

Relationship between sociodemographic characteristics, knowledge, and behaviours to prevent COVID-19 among students of Manarul Huda Islamic Boarding School

Caecielia Makaginsar¹, Meta Maulida Damayanti², Yuniarti³, Siska Nia Irasanti⁴

¹Department of Medical Education, Bioethics, Humanities and Islamic Inset, Faculty of Medicine, Universitas Islam Bandung, Bandung, Indonesia

²Pathology Anatomy Department, Faculty of Medicine, Universitas Islam Bandung, Bandung, Indonesia

³Anatomy Department, Faculty of Medicine Universitas Islam Bandung, Bandung Indonesia

⁴Public Health Department, Faculty of Medicine, Universitas Islam Bandung, Bandung, Indonesia

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ABSTRACT

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*Corresponding author:

caecielia@gmail.com

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Background: Good knowledge and behaviours are crucial to prevent coronavirus disease (COVID-19) transmission in boarding school communities during the pandemic.

Objective: To evaluate the relationship between sociodemographic characteristics, knowledge, and behaviours to prevent COVID-19 among students in an Islamic boarding school.

Methods: A descriptive cross-sectional study was conducted in March 2021 at the Manarul Huda Islamic Boarding School on 39 students who met the inclusion criteria. Sampling was employed using the total sampling technique. Variables analysed were students' age, education level, knowledge, and behaviour on COVID-19 prevention as measured using a closed questionnaire. Data were then analysed univariately using frequency distribution and bivariate using the Chi-Square (χ^2) and Fisher's Exact test. Results were considered significant if the p-value was < 0.05 .

Results: No significant relationships were found between age and knowledge of COVID-19 ($p = 0.97$); education level and knowledge of COVID-19 ($p = 0.619$); age and behaviours to prevent COVID-19 transmission ($p = 0.136$); and education level and behaviours to prevent COVID-19 transmission ($p = 0.399$) among of the Islamic boarding school students. In contrast, knowledge was significantly ($p = 0.035$) linked with behaviours to prevent COVID-19 transmission among students.

Conclusion: There is a relationship between knowledge and behaviours in preventing COVID-19 among students. However, no relationship was found between demographic characteristics of age and educational level and knowledge and behaviours to prevent COVID-19 in our study participants.

Latar Belakang: Pengetahuan, dan perilaku yang baik dalam pencegahan penyakit coronavirus (COVID-19) sangat dibutuhkan di lingkungan pondok pesantren untuk menghindari penularan di masa pandemi ini.

Tujuan: Mengevaluasi hubungan karakteristik sosiodemografi dan pengetahuan dengan perilaku pencegahan COVID-19 pada para santri di pondok pesantren.

Metode:

Penelitian deskriptif potong lintang dilakukan pada bulan Maret 2021 di Pesantren Manarul Huda dengan teknik total sampling. Tiga puluh sembilan siswa yang memenuhi kriteria diikutsertakan dalam penelitian ini. Variabel penelitian adalah usia, tingkat pendidikan, pengetahuan, dan perilaku pencegahan COVID-19 pada para santri. Alat ukurnya adalah angket tertutup. Hasil penelitian dianalisis secara univariat dengan menggunakan distribusi frekuensi dan bivariat dengan menggunakan chi-square (χ^2) dan fisher exact test. Hasil menunjukkan signifikan jika p-value $< 0,05$.

Hasil: Tidak ditemukan hubungan yang signifikan antara usia dengan pengetahuan tentang COVID-19 (p -value 0,970), tingkat pendidikan dengan pengetahuan tentang COVID-19 (p -value 0,619), usia dengan perilaku pencegahan COVID-19 (p -value 0,136), dan hubungan tingkat pendidikan dengan perilaku tentang pencegahan COVID-19 (p -value 0,399) pada para santri. Namun terdapat hubungan yang signifikan antara pengetahuan dengan perilaku pencegahan COVID-19 (p -value 0,035) pada para santri.

