

RESEARCH ARTICLE | JUNE 14 2023

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AIP Conference Proceedings 2491, 040031 (2023)

<https://doi.org/10.1063/5.0105510>



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Knowledge, Attitude, and Practice about Coronavirus Disease (COVID-19) on the First-Year Student in Universitas PGRI Yogyakarta

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Abstract. The Corona Virus Disease 2019 (COVID-19) pandemic has caused an increase in morbidity and mortality and has affected the lives of the global community. This research aims to determine the knowledge, attitudes, and practice (KAP) toward COVID-19 among first-year students' at Universitas PGRI Yogyakarta (UPY). It's hoped that the increased KAP and awareness of students about COVID-19 are expected to break the chain of the spread of COVID-19 or social transmission. The research method used is a descriptive study with a cross-sectional design. The sampling technique was non-random sampling with a purposive sampling type. The data on demographic characteristics and level of KAP were obtained using a validated questionnaire. Data collection began in December to March 2021 using online questionnaires through social media networks which consisted of five main parts: socio-demographics, sources of information, knowledge, attitudes, and practice towards COVID-19 and then analyzed descriptively. The results showed that 226 students consisted of women (n = 155) and men (n = 71) with an average age of 17-25 years. Most of the students' backgrounds are from non-health sciences (n = 198). The results showed that students had moderate knowledge (41.6%), while good attitudes (99.6%) and practice (85.8%). Non-medical preventive measures are considered very effective through social media information technology (66.4%), as seen from students' good attitudes and practice. The level of knowledge of first-year students in UPY is moderate so that it is necessary to increase understanding related to COVID-19 through online education that is a sustainable and intensive on-campus environment.

INTRODUCTION

The novel coronavirus or severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) is a new virus that attacks the respiratory system. The disease resulting from this viral infection is called COVID-19. COVID-19 was first reported by the World Health Organization (WHO) on December 31, 2019, in Wuhan City, Hubei Province, China, and was declared a global pandemic on March 11, 2020 [1]. This infectious virus then spread throughout the world, including Indonesia [1] [2], except Antarctica [3]. The clinical symptoms of COVID-19 are fever, dry cough, runny nose, respiratory problems, sore throat, fatigue, lethargy, and malaise [2] [4]. Currently, morbidity and mortality rates are increasing due to this disease and other diseases. The cessation of social activities worldwide to reduce the spread of this pandemic has led to a contraction in the global economy and possible economic wounds [5].

Before WHO's statement regarding COVID-19 as a world health challenge and a pandemic, the Indonesian government and some people still underestimated this virus. Initially, the Indonesian government seemed to cover up the facts about COVID-19 in Indonesia. As a result, the community does not have readiness or understanding or

even misinformation about the coronavirus. The Indonesian Minister of Health, Dr. Terawan, was previously too arrogant and busy explaining that the coronavirus would not enter Indonesia, resulting in the government's lack of preparation in responding to this pandemic [6]. Currently, the number of positive cases of COVID-19 in Indonesia as of November 6, 2020, is 429.574, 360.705 recovered, 14.442 deaths, 56.663 suspects, and 38.091 specimens [2].

Despite unprecedented national steps in fighting the pandemic, the success or failure of these efforts hinges on people's knowledge, attitudes, and practice (KAP). Various studies have only assessed the virological characteristics and clinical impact of COVID-19 [7] [8]. However, research related to the exploration of knowledge, attitudes, practice, and perceptions of the severity and control of COVID-19 is still minimal in the community, especially in the campus environment in Indonesia. Assessment of public knowledge, practice, and attitudes towards this pandemic is critical to seeing the many misunderstandings and false information (hoaxes) circulating on social media regarding disease transmission and the method/route of transmission [9] as a deliberate biological weapon. Made by a country, cannot live in the Indonesian climate and believe that gargling with salt water or vinegar can kill the virus [10].

