the relationship between knowledge and Clean and Healthy Living Behavior (PHBS) in the prevention of Covid-19 among medical students of the 2019 cohort at Universitas Gunung Leuser, in 2020.

The population in this study consisted of all students of the 2019 medical program at Universitas Gunung Leuser. A total sampling technique was applied, resulting in 150 respondents who met the inclusion criteria: (1) registered as active students of the 2019 medical program, and (2) willing to participate by completing the questionnaire.

Data collection was conducted online using a structured questionnaire distributed to the respondents from September to December 2020. Prior to the main study, a reliability test was carried out on 30 respondents to ensure the instrument's validity and reliability. Data analysis was conducted using the Statistical Package for the Social Sciences (SPSS). A univariate analysis was used to describe the characteristics of each variable and research subject, while a bivariate analysis was performed to examine the relationship between knowledge and PHBS. The Chi-square test was applied to determine whether there was a statistically significant association between the two variables.

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RESULTS

Characteristics of Research Subjects

Based on the data obtained, the majority of respondents were male, totaling 107 students (71.3%). The respondents' ages ranged from 17 to 23 years, with the largest proportion being 19 years old, consisting of 83 respondents (55.3%). (Table 4.1)

Table 1. Characteristics of the Respondents

Variables	n	%
Gender		
Man	43	28,7
Woman	107	71,3
Respondent's age		
17 years	2	1,3
18 years	13	8,7
19 years old	83	55,3
20 years	44	29,3
21 years	3	2,0
22 years	4	2,7
23 years	1	0,7

Univariate and Bivariate Analysis

Based on the research results, the majority of respondents demonstrated a high level of knowledge, with 137 respondents (91.3%) categorized as having good knowledge (Table 2). Furthermore, 147 respondents (98.0%) were found to exhibit good Clean and Healthy Living Behavior (PHBS) (Table 3).

The Chi-square test analysis showed a *p*-value of 0.590, indicating that there is no significant relationship between knowledge and Clean and Healthy Living Behavior (PHBS) in the prevention of Covid-19.

Table 1. Level Of Behavior Living Healthy And Healthy Response

No	Level of Behavior	Number of Respondents (n)	Percentage (%)
1	Good	147	98.0
2	Poor	3	2.0
Total		**150**	**100.0**

Table 3. Cross Tabulation of Knowledge and Clean and Healthy Living Behavior (PHBS) in Covid-19 Prevention

Knowledge Level	PHBS Poor (n/%)	PHBS Good (n/%)	Total (n/%)	p-value
Poor	0 (0.0%)	13 (8.6%)	13 (8.6%)	
Good	3 (2.0%)	134 (89.3%)	137 (91.3%)	

Total	**3 (2.0%)**	**147 (98.0%)**	**150 (100%)**	**0.590**

DISCUSSION

The results of this study indicate that most respondents had a good level of knowledge and behavior in preventing Covid-19. This finding is in line with Notoatmodjo (2014, in Masturoh, 2018) who explained that knowledge can be obtained through both scientific and non-scientific methods. In this case, students as research subjects gained knowledge through learning processes, academic literature, and evidence-based sources, which strengthened their understanding of Covid-19 prevention.

The results of this research are consistent with previous studies. Maoudy et al. (2020) reported that 76.9% of respondents had good knowledge, while Usman, Budi, and Nur Adkhana Sari (2020) found that 51.35% of respondents demonstrated adequate knowledge. In contrast, Alfikri, Akbar, and Anggreini (2021) reported that 62.5% of students still had poor knowledge regarding Covid-19 prevention, and Susanti & Sri (2020) also found a relatively low level of knowledge among DIII students at Universitas MH Thamrin.

In terms of behavior, 98% of students in this study practiced good PHBS (Clean and Healthy Living Behavior). This is in line with B. Karuniawati (2020), who found that 77.5% of respondents had good PHBS in Covid-19 prevention, and Purnamasari (2020), who reported that 95.8% of the Wonosobo community practiced good behavior related to Covid-19 prevention.

However, the chi-square test in this study showed no significant relationship between knowledge and PHBS. This result is similar to the findings of Widyakusuma & Manal (2020), who also reported no significant correlation. On the other hand, Mujiburrahman, Riad, and Ningsih (2020) and Devi Pramita Sari & Nakin Solih' Atiqoh (2020) found that knowledge was significantly related to Covid-19 preventive behavior, particularly compliance with mask use. Similarly, Susanti & Sri (2020) also reported a significant relationship ($p = 0.024$) between knowledge and Covid-19 prevention behavior among DIII students.