Kesimpulan: Terdapat hubungan antara tingkat pengetahuan tentang COVID-19 dengan perilaku pencegahan COVID-19 pada para santri. Namun tidak terdapat hubungan antara usia dan tingkat pendidikan dengan pengetahuan dan perilaku pencegahan COVID 19 pada para santri.

INTRODUCTION

The coronavirus disease 2019 (COVID-19) pandemic caused by the SARS-CoV-2 virus has gained worldwide attention. The disease has affected almost every part of the globe, leading to its declaration as a pandemic by the World Health Organisation (WHO).¹ As of May 18, 2020, WHO reported 4,589,526 confirmed cases of COVID-19 worldwide, with 310,391 deaths. During this period, the United States of America had the highest number of confirmed cases, recording 2,018,467.² In Indonesia, the virus also had a significant impact. As of August 12, 2020, Indonesia had recorded a total of 130,718 cases, with 85,798 patients having recovered and 5,908 deaths, according to data from the Indonesian COVID-19 Task Force. During the same period, West Java Province was the second-highest contributor of COVID-19 cases after DKI Jakarta Province, with 7,599 cases.³ The situation calls for a concerted effort to prevent the spread of COVID-19 and its transmission to avoid further escalation of cases.

In order to prevent the spread of COVID-19, individuals need to be able to protect themselves from the transmission. Health is influenced by two main factors: behavioural and non-behavioural. Bloom has proposed three domains of behaviour: knowledge, attitude, and practice, while Green has considered predisposing, enabling, and reinforcing factors as health influencers.⁴ The predisposing factor includes knowledge, attitude, beliefs, values and perception, which are linked to an individual or group's motivation to take action. The enabling factor involves the skills and resources

required to carry out healthy behaviours, such as cost, distance and availability of transportation. Meanwhile, the reinforcing factor encompasses the attitudes and behaviours of healthcare workers, community leaders, religious leaders, parents and other authorities as reference groups for behaviour in the community.⁵ Sociodemographic characteristics, such as age, gender, education level, occupation and area of origin, may also predispose individuals or communities to disease. These characteristics have been shown to influence community behaviour and public health outcomes.⁶

A study by Zhong et al. demonstrated a significant relationship between sociodemographic characteristics, such as age and education level, and knowledge of COVID-19.⁷ Knowledge of COVID-19 is defined as understanding a person about the disease, its prevention, treatment, and complication. Knowledge is the most important domain that shapes a person's behaviour.⁵

The Manarul Huda Islamic Boarding School is situated in Bandung City, West Java Province, Indonesia. It is one of the many Islamic Boarding Schools (pesantren) in the area where children study, recites the Quran, and engage in various positive activities. The students (*santri*) are generally independent and accustomed to doing activities on their own. However, given the current situation, it is essential to provide them with special attention to prevent the transmission of COVID-19. As they spend most of their time with other students, and some even share sleeping arrangements, the boarding school setting presents a high risk of COVID-19 transmission. The limited information sources available to them, such as parents, caregivers, and other media, make it necessary to guide them in adopting clean and healthy habits to prevent the spread of COVID-19, as per the protocols.⁸

Therefore, to minimise the transmission of COVID-19 among the young students of Manarul Huda Islamic Boarding School, it is essential to educate them about clean and healthy behaviours.⁸ This can be achieved through the following steps: wearing masks, covering the mouth and nose when sneezing or coughing, washing hands regularly with soap or using hand sanitiser containing at least 60% alcohol, avoiding contact with infected individuals, maintaining distance from others, and refraining from touching the eyes, nose and

mouth with unwashed hands.⁹ By imparting real knowledge and encouraging these actions related to clean and healthy living behaviour, the number of COVID-19 cases can be reduced, leading to a shorter COVID-19 pandemic period. This study aims to explore the relationship between sociodemographic characteristics (age and education level), knowledge and behaviours to prevent COVID-19 transmission among Manarul Huda Islamic Boarding School students.