In particular, public compliance with the preventive measures established by the government is essential to prevent the spread of this disease. Compliance is likely influenced by people's knowledge, attitudes, and good practice towards COVID-19. Students, in this case, are part of society, take an active role in following trend issues related to the current COVID-19 problem. Research by Khasawneh et al. (2020) proved that medical students in Jordan have good knowledge, attitudes, and practice about COVID-19 to have the right strategy to prevent its spread [11]. In contrast to this, several studies that have been carried out on medical and health science students in Indonesia, India, Korea, China, Japan, Turkey, and Uganda show a good level of knowledge, attitudes, and practice about COVID-19 [12] [13] [14] [15] [16] [17].

It is also essential to study the knowledge, attitudes, and practice of non-health students because they live independently with limited knowledge and experience. Descriptive studies of students' knowledge, attitudes, and practice towards COVID-19 at Universitas PGRI Yogyakarta have never been carried out before. Universitas PGRI Yogyakarta is a private university in the province of D.I. Yogyakarta has diverse students from both regions and faculties. This study aims to determine the knowledge, attitudes, and practice of Universitas PGRI Yogyakarta students regarding the prevention of COVID-19. This research is expected to serve as data for researchers and institutional leaders, and policymakers across sectors regarding the level of knowledge, attitudes, and practice so that they are better equipped to prevent and control the spread of COVID-19 in their respective environments.

MATERIALS AND METHODS

This research is a descriptive study with a cross-sectional design conducted at Universitas PGRI Yogyakarta from December to March 2021. The sampling technique was non-random sampling with a purposive sampling type, collecting data using an online questionnaire which consists of four main parts: socio-demographics, sources of information, knowledge, attitudes, and practice towards COVID-19.

The population in this study were all active first-year students at Universitas PGRI Yogyakarta. The inclusion criteria in this study were (1) active first-year students at Universitas PGRI Yogyakarta who were willing to become respondents, (2) healthy students without COVID-19. While the exclusion criteria were (1) Not getting the approval of the respondents as research subjects, (2) Students who did not fill out the online questionnaire, (3) Incomplete questionnaire filling.

The sampling technique in this study was to use a cross-sectional design, randomly distributing closed questions on the online platform questionnaire (google forms) to active students of the Universitas PGRI Yogyakarta through the WhatsApp group social media. Previously, the respondents provided informed consent to agree to the questionnaire filling. After getting several respondents, it will be recorded, and the research begins.

The questionnaire was tested on 30 samples to test its validity and reliability. Based on the validity analysis obtained valid items with a correlation coefficient value of $p > 0.3$. The results of the reliability test obtained Cronbach's Alpha coefficient value of 0.764 which indicates all items are reliable so that they can be used in research instruments.

After the data is scored (score), a computer is processed using a statistical software program, namely SPSS (Statistic Package for Social Science). Data analysis was carried out descriptively. Sociodemographic data were analyzed descriptively in the form of frequencies and percentages.

The level of knowledge, attitudes, and practice data is determined based on the scoring of each question item and the overall total. The level of knowledge, attitudes, and practice of first-year students about COVID-19 is said to be low if the respondent's score is (<60%), moderate (60-75%), and high (> 75-100%).

RESULTS AND DISCUSSION

A total of 226 first year students were involved in this study. Of this total, 31.1% (n = 71) were male and 68.9% (n = 155) women aged 17-19 years (n = 159; 70.4%), 20-22 years (n = 59; 26.1%), and 23-25 years (n = 8; 3.5%). The majority of respondents came from the non-health sciences, namely 198 students (87.6%), and a minority from the health sciences were 28 students (12.4%) consisting of the Faculty of Science and Technology (n = 86; 38.1%), Faculty of Business (n = 65; 28.8%), Faculty of Teacher Training and Education (n = 61; 27.0%), and Faculty of Agriculture (n = 14; 6.2%). The results of the respondents' sociodemographic characteristics can be seen in Table 1.

