

## **The Effect of Access to Financial Assistance on the Mental Health of College Students During The Covid-19 Pandemic**

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### **Abstract**

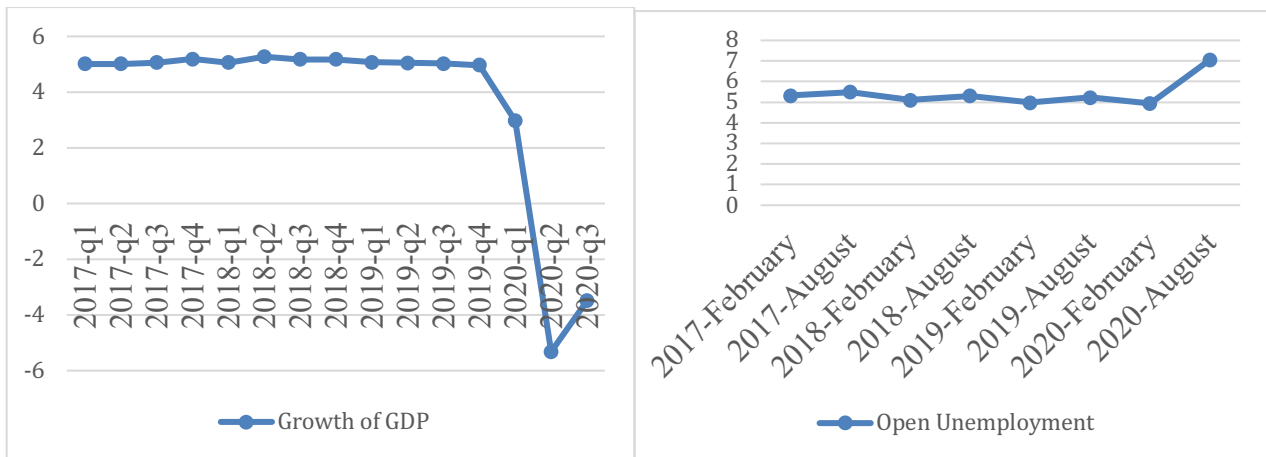
The Covid-19 pandemic situation affects the social and psychological conditions of the community, including university students. One of the pressures felt by students is psychological pressure due to decreased ability to pay tuition fees. The government's policy to ease the university students' financial burden is regulated by the Regulation of the Minister of Education and Culture (Permendikbud) No. 25 of 2020 concerning Standards of Higher Education Operational Cost Units. This study aims to determine the effect of financial assistance on students' mental health and determine the differences in mental health conditions of students who get access to financial assistance with students who do not get access to financial assistance. Quasi-experimental testing with the Difference in Difference (DiD) regression method found that students who gained financial assistance experienced a significant decrease in average psychological distress. Students who get access to financial assistance in installment schemes or deductions experience a significant average psychological pressure decrease. Therefore, access to financial assistance for college students can improve the quality of students' mental health so that financial assistance can be one solution in maintaining people's mental health when there is a shock in the economy.

*Keywords: Financial Assistance, Mental Health, University, Difference in Difference.*

### **1. Introduction**

On December 31, 2019, the World Health Organization (WHO) disclosed the information about the spread of a kind of pneumonia with new etiology in the city of Wuhan, Hubei province, China, which now is known as the Novel Coronavirus (Covid-19). This virus spread rapidly outside China, then on March 11, 2020, it was declared as the global pandemic (WHO, 2019). The first two Covid-19 cases in Indonesia were reported on March 2020, followed by the significant positive cases after. As of December 15, 2020, Indonesia had reported about 629,429 positive cases, 19,111 death and 516,656 recovered cases (Committee on Handling COVID-19 and National Economic Recovery, 2020)

The Covid-19 pandemic that began at the beginning of 2020 has affected people's lives in several aspects. For instance, there is a report on the decline of public health status, the social distancing, and the changes in the economic condition (Haleem, Javaid, & Vaishya, 2020). The shock to the economy caused by the Covid-19 is illustrated in Figure 1.1. This figure shows a decline in GDP growth and an increase in open unemployment in 2020. In addition, The decline in economic conditions caused by Covid-19 can cause a decrease in the quality of people's mental health (Martin-Carrasco et al., 2016; McInerney, Mellor, & Nicholas, 2013).

