



Depression Among University Students During Covid-19 Pandemic: An Online-Based Cross-Sectional Study

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ABSTRACT

COVID-19 is a new communicable disease that spread all over the world and becomes a pandemic. It also caused psychological conditions like depression. Students were one of the groups who have a high opportunity to get depressed. Since students are in a transitional period of early adulthood, they are facing another form of adjustment that can trigger depression. This study aimed to know the depression level of students at Universitas Islam Negeri Alauddin Makassar and some factors that were thought to have a relation to the depression level. This is quantitative research, in which a cross-sectional study design used primary data taken from August 1 until August 12, 2021, via a Google Form. The total sample was 344 respondents. Most of the respondents tend to have normal levels of depression. Age, gender, period of learning, and learning challenges were being the variable that had a significant correlation with depression level. Whilst, faculty and learning media had not. In order to tackle down the depression of students, it is necessary to have the cooperation of various parties, including from the campus, the family, and the role of students in managing information.

Keywords : COVID-19, Learning, Depression.

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INTRODUCTION

Coronavirus Disease 2019 (COVID-19) is a new communicable disease that spread all over the world and becomes a pandemic. The novelty of this virus makes some changes in social interaction, lifestyle, and also the way students and workers do. The transmission also causes public panic.

There were three major events during the COVID-19 pandemic that may cause public panic. The events consist of (1) the official confirmation from WHO that coronavirus can transmit from human to human (Qiu et al., 2020); (2) physical distancing that was implemented in Indonesia; (3) the implementation of work from home for workers and learn from home for students. These major events

can cause a psycho-emotional chaotic situation including anxiety, depression, stress, sleep disorder, and fear (Islam et al., 2020; Shmatova, 2021).

The age of university students is a transitional period of early adulthood. They may face a lot of adjustments in their age. Moreover, the pandemic of COVID-19 is another form of adjustment that can trigger depression. Major depression is a common illness that severely limits psychosocial functioning and reduces the quality of life (Malhi & Mann, 2018).

A previous meta-analysis reported that there were 29% of medical students in China get depression with a range from 3.2% to 66.8%. Depression can lead to many negative consequences for youth, such as poor academic performance, high rates of drug use, and even suicidal ideation. (Zeng et al., 2019).

A study that was conducted on dental students in Saudi Arabia showed that most students have a normal level of depression (44.1%). But there were still found some students who get an extremely severe level of depression (11.7%). The satisfaction with relationship with peer faculty was one of the significant factors that influence the level of depression. Depression will decrease when satisfaction with peer faculty increased (Basudan et al., 2017; Bolatov et al., 2021; Magson et al., 2021). Therefore, since the pandemic of COVID-19 has decreased the relationship between people, it then affects the depression level. It was a difficult part that students in college have to adjust because in the "New Normal Era" people were instructed to implement physical distancing with online learning for students.

Universitas Islam Negeri (UIN) Alauddin Makassar is one of the universities that runs online learning methods during the pandemic. As a Muslim university, students of UIN Alauddin Makassar are not only required to be able to adapt to online learning but are also required to keep depositing the memorization of juz 30 to the Academic Advisor (PA) as a prerequisite for graduation. Based on the load analysis in adapting learning, the authors feel it is important to carry out research for knowing the depression level of students at Universitas Islam Negeri Alauddin Makassar and some factors that were thought to have a relation to it.

Previous research has shown that the psychological condition of students is only based on the level of depression. In this study, information about learning methods and the obstacles experienced were also included in the questionnaire. This is to find out how methods and symptoms may affect the level of depression in students. This research can be useful for institution to be the early screening and overcome mental issue that probably happened to students.

MATERIALS AND METHODS

Participants

This research used primary data that was collected from an online questionnaire at Universitas Islam NegeriAlauddin Makassar. This study was cross-sectional data that was only eligible to fill from August 1 until August 12, 2021, via a Google Form. The sample in total was 344 students. The online questionnaire was spread through WhatsApp to students and lecturers. The researcher asked for the lecturers' help to forward the questionnaire to their students. Inclusion criteria were (1) registered as a student of Universitas Islam NegeriAlauddin Makassar; (2) have a student identification number; (3) willing to be a respondent on this research. While the exclusion criteria were a student who refused to be a respondent while the informed consent was given on the first page of the questionnaire.