METHODS

A descriptive cross-sectional study was conducted in March 2021 using a total sample of enrolled students at Manarul Huda Islamic Boarding School. The inclusion criteria included healthy students between the ages of 6 and 17, who could read and understand Bahasa Indonesia, and were willing to participate in the study. Students who were not present at the dormitory during data collection, which was during the pandemic period, were excluded. This study included a total of 39 registered students who met the inclusion criteria. The variables examined in this study were sociodemographic characteristics (age and education level), knowledge of COVID-19, and behaviours to prevent COVID-19 transmission. The instrument used was a closed questionnaire developed by Ni Putu Emy Darma Yanti, which has been tested for its validity and reliability.¹⁰ The questionnaire consisted of two sections, the knowledge and the behaviour sections. The knowledge section comprised ten true or false items, and the behaviour section consisted of seven statement items with a Likert scale response. The

Likert scale was applied for positive statements using “always” (scored 4), “almost always” (scored 3), “rarely” (scored 2), and “never” (scored 1), while for negative statements, the scale was applied in reverse, with 1 representing always and 4 representing never. The questionnaire was deemed valid (r count 0.330-0.843 > r table 0.320) and reliable (Alpha Cronbach of 0.763 for knowledge and 0.856 for behaviour).¹⁰

Collected data were analysed univariate, which displayed frequency distribution, and bivariate using the Chi-Square (χ^2) and Fisher's Exact test to examine the relationship between sociodemographic characteristics (age, education level), knowledge, and behaviour for preventing COVID-19. This study has been approved by the Research Ethics Commission of the Faculty of Medicine, Bandung Islamic University, by issuing the ethical clearance number 08/KEPK/Unisba/XII/2020.

RESULTS

Table 1-6 presents the frequency distribution of student characteristics, knowledge of the COVID-19 pandemic, behaviour to prevent COVID-19 transmission, and categories of knowledge on COVID-19. The results of Table 1 demonstrate that the majority of students were aged 12-14 years (59%), with a higher percentage of female students (82%) and students in grades 7-9 (67%).

Table 2 shows that most of the students answered correctly on each question item given regarding the COVID-19 pandemic, but two items had the most incorrect answers; people who can transmit COVID-19 only those who have

Table 1. Student characteristics distribution (n = 39)

Characteristics	Frequency n (%)
Age (years)	
9-11	3 (8)
12-14	23 (59)
15-17	13 (33)
Sex	
Male	7 (18)
Female	32 (82)
Education level	
Grade 1-6	8 (21)
Grade 7-9	26 (67)
Grade 10-12	5 (13)

symptoms and new normal means to go back to the original habits before the emergence of the corona outbreak.

As seen in Table 3, the majority of students answered “always” for every positive statement of community behaviour during the COVID-19 pandemic (points 1–5) and “rarely” for every negative statement of community behaviour during the COVID-19 pandemic (point 6 and 7). This illustrates the high level of student compliance in obeying the recommended health protocols during the COVID-19 pandemic.

In item number 4, the statement “I maintain a minimum distance of 1 meter from other people outside the house” was answered “never” by

four participants (10%). Furthermore, in item number 5, the statement “I keep my distance from the elderly” was answered positively by three participants (8%). In item number 6, the statement “I attended an event that gathered many people” was answered “very often” by seven participants (18%). Also, in item number 7, the statement “I use public facilities or go to public places (public transportation, malls, markets, tourist attractions)” was answered “very often” by 11 participants (28%).

The distribution of students’ knowledge categories about COVID-19 demonstrates that most students had a good level of knowledge 26 (67%), while the remaining had an insufficient

Table 2. Distribution of students’ knowledge of COVID-19 (n = 39)

No	Question	Frequency n (%)	
		Correct	Incorrect
1.	COVID-19 is a harmless disease similar to the common cold.	33 (85)	6 (15)
2.	Coronavirus can survive several hours outside the human body.	22 (56)	17 (44)
3.	Coronavirus will not be contagious while talking.	34 (87)	5 (13)
4.	Only people who can transmit COVID-19 have symptoms.	15 (38)	24 (62)
5.	Healthy people do not need to wear masks when leaving the house	35 (90)	4 (10)
6.	Symptoms of COVID-19 in the elderly are generally more severe than at a young age.	25 (64)	14 (36)
7.	The risk of death in COVID-19 patients is higher in people with chronic diseases.	30 (77)	9 (23)
8.	Children are not included in the group at risk because they are rarely infected with COVID-19.	28 (72)	11 (28)
9.	New normal means to return to the original habits before the corona outbreak emerged.	11 (28)	28 (72)
10.	Self-isolation for people infected with COVID-19 is unnecessary for those with no symptoms.	24 (62)	15 (38)