TABLE 1. Sociodemographic Characteristics of Respondents (n = 226)

Characteristics of Respondents	Number (n)	Percentage (%)
Gender		
Men	71	31.1
Women	155	68.9
Age		
17-19 years	159	70.4
20-25 years	59	26.1
23-25 years	8	3.5
Knowledge Field		
Health (Nutrition and Pharmacy)	28	12.4
Non-Health	198	87.6
Faculty		
Business	65	28.8
Teacher Training and Education	61	27.0
Agriculture	14	6.2
Science and Technology	86	38.1

Sources of information obtained by respondents about COVID-19 mostly came from social media, namely (n = 150; 66.4%) followed by health workers (n = 28; 12.4%), search engines / websites (n = 14 ; 6.2%), official sites (n = 12; 5.3%), TV news channels (n = 12; 5.3%), and family and friends (n = 10; 4.4%) (Figure 1). During the COVID-19 pandemic, social media platforms have played an important role in disseminating public health information, including students [18] [19] [20] [21]. Research by Radwan et al. (2020) proved that social media, especially Facebook (81.8%), had a significant influence in obtaining news about COVID-19 for students (6-18 years) [21]. In contrast to this, Khasawneh et al. (2020) revealed that 83.4% of students use social media to obtain information about COVID-19 [11].

Health news was the topic most frequently seen, read, or heard (n = 529; 56.2%) during the COVID-19 pandemic, where men were more likely to follow health news than women (p <0.001) (Radwan et al., 2020). The results of research by Khasawneh et al. (2020) revealed that the official CDC website and PubMed (a particular website for health articles), which are supposed to be reliable sources of information based on evidence medicine for students, are used less frequently than social media as news channels to get information related to COVID-19 [11]. This dramatically affects a person's knowledge because more and more information is obtained, both false / hoax and accurate information. If used correctly and wisely, social media will serve as a powerful tool to change one's practice and promote well-being and public health [22]. So this is important for policymakers regarding the importance of social media in disseminating information to the public, especially regarding the current pandemic case.

Knowledge related to COVID-19 was assessed based on 11 categories. A graded score explains each question and answer. Among the total 226 answers collected, as many as 207 (91.6%) students answered correctly. Female students had significantly higher scores than boys (65.0% and 26.5%). The results of this study indicate that the level of knowledge of first-year students at UPY about COVID-19 is in a moderate/suitable category (n= 94; 41.6%) (Figure 2). These results are consistent with Baloran's (2020) research on students in the Philippines that the level of student knowledge regarding the prevention of COVID-19 is in a moderate/suitable category.