Procedures and Measures

As Indonesia Government recommended the citizens minimize face-to-face interaction and suggest they stay at home, therefore this research used an online platform with an online questionnaire. The questionnaire was taken from Depression Anxiety Stress Scales (DASS) with a 42-item self-report instrument designed by the Psychology Foundation of Australia. Specifically for depression measurement, there were 14 questions. Each question had four options with its score, consist of (Psychology Foundation of Australia, 2018) :

0 = Did not apply to me at all

1 = Applied to me to some degree, or some of the time

2 = Applied to me to a considerable degree, or a good part of the time

3 = Applied to me very much, or most of the time

After that, all scores from every question were calculated and divided into four categories. The categories such as normal (0-9), mild (10-13), moderate (14-20), severe (21-27), and extremely severe (>28).

Statistical Analysis

The independent variables were age, faculty, gender, period of learning, learning media, and learning challenges. The dependent variable was the level of depression during learning from home in the COVID-19 pandemic. Descriptive analysis was calculated through frequency for univariate analysis and chi-square for bivariate analysis using statistical software.

Ethical Clearance

The number of ethical approval from this study was B.088/KEPK/FKIK/VII/2021 on July 01, 2021.

RESULT AND DISCUSSION

Depression is a form of psychological disorder that can be experienced by communities, including students. This condition is exacerbated by the COVID-19 pandemic, which requires people to adapt to new habits. One of the new habits felt by students is doing online learning from home to avoid direct contact with humans.

The respondents of this research were 344 students who came from all faculties at Universitas Islam Negeri Alauddin Makassar. Based on data, most students tended to have a normal level of depression (38.7%). Yet, there was still a valuable proportion for an extremely severe level of depression. Even though the percentage was not high, it must become a concern for health practitioners (Table 1).

Table 1. Frequency Distribution of Depression Level of Students in Universitas Islam Negeri Alauddin Makassar during Covid-19 Pandemic (n=344)

Variables	n	%
Depression		
Normal	133	38.7
Mild	40	11.6
Moderate	75	21.8
Severe	51	14.8
Extremely Severe	45	13.1

Depression in university students is very commonly associated with academic, financial, and interpersonal stress. University students are a special group who endure the transitional period from adolescence to adulthood and experience perhaps the most stressful period of life. Going through this transition can lead to an increased risk of depression. Some students experience depression because they cannot adapt to the crying response, skip class, or isolate themselves without realizing they are depressed (Santoso et al., 2020; Sarokhani et al., 2013).

The proportion in each depression level showed that all categories of age tended to have a normal level of depression. However, a respondent whose age was above 21 years old tended to have a higher proportion of the extremely severe level of depression than other groups. Similar to the gender variable that both men and women had a normal level of depression. Yet, based on the extremely severe category, it showed that women tended to have a higher proportion to feel extremely severe depression than men (Table 2).

Table 2. Factors Associated to Depression Level of Students in Universitas Islam NegeriAlauddin Makassar during Covid-19 Pandemic (n=344)

