

# COVID-19 Effects on Perception and Attitudes of Medical Students towards Clinical Clerkship at the Universitas Sebelas Maret Hospital

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**Abstract.** The effects of COVID-19 have made it difficult to carry out medical education hospital clerkships. Reducing the number of patients, hospitals, student time and increasing the risk of infection became a challenge of hospital clerkship during the pandemic. We aimed to determine the perceptions and attitudes of students towards clerkship at the Universitas Sebelas Maret Hospital when COVID19 reaches its peak. This research was conducted using a questionnaire survey on medical students at the Faculty of Medicine at Sebelas Maret University in May 2020. The questionnaire consisted of 3 sections and 14 questions about perception and attitude to a clinical clerkship at the Universitas SebelasMaret hospital. The number of respondents was 56 students, 21 males, and 35 females. The study showed most (62.5%) had average knowledge, feel average awareness of COVID-19, experience concerns from their families, and perceive a decline in the efficiency of hospital clerkships during the pandemic.

**Keywords:** Perception; Attitudes; Covid-19; Hospital; Clerkship.

## 1 Introduction

COVID-19 (coronavirus disease 2019) has been in Indonesia for more than a year and has not disappeared completely. Many problems and aspects of life are affected by COVID-19, one of which includes the field of medical education. COVID-19 has had such a significant impact that study shows it will take more than a decade for the globe to be normal again (1). In January 2021, there were eight hundred thousand cases of COVID-19 in Indonesia, with 120 thousand active cases and 23 thousand deaths. Central Java COVID-19 death case occupies number 2 in Indonesia, this proves COVID-19 is a serious problem in central Java (2).

With the increasing spread of COVID-19 infection, the availability of hospitals that are places of study for medical students is limited and has become an important issue. Due to the decreasing capacity, students will be rescheduled to make the study period longer. The recommendation from the faculty to students is to postpone the learning process when the peak of COVID-19 occurs. This condition aims to prevent the transmission of COVID-19 from getting worse. Recommendations from the faculty also state that education should be

taken online, except psychomotor education requires practice to gain good knowledge for students (3,4).

COVID-19 has caused many changes to hospital clerkships. Medical students undergoing hospital clerkship programs must adapt to hospital plans and schedules and still adhere to health protocols in every task they carry out. The consequences for these students include longer study time, increased risk of infection, decreased a number of patients for medical practice, and decreased hospital clerkship hours so that there is a risk of reduced skills and abilities of students. Regulations implemented in the COVID-19 pandemic tend to be issued by only one party from the faculty and University regardless of the student's opinion. Therefore, it is essential to know students' attitudes during their hospital clerkship in hospitals. We aim to determine the attitudes and perceptions of medical students towards hospital clerkship at the Universitas Sebelas Maret Hospital during the time of COVID-19.

## **2 Methods**

### **2.1 Subject design**

This study was observational research. From April 20 to 25 2021, a cross-sectional survey using a google form-based 14-items questionnaire was conducted to determine their perceptions and attitudes toward clerkship education during the time of COVID-19. This research was approved by the Health Research Ethics Committee of the Medical Faculty Universitas Sebelas Maret, vide number 421/IV/HREC/2021 dated 7<sup>th</sup> April 2021.

### **2.2 Population and Study Setting**

Medical students at the Faculty of Medicine UniversitasSebelasMaret were the focus of this study. The questionnaire was filled out by students who had not yet been undergoing hospital clerkship activities at the UniversitasSebelasMaret Hospital.

### **2.3 Variables**

The questionnaire used a google form consisting of 3 sections and 14 questions about perception and attitude to a clinical clerkship at the Universitas Sebelas Maret hospital. Questions on the questionnaire included the effect of COVID-19 on their habits and lifestyle (four questions), students' awareness and knowledge of COVID-19 (three questions), and the attitudes of students towards the clerkship during the COVID-19 outbreak at Universitas Sebelas Maret Hospital (six questions). The questionnaire used had been validated by previous studies, and by researchers who conducted reliability tests with alpha Cronbach tests. This research was conducted from 20th until 25th May 2021 in Surakarta. We used Google Forms in data collection. Students in medicine who were included in this research were those who answered the questionnaire entirely according to their knowledge using self-assessment.

## 2.4 Data collection

The research questionnaire data used the google form, filled in by the research subjects. Informed consent was attached at the beginning of the google form to be approved before filling out the questionnaire. Demographic data were presented as means and standard deviations.