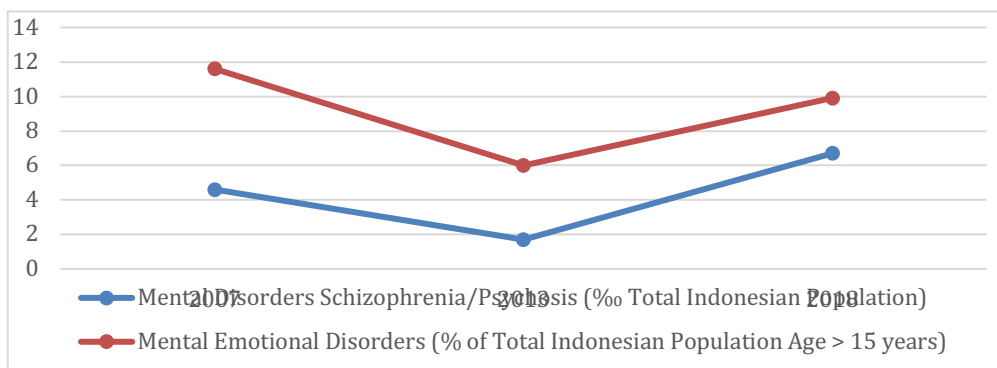


**Figure 1. Growth of Gross Domestic Product (y on y) and Open Unemployment**

Source : (Central Bureau of Statistics, 2020a, 2020b)

The changes caused by the Covid-19 pandemic have also caused problems in the university. The teaching and learning process in higher education that is carried out online leads to several problems, such as the mental health problems experienced by the students (Cao et al., 2020). Research from Rosenbaum & Liebert (2015) shows that students' mental health is often disrupted due to the tight schedule of lectures, changes in teaching and learning interactions from high school to lectures, the presence of new friends, new environments, very varied assignments, and the desire to work.

Conservation of Resources Theory proposed by Hobfoll (1989) explains that resources can be categorized into objects, conditions, personal characteristics, and energy. The occurrence of an economic shock will cause a reduction in the resources owned by individuals due to the Covid-19 pandemic. Therefore, it is worth saying that the changes in resources can somehow increase psychological pressure as well as reduce the quality of mental health. As shown in Figure 2, the quality of mental health conditions in Indonesia experienced an increase in 2013 but a decline in 2018. 706,688 people were reported experiencing emotional disorders in the population over the age of fifteen, 282,654 households had household members with schizophrenia/psychosis mental disorders in 2018. Thus, it is believed that an increase in psychological pressure can further reduce the quality of mental health in the following year. In 2015 the United Nations (UN) has included mental health indicators as a priority on the health agenda in the Sustainable Development Goals (SDGs). This shows that the UN and the government are focused on maintaining the mental health of the community, including students.



**Figure 2. Development of Mental Health Conditions in Indonesia**

Source: (Ministry of Health of the Republic of Indonesia, 2007, 2013, 2018a)

To respond to the decline in the community's ability to finance Higher, the Government of the Republic of Indonesia issued a Regulation of the Minister of Education and Culture (Permendikbud) Number 25 of 2020 concerning the Standards for Higher Education Operational Cost Units at State Universities within the Ministry of Education and Culture. This regulation consists of various assistance schemes for higher education students including the adjustment of the Single Tuition Fee (UKT). The purpose of this government policy is to reduce the financial burden of students during the Covid-19 pandemic to help sustain the learning experience as well as complete the education on time.

This study attempts to answer the research questions originating from the issuance of the above government regulations. "Does the financial assistance in the form of UKT adjustment help maintain the mental health of students?" Based on the conducted literature review, there are many studies on mental health and access to financial assistance in universities, but there has been very limited research related to these topics with the current state of the Covid-19 pandemic in Indonesia.