Table 3. Distribution of student behaviour towards COVID-19 pandemic (n = 39)

No	Statements	Frequency n (%)			
		Always	Almost Always	Rarely	Never
1.	I wash my hands with soap or use hand sanitiser after touching objects in public places.	17 (44)	10(26)	10 (26)	2 (5)
2.	I take a shower and change clothes after coming home from travelling.	28 (72)	8 (21)	3 (8)	0 (0)
3.	I wear a mask in public places (markets, terminals, worship places, and others).	28 (72)	3 (8)	6 (15)	2(5)
4.	I maintain a minimum distance of 1 meter from other people outside the house.	17 (44)	8 (21)	10 (26)	4 (10)
5.	I keep my distance from the elderly.	11 (28)	11(28)	14 (36)	3 (8)
6.	I attended an event that gathered many people.	7 (18)	2 (5)	25 (64)	5 (13)
7.	I use public facilities or go to public places (public transportation, malls, markets, tourist attractions).	11(28)	4 (10)	22 (56)	2 (5)

level of knowledge 13 (33%) about COVID-19.

Table 4 displays the relationship between age, education level, and knowledge of COVID-19 among students. The analysis reveals no significant ($p = 0.970$) relationship between age and knowledge of COVID-19. Similarly, there is no significant ($p = 0.619$) relationship between education level and knowledge of COVID-19. Therefore, no significant association exists between students' age and education level with their behaviour in preventing COVID-19 transmission.

Table 5 displays the relationship between age, education level, and behaviour to prevent

transmission during the COVID-19 pandemic among students. The analysis revealed an insignificant ($p = 0.136$) result between age and behaviour and between education level and behaviour ($p = 0.399$).

Table 6 displays the relationship between students' COVID-19-related knowledge and their behaviours in preventing transmission during the pandemic. The statistical analysis demonstrated a significant ($p = 0.035$) relationship between students' knowledge about COVID-19 and their behaviours toward preventing transmission.

Table 4. Relationship between age, education level, and COVID-19 knowledge among students (n = 39)

Characteristics	Knowledge n (%)		Total n (%)	p-value*
	Good	Poor		
Age (years)				
9-11	2 (86.7)	1 (33.3)	3 (100.0)	0.970
12-14	15 (65.2)	8 (34.8)	23 (100.0)	
15-17	9 (69.2)	4 (30.8)	13 (100.0)	
Education level				
Grade 1-6	6 (75.0)	2 (25.0)	8 (100.0)	0.619
Grade 7-9	16 (61.5)	10 (38.5)	26 (100.0)	
Grade 10-12	4 (80.0)	1 (20.0)	5 (100.0)	

*Chi-Square test

Table 5. Relationship between age, education level, and behaviour in preventing transmission during COVID-19 pandemic among students (n = 39)

Characteristics	Behaviour n (%)		Total n (%)	p-value*
	Good	Poor		
Age (years)				
9-11	3 (100.0)	0 (0.0)	3 (100.0)	0.136
12-14	18 (78.3)	5 (21.7)	23 (100.0)	
15-17	13 (100.0)	0 (0.0)	13 (100.0)	
Education level				
Grade 1-6	6 (75.0)	2 (25.0)	8 (100.0)	0.399
Grade 7-9	23 (88.5)	3 (11.5)	26 (100.0)	
Grade 10-12	5 (100.0)	0 (0.0)	5 (100.0)	

*Chi-Square test

Table 6. Relationship between COVID-19 knowledge and behaviour among participants (n = 39)

Knowledge	Behaviour n (%)		Total n (%)	p-value*
	Good	Insufficient		
Good	25 (96.2)	1 (3.8)	26 (100.0)	0.035
Insufficient	9 (69.2)	4 (0.8)	13 (100.0)	
Total	34 (87.2)	5 (12.8)	39 (100.0)	