## 3 Results and Discussion

**Table 1.** Demographic Variable of Perception and Attitudes of Medical Students towards Clinical Clerkship in UniversitasSebelasMaret Hospital

No.	Variable	Mean $\pm$ SD
1	Age	20.787 $\pm$ 2.015
2	N	56
	Male	21
	Female	35
3	Length of time undergoing clinical clerkship stage	1.48 $\pm$ 0.5
4	The number of clinical clerkship stages	4.39 $\pm$ 5.18
5	The number of medical students who undergoing clinical clerkship stage	47

**Table 2.** Perception and Attitudes of Medical Students towards Clinical Clerkship in Universitas Sebelas Maret Hospital

No	Question	Perception and Attitudes
1	How much do you think you know about COVID-19?	Below average 3 (5.3%) Average 35 (62.5%) Above Average 18 (32.14%)
2	Do you think SARS-CoV-2 can spread from patients to students during clinical clerkship courses?	Probably not 1 (1.7%) Unsure 2 (3.4%) Probably yes 28 (50%) Definitely yes 25 (44.64%)
3	Do you think SARS-CoV-2 can spread from students to patients during clinical clerkship courses?	Probably not 2 (3.5%) Unsure 3 (5.3%) Probably yes 32 (57.14%) Definitely yes 19 (33.92%)
4	Have you been notified by the faculty about changes to the learning system and schedule during the clinical secretariat due to COVID-19?	Yes 53 (94.7%) No 3 (5.3%)
5	Are you satisfied with the changes to the learning system and schedule during the clinical clerkship due to COVID-19?	Very dissatisfied 1 (1.7%) Dissatisfied 12 (21.42%) Unsure 22 (39.28%) Satisfied 21 (37.5%)
6	Do you think you should participate in clinical clerkship training as scheduled despite the COVID-19 pandemic?	Yes 51 (91.1%) No 5 (8.9%)
7	What are your family's concerns about your clinical clerkship training in the COVID-19 pandemic?	Slightly concerned 4 (71.4%) Somewhat concerned 7 (12.5%) Moderately concerned 36 (64.28%) Extremely concerned 9 (16%)
8	Do you think the quality of clinical clerkship training will be reduced by	Unsure 1 (1.7%)

	the COVID-19 pandemic?	Probably not 4 (7%) Unsure 8 (8.7%) Probably yes 27 (48.21%) Definitely yes 16 (28.57%) unsure1 (1.7%)
9	Do you think you may have various experiences in clinical clerkship training during the COVID-19 pandemic?	Probably not 3 (5.3%) Unsure 19 (33.92%) Probably yes 20 (35.6%) Definitely yes 3 (5.3%)

Research results were summarized in Table 1 and Table 2. The number of respondents was 56 students, 21 male, and 35 female. The mean age was  $20.79 \pm 2.02$  years. Most (62.5%) had average knowledge of COVID-19. 94.6% of students believed the virus was spreading from patient to student, while 91% thought the virus could spread from student to patient. The faculty had notified 94% about changes in schedules and learning methods. 37.5% were happy with the learning system during a pandemic, 39% were unsure, and 12% did not like it. All students experience concern on the part of their families. As many as 76% felt that the quality of hospital clerkship had decreased. 41% believe they would have much experience during a pandemic, 33.9 were unsure, and 25% felt they had no experience during a pandemic.

In this cross-sectional study, most medical students, particularly those nearing graduation, expressed a strong commitment to hospital clerkships because they believed it could not be substituted by online training and that it would allow them to work as healthcare professionals. In the past, during the period of the last pandemic (middle east respiratory syndrome) in 2015 abroad, the same thing happened, namely partial closure of schools, but this was only temporary and following local policies (5,6).

The COVID-19 epidemic is wreaking havoc on the world's educational system (6, 7). The COVID-19 pandemic's long-term consequences are that the University has postponed the academic calendar and recommended other education systems such as online education. This action focuses on the safety of students to prevent transmission of COVID-19, however, there are concerns concerning the quality of health education and student attitudes during hospital clerkships. (8).

In large parts during the COVID-19 pandemic, studying medicine was studied hard. In this study, most medical students showed positive attitudes regarding the clinical, although there was a concern that the hospital clerkship could spread the virus. This result shows how vital a hospital clerkship is for students to complete the medical education curriculum following the specified time. Besides, the hospital clerkship also confirms their identity as a doctor undergoing an internship at the hospital (9).

During the COVID-19 outbreak, there was apprehension concerning the transmission of COVID-19 from patient to student. This concern would lead to a decrease in the quality of hospital clerkships. This concern was more common in preclinical students than students who had undergone hospital clerkships (10). This was probably based on the fact that students in preclinical tend not to have the opportunity to experience dealing with infection prevention that has been routinely carried out by students who have undergone hospital clerkship. However, the expectation of getting varied clinical practice experience during hospital clerkship during the COVID-19 era was lower for students who had undergone hospital clerkship than those who had not undergone hospital clerkship, where students tended to experience restrictions to access patients and use hospital facilities due to system changes in hospital caused by COVID-19 (8).

In this study, most medical students stated that their lifestyle was negatively affected by the delay in their study schedule. This was because preclinical students positively affect COVID-19, the routine lifestyle of preclinical students compared to students who had undergone hospital clerkships. This shows that although all classes are replaced with online types at home for preclinical students, academic schedules are not significant to Interfere with their daily routine. On the other hand, students who have undergone hospital clerkships will disrupt their daily patterns.

This study's limitations are that the number of respondents is still small, only in one location, and a multi-center follow-up study needs to be carried out with the number of patients is quite large.

### 3 Conclusion

Most students have average knowledge of COVID-19, experience concerns from their families, and feel that the quality of hospital clerkship has decreased during the pandemic. In the face of the COVID-19 pandemic, the faculty must take various strategic steps to meet hospital clinical learning needs while still prioritizing health protocols to prevent virus transmission.

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