

Pengetahuan dan Perilaku Pelajar SMP dan SMA di Jawa Timur terhadap Protokol Kesehatan 6M

Knowledge and Behavior of East Java's Middle and High School Students Towards 6M Health Protocols

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Article Info	ABSTRAK
Article history: Received 03,08, 2022 Revised 06,19, 2023 Accepted 06,20, 2023	Penyakit menular Covid-19 telah menyebar ke seluruh dunia sejak 2019. Saat ini, sudah ada sekolah yang mulai mengadakan Pertemuan Tatap Muka terbatas. Penelitian ini bertujuan untuk mengidentifikasi profil pengetahuan dan perilaku pelajar SMP dan SMA di Jawa Timur terkait protokol kesehatan 6M di sekolah, mengidentifikasi hubungan antara usia, nilai pengetahuan, dan nilai perilaku, dan mengidentifikasi perbedaan profil pengetahuan dan perilaku berdasarkan jenis kelamin, tingkat pendidikan, dan kelas. Penelitian ini merupakan penelitian cross-sectional dengan teknik pengambilan sampel accidental sampling pada 743 responden di 8 kabupaten / kota di Jawa Timur menggunakan metode pengambilan data kuesioner. Analisis statistik dilakukan dengan uji Spearman, Mann-Whitney, dan Kruskal-Wallis. Dari hasil penelitian, sebanyak 80,5% responden memiliki pengetahuan yang baik dan lebih dari 90% responden berperilaku positif terhadap protokol kesehatan 6M. Ada korelasi bermakna antara usia dan skor pengetahuan ($p < 0,05$), usia dan skor perilaku ($p < 0,05$), dan skor pengetahuan dan skor perilaku ($p < 0,05$). Ditemukan juga adanya perbedaan skor pengetahuan dan skor perilaku berdasarkan jenis kelamin, tingkat pendidikan, dan kelas.
Kata kunci Covid-19 Pengetahuan Perilaku Protokol kesehatan	
Keywords: Covid-19 Knowledge Behavior Health protocols	ABSTRACT Since 2019, the infectious disease Covid-19 has spread throughout the world. Schools have begun to hold limited face-to-face meetings. This study sought to identify a knowledge profile and behavior profile of middle and high school students in East Java toward 6M health protocols, as well as the relationship between age, knowledge score, and practice score, as well as a comparison of knowledge and behavior profile based on gender, education level, and class. This study used a cross-sectional study with accidental sampling and questionnaires to collect data from 743 respondents in 8 districts or cities in East Java. The Spearman, Mann-Whitney, and Kruskal-Wallis tests were used for statistical analysis. The results show that 80,5% of respondents have good knowledge, and more than 90% had positive behavior towards 6M health protocols. There was a significant correlation between age and knowledge score ($p < 0,05$), age and behavior score ($p < 0,05$), and knowledge score and behavior score ($p < 0,05$). The study also discovered differences in knowledge and behavior scores based on gender, education level, and class.

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1. INTRODUCTION

The infectious disease COVID-19 (Coronavirus Disease), caused by the Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2), has spread worldwide since 2020 [1]. COVID-19 cases in East Java have been confirmed at 399,009 cases, with 210 being active cases, 369,121 declared recovered, and 29,678 people have died [2]. The government has made various efforts to reduce the number of COVID-19 transmissions, one of which is through implementing the 6M health protocol. Wearing masks, washing hands with soap in running water, maintaining distance, avoiding crowds, decreasing movement, and avoiding eating together are all part of the 6M health routine.[3]. Implementing community behaviour related to discipline in health protocol implementation aids in the prevention of COVID-19 dissemination. If health precautions are not effectively implemented, the probability of COVID-19 transmission can reach 100%. [4]. According to research, the following health protocols are effective in reducing the risk of COVID-19 transmission: hand washing can reduce the risk of contracting COVID-19 by 24-31% [5], social distancing can reduce the risk of contracting COVID-19 by 85% [6], and using masks can reduce the risk of COVID-19 transmission by 79% [7].

