

# Psychological Conditions of Undergraduate Students of Faculty of Medicine, Universitas Islam Indonesia During Pandemic Covid-19

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## ABSTRACT

The COVID-19 pandemic has brought changes in medical education. The physical restrictions lead to fully online learning that is new for students. Students failure to adapt to this situation might cause psychological disorders. This study aims to see the psychological conditions of undergraduate students during pandemic Covid-19. This study was cross-sectional using a mixed-methods design with a sequential explanatory approach. The study population was all of undergraduate students (Year 1 till Year 4) of the Faculty of Medicine UII in the academic year 2020/2021. Subjects were determined by consecutive sampling (n=299). Data collected through Self Reporting Questionnaire 29 Items (SRQ-29) and open question in terms of student feelings. Quantitative data were analyzed using Kruskal Wallis-Test by comparing students mental state in each batch. Qualitative data were analyzed thematically. More than half of the students had mental disorders (59 %). The percentage of mental disorders for Year 1-Year 4 were 65, 59, 60, and 51, respectively. There was no significant difference in the number of students who had mental disorders in each batch ( $p > 0.05$ ). Most of the students experienced that they felt stress and bored in this pandemic situation. Students in each year had different additional stress. For instance, students year one struggled to adapt to the higher education learning environment, while fourth-year students were facing a problem to finish their study on time. Pandemic Covid-18 and the change in learning methods become essential stress for students. Faculty need to monitor students physical condition regularly and to design comfort learning methods for students.

**Keywords:** *psychological, undergraduate students, COVID-19.*

## 1. INTRODUCTION

The existence of the Covid-19 pandemic has a significant impact on several fields, including medical education. During this pandemic, there was a physical restriction of all activities to suppress the disease's spread. On the other hand, the learning process must continue so that educational needs can still be met. The learning process includes the exams that initially run offline turned full-online.

Fully online learning has both positive and negative effects. On the positive side, this learning method is more efficient and reduces financial cost for both the teachers and students. Moreover, students could access the learning material from any locations and any time they want. Students could also apply various learning styles that are appropriate for them.

The online learning method consists of various resources that each student could personalize.

On the other hand, online learning also has unintended effects. These effects relate to the students' ability to focus on the screen. Students need more time and effort compared to the conventional method. Students also have limited time to conduct collaborative learning and direct interaction among their peers. This condition may stimulate a feeling of being "isolated" from their environment [1]. Due to these effects, the change in learning method requires a good adaptation process by medical students. Failure of this adaptation process can stimulate psychological disorder.

In a normal situation (non-pandemic), medical students' mental health problem is greater than other

programs. The most case reported among medical students is anxiety and depression. The workload, competitive environments, and constant assessment pressure are identified as the factors stimulating mental health problems among medical students. Students whom failure to cope with these conditions will be unable to organize their learning that in turn will affect their learning performance [2,3].

In a pandemic situation, medical students have double problems. They face challenges regarding the learning load and their adaptation to the fully online learning method and daily life situation. These situations may trigger more psychological problems [4,5]. This study aims to identify the psychological conditions of undergraduate students during pandemic Covid-19.

**2. METHODS**

**2.1 Research Design and Data Collection**

We conducted a cross-sectional survey using a mixed-methods design with a sequential explanatory design from November- December 2020. The study population was all of undergraduate students (Year 1 till Year 4) of the Faculty of Medicine UII in the academic year 2020/2021. Subjects were determined by consecutive sampling (n=299). The survey involved a questionnaire that was distributed in an online form to all undergraduate students, which have over 500 medical students. An online form containing the study questionnaire was distributed among specific social media groups of the students. This was conducted to ensure the appropriate selection of study participants. A friendly reminder was sent to potential respondents to ensure the highest possible response rate. Unreturned questionnaires were recorded as missing participants. The questionnaire was self-administered without intervention by the authors or any specific person, and it did not contain any identifying data of the participants to ensure confidentiality. Questionnaires with incomplete information or missing data were excluded from the analysis. Ethical approval was obtained from the Ethics Committee at the Faculty of Medicine, Universitas Islam Indonesia in Yogyakarta.

**2.2 Study Tool and Data Analysis**

The online questionnaire covers participants' primary demographic data, such as their gender and medical education level. The questionnaire also includes a mental health assessment that is measured levels of anxiety and depression. Depressive symptoms were assessed using the Self Reporting

Questionnaire 29 Items (SRQ-29). This tool has been validated in a previous study. There are more than six yes answers to question items number 1-20 or 1 answer yes to questions 21-29 indicates high sensitivity in the depressed individual [6]. We also developed two open questions to identify students' feeling and thought. We used descriptive statistics to examine respondents' characteristics and responses using frequencies and percentages. We conducted an analysis of quantitative data using the Kruskal Wallis Test by comparing students' mental state in each batch/year. Qualitative data were analyzed thematically.

**3. RESULTS**

**3.1 Quantitative Data**

There were 299 questionnaires completed by medical students from year one till year four of Faculty of Medicine, Universitas Islam Indonesia. Participants were predominately female; the sample included 209 females (69,9%) and 90 (30,1%) males. Students Year one had the highest response rate with 94 completed questionnaires (31,4%), followed by year 4 (84 completed questionnaires, 28,1%), year 2 (69 completed questionnaires, 23,1%), and year 3 (52 completed questionnaires, 17,4%).

