

Adolescents' Knowledge and Practice of Clean and Healthy Living (PHBS) During the COVID-19 Pandemic

Ratih Wulansari

Puskesmas Nganjuk

*Email: ratihwulansari@gmail.com

ABSTRACT

The high risk of COVID-19 transmission in higher education institutions, particularly those located in Islamic boarding schools, is closely related to the low implementation of health protocols. Promoting Clean and Healthy Living Behavior (PHBS) is one of the key strategies to reduce the spread of COVID-19. This study aimed to determine the relationship between knowledge and behavior in practicing PHBS among adolescents. This research employed an observational design with a cross-sectional approach. The population consisted of 60 students, with a simple random sampling technique yielding 52 respondents. The independent variable was knowledge of PHBS, while the dependent variable was PHBS behavior during the pandemic. Data were collected using a questionnaire and analyzed with the Spearman rank correlation test at a significance level of $\alpha = 0.05$. The findings showed that most respondents (69%) had a moderate level of knowledge about PHBS, and the majority (71%) demonstrated sufficient PHBS behavior. Statistical analysis revealed a significant relationship between knowledge and behavior ($p = 0.004 < 0.05$). There is a significant relationship between knowledge and behavior in PHBS among adolescents during the COVID-19 pandemic. Strengthening health education programs is essential to improve awareness and foster sustainable PHBS practices in pesantren environments.

Keywords: Adolescents, Behavior, COVID-19, Knowledge

BACKGROUND

COVID-19 has posed serious challenges to health and education sectors, especially, where dense populations and limited facilities increase the risk of transmission. A survey conducted by Rabithah Ma'ahid Islamiyah (RMI) found that only 35% fully implemented health protocols, while 65% applied them partially (Agustina et al., 2021). By October 2020, the Indonesian Ministry of Religious Affairs reported 2,332 positive cases of COVID-19 in 39 across 11 provinces, with 90% of cases being asymptomatic (Agustina et al., 2021).

COVID-19 is primarily transmitted through droplets when individuals are in close contact (<1 meter) with infected persons (Indonesia, 2020). Clinical manifestations vary from mild to severe, including fever, cough, shortness of breath, sore throat, gastrointestinal symptoms, and neurological disturbances (Hastuti & Djanah, 2020). Due to the similarities of initial symptoms with common flu, many people underestimate early signs, leading to significant increases in cases. The implementation of PHBS, such as proper handwashing, mask-wearing, and maintaining personal hygiene, is an important preventive measure against COVID-19 (Kemenkes RI, 2020). Previous studies have emphasized the importance of knowledge in shaping health-related behavior

(Romanti, 2021; Zukmadini et al., 2020). Thus, it is crucial to assess the relationship between knowledge and behavior in PHBS, especially among adolescents living.

This study aimed to examine the relationship between knowledge and behavior in PHBS during the COVID-19 pandemic among adolescents.

METHODS

This study employed an observational design with a cross-sectional approach. The cross-sectional design was chosen because it allows researchers to observe the relationship between variables at a specific point in time without the need for prolonged observation. By using this method, the study could efficiently capture data regarding students' knowledge and behaviors related to clean and healthy living behavior (PHBS) during the COVID-19 pandemic.

The study population consisted of 60 students enrolled at the Islamic College. From this population, 52 respondents were selected as the sample through a simple random sampling technique. This method ensured that every student had an equal chance of being included, thereby reducing bias and improving the representativeness of the sample in reflecting the actual population.

The variables studied included both independent and dependent variables. The independent variable was knowledge of PHBS, while the dependent variable was PHBS behavior during the COVID-19 pandemic. This framework was used to assess how students' knowledge about health protocols and hygiene practices influenced their actual implementation of PHBS in daily life.

To collect data, the researchers used a structured questionnaire consisting of several sections. The questionnaire included items on demographic characteristics such as age and gender, as well as questions measuring students' level of knowledge about PHBS and their behavioral practices during the pandemic. This instrument ensured systematic and reliable data collection from all respondents.

The collected data were analyzed using the Spearman rank correlation test. This non-parametric test was chosen because it is suitable for identifying correlations between ordinal and continuous variables. The use of this test allowed researchers to evaluate whether higher knowledge levels were associated with better PHBS behavior among students.

A significance level of $\alpha = 0.05$ was applied in the analysis to determine statistical significance. This means that if the p-value obtained was less than 0.05, the relationship between knowledge and behavior could be considered statistically significant. By applying this threshold, the study ensured that its findings were both reliable and scientifically valid.

RESULTS

The characteristics of the respondents revealed that most of the participants were within the age range of 20 to 21 years, accounting for 71% of the total sample, while the remaining 29% were between 18 and 19 years old. This indicates that the majority of respondents were in early adulthood, a stage where awareness and practice of healthy behaviors are expected to develop more consistently.