Some research results show that middle and high school students in adolescence still have low compliance with health protocols. They are one of the most critical components in successfully implementing limited face-to-face learning in schools. A study on the knowledge level of COVID-19 was conducted on 55 students at Salemba Adventist College High School. As many as 65.5% of students have good knowledge, 27.3% have moderate knowledge, and 7.3% have poor knowledge of Covid-19 [8]. The results of a study of 111 respondents aged 16-22 showed that 64.9% of adolescents had high knowledge, and 34.2% of adolescents had moderate knowledge. In contrast, 0.9% of adolescents had moderate knowledge of Covid-19 [9]. Other studies have shown that in implementing COVID-19 prevention health protocols, 51.7% of adolescents are not compliant in washing their hands, 60.3% of adolescents did not comply with wearing masks, and 93.1% of adolescents are disobedient in social distancing. The sample used was students in Sangingloe Environment, Tamalatea District, Jeneponto Regency, with a sample of 34 high school students (58.6%) and 24 junior high school students (41.4%) [10].

There is currently no research to describe the profile of knowledge and compliance of junior and senior high school students in East Java with the application of the 6M health protocol in schools. The goal of this study was to find out what junior and senior high school students in East Java knew and how they behaved when it came to the implementation of the 6M health protocol in schools. The study also identified associations between age, knowledge scores, and behavioural scores, identifying differences in knowledge and behavioural profiles based on gender, education level, and grade. This research is expected to provide an overview of the implementation of face-to-face learning in junior and senior high schools to help the readiness of schools, parents and students, and the community regarding face-to-face learning activities in schools while implementing 6M health cigarettes during the COVID-19 pandemic.

2. METHODS

The Health Research Ethics Commission of the Faculty of Pharmacy, Universitas Airlangga (No. 45 / LB / 2021) has approved this study. The population of junior and senior high school students who participated in Limited Face-to-Face Learning (LF2FL) activities was studied in a cross-sectional survey using incidental sampling procedures. The sample in this study was junior and senior high school students in East Java who



participated in LF2FL activities. Data collection was carried out using questionnaires in October 2021 in Surabaya City, Kediri City, Pamekasan Regency, Gresik Regency, Bojonegoro Regency, Lamongan Regency, Tulungagung Regency, and Banyuwangi Regency. The variables in this study are the knowledge profile and behaviour profile of junior and senior high school students in East Java who participate in LF2FL to the 6M health protocol.

According to the inclusion criteria, respondents filled out a questionnaire through a Google form. The questionnaire has gone through the validation test stage on ten respondents. The questionnaire consists of three parts. The first part is about respondents' demographic data, the second is about knowledge of the 6M Health Protocol (n=13), and the third is about behaviour towards the 6M Health Protocol (n = 15). The thirteen statements in the variable knowledge section are divided into several parts with the following details: 4 statements about general knowledge of Covid-19 (1-4), 1 statement about Covid-19 symptoms (5), 1 statement about Covid-19 transmission (6), five statements about health protocols 6M (7-11), and two statements about Covid-19 prevention (12-13) with detailed questions as written in table 3. Each given statement has the answer options "Yes", "No", and "Do Not Know". Except for statements 3, 9, 12, and 13, correct answers (Yes) get a value of 1, and incorrect answers (No/Don't know) get 0. For statements 3, 9, 12, and 13, the correct answer (No) receives a value of 1, and the wrong answer (Yes/No Know) gets 0.

The total knowledge score ranges from 0 – 13. Then, the entire knowledge score of each respondent is categorized into three levels of knowledge profile. A total score of 10 – 13 points is included in the good category, a total score of 7 – 9 points is included in the medium category, and a total score of 0 – 6 points is included in the less category. The fifteen questions in the behavioural variables section are divided into two categories. There are nine questions about implementing the 6M health protocol (1 – 7, 13 – 14) and six questions about implementing efforts to prevent the transmission of COVID-19 (8 – 12, 15) with detailed questions as written in Table 4. Each question has answer choices of "Always", "Often", "Rarely", and "Never". The scoring of questions number 1, 3, 4, 5, 9, 11, 13, and 14 is 4 for always answers, 3 for frequent answers, 2 for infrequent responses, and 1 for never answers. The assessment of questions 2, 6, 7, 8, 10, 12, and 13 is 4 for never answers, 3 for rare answers, 2 for frequent answers, and 1 for always answers. The assessment of questions 2, 6, 7, 8, 10, 12, and 13 is 4 for never answers, 3 for rare answers, 2 for frequent answers, and 1 for always answers. The maximum total score obtained is 60 points if the respondent answers correctly. Then, the total behavioural score of each respondent was categorized into two categories. A score of ≥ 30 falls into the positive behaviour category, while a total score of < 30 is organized into negative behaviour.