**Table 1.** Basic Demographic Characteristic

Participants Characteristic	Number of students		Psychological Disorders	
	n	%	No	Yes
<b>Year</b>				
Year 1	84	28	35%	65%
Year 2	52	17	41%	59%
Year 3	69	23	40%	60%
Year 4	94	32	49%	51%
<b>Gender</b>				
Male	90	30	14,%	17%
Female	209	70	27%	42%
<b>Total students</b>	299	100	41%	59%

More than half of the students had mental disorders (59 %). The percentage of mental disorders for Year 1 -Year 4 were 65, 59, 60, and 51, respectively. In each year, the prevalence of psychological disorder was more frequent in the female. The complete essential demographic characteristics can be seen in Table 1.

The Kruskal Wallis analysis results show that there was no significant difference in the number of students who had mental disorders each year ( $p > 0.05$ ).

### 3.2 Qualitative Data

Based on the qualitative data, students' feeling and thoughts could be categorized into four themes: Feeling bored and overwhelmed with online-learning, limited interaction and isolated from others, insecure with health conditions, and stress caused by the academic load.

Students described that they felt bored and overwhelmed with online learning activities. The told the learning activities was just in front of the screen in the last ten months. This condition made their learning motivation decreased. Sometimes they did want to join some scheduled learning activities. They want to sleep to take a rest and get some refreshment.

*"I am very bored with these online activities, and my eye is in pain frequently because of looking up the screen throughout the day, from morning till night. Offline activities are reduced significantly because of the pandemic situation. Too many activities have to do, and we do these online"* (R22.4)

During the pandemic covid-19, students had limited interaction with their peers and also other people. The felt isolated from their environment. Some of the students described that they did not know what they had to do without meet face to face with their peers. They got anxiety contentiously. The first-year students explained because they started their study in the Faculty of medicine in a pandemic situation, so they haven't made many friends until now.

*"In term of friendship, I just aware that I only have one or two friends to whom I frequently communicate. More than that, I ask about the issue relating to academia topic. Sometimes, I ask myself: Do I need a circle of friend? I want to open myself to everyone"* R19.1

The pandemic situation made students worrying about their safety. They felt insecure about their own condition and family. Sometimes they thought negatively. They got anxious when there was a more positive case near them. They were worried if one of their family would die because of Covid-19

*"I am worried if Covid comes to my family. Worried because my old parent, and I am the first daughter in*

*my family. I haven't had my salary. This makes me insecure with my own life now".* R51.4

Students were dealing with the pandemic situation, but they were also experiencing academic problems as medical students. There was a different problem in each grade. Students in the fourth grade (last year) described that they felt stressed about their science project. There is an obligation of each undergraduate student in FM UII to submit a scientific project before graduation. Second and third-year students had more problem in facing the learning activities and examination. On the other hand, first-year students had more problems adapting to the new learning environment that is different from their previous education.

*"I am feeling tired, trying to study better. But in the last month, I am feeling unwell and getting sick. It makes me could not be optimal in the study. The learning schedule is too tight, and we also need to join the activities of the students' union. So I feel I could not achieve my goal in this course"* R76.1

## 4. DISCUSSION

More than half of the students had mental disorders (59 %) due to pandemic COVID-19 (Table 1). This finding is in line with previous research conducted by Son et al (2020) in a public university in the United States, showing that 71 % of subjects (n=95) indicated an increase in stress anxiety during the Covid-19 outbreak. This study also shows that the prevalence of physiological disorder is higher in female students (Table 1). The woman has more significant stress and anxiety. The woman usually focuses cognitively on their sadness, while the man is usually trying to far away from emotional stress [7].

Some aspects could cause a high prevalence of the psychological disorder among the students in this study. Pandemic situation induces radical lifestyle changes and then create new stressor such as fear and worry about oneself or his or her family [8]. This condition was also experienced by the students contributing to this study. The results of qualitative data indicate that students felt insecure about their safety. The students dominantly stated fear of losing their loves ones. The quarantine situation also induced this psychological problem during a pandemic. The limitation of having social interaction with other people, especially their peers, made students not release their stress. Social support could stimulate resilience stress [9].

The qualitative data also show that the other factors induced students' psychological disorder relates to the online learning method during the pandemic. Students felt bored and overwhelmed with these learning activities. This finding is in line with the previous research conducted by Irawan *et.al.* (2000) at Mulawarman University, Indonesia. Students felt bored and did not have a high interest in the learning process. The changes in the learning process become one of the causes of stress in undergraduate medical students [10]. Physiological stress responses are essential for survival under adverse conditions. Rapid responses to acute stress help people avoid actual harm and cope. The flexibility in adapting the stress is essential to release the stress. However, rapid responses can be potentially harmful if they face stress frequently over extended periods in response to chronic exposure to stress [11].

The prevalence of the psychological disorder is different in each year. The highest prevalence is in first-year students (Table 1). All students experienced getting stress during the pandemic situation. The qualitative data shows that students in each year had different additional stress. First-year students struggled to adapt to higher education learning environments, while fourth-year students were facing a problem to finish their study on time. Academic load in medical faculty could induce psychological disorder, especially depression and anxiety, to medical students [2].

## 5. CONCLUSION

More than half of the students had psychological disorders during the pandemic situation. Pandemic Covid-19 and the change in learning methods become essential stress for students. Faculty need to monitor students physical condition regularly and to design comfort learning methods for students.

## AUTHORS CONTRIBUTIONS

RLA, MDP, NW UK, designing the study, collecting and analyzing the data. RLA and UK drafting the manuscript. All of the authors agreed with the final manuscript.

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