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The Impact of the Online Exam Module on Student Anxiety During the Covid-19 Pandemic

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ABSTRACT

The Covid-19 pandemic has an impact in all sectors of life. Faculty of medicine issued a regulation on the implementation of online education to break the chain of spreading Covid-19. This research aimed to assess the impact of the online exam module on student anxiety during the Covid-19 pandemic. The method used in this present study was a descriptive analytical method. The research was conducted at the Faculty of Medicine, Universitas Mulawarman, Indonesia. All students of this faculty who took the exam using the online exam module became research respondents. The research was carried from three stages including preparation, the implementation and the evaluation of the online exam module. The anxiety of students during this online examination was evaluated to determine the effect of this kind of examination on the anxiety of students. The anxiety of students was measured using questionnaire prepared based on *Hamilton Rating Scale*. A total of 504 respondents (141 male students (28 % of total respondents); 363 female students (72 % of total respondents)) who had undergone online examinations were involved in this present study. The result was 62% experienced mild anxiety, 19% experienced mild-moderate anxiety, and 19% experienced moderate-severe anxiety. For the level of anxiety based on gender, 69.6% female and 30.4% male students experienced mild anxiety, 70.8% female and 29.2% male students experienced mild-moderate anxiety, and 81.1% female and 18.9% male students experienced moderate-severe anxiety. It can be concluded that students who take the online exam module majorly tend to experience mild anxiety. The level of anxiety of female students is higher than male students.

Keywords: *anxiety, online exam.*

1. INTRODUCTION

The coronavirus disease (COVID-19) outbreak has been spreading to many countries and regions and declared as a Health Emergency. The knowledge about Covid-19 is still unknown and growing in the meantime. It is currently known that COVID-19 is transmitted directly through contact with respiratory droplets from an infected person (generated through coughing and sneezing). Individuals can also become infected from touching a surface contaminated with the virus, then touching the face (for example, eyes, nose, mouth) [1].

Various policies were issued to break the spreading chain of Covid-19, including in the field of education. The Minister of Education and Culture of Indonesia issued circular No 36962/MPK.A/HK/2020 on March 17th, 2020, concerning all educational activities operated online and working from home to prevent the spread of Covid-19 [2]. It certainly has an impact on the implementation of education, especially in medical and dentistry education.

The Covid-19 pandemic has disrupted the structure of existing learning activities in medicine at both the pre-clinic and clinical levels [3,4]. The activities requiring

face-to-face have been replaced by online meetings. Apart from learning activities, the assessment system in medical education has also been affected by Covid-19. Amid the Covid-19 pandemic outbreak, assessment activities must still be carried out online.

Online exams must be performed while complying with the principles of assessment to hold a credible exam. A good assessment system is an important requirement in improving the quality and accountability of medical education. Through the assessment, information about student learning outcomes can be obtained, determining whether students pass or not, encouraging the learning process, and providing feedback for students and stakeholders [5,6].

Therefore, we have developed an online exam module based on a series of research processes and testing the method several times, so the implementation remains credible. Credible online exams can convince lecturers and students that students who pass the online exam can be held accountable for their quality. This study aims to assess the impact of online examinations on student anxiety.



2. METHODS

This research used a descriptive analysis design and was conducted at the Faculty of Medicine, Mulawarman University. Respondents were students of the Medicine and Dentistry Study Program who had carried out an online exam based on the online exam module.

Students' anxiety levels for taking the online exams were assessed using the Hamilton Anxiety Rating Scale questionnaire. The validity and reliability of the item construct based on the Pearson correlation ranged from 0.529 to 0.727, with Cronbach's alpha reliability was obtained at 0.756 [7].

The data were analyzed through univariate to see the frequency, mean, and median of the data. Anxiety level was assessed and categorized into several groups: (1) <17 as mild; (2) 18-24 as mild to moderate; (3) 25-30 as moderate to severe.

This study has received ethical clearance from the Health Research Ethics Committee of the Faculty of Medicine, Mulawarman University with No. 39/KEPK-FK/X/2020 on 13 October 2020.

2.1 IMPLEMENTATION OF THE ONLINE EXAM MODULE

2.1.1 Preparations

The preparation includes the authority policies and the formation of an online examination team. These policies can be the basis for the implementation of online exams for all parties, both lecturers and students. It will also facilitate the practice to become facile, including the costs incurred.