The data analysis process was carried out using Microsoft Excel 2019 and IBM SPSS Statistics version 25.0. Microsoft Excel 2019 is used to sort and reduce data, which is then entered into SPSS software. The normality test of knowledge score data and the behavioural score were performed using the Kolmogorov-Smirnov test. The statistical analysis used next is a nonparametric test. The Spearman correlative test analyzed the correlation between age, knowledge score, and behavioural score. The Spearman correlation coefficient test The Mann-Whitney and Kruskal-Wallis tests were used to examine differences in median knowledge and behavioural scores by gender, education level, and grade.



3. RESULT

Tabel 1. Demographic Data of Research Respondents

Variable	Variable	Variable
Gender	Gender	179 (24,1)
	Perempuan	564 (75,9)
Age (years old)	Age (years old)	155 (20,9)
	15	180 (24,2)
	16	237 (31,9)
	17	139 (18,7)
	18	32 (4,3)
City / Regency	City / Regency	111 (14,9)
	Kota Kediri	38 (5,1)
	Kabupaten Pamekasan	25 (3,4)
	Kabupaten Gresik	46 (6,2)
	Kabupaten Bojonegoro	277 (37,3)
	Kabupaten Lamongan	111 (14,9)
	Kabupaten Tulungagung	82 (11,0)
	Kabupaten Banyuwangi	53 (7,1)
Level of Education	Level of Education	193 (26,0)
	SMA	550 (74,0)
Class	Class	14 (1,9)
	2 SMP	60 (8,1)
	3 SMP	119 (16,0)
	1 SMA	234 (31,5)
	2 SMA	197 (26,5)
	3 SMA	119 (16,0)

The number of respondents who met the inclusion criteria was 743, with the distribution written in Table 1. The median, minimum, and maximum scores of the age, knowledge, and behaviour score variables can be seen in Table 2. The median score shows the concentration of respondents' data based on age, knowledge score, and behaviour score.

Table 2. Median Age, Knowledge Score, and Behavior Score of Respondents

	Median (IQR)	Minimum Score	Maximal Score
Age	16 (1)	14	18
Knowledge Score	11 (2)	0	13
Behavior Score	50 (9)	28	60

Table 3. Analysis of Knowledge Profile and Behavioral Profile of Respondents Regarding the 6M Health Protocol

Variable		Knowledge			Behavior	
		Poor n (%)	Moderate n (%)	Baik n (%)	Poor n (%)	Moderate n (%)
Gender	Man	5 (2,8)	43 (24,0)	131 (73,2)	0 (0,0)	179 (100,0)
	Woman	6 (1,1)	91 (16,1)	467 (82,8)	1 (0,2)	563 (99,8)
Age (years old)	14	8 (5,2)	34 (21,9)	113 (72,9)	1 (0,6)	154 (99,4)
	15	1 (0,6)	29 (16,1)	150 (83,3)	0 (0,0)	180 (100,0)
	16	0 (0,0)	35 (14,8)	202 (85,2)	0 (0,0)	237 (100,0)
	17	2 (1,4)	31 (22,3)	106 (76,3)	0 (0,0)	139 (100,0)
	18	0 (0,0)	5 (15,6)	27 (84,4)	0 (0,0)	32 (100,0)
City / Regency	Surabaya City	1 (0,9)	22 (19,8)	88 (79,3)	0 (0,0)	111 (100,0)
	Kediri City	0 (0,0)	6 (15,8)	32 (84,2)	0 (0,0)	38 (100,0)
	Pamekasan Regency	1 (4,0)	5 (20,0)	19 (76,0)	0 (0,0)	25 (100,0)
	Gresik Regency	0 (0,0)	9 (19,6)	37 (80,4)	0 (0,0)	46 (100,0)
	Bojonegoro Regency	2 (0,7)	61 (22,0)	214 (77,3)	1 (0,4)	276 (99,6)
	Lamongan Regency	6 (5,4)	13 (11,7)	92 (82,9)	0 (0,0)	111 (100,0)
	Tulungagung Regency	0 (0,0)	13 (15,9)	69 (84,1)	0 (0,0)	82 (100,0)



