



Academic Stress and Mental Health Issue of College Student during Online Learning

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ABSTRACT

This study aimed to investigate the educational stress and mental health issues of college students participating in online learning. This study uses an associative quantitative approach with a survey method. The population in this study are college students at Universitas Negeri Jakarta who took component in online studying at some stage in lectures. As many as 743 first and second-year students (male = 157, female = 586) from eight faculties are selected using disproportionate random sampling. Academic stress was measured using the Educational Stress Scale for Adolescents (ESSA), while mental health issues were measured using the Depression Anxiety Stress Scale (DASS-21). After testing the construct and empirical validity, all items fit the model and are suitable for data collection. Data analysis used simple linear regression testing. The results showed that the data met the normal and linear assumptions. Academic stress has a positive and significant effect on the mental health issue of college students participating in online learning. The higher the academic stress experienced by students, the higher the chances of students experiencing a mental health issue. Pressure from learning activities, workload, personal expectations, and hopelessness are positively related to depression, anxiety, and stress. Meanwhile, worry about grades is positively related only to anxiety and stress. Academic stress can have an impact on student academic performance. Therefore, parents are expected to be able to adjust expectations with student abilities to minimize academic stress on students.

Keywords: *Academic Stress, College Student, Mental Health Issue, Online Learning.*

1. INTRODUCTION

At present, the world is still not free from a virus called Covid-19 virus where this virus spreads very quickly and makes all people anxious. The beginning emergence of this virus was in China, Wuhan, at the end of 2019. The Covid-19 virus began to enter Indonesia in early March, and so far, the virus still exists in Indonesia. WHO assesses the spread and severity of concern, so this incident is called a pandemic [1]. The Covid-19 virus has dramatically impacted every aspect or field of people's lives in Indonesia. The sectors affected by Covid-19 are the field of work, the country's economy, education, and others. During the Covid-19 pandemic, all the activities that people usually do in Indonesia were limited. The president has issued several regulations and policies during this pandemic, which are significant for handling Covid-19 [2]. The government also encourages everyone

in Indonesia to wear masks, maintain distance, and wash their hands in clean running water daily.

During the pandemic, not only did the field of work experience change, but the education sector has also experienced many changes in the learning system. This change aims to prevent the spread of the virus rapidly. Based on the policy from the government in circular letter Number 4 of 2020 concerning the Implementation of Education Policy in the Emergency Period of the Spread of Corona Virus Disease (Covid-19), schools and colleges organize online learning [3]. The learning system is a teaching and learning system without face-to-face meetings between the teacher and students. Instead, the teaching and learning process uses the internet network and available platforms such as Google Classroom, Zoom Meeting, Google Meet, and other online platforms. The teaching and learning system issued by the government during this pandemic is called the distance learning system. Distance learning applies to

all school levels, from Kindergarten, Primary School, and High School to Higher Education.

Currently, Indonesian universities put into effect teaching and gaining knowledge of systems, precisely synchronous and asynchronous. Synchronous studying helps via media and video conferencing, potentially assisting college students in growing studying communities [4]. Synchronous gaining knowledge can also boom social interplay into learning interactions which are synchronous with one another [5]. However, asynchronous getting to know is facilitated through media, such as email [4] and group discussions [6], which helps the relationship between students and educators even when both cannot be online at the same time. A studying machine like this truly impacts college students significantly and terribly.

Students find it challenging to carry out assignments given by lecturers because there needs to be more understanding of the subject matter and short deadlines, making students feel anxious and stressed. Incidents like this can be an obstacle for students in online learning. The disturbances experienced by these students can also have an impact on their physical health. Anxiety experienced by students can cause headaches, muscle tension, excessive sweating, and faster heart rate and breathing [7]. In addition, increased spread of invalid news, boredom with limited activities, stress caused by academic demands and lack of technological skills, fear of exposure to disease with increasing cases, decreased family income due to a pandemic that can occur, excessive assignments too exacerbate the online learning situation and affect student stress levels [8].