*) Fisher's Exact test

DISCUSSION

This study revealed that the majority of participants were aged between 12-14 years (59%), female (82%), and from grades 7-9 (67%). Prior research has indicated that age influences an individual's understanding of clean and healthy living behaviours in preventing COVID-19 transmission. Specifically, older individuals have a better grasp of such behaviours compared to their younger counterparts.^{11,12} Another study has also demonstrated that an individual's level of education impacts their knowledge about COVID-19.¹³ Higher education levels enable individuals to access and understand a wider range of COVID-19-related information, thereby improving their knowledge levels and disease prevention behaviours.¹³ Apart from education, gender is another factor that affects an individual's ability to prevent diseases.^{13,14} According to Lawrence Green's basic theory, gender is a predisposing or enabling factor influencing an individual's health behaviour.¹⁵ Women tend to be more health-conscious and mindful of environmental conditions, leading them to engage in better health behaviours compared to men. This tendency makes women more adept at implementing COVID-19 prevention measures.¹³

In this study, most students answered each item regarding COVID-19 correctly. Among the items in this section, three items have the most incorrect answers: item number 2 about the coronavirus being able to survive several hours outside the human body, item number 4 stating that people who can transmit COVID-19 are only those who have symptoms, and item number 9 on the definition of the new normal as being able to return to the original habits before the coronavirus outbreak.

Item number 2 on the ability of the coronavirus to survive several hours outside the human body was answered incorrectly by 44% of the participants. This result is because preliminary information indicates that the SARS-CoV-2 virus can survive several hours to days outside the human body. However, the results of a more recent study show that the virus cannot live outside the body of a living being.¹⁶ Characteristics of different object surface types will give different time spans for the virus to remain active and survive permanently on the object's surface. The surface of relatively low-porous objects, such as plastic and steel, is the worst for the SARS-CoV-2

virus to reside in droplets or small particles in the air.^{10,17} When objects contaminated by the SARS-CoV-2 virus are touched or inhaled, the spread of the SARS-CoV-2 virus is inevitable. This condition has triggered the WHO to require wearing masks, washing hands with soap, and avoiding crowds by maintaining distance.¹⁶

Item number 4 was answered incorrectly by 62% of the study participants. This item asks whether people who can transmit COVID-19 are only those with symptoms. In fact, some studies suggest that asymptomatic patients can transmit the SARS-CoV-2 virus without realising it. This is one of the causes of the spread of the SARS-CoV-2 virus.^{18,19} Therefore, students must be more aware of the presence of people without symptoms (close contact) and maintain good knowledge regarding COVID-19 transmission to prevent infection.¹⁰

For item number 9, which presented the new normal as having the meaning of returning to the original habit before the corona outbreak, 72% of the students answered incorrectly. This means that many students still have a misperception towards the term "new normal". The government referred to the new normal as a large-scale adjustment of social restrictions. New normal is used to explain the new adjustment period where we coexist with COVID-19 with several conditions, which are the use of data and science as a basis for decision-making, adjustments to large-scale social restrictions that are implemented in stages, paying attention to the predetermined zones, implementing strict health protocols, and conducting a review of implementation. The adjustment of large-scale social restrictions is possible with the re-imposition of large-scale social restrictions with a deterrent effect strictly enforced if people do not follow the rules when doing their activities.²⁰ Therefore, the students should not simply ignore various health protocols just because of using the new normal term.

The majority of students answered "always" for every positive statement of community behaviours during the COVID-19 pandemic (points 1-5), and most of them answered "rarely" for every negative statement of community behaviour during the COVID-19 pandemic (points 6 and 7). This illustrates students' compliance with the recommended health protocols during the COVID-19 pandemic.