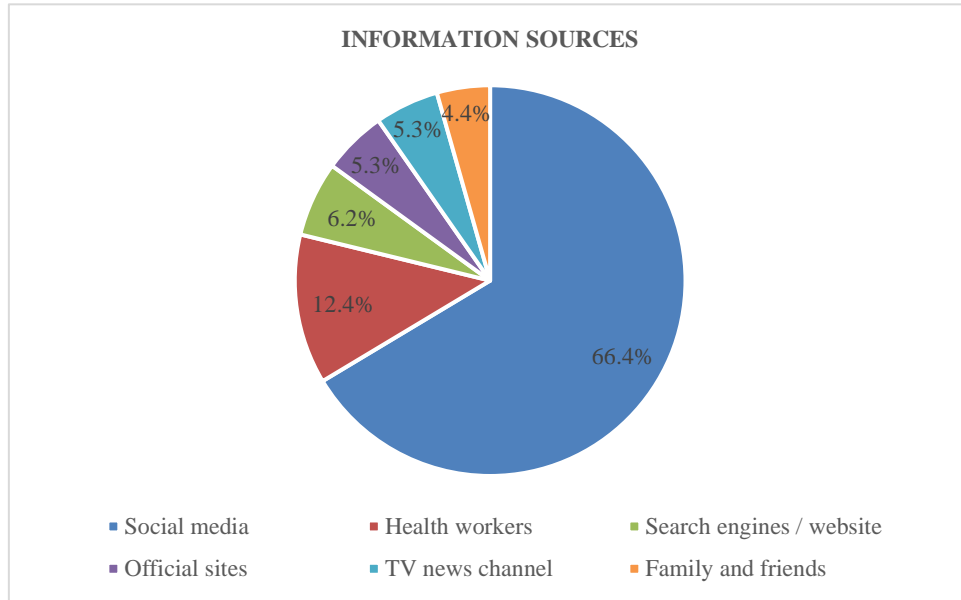


FIGURE 1. Respondent information sources

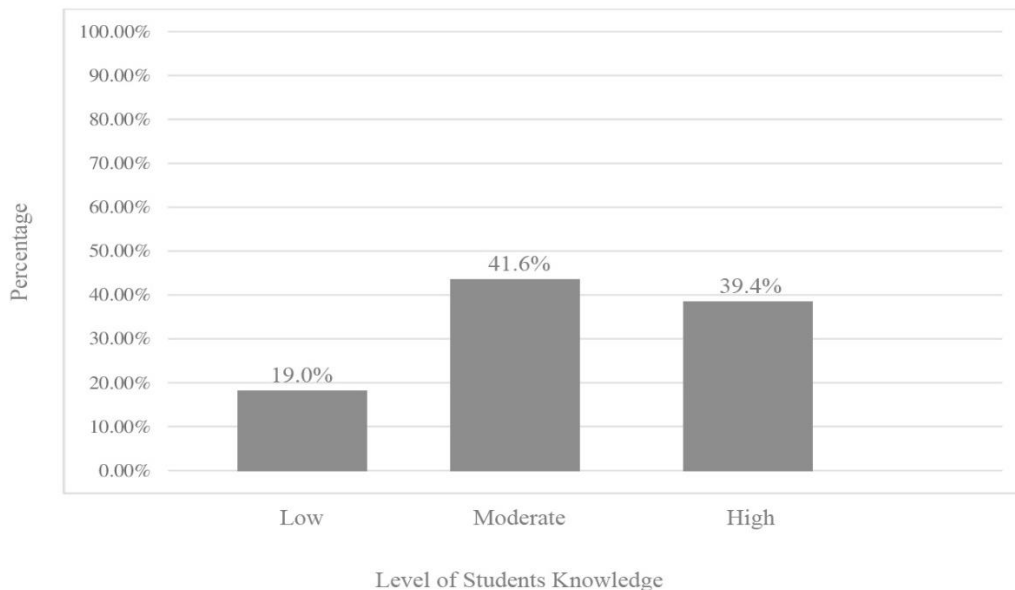


FIGURE 2. Overview of first-year student knowledge about COVID-19

Research related to the level of student knowledge about COVID-19 in Bangladesh [23] [24], India [25] and Indonesia [26] is mainly classified as inferior. This contradicts research in several countries that are classified as good, such as Japan (100%) [27], China (82.3%) [15], and the United Arab Emirates (72.3%) [28].

In this study, we found 3 out of 11 Knowledge level questions that most students answered incorrectly. Many as 160 students (70.8%) answered that the virus that causes COVID-19 could be transmitted through the airborne. Students think that the virus is likely to be airborne. This may be due to confusion between the airborne droplet transmission pathways and inhalation, although the essential differences between the two transmission mechanisms are different. WHO states that particles with a diameter of $>5-10 \mu\text{m}$ are respiratory droplets, while airborne transmission occurs in droplets with $<5 \mu\text{m}$ [11]. When asked about the current protein, it is recommended to consume more than fruits and vegetables. As many as (48.2%) students answered Yes. In addition, as many as (53.1%) students thought that during this pandemic, the nutrients only needed by the body consisted of protein and

carbohydrates. In the COVID-19 pandemic, macro and micronutrient intake is urgently needed. There are many micronutrient intakes in fruits and vegetables. Some of the micronutrients that are thought to help the healing process of COVID-19 patients are vitamins A, C, E, D, and omega-3, zinc, and iron. Optimal nutrition and dietary intake impact the immune system through gene expression, cell activation, and molecular signal modification. A balanced diet will increase a robust immune system which can help resist viral invasion [29].

Questions about the attitude of COVID-19 cover six categories. Each question and answer choice is explained by a score assessed in Table 2. Among the 226 students, 225 (99.6%) showed positive (good) attitudes (Figure 3). This is by various studies conducted in several countries regarding good student attitudes about COVID-19 [12] [13] [14] [15] [16] [17] [30]. In contrast to the research results by Ssebuufu et al. (2020) in Uganda on drivers, employers, and security workers who have worse attitudes. This shows that the type of work affects a person's daily life both on knowledge and impacts the attitude of preventing COVID-19 [31].