	Banyuwangi Regency	1 (1,9)	5 (9,4)	47 (88,7)	0 (0,0)	53 (100,0)
Student	Junior High School (JHS)	8 (4,1)	41 (21,2)	144 (74,6)	1 (0,5)	192 (99,5)
	Senior High School (SHS)	3 (0,5)	93 (16,9)	454 (82,5)	0 (0,0)	550 (100,0)
Class	JHS Grade 1	1 (7,1)	8 (57,1)	5 (35,7)	1 (7,1)	13 (92,9)
	JHS Grade 2	3 (5,0)	12 (20,0)	45 (75,0)	0 (0,0)	60 (100,0)
	JHS Grade 3	4 (3,4)	21 (17,6)	94 (79,0)	0 (0,0)	119 (100,0)
	SHS Grade 1	1 (0,4)	39 (16,7)	194 (82,9)	0 (0,0)	234 (100,0)
	SHS Grade 2	0 (0,0)	36 (18,3)	161 (81,7)	0 (0,0)	197 (100,0)
	SHS Grade 3	2 (1,7)	18 (15,1)	99 (83,2)	0 (0,0)	119 (100,0)

Table 4. Correlation of Age, Knowledge Score, and Behavior Score

Variable	Correlation coefficient	p
Age – Knowledge Score	0,123	0,001
Age – Behavior Score	0,119	0,001
Knowledge Score – Behavior Score	0,284	0,000

* significant (p<0.05) with 95% confidence level

Table 5. Differences in Knowledge Scores and Behavior Scores Based on Gender, Education Level and Class

Variable	Knowledge		Behavior		
	Score	p	Skor	Score	
Gender	Man	11 (2)	0,001*	48 (10)	0,000*
	Woman	11 (2)		50 (8)	
Level of Education	JHS	11 (2)	0,000*	50 (8)	0,000*
	SHS	11 (2)		47 (9)	
Class	JHS Grade 1	9 (2,25)	0,000**	41 (14,75)	0,000**
	JHS Grade 2	10 (1,75)		48,5 (9)	
	JHS Grade 3	11 (1)		47 (8)	
	SHS Grade 1	11 (2)		52 (8)	
	SHS Grade 2	11 (2)		49 (8)	
	SHS Grade 3	11 (2)		49 (8)	

* significant (p<0.05) at the 95% confidence level by Mann – Whitney test

** significant (p<0.05) at the 95% confidence level by Kruskal Wallis test

4. DISCUSSION

The number of respondents who filled out the questionnaire was 851 respondents. Then, data reduction was carried out on as many as 108 respondents who did not meet the predetermined criteria, with the following details: did not participate in LF2FL (15 respondents), did not age 14-18 years (76 respondents), filled classes not by education level (8 people), and were not willing to be research respondents (9 people). From these results, 743 respondents met the requirements, with 550 high school students and 193 junior high school students. Most respondents were women, as many as 564 (75.9%). The highest age was 16 years, as many as 237 respondents (31.9%). Most respondents were grade 1 high school students, totalling 234 (31.5%). The most respondents came from Bojonegoro Regency (277, 37.3%).