However, in item number 4, which says, "I

keep a minimum distance of 1 meter from other people when I am outside the house”, 10% of respondents responded with “never”. the same is true for item 5, “I keep my distance from the elderly”, as 8% of respondents responded with “never”. Notably, social distancing or what can be interpreted as social distancing restrictions refers to the articles in the Public Health Department.²⁰ It is explained that social distancing means creating a distance between oneself and others to prevent transmitting certain diseases.²⁰ Social distancing plays an important role in minimising interactions and crowds, as well as preventing the spread of the SARS-CoV-2 virus in the community. Social distancing will limit the reproduction rate of the virus, which eventually reduces transmission in the community.^{10,21}

The term “social distancing” has currently been replaced by “physical distancing restrictions” by the government. Physical distancing, or what can be interpreted as limiting physical contact, is a series of actions in non-pharmaceutical infection control measures that aims to stop or slow down the spread of infectious diseases. The main purpose of this restriction policy is to reduce the possibility of physical contact between infected people and other people who are not infected, thus minimising the occurrence of disease transmission, number of viruses, morbidity, and other adverse effects that can result in death.^{20,22} Physical distancing is effectively carried out to prevent transmission of viral infections that can be transmitted through physical contact, which includes sexual contact, indirect physical contact such as touching a contaminated surface, transmission through the air, or droplets from coughing or sneezing.²⁰ The community, including the students, can implement physical distancing by adopting several measures such as not leaving the house except for very urgent conditions like buying basic needs or treatment, greeting others by waving and not shaking hands, and regularly doing sports activities at home for at least 30 minutes a day to maintain endurance, taking advantage of the technology available at home to work or study from home.²⁰

For item 5, “I keep a distance from elderly people”, 8% of respondents answered positively. Older people have weaker immune systems than young people. Even though they are not suffering from certain diseases, the elderly are considered to need special health attention.²³ Specifically, older

people have a greater risk of being infected with the SARS-CoV-2 virus and have a greater chance of transmitting the virus.¹⁰

Item number 6, “I attended an event that gathered many people”, was responded to by 18% of respondents with “very often”. Item number 7, “I use public facilities or go to public places (public transportation, malls, markets, tourist attractions)”, was responded by 28% of the respondents with “very often”. People who spend a lot of time in crowded places and high traffic, such as in various public places or public facilities, have a higher risk of being infected with SARS-CoV-2.^{10,24} This is because there are still many public places or public facilities that have not been able to implement health protocols or social distancing, so transmitting the SARS-CoV-2 virus between humans is faster and easier. Therefore, the application of clean and healthy living behaviour is absolute to be applied independently by each person in order to protect himself/herself from SARS-CoV-2 virus infection.¹⁰

This study’s results indicate no significant ($p > 0.05$) relationship between students’ age and knowledge of COVID-19. This finding is consistent with previous research, which has suggested that age is not a decisive factor in inhibiting an individual’s access to information about COVID-19. Rather, the acquisition of knowledge about COVID-19 is dependent on an individual’s active efforts to seek out information and their exposure to it.^{25,26} However, other studies have suggested that age may have an impact on an individual’s understanding of COVID-19 prevention measures. It is believed that as individuals age, they become more proficient in clean and healthy living behaviours that can help prevent COVID-19 transmission.^{11,12}

Students’ education level is demonstrated to have no significant ($p > 0.05$) relationship with the knowledge of COVID-19. This study’s finding aligns with previous studies stating that no significant relationship exists between education level and a person’s knowledge about COVID-19. This may be because a person’s knowledge about COVID-19 comes not only from formal education but can also come from their own experience and environment.²⁵ However, other studies have shown that a person’s education level can affect their knowledge level.¹³ The higher the person’s education level is, the easier it will be for that

person to receive various information related to COVID-19.¹²

The age of students in this study is also shown to have no significant ($p > 0.05$) relationship with students' behaviour during the COVID-19 pandemic. This study finding is supported by another study that reported no relationship between age and behaviour regarding the COVID-19 pandemic.²⁷ This may be due to the level of discipline of each individual. Younger individuals tend to develop disciplined attitudes in following health protocols, which are also influenced by their self-awareness.²⁸ In addition, individuals at a young age need more assistance in implementing clean and healthy living behaviours during the COVID-19 pandemic. The limited information obtained makes them need guidance from adults to apply health protocols during the COVID-19 pandemic.⁸