TABLE 2. Students' attitudes about the COVID-19 pandemic (n = 226)

Questions	Yes, n (%)	No, n (%)	I don't know n (%)
Do you think this outbreak is affecting your studies on campus?	219 (96.9)	7 (3.1)	
Do you hope that this plague ends soon so that you can return to campus?	219 (96.9)	3 (1.3)	4 (1.8)
Do you agree with the termination of tuition during the COVID-19 pandemic?	115 (50.9)	104 (46.0)	7 (3.1)
Do you agree if offline (face-to-face) lectures are conducted in the next semester?	128 (56.6)	78 (34.5)	20 (8.9)
Do you agree to Online Learning (online) during the quarantine period?	221 (97.8)	3 (1.3)	2 (0.9)
The reasons for saying "YES" to Online Learning (can choose more than one):		n (%)	
a. I want to finish my academic requirements.		49 (15.2)	
b. I don't want to quit school.		56 (17.4)	
c. I am bored at home, and I miss doing academic tasks and hanging out with friends.		43 (13.4)	
d. Online classes and modules are more convenient and practical than going to school.		48 (14.9)	
e. It is about time to use online-blended education in college, especially during a crisis like this.		20 (6.2)	
f. It would be safe to study at home than to go to school.		106 (32.9)	
Total		322 (100)	
The reasons for saying "NO" to Online Learning (can choose more than one):			
a. I don't have an internet connection.		33 (12.2)	
b. I don't have personal computers and smartphones.		11 (4.1)	
c. I would still prefer learning inside the classrooms.		92 (34.1)	
d. I have difficulty accessing the school's E-learning.		77 (28.5)	
e. I don't have the money or budget to buy an internet package.		57 (21.1)	
Total		270 (100)	
Do you agree with the distribution of groceries as a form of assistance during the COVID-19 pandemic?	226 (100)		

In the conditions of the COVID-19 pandemic, students are required to have a positive and optimistic attitude. Students must build a clear mind, not give up quickly, and always face challenges in the future. Students are agents of change and the nation's hope so that if they have a good/positive attitude, it will bring the nation more direction. Indirect attitude manifestations can be seen but can only be interpreted from closed practice [12].