After receiving the Dean's support, an online examination team was formed. The task was to formulate an appropriate exam platform, created standard operating procedures (SOP) for exams, carry out trials, test kits training, and formed exam committees.

2.1.2 Execution

Online examinations were executed following the SOPs, using two platforms, namely the Zoom Cloud Meeting for supervision and Edmodo as the exam platform. The access for the Edmodo was required using a PC or laptop, while Zoom used a cellphone. The examination station used by students also has special provisions, for example, facing a wall, no books around the station, and a zoom camera shots directly on the laptop with the hand position on the keyboard. All exam supervisors were gathered in one place, at the CBT Center of the Faculty of Medicine, Mulawarman University, while the students were at their respective homes.

2.1.3 Evaluation

On the last day of the examination, the evaluation was assessed by the students using the questionnaire distributed via Google Form after interviewed through Zoom Cloud Meeting.

3. RESULTS AND DISCUSSION

A total of 504 respondents were involved in this study. Respondents consisted of 28% male and 72% female, with an average age of 19.5 years. The experience of taking online exams more or equal to 5 times was 89.1%.

Table 1. Respondent characteristics

Characteristic		Total (%)
Age		
Mean	19,52	
Median	19	
Maximum	23	
Minimum	17	
Sex		
Male		141 (28)
Female		363 (72)
taking online exam(s)		
< 5x		51 (10.1)
≥ 5x		453 (89.1)

Table 2. Anxiety

Anxiety Severity	Total	Percentage (%)
Mild	313	62
Mild to Moderate	96	19
Moderate to Severe	95	19
Total	504	100

Table 3. Gender and Anxiety

Gender	Mild (%)	Mild to Moderate (%)	Moderate to Severe (%)
Male	95 (30.4%)	28(29.2%)	18(18.9%)
Female	218 (69.6%)	68(70.8%)	77 (81.1%)
Total	313 (100 %)	96(100%)	95 (100%)

Table 4. Barriers to implementing the online exam module

Barrier	Total (individual)	Percentage (%)
Internet Network	395	78.4
Internet Quota	232	46
Cellphone or Laptop Device	186	36.9
Edmodo Platform	66	13.1
Zoom Platform	59	11.7

The results of this study indicate that most respondents (62%) experienced mild anxiety in running

the online exam module. This result is in line with the research conducted by Khoshhal et al. (2017) that showed that around 65% of students felt anxious when undergoing exams [8]. It may happen for various reasons, includes studying all night before the exam and the heavy study load. Ozden et al. (2004) stated that, even though students have been trained to take online examinations, some students still feel anxious [9]. In this study, student anxiety might arise because of the obstacles they experience related to the internet network, internet quota, mobile or laptop devices, and the platforms (Zoom and Edmodo).

The mild anxiety found in this study was still within normal limits, and some concerns are considered normal. In some situations, feeling anxious is very important to determine survival. When the individual feels or thinks there is a danger, the brain sends a signal to the nervous system to release adrenaline. The adrenaline rush causes one to feel alert and energetic that will give the impetus to fight or escape the danger. However, adrenaline also has unpleasant side effects, such as nervousness, tension, sweating, shaking, or shortness of breath. Some of the side effects are quite annoying but not dangerous. Besides, the effect does not last long [10].

When anxiety affects cognitive, physical, and behavior persistently and severely, anxiety will harm someone's life. Anxiety will affect a person's ability to work or study, socialize, and carry out daily activities [10].

This study also showed that when running the online exam module, women experience more anxiety than men. In general, anxiety disorders are the most common mental problems in women [10]. Hosseini and Khazali (2012) explained that there are many different theories about why women experience more anxiety than men. Women tend to report experienced symptoms, and the existence of psychological differences may also explain these differences. Social factors also have a role in the occurrence of anxiety. Men face social pressure to face their fear more often than women. Dealing with fear is one of the most effective treatments [11]. The results of Bahrami and Yousefi's (2011) study shows that women are more prone to anxiety than men due to the control strategies and metacognitive beliefs that cause emotional and neurotic problems [12].

4. CONCLUSION

It can be concluded that students who took the online exam module experience mild anxiety. Also, women experienced a higher occurrence of anxiety than men.

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