Psychologists and mental health experts speculate that this pandemic will impact the population's mental fitness globally [9]. Regrettably, society still ignores mental health, which is harmful and detrimental in the long term [10]. In line with the 2020 country-wide fundamental fitness research file, the prevalence of intellectual and emotional issues in Indonesians over 15 is 11.6% [11]. Similarly, records from the Central Bureau of Statistics survey in 2022 also explain that young human beings' intellectual health situation in the imposition of emergency community activity restrictions was the worst. Central Bureau of Statistics survey results proves that the age organization of 17 to 30 often sense tense as much as 24.7%, another 24.7% are without problems angry, and 16% are overly afraid [12]. Most mental health issues arise during early maturity [13]. According to [14], early maturity happens from 18 to 40. Primarily based on this category, students are in early adulthood. Some mental problems in college students include melancholy and tension associated with reduced GPA, elevated self-damage behaviour, withdrawal from college [15], and social phobia [13].

Commonplace intellectual fitness signs and symptoms among university students can affect their

educational performance [16]. Pressure is an uncomfortable response when someone feels compelled, which may intrude on thoughts and feelings and disrupt everyday activities. Pressure is an unpleasant or uncomfortable circumstance skilled through a character that interferes with thoughts, emotions, actions or behaviour in everyday life [17]. Pressure can also be interpreted as a reaction that arises when dealing with a selected scenario, making them sense depressed [18]. The stress that arises in someone is hard to keep away from, in particular, if that character cannot overcome the cause of the stress. Therefore, warding off stress is difficult [18]. Someone will enjoy strain once they experience they cannot address their needs made on them [18]

Stress can be experienced by anyone, anywhere, and anytime as long as there is pressure. However, students generally experience ongoing stress related to education or known as academic stress [19]. Academic stress significantly contributes to various mental and behavioural disorders, such as depression and anxiety [20]. The results of research conducted by [21] found that 70% of the factors causing adolescent stress were academic, followed by friends (3.0%), family (11.8%), teachers (6.3%) and other factors (49.7%). Adolescents feel stressed because of their many academic demands, such as exams and assignments [22].

Academic stress experienced by students in learning can hinder the fulfilment of student development tasks [23]. If students experience high academic stress, it will undoubtedly hinder the achievement of these assignments [23]. Various kinds of academic demands at school can hurt students, such as academic stress, which can reduce academic achievement, reduce motivation to learn and increase the risk of dropping out of school [19]. Academic stress is closely related to students' assessment of academic situations. Stress for each student usually also occurs because of the many expectations and demands in the academic field, often referred to as academic stress [24]. Academic stress is a form of distress caused by students' negative thoughts about academic demands at school [25].

[26] research discovered a close relationship between online lectures and the mental mindset of university students. Around 59.5% of respondents objected to assignments given by using lecturers at some stage in this pandemic, and around 60% of college students experienced issue slumbering because of the impact of assignments. Then the effects of research by way of [27] said that Sriwijaya university students experienced melancholy, tension, and strain at some stage during the Covid-19 pandemic, and several factors affected the intellectual fitness of Sriwijaya university students, such as gender, semester, marital popularity, records of continual infection, and family records of mental disorders. Ultimately, the observed outcomes using [28] concluded that intellectual fitness extensively correlates

with perceived stress. For this reason, it is necessary to have a study that links mental health issues and academic stress to treat the problems appropriately faced.

2. METHODS

This study aims to investigate the educational stress and mental health issues of college students participating in online learning. This study uses an associative quantitative approach with a survey method. The population in this study are college students at Universitas Negeri Jakarta who took part in online studying at some stage in lectures. As many as 743 first and second-year students (male = 157, female = 586) from eight faculties were selected using disproportionate random sampling. This research was conducted at Universitas Negeri Jakarta, Rawamangun Muka Street, East Jakarta. The research was conducted from March to September 2022.

Student academic stress was measured using the Educational Stress Scale for Adolescents (ESSA) instrument consisting of 16 items which consisted of dimensions of pressure from learning activities, assignments, worry about grades, personal expectations, and hopelessness and was measured by a Likert scale, namely strongly disagree, disagree, agreed, and strongly agreed [20].

Table 1. ESSA Blueprint.