Analysis of Respondents' Knowledge of 6M Health Protocol

This research shows that as many as 627 respondents (84.4%) knew that COVID-19 is a respiratory tract infection caused by the SARS-CoV-2 virus. Based on the research results, as many as 150 respondents (20.2%) did not know that someone exposed to Covid-19 could recover as before. Covid-19 is a disease caused by the SARS-CoV-2 virus, where most viral infections are self-limited and can heal themselves, including the SARS-CoV-2 virus that causes Covid-19 [11,12]. A total of 207 respondents (27.9%) did not know that Covid-19 could be transmitted via droplets. The SARS-CoV-2 virus can be transmitted through direct, indirect, or close contact (within a distance of one meter) with



an infected person through secretions such as saliva and respiratory tract secretions or respiratory droplets that come out when the person is infected [13]. Compared with research on junior high school students in Yogyakarta, which showed 97.5% of respondents knew the source of COVID-19 transmission, student respondents in East Java had less knowledge regarding this matter [14].

A lack of understanding about Covid-19, especially its transmission, can be caused by a lack of access to reliable information sources. A study shows that most students (50.9%) got information about Covid-19 from social media. On social media, you often find information that could be more trustworthy. The Indonesian government has provided an official website that anyone can access to get the latest information about COVID-19 via *covid19.go.id* [14]. Other studies obtained different things, which showed that as many as 80.4% of teenagers got information about COVID-19 from people closest to them, such as family and friends [15]. Apart from the role of the family, schools also have an essential role in increasing students' awareness about Covid-19 [14].

The responses to questions about washing hands with soap and running water and using masks showed that 97.8% and 99.5% of respondents answered correctly. The use of masks accompanied by increasing the habit of using hand sanitizers containing alcohol or washing hands using soap and running water is one of the recommended efforts to reduce exposure to the COVID-19 virus [13]. The results of this questionnaire show that respondents know health protocols well compared to research in Saudi Arabia, which showed that 45.8% of students agreed that washing hands with soap can prevent disease [16].

Physical distancing can be interpreted as creating distance between oneself and other people to prevent disease transmission [17]. This study showed a vast majority (99.1%) of the respondents understood the importance of physical distancing and limiting outdoor activities as effective measures to reduce the transmission of COVID-19. This finding is consistent with other research indicating that 99.23% of the respondents recognize physical distancing as an effective way to curb the spread of COVID-19 [18]. A study finds that teenagers' awareness of physical distancing to prevent COVID-19 transmission is motivated by social responsibility and a desire to protect others from exposure to the virus [19].

Based on the analysis, it has been found that one statement received the lowest percentage of correct answers compared to other statements, with only 47.8% of students answering it correctly. The statement is about whether someone can indeed prevent transmission of Covid-19 by just taking vitamins and exercising. This low level of correct answers indicates that middle and high school students in East Java lack knowledge that COVID-19 cannot be prevented by just taking vitamins and exercising. Therefore, it is necessary to focus on providing a better understanding of this matter. Taking vitamins and exercising regularly attempts to boost immunity, but it is not the only approach to avoid developing the disease. Covid-19. The population frequently purchases vitamins during a pandemic because they support, regulate, and give a stronger defence for the body. This is based on a study that states there was an increase in vitamin sales in pharmacies during the pandemic [20]. It's also crucial to follow a disciplined program that includes implementing health protocols, supporting 3T (Testing, Tracing, Follow-up/Treatment), making the national vaccination program a success, and strengthening the immune system by exercising, getting enough rest, and eating nutritious food [21].

The respondent's knowledge profile data is then processed to calculate the knowledge profile value of each respondent. The results on respondents' knowledge profiles, as many as 80.5% of respondents had a knowledge profile in the good category



(10 - 13 points), as many as 18.0% of respondents had a knowledge profile in the medium category (7 - 9 points), and as many as 1.5% respondents have a knowledge profile in the poor category (0 - 7 points). This is in line with research conducted by Al-Hanawi et al. (2020), namely 81.64% of the public showed good knowledge about Covid-19 [18].

Analysis of Respondents' Behavior of 6M Health Protocol

Based on the results of this research, it is known that the majority of respondents showed the behaviour of implementing health protocols during LF2FL, such as 92.8% of respondents always wearing masks at school and 59.1% of respondents constantly washing their hands with soap and running water when arriving and before leaving school. However, several respondents admitted that they still had physical contact with friends while at school, namely 31.2% of respondents who rarely did not have physical contact with friends while at school. The combination of maintaining distance, wearing a mask, and washing hands for 20 seconds can reduce the impact of transmission while at school.

