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Research Article

Description of Knowledge of Pre-Clinical Students of the Faculty of Medicine, Indonesian Christian University Batch 2020 regarding COVID-19

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Abstract

The world is currently facing a pandemic spreading rapidly in more than 200 countries caused by the SARS-CoV-2. The virus was first thought to have originated from Wuhan, China, and the infection has spread throughout the world, including Indonesia. The mortality rate for COVID-19 in Indonesia is 8.9%. This figure is the highest in Southeast Asia. Therefore, the government made various efforts and policies to tackle the COVID-19 outbreak in Indonesia. One of them is implementing the health protocol, namely 3M (using masks, washing hands, and social distancing). However, due to the increasing number of Covid-19 transmission in Indonesia, the current health protocol became 5M (washing hands, wearing masks, social distancing, limiting mobility and interaction and staying away from crowds) is expected to reduce the transmission rate of the COVID-19 virus. This study aims to discover the description of knowledge of Pre-Clinical Students in Faculty of Medicine, Christian University of Indonesia, Class of 2020 regarding COVID-19. The design of the study is a descriptive survey with a quantitative descriptive. Data were obtained by using questionnaires distributed online with a non-random sampling technique, in which we used purposive sampling. The participants were next screened with the inclusion and exclusion criteria. It resulted in 140 participants who qualified the criteria and whose data could be considered for further analysis. The results showed that from 140 students, 136 students (97,1%) had good knowledge, three students (2,1%) had sufficient knowledge, and one student (0,8%) had less knowledge about COVID-19. The study finds that 136 students (97,1%) in a class of 2020 in the Faculty of Medicine at Christian University of Indonesia have a good knowledge of COVID-19.

Keywords: Knowledge, Pre-Clinical Students, FK UKI 2020, COVID-19.

INTRODUCTION

The world is currently facing a pandemic spreading rapidly in more than 200 countries caused by the SARS-CoV-2 virus (Severe Acute Respiratory Syndrome-Corona Virus-2), a coronavirus strain subgenus *Sarbecovirus* and genus *Betacoronavirus* [1]. This virus was first suspected of originating from a Huanan seafood traditional market and infected a 55-year-old citizen of the People's Republic of China, to be precise, in Wuhan, Hubei province, on 17th November 2019. Since then, this virus has continued to infect citizens of " The Great Wall" with pneumonia symptoms that have never been known before [2]. At the end of December 2019, the world was shocked by an infectious disease that caused a lack of oxygen supply to body tissues and caused death. On 11th February 2020, the World Health Organization (WHO) referred to this disease as COVID-19 [3; 4].

Over time, all types of viruses, including SARS-CoV-2, can change their genetic material each time they reproduce. WHO, GISAID (Global Initiative on Sharing Avian Influenza), and international experts have collaborated to identify the mutational variant of SARS-CoV-2, and hundreds of variations of the SARS-CoV-2 virus worldwide have been found. The increasing types and mutations of the SARS-CoV-2 virus open up great opportunities for this virus to become more easily transmitted and aggravate the severity of the disease [5; 6; 7].

Indonesia is the first country in Asia with the highest total active COVID-19 cases in Asia, which is 175,236 cases, occupies the 4th position of the country that has the highest COVID-19 morbidity rate in Asia with a total of 1,111,671 positive confirmed cases, and is in in the 17th place with the highest COVID-19 morbidity rate worldwide until 4th February 2021 [8; 9; 10]. The outbreak of the COVID-19 disease is detrimental to the health sector and to various fields, where the economic sector is one of the leading sectors affected. Based on a report from the Ministry of Finance of the Republic of Indonesia, the Indonesian government's responsibility in dealing with the COVID-19 outbreak reached 4.2% of the Gross Domestic Product, equivalent to 677.2 trillion rupiahs [11; 12; 13]. As a result, there has been a change in the 3M health protocol (using masks, washing hands, and maintaining distance) to 5M (washing hands, wearing masks, maintaining distance, limiting mobility and interaction and staying away from crowds) [14]. One of the biggest concerns is when hospitals become overwhelmed,

and many patients cannot get standard care to save patients' lives, as is the case in Indonesia today.

The reasons mentioned above encourage the author to research the description of COVID-19 knowledge in Pre-clinical students of the Faculty of Medicine, Indonesian Christian University, Jakarta batch of 2020, where medical students are the next generation in the medical field who will participate in being the front line in primary and secondary health care facilities join the fight against COVID-19 COVID.