In terms of gender, all respondents in this study were male, representing 100% of the sample. This homogeneity reflects the context of the Islamic College where the research was conducted, which primarily consists of male students. Such uniformity in gender eliminates variability from gender differences, allowing the focus to remain on age, residence, knowledge, and behavior.

With respect to residence, the majority of respondents, about 69%, lived in pesantren dormitories, while the remaining 31% resided outside the dormitories. Living arrangements may influence

exposure to health education and daily routines, which in turn could affect both knowledge and behavior regarding clean and healthy living practices (PHBS).

Regarding knowledge of PHBS, the findings showed that 69% of respondents had a moderate level of knowledge, while 19% demonstrated a low level, and only 12% had a high level of knowledge. This distribution suggests that most students were aware of the basic principles of PHBS but may still lack deeper understanding or consistency in applying their knowledge.

In terms of PHBS behavior, 62% of respondents demonstrated sufficient behavior, while 19% were categorized as poor and another 19% as good. These findings indicate that although most students engaged in acceptable PHBS practices, there remains a notable portion of adolescents whose behavior either fell below or exceeded the standard expectations.

The results of the statistical analysis using the Spearman rank correlation test showed a p-value of 0.004, which is smaller than the significance level of 0.05. This finding indicates a statistically significant relationship between knowledge and behavior in PHBS among adolescents. In other words, students with higher levels of knowledge were more likely to demonstrate better PHBS behavior, emphasizing the importance of health education in shaping positive practices during the COVID-19 pandemic.

Table 1. Characteristics of Respondents (n = 52)

Characteristics	Category	Frequency (n)	Percentage (%)
Age	18–19 years	15	29
	20–21 years	37	71
Gender	Male	52	100
Residence	Dormitory	36	69
	Outside dormitory	16	31

Based on Table 1, the majority of respondents were aged 20–21 years (71%), while 29% were between 18–19 years old. All respondents were male (100%), and most of them resided in pesantren dormitories (69%), with only 31% living outside. This indicates that the study population was relatively homogeneous in terms of gender and strongly dominated by dormitory residents.

Table 2. Distribution of Respondents by Knowledge of PHBS (n = 52)

Knowledge Level	Frequency (n)	Percentage (%)
Low	10	19
Moderate	36	69
High	6	12

Based on Table 2, it can be seen that most respondents had a moderate level of knowledge about PHBS (69%). A smaller proportion demonstrated low knowledge (19%), while only 12% showed high knowledge. This suggests that the majority of students possessed basic awareness of PHBS but had not yet achieved optimal knowledge.

Table 3. Distribution of Respondents by PHBS Behavior (n = 52)

Behavior Level	Frequency (n)	Percentage (%)
Poor	10	19
Sufficient	32	62
Good	10	19

Based on Table 3, most respondents displayed sufficient PHBS behavior (62%), while poor and good behaviors were equally distributed at 19% each. This indicates that while a majority of

students practiced acceptable levels of PHBS, there remains room for improvement, particularly to shift more respondents toward the “good” category.

Table 4. Correlation Between Knowledge and Behavior of PHBS

Variables	r	p-value
Knowledge vs Behavior	0.422	0.004

Based on Table 4, the results of the Spearman rank correlation test showed a correlation coefficient of $r = 0.422$ with a p-value of 0.004. Since the p-value is smaller than 0.05, it indicates a statistically significant positive relationship between knowledge and behavior in PHBS. This means that students with higher knowledge levels were more likely to demonstrate better PHBS behavior during the COVID-19 pandemic.

DISCUSSION

This study found that most adolescents had moderate knowledge of PHBS but only sufficient behavior in its implementation. The results are consistent with Romanti (2021), who noted that pesantren environments often face challenges in maintaining optimal personal hygiene due to shared facilities and limited health resources.

Knowledge plays a pivotal role in shaping health-related behavior. According to Zukmadini et al. (2020), health education is necessary to instill PHBS practices among adolescents, especially those in communal living environments such as pesantren. Although most respondents understood the principles of PHBS, their behavior was not consistently aligned with their knowledge, suggesting a gap between awareness and practice.

Several factors may contribute to this discrepancy, including limited facilities, lack of institutional enforcement, and habituation. Sunardi and Kriswanto (2020) argue that PHBS is easier to adopt when it becomes a cultural practice within families and communities. Additionally, gender dynamics may influence behavior; studies show that males are more likely to neglect preventive measures such as mask-wearing compared to females (Abdu et al., 2021).

Overall, the findings highlight the need for continuous health education and environmental support within pesantren to strengthen both knowledge and behavior in PHBS.

CONCLUSION

The findings of this study indicate that the majority of respondents (69%) possessed a moderate level of knowledge regarding clean and healthy living behavior (PHBS), while most of them (71%) demonstrated sufficient PHBS behavior. Furthermore, statistical analysis revealed a significant relationship between knowledge and behavior in PHBS among adolescents during the COVID-19 pandemic ($p = 0.004$), suggesting that higher knowledge levels were associated with better implementation of PHBS practices.

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