Variables	Depression Level					P-value
	Normal	Mild	Moderate	Severe	Extremely Severe	
Age						
18 – 19 years	73 (47.1%)	12 (7.7%)	32 (20.6%)	18 (11.6%)	20 (12.9%)	0.024
20 -21 years	55 (35.3%)	22 (14.1%)	36 (23.1%)	24 (15.4%)	19 (12.2%)	
>21 years	5 (15.2%)	6 (18.2%)	7 (21.2%)	9 (27.3%)	6 (18.2%)	
Gender						
Men	37 (56.9%)	6 (9.2%)	10 (15.4%)	7 (10.8%)	5 (7.7%)	0.022
Women	96 (34.4%)	34 (12.2%)	65 (23.3%)	44 (15.8%)	40 (14.3%)	
Faculty						
Social	63 (13.1%)	24 (13.1%)	37 (20.2%)	31 (16.9%)	28 (15.3%)	0.226
Exact	70 (43.5%)	16 (9.9%)	38 (23.6%)	20 (12.4%)	17 (10.6%)	
Period of Learning						
1 st year	37 (41.1%)	11 (12.2%)	20 (22.2%)	13 (14.4%)	9 (10.0%)	0.019
2 nd year	48 (49.0%)	5 (5.1%)	22 (22.4%)	8 (8.2%)	15 (15.3%)	
3 rd year	18 (24.0%)	13 (17.3%)	15 (20.0%)	17 (22.7%)	12 (16.0%)	
4 th year	29 (39.7%)	10 (13.7%)	17 (23.3%)	9 (12.3%)	8 (11.0%)	
≥ 5 th year	1 (12.5%)	1 (12.5%)	1 (12.5%)	4 (50.0%)	1 (12.5%)	
Learning Media						
Whatsapp	20 (32.3%)	4 (6.5%)	17 (27.4%)	10 (16.1%)	11 (17.7%)	0.149
Zoom/Google	100	35 (13.5%)	55 (21.2%)	38 (14.7%)	31 (12.0%)	
Meet/Webex	(38.6%)	0 (0%)	1 (7.7%)	3 (23.1%)	0 (0%)	
Google Classroom	9 (69.2%)	1 (10.0%)	2 (20.0%)	0 (0%)	3 (30.0%)	
Lentera	4 (40.0%)					
Learning Challenges						
Bad Internet	65 (42.8%)	23 (15.1%)	28 (18.4%)	17 (11.2%)	19 (12.5%)	0.026
Connection	41 (33.3%)	8 (6.5%)	29 (23.6%)	26 (21.1%)	19 (15.4%)	
Difficulty to Focus	26 (39.4%)	9 (13.6%)	18 (27.3%)	8 (12.1%)	5 (7.6%)	
Limited Internet Quota	1 (33.3%)	0 (0%)	0 (0%)	0 (0%)	2 (66.7%)	
Illiterate Electronic Media Usage						

The factor that had significant relation with the level of depression were age, gender, period of learning, and learning challenges. This study showed that the age group above 21 years had the largest proportion of experiencing extremely severe levels of depression. This is probably caused by various reasons such as students over the age of 21 years having a triple burden not only in lectures but also the completion of the final project (thesis) and the obligation to complete memorization of specific surah in the Holy Qur'an as the campus' policy. Research conducted by Solomou and Constantinidou (2020) is also in line with this study where age has a significant effect on the prevalence of depression in respondents. Respondents who are in the 18-29 year age group have a high average rate of depression compared to other age groups (Solomou & Constantinidou, 2020).

Research conducted by a university in Bangladesh showed that older students had greater depression (OR = 2.886, 95% CI = 0.961-8.669) than students in the younger age group. Students in the age group above 24 years have a 2.8 times greater chance of experiencing depression than students aged 17-20 years. Meanwhile, students aged 21-24 years have a 1.06 times greater chance

of experiencing depression compared to students in the 17-20 year age group (Akhtarul Islam et al., 2020).

Based on the gender variable, female students had the largest proportion of experiencing depression in the very severe category compared to male students. Previous research showed that 20.2% of university students had depression in the last 12 months. Students commonly have psychological disorders related to academic difficulties and regulations under normal circumstances (American University Health Association, 2019; Santoso et al., 2020). Gender differences support previous research in which depression scores were higher in women compared to men (Birhanu & Hassein, 2016; Okafoagu et al., 2019; Rakhmanov & Dane, 2020).

Different with faculty variable that showed the highest proportion of social faculties was in a moderate level of depression. Whereas most of the respondents from science faculties had a normal level of depression. Based on the period of learning, most students in four categories (1st – 4th year) tended to have a normal level of depression. Whilst, students above or in the 5th-year category tended to have a severe level of depression (Table 2).