Although this study did not find a significant relationship, knowledge still plays an important role as the foundation for individual decision-making and behavior. According to Notoatmodjo (2010), knowledge or cognition is a critical domain that influences a person's actions. Likewise, Liu (2016, in Purnamasari, 2020) emphasized that knowledge is a factor that can influence behavioral change through continuous learning processes.

REFERENCES

Alfikrie, F., Akbar, A., & Anggreini, YD (2021). Knowledge and attitudes in preventing COVID-19. *Borneo Nursing Journal, 3* (1), 1–6. Available at: https://akperyarsismd.e-journal.id/BNJ

Andriansyah , Y., & Rahmantari , DN (2013). Counseling and practice of PHBS (Clean Living Behavior). *Innovation and Entrepreneurship, 2* (1), 45–50.

Karuniawati, B. (2020). An overview of clean and healthy living behavior (PHBS) in preventing the transmission of Covid-19. *Karya Husada Health Journal, 8* (2), 34–53.

COVID-19 (2020). Available at: https://covid19.go.id

Sari, DP, & 'Atiqoh, NS (2020). The relationship between public knowledge and compliance with mask use as an effort to prevent Covid-19 in Ngronggah. *Infokes: Scientific Journal of Medical Records and Health Informatics, 10* (1), 52–55. https://doi.org/10.47701/infokes.v10i1.850

Izzah, N. (2020). *Clean and healthy living behavior (PHBS) strengthens the capabilities of children and families* .

Ministry of Health of the Republic of Indonesia. (2020). *Guidelines for preparedness in facing COVID-19* .

Ministry of Health of the Republic of Indonesia. (2016). *PHBS* . Available at: https://promkes.kemkes.go.id/phbs

Moudy, JSRA (2020). Knowledge related to efforts to prevent Coronavirus Disease (COVID-19) in Indonesia. *Higeia Journal of Public Health Research and Development, 4* (3), 333–346.

Mujiburrahman, Riyadi, ME, & Ningsih, MU (2020). Knowledge related to increased COVID-19 prevention behavior in the community. *Integrated Nursing Journal, 2* (2), 130–140. Available at: http://jkt.poltekkes-mataram.ac.id/index.php/home/article/view/85/69

Notoatmodjo , S. (2018). *Health research methodology* (No. 1 edition). Jakarta: PT Rineka Cipta .

Notoatmodjo , S. (2010). *Health behavioral science* . Jakarta: Rineka Cipta .

Nugroho, WD, et al. (2020). Literature review: Human-to-human transmission of Covid-19 in Asia. *Journal of Bionursing, 2* (2), 101–112. Available at: http://bionursing.fikes.unsoed.ac.id/bion/index.php/bionursing/article/view/51

Purnamasari, I. (2020). Level of knowledge and behavior of the Wonosobo Regency community regarding Covid-19. *Scientific Journal of Health* , 33–42.

Putri , RN (2020). Indonesia in facing the Covid-19 pandemic. *Scientific Journal of Batanghari Jambi University, 20* (2), 705–709. https://doi.org/10.33087/jiubj.v20i2.1010

Rosidin , U., Rahayuwati , L., & Herawati , E. (2020). Behavior and role of community leaders in preventing and handling the Covid-19 pandemic in Jayaraga Village, Garut Regency. *Umbara , 5* (1), 42. https://doi.org/10.24198/umbara.v5i1.28187

Singla, G., Singla, T., & Singla, S. (2020). COVID-19 pandemic—A literature review. *International Journal of Research and Review, 7*(6), 282–293. Available at: https://www.ijrrjournal.com/IJRR_Vol.7_Issue.6_June2020/IJRR0040.pdf

Susanti, R., & Sri, N. (2020). The relationship between student knowledge and behavior in preventing the spread of the Covid-19 virus. *PROMOTIF: Journal of Public Health, 10* (2), 160–166.

Tubarad, G. D. T., et al. (2021). An overview of medical students' psychological in the process of distance learning on pandemic COVID-19. *Muhammadiyah Medical Journal, 2*(2), 62. https://doi.org/10.24853/mmj.2.2.62-69

Usman, S., Budi, S., & Nur Adkhana Sari, D. (2020). Knowledge and attitudes of health students regarding Covid-19 prevention in Indonesia. *Journal of Nursing and Midwifery, 11* (2), 410–414.

Widyakusuma Putra, YI, & Manalu, NV (2020). Level of knowledge and behavior of residents in implementing health protocols during the new normal period of the coronavirus pandemic. *Coping: Community of Publishing in Nursing, 8* (4), 366–373. https://doi.org/10.24843/coping.2020.v08.i04.p04.

Yuliana. (2020). Corona Virus Disease: A literature review. Wellness and Healthy Magazine, 2 (2), 124–137. https://doi.org/10.2307/j.ctvzxxb18.12