Dimension	Indicator	Number of Items
Pressure from learning activities	Pressure from family and friends	4
Workload	Assignments and exams	3
Worry about grades	Worried about what other people think of the value received	3
Personal expectations	Failure to meet expectations	3
Hopelessness	Desperate at the results obtained	3
Total		16

Student mental health was measured using the Depression Anxiety Stress Scale 21 (DASS-21) instrument consisting of 21 items consisting of the dimensions of depression, anxiety, and stress and was measured using a verbal frequency scale, namely always, often, rarely, and never [29]. After testing the construct and empirical validity, all items suit the model and are appropriate for the records series. The validity coefficient for the DASS items ranged from 0.50 to 0.78 (more prominent than 0.273). Therefore DASS-21 have been declared valid. The reliability coefficient of the DASS is 0.95, which means that the tool is reliable and may be used to collect study records. The validity coefficient for the ESSA items ranged from 0.35 to 0.81 (greater than 0.273). Thus ESSA-16 had been declared valid. The

reliability coefficient of the ESSA is 0.92, which means that the tool is dependable and may be used to collect research records.

Table 2. DASS Blueprint.

Dimension	Indicator	Number of Items
Depression	Loss of self-esteem	3
	Depressed mood	4
Anxiety	Afraid	6
	Worry about negative events	2
Stress	Overly excited state	3
	Low frustration tolerance	3
Total		21

After all respondents' data was collected, perform the data analysis. Data analysis is the activity of grouping data based on variables and types of respondents, tabulating data based on variables, presenting data for each variable, appearing calculations to reply to hassle formulations, and performing calculations to check hypotheses [30]. Earlier than checking out the speculation, the facts desire to satisfy normal and linear assumptions. We test the normality using the Kolmogorov-Smirnov test on unstandardized residuals. After the records meet normal and linear assumptions, we perform simple linear regression testing to test the hypothesis.

3. RESULT AND DISCUSSION

3.1. Respondent Demographic Data

Respondents in this study were categorized based on several demographic characteristics such as gender, age, faculty, and grade. This characteristic provides a reasonably clear picture of the respondent's condition and its relation to academic stress and mental health issues. Respondents in this study were first and second-year students at Universitas Negeri Jakarta who had only ever attended online learning. They entered Universitas Negeri Jakarta after Covid-19 hit Indonesia and the government imposed learning from home (online).

Based on figure 1, the number of female students is more dominant than male students. According to [31], gender has a relationship with students' mental health conditions, where females are more likely to experience mental health issues than males. Males and females can experience depression; the only difference is how to deal with problems.

Males tend to use logic more, while female place more emphasis on feelings [32]. Based on figure 1, most respondents are 19-20 years old. [33] added that a person's age also influences the selection of coping strategies to deal with problems that cause stress. The age group of 18-25 years has a high risk of experiencing emotional disturbances [31].

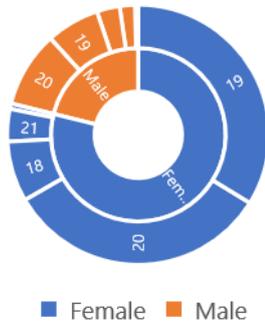


Figure 1. Diagram of Number of Respondents by Gender and Age.

This study's respondents came from eight faculties and two grades at Universitas Negeri Jakarta. More than half of the respondents are second-year students, and 43.3% of the respondents are from the Faculty of Engineering. [31] state that old and new students have different academic loads and causes of stress, but the level of stress they feel tends to be evenly distributed.

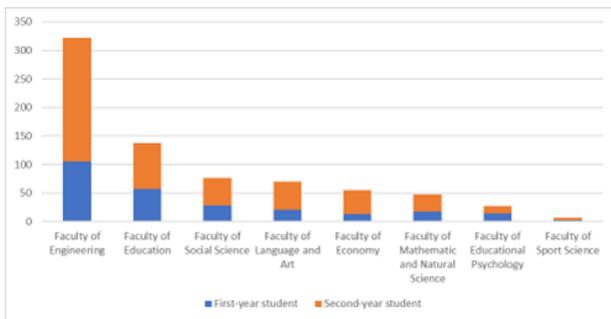


Figure 2. Number of Respondents Diagram by Faculty and Grades.