## **2. Literature Review**

### **Mental health**

According to the WHO, (2003), mental health is a psychological state where a person realizes his or her potential, can cope with life's problems naturally, can work productively and meaningfully, and is able to be positively involved in the environment. Therefore, mentally healthy people are people who realize their potential, can think rationally, can carry out activities that are useful for themselves and their environment. Thus, they can think, behave and act positively for themselves and others and their environment.

According to the Ministry of Health of the Republic of Indonesia (2018), a mentally healthy person is whose mental state is in a comfortable and peaceful state, thus enabling them to live a normal and comfortable life, as well as respect the surrounding environment. Thus, mentally healthy people will behave normally and feel happy, and try to do good to others. Meanwhile, a mentally unhealthy person is described as a person who is depressed, with a decrease in their thinking skill and inability to control their emotion, resulting in a display of bad behavior. Therefore, people who are not mentally ill will behave abnormally and feel unhappy, and treat others boorishly and destructively.

There are several studies on the relationship between mental health and work productivity, and there are even some more studies focusing on the correlation between mental health and academic achievement. They mostly show the correlation between the poor mental health of students with low academic independence and poor academic progress. A study from the United States found that mental health problems can predict delayed academic success (GPA) (Eisenberg, Golberstein, & Hunt, 2009).

Some other studies show that individual characteristics factors to interpersonal problems and institutional characteristics can also affect mental health. The research done by Robbins et al. (2004); Storrie, Ahern, & Tuckett (2010) show that emotional problems have a negative effect on learning progress and increase dropout rates in higher education. This means that students who are emotionally disturbed or have emotional stress are vulnerable to delays in the study process and can result in dropping out of the higher education. Byrd & McKinney (2012), Keyes et al. (2012) and Salzer (2012) explain that anxiety and depression harm academic and social participation in students' daily lives. Due to the lack of academic and social participation, they are left behind in lecture assignments which end up underachieving and ultimately dropping out of the learning process. Mykletun, Knudsen, & Mathiesen (2009) found that "Depressive disorders result in decreased mood, decreased cognitive function, lack of interest in interacting with others". In addition, depression and anxiety often affect memory and concentration, which makes it more difficult to acquire knowledge.

To this notion, it is considered important to maintain the mental health of students so that the study process runs smoothly, all tasks can be completed properly and on time which leads to satisfactory academic achievements and scores. Although there have been some studies that have shown otherwise, where mental stress may contribute to increased study effort and possible outcomes (Andrews & Wilding, 2004). The pressure is considered as less severe, to the extent that it does not cause depression or similar severe mental illness, depending on the level of the symptoms, and how much uncertainty and anxiety in the academic situation they cause. Thus, the stress that is considered reasonable, such as exam situations and lecture assignments that must be completed, is believed to contribute positively to academic achievement. On the other hand, mental pressures that are difficult to solve personally, such as cost and economic barriers, are likely to cause depression, leading to some other obstacles to achieving the desired academic achievement.

Therefore, the financial problems at the university level caused by the Covid-19 pandemic must be addressed by the authorities, in this case, the government. It has to ensure that the psychological pressure does not negatively affect students' academic achievement, let alone cause students to drop out of universities.

### **Access to the Financial Aid**

Access to financial assistance in the form of discounts and installment schemes is a form of social safety net. This financial aid access policy is a short-term policy aimed to deal with structural and economic changes caused by Covid-19. Additionally, this policy also aims to achieve a better standard of living and reduce vulnerability, both temporarily and permanently.

Several previous related studies were examining access to financial aid. For instance, Jackson (1978); Meneses & Blanco (2010) found that individuals who received financial assistance were more likely to continue their studies in college than individuals who did not receive financial assistance. Jensen (1981) stated that financial aid to students had a small positive effect on recipients' persistence, yet an increase in the average amount of aid per semester had an insignificant negative impact on the number of semesters attended over four years. Meanwhile, Long's research (2004) found that universities, especially private universities, responded to financial assistance by increasing student education costs. Loyalka, Song, & Wei (2012) found that government-funded aid was allocated evenly across universities with selectively varied and reached the target population of low-income students within the university, whereas university and community-funded aid did not reach low-income students. Research by Joshi & Nishimura (2016) shows that disaster-affected communities are more likely to cooperate with the government and move to government-built housing in safe areas if material and financial assistance is sufficient and evenly distributed.