RESEARCH METHOD

Data collection in this study was carried out by distributing online questionnaires to all pre-clinical students batch 2020, Faculty of Medicine, Christian University of Indonesia. The instrument used in this study was a questionnaire using the google form electronic questionnaire application. The questionnaire consists of 29 closed questions, and each question has two answer choices, namely true or false. Respondents can choose one of the answers provided. The sampling technique used is a non-random sampling technique, namely purposive sampling, selected based on inclusive criteria and exclusive criteria. The inclusion criteria for this study included pre-clinical students of the Faculty of Medicine, Indonesian Christian University batch of 2020 and were willing to fill out a questionnaire. In contrast, the exclusion criteria are pre-clinical students of the Faculty of Medicine, Christian University of Indonesia batch 2020, who are unwilling to be respondents.

RESULT AND DISCUSSION

Knowledge of Pre-Clinical Students of the Faculty of Medicine, Indonesian Christian University Class of 2020 Regarding the Definition of Covid-19 - From the study results, it was found that most of the pre-clinical students knew the definition of Covid-19 as many as 135 people (96.3%). Respondents in this study consisted of pre-clinical medical students. The research result supports by Sukesih in 2020, who obtained knowledge about COVID-19 in the excellent and sufficient category of around 83.33%. It is also in line with research conducted by Fatih Caliskan, who researched final year medical students in Turkey in 2020, getting results of 91.8% knowing the definition of COVID-19. COVID-19 is a disease caused by coronavirus 2 (SARS-CoV-2), which can cause respiratory system disorders, ranging from mild symptoms to severe infections [15; 16].

Knowledge of Pre-Clinical Students of the Faculty of Medicine of the Indonesian Christian University Class of 2020 Regarding Covid-19 Symptoms - From the study results, it was found that most of the pre-clinical students of the Faculty of Medicine of the Indonesian Christian University batch of 2020 knew the symptoms of COVID-19 as many as 138 people (98.6%). This result is in line with the research conducted by Nawar in Baghdad, which obtained knowledge of 87.4% of pre-clinical level medical students regarding the symptoms of COVID-19 in the form of fever, dry cough, and fatigue. In a study conducted by Kacper Niburski in 2020, who researched the level of knowledge about the clinical symptoms of COVID-19 in medical students in Quebec, Canada, the results were 86%, which included cough, fever and anosmia (41.4%) and other symptoms. (37.8%). Meanwhile, in a study conducted on the level of knowledge of medical and dental students at the pre-clinical level, it was found that 78.4% knew about the symptoms of COVID-19 [17; 18; 19].

Knowledge of Pre-Clinical Students of the Faculty of Medicine, Indonesian Christian University Class of 2020 Regarding Covid-19 Risk Factors - From the results of the study, it was found that most of the 2020 Indonesian Christian University Faculty of Medicine pre-clinical students knew the risk factors of COVID-19 as many as 133 people (95.2%). On the question of risk factors for COVID-19, 136 people (97.1%) knew that the elderly and people who have comorbid health problems such as hypertension, heart disease, lung disease, cancer, or diabetes could experience COVID-19 infection that is more serious, while four people (2.9%) did not know it. Various studies of COVID-19 positive people have shown that chronically ill people have a higher risk of becoming infected with the SARS-CoV-2 virus and have a higher risk of mortality [20; 21]. In people with diabetes, high blood sugar levels can damage a person's immune system. The weaker the immune system, the lower the immunity's ability to fight infections, such as COVID-19; thus, the virus can cause more damage to the body [22].

Based on data from the Chinese Center for Disease Control and Prevention, from clinical studies of 44,672 confirmed cases of COVID-19, the Case Fatality Rate (CFR) values generated in the cohort study yielded values of 6%, 7%, and 10.5%. For COVID-19 patients with a history of hypertension, diabetes and cardiovascular disease [23]. In addition, it should be noted that the risk of more severe morbidity and mortality increases if the person is over 60 years of age or is elderly [24; 25].

Knowledge of Pre-Clinical Students of the Faculty of Medicine, Indonesian Christian University Class of 2020 Regarding the Transmission of COVID-19 - From the study results, it was found that most of the pre-clinical students of the Faculty of Medicine of the Indonesian Christian University class of 2020 knew of the transmission of COVID-19 as many as 137 people (97.7%). Knowledge of preventing the spread of the SARS-CoV-2 virus is instrumental in suppressing the virus transmission rate [26]. By having good knowledge of something, a person will have the ability to determine and decide how he can deal with it [27]. The results of this study are in line with other clinical studies, where from 1,102 respondents in Indonesia, the majority of respondents have a good level of knowledge regarding social distancing in the context of preventing the transmission of COVID-19 with a prevalence of 99%. In addition, another study in DKI Jakarta Province also gave results that were in line with this study, namely 83% of respondents had good knowledge in preventing the transmission of COVID-19 [28].