3.2 Descriptive Analysis

Based on table 3, as many as 68.6% of students experience academic stress at a moderate level. The average student academic stress score is 67.90, close to the lower limit in the moderate category group. It shows that the pressure from learning activities, workload, worry about grades, personal expectations, and hopelessness experienced by students is not too heavy.

According to [34], the learning process and problems related to learning activities cause academic pressure. It can make adolescents depressed when studying every day. One of the demands that put pressure on students is the workload that exceeds their ability of students. The aspect of task load in academic stress is related to the time of collecting assignments, the homework still being given, and school exams [35]. According to [34], choosing to continue their education or enter the world of work is a problem students face after completing higher education. So this makes students feel worried if they cannot reach the target value of the lesson.

Table 3. Categories of Academic Stress Variables.

Category	Frequency	Percent
Low	158	21.3
Middle	510	68.6
High	75	10.1
Total	743	100.0
Mean ± Std. Dev	67.90±8.834	
Minimum	44	
Maximum	91	

Worrying about grades will also affect students getting stress related to not achieving standard grades, and also, the results achieved are not as expected [35]. [36] added that students are very vulnerable to academic pressure because they have high expectations. Interpretation of conditions that occur in the surrounding environment can affect individual beliefs because this can change individual mindsets and impact stress on individuals [18]

The first cross-tabulation test shows the percentage relationship between gender and academic stress. Meanwhile, the Chi-Square test examines the relationship between gender and student academic stress.

Table 4. Results of the crosstab test on gender and academic stress.

Category		Academic Stress Category			
		Low	Middle	High	Total
Gender	Female	104	420	62	586
	Male	54	90	13	157
	Total	158	510	75	743

Based on table 4, both female and male students have academic stress at a moderate level. Only 10.1% of students have academic stress in the high category. Based on the Chi-Square test, a sig value of 0.000 indicates that there is a relationship between gender and student academic stress levels. The average academic stress score of male students is 67.97, while that of female students is 67.88. There is no significant difference between the average academic stress scores of male and female.

Based on table 6, as many as 59.9% of students experience mental health issues at a low level. The average score of students' mental health issues was 57.15, close to the upper limit in the low category. It shows that depression, anxiety, and stress experienced by students are mild.

Table 5. Results of the Chi-Square Test for Gender and Academic Stress.

Category	Value	df	Sig.
Pearson Chi-Square	20.500	2	.000
Likelihood Ratio	18.877	2	.000
Linear-by-Linear Association	14.743	1	.000
N of Valid Cases	743		

Table 6. Variable categories of mental health issues.

Category	Frequency	Percent
Low	445	59.9
Middle	265	35.7
High	33	4.4
Total	743	100.0
Mean \pm Std. Dev	57.15 \pm 12.334	
Minimum	26	
Maximum	89	

When someone is depressed, they will feel that their life is meaningless, become worthless, feel like they are not looking forward to anything, are not interested in anyone, cannot feel optimistic, tend to feel sad, and find it challenging to develop the initiative. It follows research belonging to [37] that in college, students with high self-esteem will have self-confidence and feel confident that they can achieve what they expect. Therefore, this belief will motivate them to achieve their goal.

On the other hand, if a person experiences anxiety, he will worry excessively about the situation. According to research [38] a very severe level of anxiety manifests symptoms new students feels, such as difficulty breathing, racing heartbeat, difficulty concentrating, worrying about something happening and will feel relieved if it stops. Respondents experienced difficulties in the learning process and had sensitive feelings, significantly interfering with learning concentration [39].

The second cross-tabulation test shows the percentage relationship between gender and mental health issues. Meanwhile, the Chi-Square test the relationship between gender and the respondent's mental health issue.

Table 7. Crosstab test results for gender and mental health issues.

Category		Mental Health Issue Category			
		Low	Middle	High	Total
Gender	Female	326	232	28	586
	Male	119	33	5	147
	Total	445	265	33	743

Based on table 7, both female and male students have mental health issues at a low level. Only 4.4% of students have mental health issues in the high category.

Table 8. Results of the chi-square test for gender and mental health issues.