Furthermore, a study on financial aid and mental health shows that there was a negative relationship between access to financial assistance and psychological pressure, meaning that having access to financial assistance will reduce the financial burden experienced and can reduce economic problems to reduce psychological pressure (Neighbors & Laveist, 1989). However, different results were found by Walsemann, Gee, & Gentile (2015) that access to financial assistance in the form of loans had an effect on worsening psychological conditions in groups of students from prosperous families and had an effect on improving psychological conditions in groups of students from less prosperous families.

## **3. Methods**

### **Data source**

This research uses both primary and secondary data. The primary data is collected from primary sources, both documents and individuals, while secondary data is collected through non-primary

sources such as websites or related documents (Kothari, 2004). This study used a questionnaire prepared by the researcher and filled in by the respondent directly via the internet as the primary data. Yet, the secondary data was generated from documents that are already available, especially from institutions, both health institutions, and educational institutions.

### **Population and Sample**

This study involved all undergraduate students of state universities (PTN) and private universities (PTS) throughout Indonesia who received financial assistance in the form of reductions, installments, or other forms which were originally targeted by the government to be 410,000 including scholarship recipients due to the impact of the Covid-19 pandemic (Ministry of Education and Culture of the Republic of Indonesia, 2020) as the population. Therefore, the total target is known to be 410,000, but the proportion who receive reduction and installment assistance, as well as scholarship assistance, is not known for certain.

The technique of determining the sample was done purposively by considering certain criteria (Kothari, 2004) to fit the study. The criteria used for this study were the students who receive financial assistance who are affected by the Covid-19 pandemic with the provisions set by the government. The number of samples was determined using the Slovin formula as the number of population is available. With an error value of 5%, the number of respondents required was 399.6 (rounded to 400). This study used 451 respondents and it was considered adequate and fulfilled according to the specified sample.

### **Operational Variables Definition**

#### **Independent Variable**

Mental health is a psychological condition in which a person realizes his or her potential, can cope with the pressures of life properly, can engage in productive and meaningful activities, and can provide positive support and assistance to the environment (WHO, 2003). Therefore, mentally healthy people are people who realize their potential, can think rationally, can carry out activities that are useful for themselves and their environment. Thus, they can think, behave and act positively for themselves and others and their environment. To measure a person's mental health level, the level of stress is measured. The lower the stress, the more mentally healthy the person is. Mental Health will be measured using the DAAS 21 measurement. The DASS 21 measurement tool was developed by Lovibond S.H. & Lovibond P.H. (1995) to measure symptoms of depression, anxiety, and stress experienced by individuals.

#### **Dependent variable**

Access to financial assistance is the involvement of a student to get one type of financial assistance issued by the government due to the Covid-19 pandemic, based on the Regulation of the Minister of Education and Culture (Permendikbud) Number 25 of 2020 concerning Standards for Higher Education Operational Cost Units at State Universities in Indonesia. There are five new policies that provide relief in UKT payments and infrastructure assistance to students, they are:

1. Students can apply for interest-free UKT installments (0%) based on the student's economic ability.
2. Students can postpone the payment of UKT with the payment date adjusted to their economic capacity based on the agreed agreement.
3. Students can apply for a reduction in the cost and amount of UKT, either a partial reduction or an exemption according to the student's condition and ability.

4. Students have the right to apply for the Indonesia Smart Card (KIP) scholarship for college or other scholarship schemes provided by the university.

5. Students can apply for financial assistance for internet and credit networks.

This study takes into consideration that factor that affects the mental health of students is the access to financial assistance in the form of discount schemes and UKT installment schemes.