According to a period of learning variable, students who are in the 3rd year have the largest proportion of experiencing depression in the extremely severe category compared to the other periods of learning. Baldassin et al. (2008) found that Brazilian medical students in the internship period (5th and 6th years) exhibited higher rates of depression compared to entry-level (1st and 2nd years) and intermediate (3rd and 4th years) students (Baldassin et al., 2008).

Another study yielded the same conclusion where students in higher years of a study performed more sedentary activities (sedentary/sitting) due to a higher workload. In their final year of undergraduate study, students reported that they felt more worried because they had to pass final exams and find work. In addition, during the COVID-19 lockdown, several behaviors changed among students: including food consumption and smoking, increased in the second, third, and fourth years of study among those living in university dormitories, shared apartments, or with families. This triggers depression (Carrasco-Carballo et al., 2021; Romero-Blanco et al., 2020).

According to learning media, students used WhatsApp, Zoom/Google Meet/Webex, Google Classroom, and Lentera as their learning platforms. Students who mostly used Lentera had a higher proportion to get extremely severe levels of depression than other platforms. On learning challenge, even though some students had a bad internet connection, difficulty to focus on learning, limited internet quota, and illiterate electronic media usage as the challenge of online learning, most of them had a normal level of depression. Meanwhile illiterate electronic media usage became a challenge that made most students felt extremely severe in the term of depression (Table 2).

Based on learning challenges, the problem of illiterate electronic media usage had the largest proportion in experiencing depression in the extremely severe category compared to other challenges. It is because learning is currently dominated by the use of electronic media. If students

do not understand the use of electronic media used in the teaching and learning process, the students will find it difficult to follow the lesson. Missing learning progress will be a certain burden plus other burdens that will trigger depression.

Other variables such as faculty and learning media did not have a significant correlation to the depression level of students at Universitas Islam Negeri Alauddin Makassar. Nevertheless, according to the extremely severe level of depression, students who study in social faculties had a higher proportion than those who study in science faculties. This is possibly due to students from science faculties being well literate on how to adapt to new habits so that changes in lecture methods and the transmission of COVID-19 do not become a new burden for them.

Based on the learning media, the proportion of students who use lanterns as a learning medium is higher in experiencing depression at a very severe level compared to other learning media. Some students are depressed about using lanterns because this platform is relatively new so students are still not used to using it.

Depression in students can be overcome by implementing the following activities, such as physical activities, religious and social activities, doing cognitive behavioral therapy, online mindfulness therapy, and online counseling (Bhat et al., 2020; Franco, 2020; Sahu, 2020; Santoso et al., 2020). Online mindfulness intervention for four weeks was effectively used by nursing students, reducing stress, anxiety, and depression (El Morr et al., 2020; Smith, 2014). Nursing students have easy access to online mindfulness intervention exercises. Students can practice mindfulness anytime, anywhere, and under any conditions, because the online mindfulness application can be downloaded as an application on a smartphone. Students don't have to attend face-to-face online mindfulness exercises (Franco, 2020; Vseteckova, 2020).

Because students are more receptive to smartphone applications, health services can provide online or smartphone-based psych-educational and psychological interventions. Appropriate counseling services must be available to support the mental health and well-being of students. Research reveals that online counseling services for students can improve students' mental health. These findings will be useful for dealing with problems such as depression, anxiety, stress, and coping (Sahu, 2020; Santoso et al., 2020).

CONCLUSION

Most of the respondents tended to have a normal level of depression. Age, gender, period of learning, and learning challenges were being the variable that had a significant correlation with depression level. Depression can happen to students in the university. Some students experienced depression because they cannot adapt to the crying response, skip class, or isolate themselves

without realizing they are depressed. This was worsened by the Covid-19 pandemic since students have to adjust to the “New Normal Era”.

Therefore, it is necessary to have the cooperation of various parties, such as both from the campus as a place for students to gain knowledge and the family as the closest person who can support the psychological condition of students, as well as the role of students in managing information. Although the proportion of extremely severe psychological disorders experienced by students is still relatively small, this number must be taken into a consideration by the stakeholders of Universitas Islam Negeri Alauddin Makassar to support the mental health of its students.

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