Category	Value	df	Sig.
Pearson Chi-Square	21.089	2	.000
Likelihood Ratio	22.232	2	.000
Linear-by-Linear Association	17.431	1	.000
N of Valid Cases	743		

Based on the Chi-Square test, a sig value of 0.000 indicates a relationship between gender and the level of student mental health issues. The average score of male students' mental health issues was 58.54, while that of female students was 56.78. No significant difference exists between the average scores of male and female mental health issues.

The third cross-tabulation test shows the percentage relationship between academic stress levels and mental health issues. On average, students with moderate academic stress have mental health issues at low or moderate levels. Meanwhile, students with low academic stress levels also have low levels of mental health issues.

Table 9. Results of the Crosstab Test for Gender and Mental Health Issues.

Category		Academic Stress Category			
		Low	Middle	High	Total
Mental Health Issue Category	Low	133	294	18	445
	Middle	22	202	41	265
	High	3	14	16	33
	Total	158	510	75	743

Based on the Chi-Square test, a sig value of 0.000 indicates a relationship between academic stress and students' mental health issues level. We can proceed with correlation analysis to learn more about the magnitude of the relationship between the academic stress and mental health issues.

Table 10. Chi-square Test Results for Academic Stress and Mental Health Issues

Category	Value	df	Sig.
Pearson Chi-Square	116.661	4	.000
Likelihood Ratio	102.778	4	.000
Linear-by-Linear Association	89.312	1	.000
N of Valid Cases	743		

3.3. Correlation Analysis

In this study, correlation testing sees the closeness of the relationship between the dimensions and the variables studied. For example, based on table 11, pressure from learning activities, workload, personal expectations, and hopelessness are positively related to depression, anxiety, and stress. Meanwhile, worry about grades is positively related only to anxiety and stress. On the other hand, academic stress also has a positive and significant correlation with mental health issues, with a coefficient of 0.450.

3.4 Hypothesis Testing

Testing the normality of research data using the Kolmogorov-Smirnov test on unstandardized residuals. A sig value of 0.054 > 0.050 is obtained, meaning the data comes from a normally distributed population. Then do the linearity test. The deviation from linearity value is

0.83 > 0.05, and the linearity value is 0.00 < 0.05. Thus, the deviation of the data spread is insignificant, or in other words, the regression equation formed from academic stress and mental health issues is a linear line.

Table 11. Correlation test.

Factor	Depression	Anxiety	Stress	Mental Health Issues
Pressure from learning activities	.285*	.302*	.330*	.362*
Workload	.171*	.124*	.177*	.185*
Worry about grades	.006	.110*	.118*	.095*
Personal expectations	.381*	.398*	.409*	.468*
Hopelessness	.347*	.232*	.280*	.337*
Academic Stress	.368*	.366*	.408*	.450*

*. Correlation is significant at the 0.01 level (2-tailed)

The regression equation formed is $Y \approx 14.476 + 0.629X$. It indicates that if the academic stress variable increases by one unit, the mental health issue variable will increase by 0.629 at a constant of 14.476. The higher the academic stress experienced by students, the higher the chances of students experiencing mental health issues. The calculated F value of 188.341 with sig 0.00 < 0.05. Thus, academic stress has a significant effect on mental health issues. The r-square value of 0.203 indicates that 20.3% of the academic stress variable can explain mental health issues. The remaining 79.7% can be explained by other variables not included in the regression model.

3.5 Discussion

Academic stress is the body's response to academic-related demands that exceed students' adaptive abilities [40]. As many as 610 students (68.6%) experienced academic stress in the moderate category. This figure shows that students experience enough pressure to stress themselves out while participating in online learning. Measurement of academic stress using five dimensions: pressure from learning activities, workload, worry about grades, personal expectations, and hopelessness. Having short deadline assignments puts students under pressure which can cause stress [17]. Individuals' unpreparedness to bear the burden of academic demands by following a series of long schedules will increase boredom and stress in the academic field [41]. Individuals who cannot accept the workload will find it challenging to compete in the competition and get achievements [35].

Mental health is a state of well-being in which individuals are aware of their abilities, can cope with the everyday stresses of life, can work productively and contribute to their communities [42]. Students' mental health problems will undoubtedly hinder them from

carrying out the online learning process. The difficulties that occur during online learning will affect students' mental health. As many as 445 students (59.9%) had mental health issues in the low category. This figure shows that respondents managed their psychological conditions well during online learning. It aligns with research [43], where respondents generally had normal depression, anxiety and stress levels and did not have critically significant insomnia.