**Control Variable**

A regression was performed by adding control variables that affect mental health based on empirical studies. The control variables included were gender, age, location, semester, GPA, illness, expenditure, exercise, social media, University status, and location of the university. The operational definition of the control variable can be seen in Table 1 below.

**Table 1. Operational Definition of Control Variables**

| <b>Variable</b>      | <b>Definition</b>  |
|----------------------|--|
| Sex/Gender           | Gender of the students, where 0 = female and 1 = male  |
| Age                  | The age of the students (year)   |
| Residency            | Students' residency, where 0 = located outside Java and 1 = resides in Java  |
| Semester             | The semester students are currently taking   |
| GPA                  | Grade Point Average (point)  |
| Medical History      | Medical history, where 0 = has no medical history (illness) and 1 = has a medical history (illness)                  |
| Expenditure          | Student family expenses per number of dependent family members in one month (hundreds of thousands of Rupiah/capita) |
| Fitness and Wellness | Time spent exercising (hours/week)   |
| Social media         | Time consumed using social media (hours/week)  |
| University status    | Status of the University, where 0 = Private University and 1 = State University                                      |
| University location  | Location of Universities, where 0 = University is located outside Java and 1 = University in Java                    |

**Model Specifications**

To evaluate the effect of access to financial assistance on mental health, Difference-in-Differences (DiD) regression was used. This DiD estimation aims to evaluate the effect of the policy by comparing the differences in the results of the group affected by the policy with the control group before and after the policy intervention is carried out (Gertler, Martinez, Premand, Rawlings, & Vermeersch, 2016). This DiD approach eliminates the effect of individual characteristics and the difference in time effects common to the two groups. Therefore, the DiD approach removes the bias caused by the observable and unobservable time-invariant effects, i.e., the constant-time linear selection bias and the time effect of the general trend in both groups, thus the bias can be controlled. The DiD equation model and the operational definition of the estimation variables used are as follows:

$$Y_{it} = C + \beta_0 Time_t + \beta_2 Treatment_i + \beta_3 Time * Treatment_{it} + \beta_4 Z_{it} + e$$

**Table 2. Operational Definition of DiD. Estimation Variable**

| Variable             | Definition  |
|----------------------|---|
| $Y_{it}$             | Psychological Pressure  |
| $Time$               | 1 = After the UKT Reduction policy (August 2020)<br>0 = Before there was a UKT Relief policy (May 2020) |
| $Treatment$          | 1 = Students who get Access to Financial Aid<br>0 = Students who do not get access to Financial Aid     |
| $Time * Treatment_t$ | Interaction Variable (DiD)  |
| $Z_{it}$             | Control Variable  |

**4. Results and Discussion**

**Descriptive Statistics**

Table 3 shows that there were 451 students involved in this study consisting of 253 students who had access to financial aid and 198 who did not receive financial assistance who were between the ages of 17 to 28 years, with all of whom were in the 1st to 11th semester. Initial psychological pressure before receiving financial aid treatment in the treatment group was 12.81, while in the control group the psychological pressure was 11.82. Based on the results of the independent t-test, P-value > 0.05, then H0 is accepted and H1 is rejected, which means that there is no difference in the average psychological pressure and control variables in the initial conditions (May 2020) between the control group and the treatment group.

After receiving treatment (August 2020), there was a change in psychological pressure on the beneficiaries from 12.81 to 8.86 (down by 3.95). The group who did not receive assistance had psychological pressure of 11.86 to 12.33 (up by 0.47). Based on the results of the independent t-test, P-value < 0.05, then H0 is rejected and H1 is accepted, which means that there is a difference in the average psychological pressure in the final condition (August 2020) between the control group and the treatment group. Meanwhile, in the control variable, there was no mean difference between the control group and the treatment group. These results indicate that access to UKT financial assistance affects the psychological pressure of students. Furthermore, if it is left without assistance there will be an increase in psychological pressure. If the students get access to financial assistance, there will be a decrease in psychological pressure.