The research results showed that 11.0% of respondents always used public transportation to go to school. In light of Covid-19, public transportation poses a risk of physical contact and transmission. Implementing regulations requiring parents or families to pick up students can decrease public transport to and from school [23].

Based on the research, 31.2% of respondents admitted that they rarely avoid physical contact with friends while at school, and 45.2% of respondents rarely visit places that have the potential to cause crowds, such as corridors and fields at school. The behaviour of visiting crowded places is not compliant with the 6M protocol. Even though the percentage is low, some respondents still do it. According to other research, teenagers still visit places that cause crowds due to difficulties implementing new health protocols or adapting to contemporary habits [24]. Based on researchers' assumptions, junior and high school students tend to group when they meet with their friends at school to discuss lessons or chat, which can cause crowds.

When implementing limited face-to-face learning, the school should make a policy regarding things that must be prepared when learning takes place, including the provision for bringing school supplies personally. The research results show that students who rarely borrow items from friends (47.2%) are more numerous than students who never borrow items from friends (34.6%). This proves that there are still students who still need to bring complete school equipment, which can be caused by negligence or lack of preparation by students before going to school. Another factor is losing equipment during school. This shows that there is still a lack of awareness among middle school and high school students in East Java that borrowing and borrowing goods from friends is something that should be avoided as much as possible during the pandemic so that we can then focus on providing understanding regarding this matter. In addition, it is crucial to prepare and equip school equipment to avoid direct contact with other people so that the spread of COVID-19 can be avoided [25].

Students are encouraged to bring food from home to prevent physical contact and crowding. [26]. Only 15.9% of respondents always carried food supplies, while the majority (52.6%) never brought food supplies from home. This data is reinforced by laws issued by the Ministry of Education and Culture about the time limit for implementing LF2FL defined by each educational unit, which is typically just 4 hours, making it impossible to eat lunch [27].

Out of 743 respondents, 99.9% of respondents showed positive behaviour or followed health protocols (≥ 30 points), while only 0.1% demonstrated negative



behaviour (< 30 points). However, another study reported that only 54.7% complied with health protocols [22]. Research on teenagers in Mojokerto Regency shows that 84.7% do not comply, and 15.3% comply with health protocols [9]. According to research conducted in Jeneponto Regency, many respondents do not comply with health protocols. As per the study, 51.7% of respondents do not wash their hands with soap and running water, 60.3% do not wear masks, and 93.1% do not maintain distance [10]. These results differ from other research findings, indicating low student behaviour toward health protocols.

Analysis of Knowledge Profiles and Behavioral Profiles of Respondents Regarding the 6M Health Protocol

Based on the results of the data analysis obtained, it is known that the knowledge profile of most respondents is classified as good, with the percentage of female respondents (82.8%) higher than male (73.2%). Meanwhile, the moderate category for men (24.0%) is higher than for women (16.1%), and the poor category for women (1.1%) is higher than for men (2.8%). Female students have a better level of knowledge about the 6M health protocol than males. The behaviour of male respondents showed that the desired behaviour was 100% consistent with positive behaviour and following health protocols. In comparison, for female respondents, only one respondent (0.2%) behaved negatively or did not comply with health protocols. This is in contrast to the results of other studies, which state that women are more compliant in implementing health protocols [28]. Another study also stated that female students were 1,941 times more compliant in implementing health protocols than male students [29].

The behavioural profile of respondents implementing health protocols is generally good and shows a positive attitude. Only one respondent aged 14 years (0.2%) was in the negative category and did not fulfil the expected health protocol implementation behaviour. This means that age level has a significant influence on behaviour levels. Age is directly proportional to the level of education pursued. At the high school level, research results show a higher level of "good" knowledge (82.5%) and better behaviour in implementing the 6M health protocol (100%) than at the junior high school level. This data is supported by statements in other research where age influences the level of compliance because, with increasing age, a person will have a better mindset, understanding, and comprehension ability [30].