This study measures students' mental health issues with three dimensions, namely the dimensions of depression, anxiety, and stress. Depression is a mood disorder characterized by feelings of sadness that are too deep and will harm students' thoughts, actions, and mental health. The average student depression score is 52.73 and is in a low category. Depression in college students due to several factors, and college students are a particular group who survive the transition period from adolescence to adulthood and experience perhaps the most stressful period in life [44].

Anxiety is a student condition characterized by fear or worry about something, but if this anxiety is difficult to control, it will undoubtedly interfere with students' daily activities. The average student anxiety score is 57.95 and is in a low category. Students who are confused about online learning methods cause more widespread anxiety, especially during a pandemic [45]. It is to the results of a study [46] that students in Switzerland experience the highest level of anxiety, namely mild anxiety, which is 38.6%.

Then stress is a student's psychological condition where they feel pressured by a problem or situation considered too heavy and difficult. The average student stress score is 61.44, at the lower limit of the moderate category. The results of this study align with the results of research conducted [47], where students with low-stress levels are higher, namely as much as 70.2%.

Based on the results of testing the correlation coefficient, pressure from learning activities, workload, personal expectations, and hopelessness are positively related to depression, anxiety, and stress. Meanwhile, worry about grades is positively related only to anxiety and stress, with a correlation coefficient greater than 0.110 and a weak degree of affinity. On the other hand, academic stress also has a positive and significant correlation with mental health issues, with a coefficient of 0.450 and a relatively strong level of closeness. The higher the academic stress experienced by students, the higher the chances of students experiencing mental health issues.

There is a relationship between gender and students' academic stress levels. The results of this study align with [40] that academic stress correlates with gender, in line with the results of research by [48], which states that

higher stress levels will be felt together with mental health issues.

There is a relationship between gender and the level of student mental health issues. The main problem that causes poor student mental health is stress. Stress experienced by students can occur due to overly excited conditions or low frustration tolerance. [49] show that pandemics have more pronounced adverse effects on female. Also, by [50], female students are more vulnerable to mental health problems.

The average student's academic stress ($\mu=67.90$; $\sigma=8.834$) is moderate. The average mental health of students ($\mu=57.15$; $\sigma=12.334$) is in a low category. Based on the analysis results, academic stress has a significant and positive relationship with mental health issues. The results of research conducted by [51] stated that there is a relationship between academic stress and mental health in students. The results of research conducted by [52] concluded that academic stress correlates with psychiatric problems. Academic stress is a severe problem affecting two-thirds of Kolkata high school students.

Regression testing found that academic stress had a positive and significant effect on mental health issues. This study's results align with [19] that ongoing academic-related stress negatively impacts mental health, so students need to have good stress management skills.

The regression equation formed from the data analysis is $Y \approx 14.476 + 0.629X$. It indicates that if the academic stress variable increases by one unit, the mental health issue variable will increase by 0.629 at a constant of 14.476. The higher the academic stress experienced by students, the higher the chances of students experiencing mental health issues. As much as 20.3% of the academic stress variable can explain mental health issues, while the remaining 79.7% can be explained by other variables not included in the regression model.

4. CONCLUSION

Academic stress has a positive and significant effect on the mental health issue of college students participating in online learning. The higher the academic stress experienced by students, the higher the chances of students experiencing a mental health issue. There is a relationship between gender, student academic stress levels, and student mental health issues. Academic stress has a significant and positive relationship with mental health issues.

Pressure from learning activities, workload, personal expectations, and hopelessness are positively related to depression, anxiety, and stress. Meanwhile, worry about grades is positively related only to anxiety and stress. Academic stress can have an impact on student academic performance. Therefore, parents are expected to be able

to adjust expectations with student abilities to minimize academic stress on students.

AUTHORS' CONTRIBUTIONS

Conceptualization, MO & UH; methodology, MO, KH, & AZT; validation, UH; data analysis, MO, KH, & AZT; literature review, KH & AZT; writing-original draft preparation, MO; writing-review and editing, MO; visualization, MO.

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