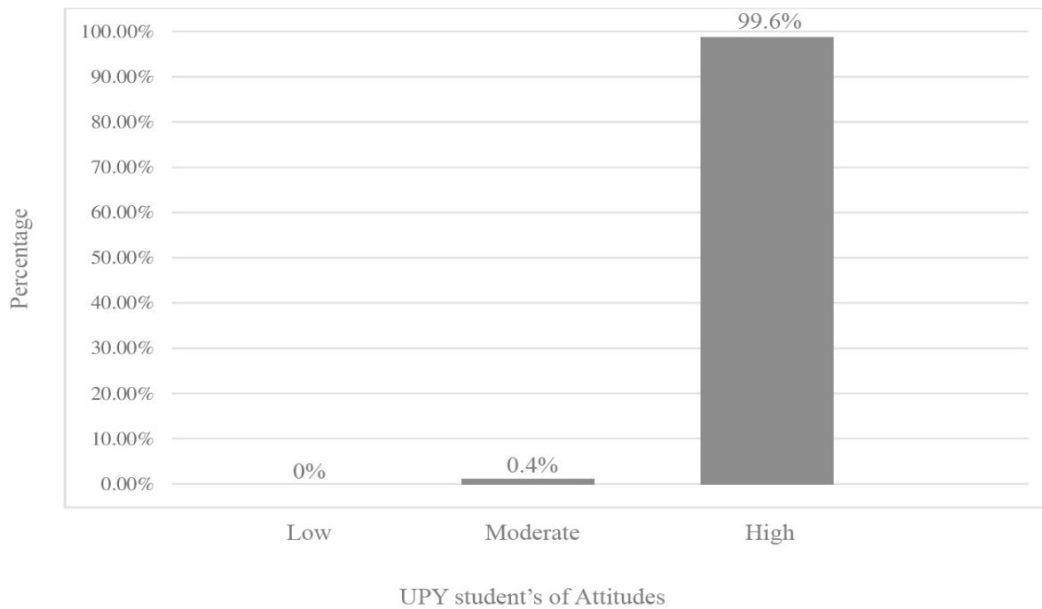


FIGURE 3. An overview of the attitude of UPY first-year students about COVID-19

Practice related to COVID-19 was assessed based on 12 categories. A graded score explains each question and answer. The results showed an excellent practice category (85.8%) (Figure 4). This result is by research conducted in several countries such as China, Japan, South Korea, Jordan, United Arab Emirates and the Saudi Arabia on students that the level of knowledge, attitudes, and practice of students regarding the prevention of COVID-19 is in good (high) category [32] [27] [14] [11] [28] [30].

A good practice is an effort to help control the transmission of COVID-19 and its effects. Conversely, lousy community practice can increase the number of cases and death rates due to the transmission of COVID-19.

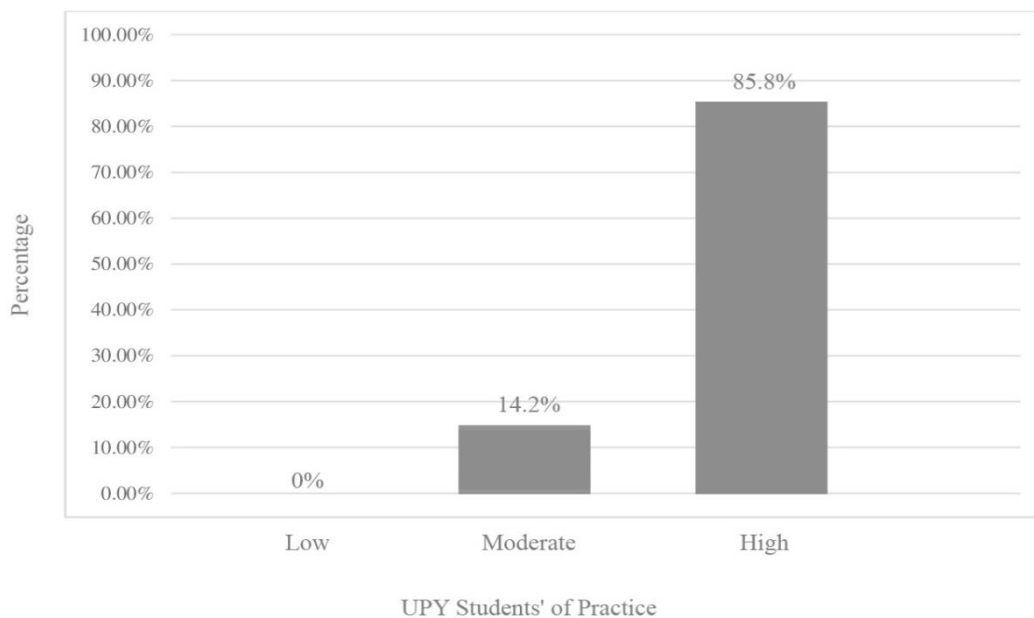


FIGURE 4. An overview of UPY's first-year student practice regarding COVID-19

CONCLUSION

First-year students of Universitas PGRI Yogyakarta have a relatively moderate level of knowledge about COVID-19 (41.6%). Meanwhile, most of them had a positive/good attitude (99.6%) and carried out proactive practice (85.8%) towards the COVID-19 outbreak. Health campaigns regarding the prevention of COVID-19 and Balanced Nutrition transmission need to be carried out massively in the campus environment.

We suggest that there should be an additional curriculum, counseling, webinars, and discussions about health to increase student understanding of COVID-19 and Balanced Nutrition.

ACKNOWLEDGMENTS

This research was funded by Beginner Lecturer Research Grant from Institute of Research and Community Service Universitas PGRI Yogyakarta, number: 001/LPPM-UPY/1/2021.

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