Regions with a low level of knowledge are Pamekasan Regency (76.0%), and high levels of knowledge are Banyuwangi Regency (88.7%). The level of knowledge in Surabaya City (79.3%) still needs to represent that urban areas have a high level of knowledge due to the support of easy access to information that is quick and easy to obtain. This study found that regional origin has no significant influence on the level of knowledge, even though it was conducted solely on the island of Java.

The correlation between age, knowledge and behaviour

From the normality test results with the Kolmogorov-Smirnov Test, the value of $p = 0.000$ ($p < 0.05$) was obtained. This shows that the data is not normally distributed, so further analysis uses nonparametric tests. Table 4 shows a relationship between age and knowledge scores, age and behaviour scores, and knowledge scores and behaviour scores ($p < 0.05$). In the correlation analysis of the age–knowledge score, the value $r = 0.123$ was obtained. This value shows that age and knowledge scores have a weak correlation ($r = 0.10 - 0.39$); the greater the age, the greater the knowledge score. From the results of the correlation analysis of age–behaviour scores, the value $r = 0.119$. This value shows that age and behaviour scores have a weak correlation; the more significant the age, the greater the behaviour score. As for the results of the correlation analysis of knowledge scores–behaviour scores, the value $r = 0.284$. This value shows that the knowledge and



behaviour scores have a weak correlation, and the greater the knowledge score, the greater the behaviour score [31].

Previous studies indicate no significant correlation between age and knowledge of Covid-19 prevention. As people age, they become more mature in their thinking and approach to work. However, regarding students learning about COVID-19 prevention, age should not be a limiting factor in accessing information. Regardless of age, students can be equally active in seeking and receiving the necessary information [32].

Analysis of Knowledge Scores and Behavior Scores Based on Gender, Education Level, and Class

Table 5 shows the results of nonparametric test analysis between knowledge scores and behaviour scores based on gender, education level, and class. From the results of the Mann-Whitney test analysis between knowledge scores and gender, the value of $p=0.001$ ($p<0.05$) was obtained, which means there is a difference in the median knowledge score between men and women. As for the behaviour score and gender, the value obtained was $p=0.000$ ($p<0.05$), which means there is a difference in the median behaviour score between men and women. The median difference in behavior scores may be due to women's greater concern and support for Covid-19 health protocols [33].

In the Mann-Whitney test between the knowledge score and the level of education, it was found that $p=0.000$ ($p<0.05$), which means there is a difference in the median knowledge score between junior high school students and high school students. As for the behaviour score with education level, the value obtained was $p=0.000$ ($p<0.05$). This means there is a difference in the median behaviour scores between junior and high school students. The Kruskal-Wallis test results between class scores and knowledge revealed a value of $p=0.000$ ($p<0.05$). This means there are differences in knowledge scores between junior high school grade 1, junior high school grade 2, junior high school grade 3, senior high school grade 1, senior high school grade 2, and senior high school grade 3. As for the behaviour and class scores, the value obtained was $p=0.000$ ($p<0.05$). This means there are differences in behaviour scores between 1st junior high school, 2nd junior high school, 3rd junior high school, 1st senior high school, 2nd senior high school, and 3rd senior high school.

Other research results show no significant difference between education level and knowledge [33]. This is also in line with the research results in South Kalimantan, which show no significant relationship between age and public knowledge regarding COVID-19 prevention. According to the research, age does not hinder people from obtaining information about preventing Covid-19. This is because age differences do not influence individuals' activity levels or exposure to information. Moreover, the public can learn about COVID-19 transmission through formal education, personal experience, and environmental influences [32].

This study is the first in East Java to examine junior and senior high school student's knowledge and behaviour toward the 6M health protocol in schools. The sample used in this research is limited to the eight selected districts/cities in East Java. Therefore, it cannot represent schools in other towns or regencies.

5. CONCLUSION

The junior and senior high school students in East Java showed an outstanding knowledge profile, and more than 90% have a favourable behavioural profile when it comes to applying 6M health standards in schools. According to the findings of the study, counselling is required because simply taking vitamins and exercising does not prevent the transfer of COVID-19 and the behaviour of borrowing goods from friends during a pandemic.



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