However, another study demonstrated a relationship between age and COVID-19 prevention behaviour because a person's age affects the mindset and comprehension in studying an object. The older they get, the more their perspective and comprehension of something. Therefore, the knowledge they gain is getting better. When a person has good knowledge about COVID-19, he or she can determine how they should behave regarding COVID-19 prevention.²⁹

Education level is also proven to have no significant ($p > 0.05$) relationship with students' behaviour during the COVID-19 pandemic in this study, which supports the previous study's finding stating no significant relationship between education level and a person's behaviour regarding COVID-19. The level of education is one factor that affects a person's level of knowledge and actions because knowledge will directly affect behaviours caused by education.³⁰ The existence of an insignificant relationship between education level and behaviour during the COVID-19 pandemic can be influenced by several components, such as differences in individuals' perceptions about disease susceptibility, perceptions of prevention efforts, perceptions of benefits, and perceptions of taking prevention efforts.²⁷ However, other studies have shown a relationship between education level and COVID-19 prevention behaviour, which may be because knowledge is one factor that influences respondent behaviour. The respondent's knowledge is closely related to education. The higher the education level is, the

higher the knowledge. On the other hand, the lack of education will hinder the development of one's attitude towards newly introduced values.³¹

The distribution of knowledge categories among students revealed that the majority (67%) possess good knowledge of COVID-19. Furthermore, this study has established a significant ($p < 0.05$) relationship between students' knowledge and their behaviour towards preventing COVID-19 transmission. This finding indicates that students' knowledge of COVID-19 positively relates to their behaviour to prevent transmission during the pandemic.

According to scientific evidence, a person's health behaviours are determined by three main factors: predisposing, enabling, and reinforcing. Predisposing factors can facilitate the occurrence of the behaviour. These factors include a person's or society's knowledge and attitudes towards what will be done. In addition, beliefs, traditions, systems, and values in the local community can also facilitate or complicate the occurrence of a person's behaviour. Enabling factors support a person's behaviour and can take the form of facilities and infrastructure that support or facilitate a person's behaviour. In terms of public health, for people to have healthy behaviors, they must have access to health care facilities, including the financial capacity to access health services. Reinforcing factors include, among others, messages from community leaders or religious leaders, regulations, laws, and decrees from government officials to do healthy behaviours.³²

As one of the predisposing factors, knowledge is the initial factor that can affect a person's health behaviours. Knowledge is the result of humans sensing or knowing someone familiar with an object or situation based on the senses he/she has. Students' knowledge of COVID-19 refers to students' understanding of the causes of COVID-19, common symptoms, transmission, and prevention.³² Therefore, it is recommended for health services, such as the Public Health Center (PHC), perform education sessions about COVID-19 and how to prevent its transmission to students of the Manarul Huda Islamic Boarding School. On the other hand, the Manarul Huda Islamic Boarding School management is advised to develop a guideline for preventing COVID-19 transmission in Islamic boarding schools so that students can adopt measures to prevent the

transmission of COVID-19 and apply them in their daily behaviours.

The limitation of this study is that this study was conducted during the COVID-19 pandemic; thus, researchers had difficulty collecting data due to the strict regulations applied at the Manarul Huda Islamic Boarding School. The school did not allow students to meet people from outside the Islamic Boarding School, and at that time, many students chose to return to their homes.

CONCLUSION

The results of this study indicate that most students have a good level of knowledge about COVID-19 and a high level of compliance with recommended health protocols to prevent transmission during the COVID-19 pandemic. There is a relationship between the level of knowledge on COVID-19 and the behaviour regarding COVID-19 during the COVID-19 pandemic. Therefore, with good knowledge, it can be expected that students' behaviours in preventing transmission by adopting clean and healthy living behaviours or complying with the health protocols applied during the COVID-19 pandemic will be good. However, no relationship is observed between the students' age, education level, knowledge of COVID-19, and behaviours to prevent transmission during the COVID-19 pandemic.

CONFLICT OF INTEREST

There is no conflict of interest in this study.

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