**Table 3. Descriptive Statistics**

| Variable               | Group     | Obs | Mi  | Max | Mean  | St.Dev | T     | df  | P    |
|------------------------|-----------|-----|-----|-----|-------|--------|-------|-----|------|
| Mei 2020               |           |     |     |     |       |        |       |     |      |
| Psychological Pressure | Treatment | 253 | 0   | 57  | 12,81 | 10,04  | 1,05  | 449 | 0,29 |
|                        | Control   | 198 | 0   | 42  | 11,82 | 9,80   |       |     |      |
| Expenditure per Capita | Treatment | 253 | 0,3 | 50  | 8,70  | 6,64   | -1,61 | 449 | 0,11 |
|                        | Control   | 198 | 0,2 | 60  | 9,92  | 9,49   |       |     |      |
| Wellness and Fitness   | Treatment | 253 | 0   | 7,5 | 1,75  | 1,66   | 0,73  | 449 | 0,46 |
|                        | Control   | 198 | 0   | 7,5 | 1,63  | 1,68   |       |     |      |
| Social Media           | Treatment | 253 | 0,5 | 20  | 5,11  | 3,72   | -1,56 | 449 | 0,12 |
|                        | Control   | 198 | 0,5 | 19  | 5,68  | 4,07   |       |     |      |

|                        |           |     |     |      |       |       |       |     |         |  |
|------------------------|-----------|-----|-----|------|-------|-------|-------|-----|---------|--|
| Agustus 2020           |           |     |     |      |       |       |       |     |         |  |
| Psychological Pressure | Treatment | 253 | 0   | 56   | 8,86  | 9,87  | -3,52 | 449 | 0,00*** |  |
|                        | Control   | 198 | 0   | 47   | 12,33 | 11,01 |       |     |         |  |
| Expenditure per Capita | Treatment | 253 | 0,2 | 50   | 8,40  | 8,04  | -1,39 | 449 | 0,16    |  |
|                        | Control   | 198 | 0,1 | 60   | 9,56  | 9,58  |       |     |         |  |
| Wellness and Fitness   | Treatment | 253 | 0   | 7,5  | 1,67  | 1,61  | 0,45  | 449 | 0,65    |  |
|                        | Control   | 198 | 0   | 7,5  | 1,60  | 1,46  |       |     |         |  |
| Social Media           | Treatment | 253 | 1   | 24   | 8,11  | 5,23  | -0,59 | 449 | 0,55    |  |
|                        | Control   | 198 | 1   | 40   | 8,41  | 5,73  |       |     |         |  |
| Fixed                  |           |     |     |      |       |       |       |     |         |  |
| Sex/ Gender            | Treatment | 253 | 0   | 1    | 0,43  | 0,49  | 0,03  | 449 | 0,97    |  |
|                        | Control   | 198 | 0   | 1    | 0,42  | 0,49  |       |     |         |  |
| Age                    | Treatment | 253 | 17  | 28   | 19,64 | 1,55  | 0,16  | 449 | 0,87    |  |
|                        | Control   | 198 | 17  | 26   | 19,62 | 1,51  |       |     |         |  |
| Location               | Treatment | 253 | 0   | 1    | 0,32  | 0,47  | 0,13  | 449 | 0,89    |  |
|                        | Control   | 198 | 0   | 1    | 0,32  | 0,47  |       |     |         |  |
| Semester               | Treatment | 253 | 1   | 9    | 3,55  | 1,97  | 0,34  | 449 | 0,73    |  |
|                        | Control   | 198 | 1   | 11   | 3,55  | 1,97  |       |     |         |  |
| GPA                    | Treatment | 253 | 1,5 | 3,75 | 3,32  | 0,58  | 0,10  | 449 | 0,92    |  |
|                        | Control   | 198 | 1,5 | 3,75 | 3,32  | 0,58  |       |     |         |  |
| Medical History        | Treatment | 253 | 0   | 1    | 0,16  | 0,37  | -0,13 | 449 | 0,89    |  |
|                        | Control   | 198 | 0   | 1    | 0,16  | 0,37  | 1     |     |         |  |
| University status      | Treatment | 253 | 0   | 1    | 0,77  | 0,42  | -1,03 | 449 | 0,30    |  |
|                        | Control   | 198 | 0   | 1    | 0,81  | 0,39  |       |     |         |  |
| University location    | Treatment | 253 | 0   | 1    | 0,34  | 0,47  | 0,26  | 449 | 0,79    |  |
|                        | Control   | 198 | 0   | 1    | 0,33  | 0,47  |       |     |         |  |