Knowledge of Pre-Clinical Students of the Faculty of Medicine, Indonesian Christian University Class of 2020 Regarding the Diagnosis of COVID-19 - From the study results, it was found that most of the pre-clinical students of the Faculty of Medicine of the Indonesian Christian University batch of 2020 knew the diagnosis of COVID-19 as many as 138 people (98.6%). This result is in line with the research conducted by Kacper Niburski in 2020, who conducted a study on the level of knowledge of COVID-19 among medical students in Quebec, Canada, which yielded 64%. However, this result is inversely proportional to the research conducted by Nisha Jha in 2020. With a study of the level of knowledge of medical and dental students at the pre-clinical level in Nepal, the result was that 35.6% knew knowledge about the diagnosis of COVID-19, which is one of the recommended diagnostic tools is molecular assay (PCR) [23; 24].

Knowledge of Pre-Clinical Students of the Faculty of Medicine of the Indonesian Christian University Class of 2020 Regarding the Management of COVID-19 - From the study results, it was found that most pre-clinical students knew the management of Covid-19 as many as 123 people

(87.7%). This result is in line with research conducted by Hayder Hasan in the study comparing health and non-health students in the UAE, showing that 80.8% of students agree that the only effective treatment for COVID-19 is symptomatic therapy. This research is also supported by research conducted by Nisha Jha in Nepal, which showed 92.2% of students agreed there was no specific Covid-19 treatment, and for other therapeutic options in the form of antiviral drugs as much as 87.6%, antibiotic therapy (77.3%), and convalescent plasma therapy (70.3%). Meanwhile, in a study conducted by Ashraf in 2020 in Jordan, 90% of respondents believed that Covid-19 positive patients could recover spontaneously [29].

Knowledge of Pre-Clinical Students of the Faculty of Medicine of the Indonesian Christian University Class of 2020 Regarding COVID-19 Prevention - From the study results, it was found that most of the pre-clinical students of the Faculty of Medicine of the Indonesian Christian University class of 2020 knew about the prevention of Covid-19 as many as 130 people (93.1%). Prevention of disease transmission is a cost-effective strategy in controlling COVID-19. The results of this study are in line with research on student knowledge in China related to COVID-19 infection, with knowledge results that fall into the excellent category of 82.3% [19]. Good knowledge about preventing COVID-19 infection certainly impacts the behaviour of each individual in preventing COVID-19. Bakhtiar et al., who researched the impact of knowledge and understanding of COVID-19 infographics as a form of effort to prevent COVID-19 transmission, found that in this population, a good understanding of COVID-19 infographics increases a person's adherence to preventive behaviours, such as keeping a distance, wearing masks, washing hands and increasing body immunity to reduce the transmission rate of COVID-19 in the community. The percentage of the population who understands the infographic is 79.5%, 81.6% practice social distancing, 50.9% use masks, 74.3% wash their hands as often as possible, and 73.6% try to boost the immune system [30].

Knowledge of Pre-Clinical Students of the Faculty of Medicine, Indonesian Christian University Class of 2020 Regarding COVID-19 - From 29 statement items, the knowledge variable is categorized into three categories: good knowledge, sufficient knowledge, and lack of knowledge understanding knowledge about COVID-19. The following table presents data on the results of 140 respondents' knowledge about COVID-19.

Research Variable Frequency Distribution Table

Respondent Knowledge	Frequency (n)	%
Good knowledge	136	97.1
Enough knowledge	3	2.1
Lack of knowledge	1	0.8
Total	**140**	**100.0**

Based on the table above, it can be seen that from 140 respondents, as many as 136 respondents (97.1%) have good knowledge about COVID-19, as many as three respondents (2.1%) have sufficient knowledge about COVID-19, and as many as one respondents (0.8%) have less knowledge about COVID-19.

Public Health Science is recognized as a science that plays an active role in preventing and controlling public health emergencies by preparing people for specific situations or diseases [31]. Everyone knows, and everyone has a different level of knowledge. A person's level of knowledge is divided into Know (Know), Understanding (Comprehensive), Application (Application), Analysis (Analysis), Synthesis (Synthesis), and Evaluation (Evaluation). The better a person's level of knowledge and understanding of something, the better his behaviour towards a particular condition or problem will be which means that a person's knowledge will also impact his behaviour [31]. Good knowledge will encourage positive attitudes, as in the research conducted by Peng et al., showing that the highest percentage of knowledge is in the excellent category as much as 228 (51.35%) followed by the highest percentage of attitudes in the good attitude category as much as 206 (46,39%), where a sense of responsibility for their duties as prospective health workers in the community will later encourage them to show a positive attitude in preventing COVID-19.[32]

CONCLUSION

From the all of the above elaboration, it is concluded that 136 Pre-Clinic Students of the Faculty of Medicine, Indonesian Christian University Class of 2020 had a good understanding of COVID-19 (97.1%).

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