Description: Significant \*\*\* p<0.01, \*\*p<0.05, \*p<0.1

## DiD Regression

This study used the DiD regression method to calculate the effect of Access to Financial Aid which is the main variable on the Mental Health of students. As shown in Table 4, before determining the regression model, demographic control variables were added in the form of gender, age, location, semester, medical history, expenditure, wellness/fitness, and social media which were calculated one by one to see inconsistent trends in the DiD variable in the regression results.

After adding the control variables, the tested DiD variable remained constant with the coefficient sign and its significance when added to the control variable in each model, only the magnitude of the coefficient changed. When added to the control variable, the value of Adj. R<sup>2</sup> was getting bigger and F-statistic was significant in each model.



**Table 4. Model Testing**

| Variable          | Psychological Pressure  |                         |                         |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|-------------------|-------------------------|-------------------------|-------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                   | Model 1                 | Model 2                 | Model 3                 | Model 4             | Model 5             | Model 6             | Model 7             | Model 8             | Model 9             | Model 10            | Model 11            | Model 12            |
| <b>Hypothesis</b> |                         |                         |                         |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| Treatment*Time    | -<br>4,46***<br>(-3,27) | -<br>4,47***<br>(-3,27) | -<br>4,47***<br>(-3,28) | -4,47***<br>(-3,30) | -4,47***<br>(-3,31) | -4,47***<br>(-3,33) | -4,47***<br>(-3,46) | -4,47***<br>(-3,46) | -4,49***<br>(-3,48) | -4,55***<br>(-3,55) | -4,56***<br>(-3,56) | -4,56***<br>(-3,56) |
| Treatment         | 0,99<br>(1,03)          | 0,99<br>(1,03)          | 1,01<br>(1,04)          | 0,99<br>(1,04)      | 0,97<br>(1,01)      | 0,97<br>(1,03)      | 1,01<br>(1,11)      | 1,05<br>(1,15)      | 1,10<br>(1,21)      | 1,25<br>(1,37)      | 1,22<br>(1,35)      | 1,22<br>(1,34)      |
| Time              | 0,51<br>(0,50)          | 0,51<br>(0,50)          | 1,51<br>(0,50)          | 0,51<br>(0,50)      | 0,51<br>(0,50)      | 0,51<br>(0,51)      | 0,51<br>(0,53)      | 0,52<br>(0,54)      | 0,51<br>(0,53)      | -0,15<br>(-0,16)    | -0,17<br>(-0,18)    | -0,18<br>(-0,18)    |
| <b>Control</b>    |                         |                         |                         |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| Gender            |                         | -0,91<br>(-1,33)        | -0,89<br>(-1,31)        | -1,01<br>(-1,48)    | -0,95<br>(-1,40)    | -0,89<br>(-1,33)    | -0,70<br>(-1,08)    | -0,75<br>(-1,15)    | -0,61<br>(-0,94)    | -0,52<br>(-0,79)    | -0,44<br>(-0,67)    | -0,44<br>(-0,67)    |
| Age               |                         |                         | -0,42*<br>(-1,91)       | -0,42*<br>(-1,92)   | -0,78***<br>(-2,86) | -0,59**<br>(-2,13)  | -0,48*<br>(-1,79)   | -0,45*<br>(-1,65)   | -0,47*<br>(-1,72)   | -0,41<br>(-1,50)    | -0,40<br>(-1,49)    | -0,39<br>(-1,44)    |
| Location          |                         |                         |                         | 2,66***<br>(3,69)   | 2,80***<br>(3,89)   | 2,88***<br>(4,02)   | 2,78***<br>(4,02)   | 2,73***<br>(3,95)   | 2,77***<br>(4,01)   | 2,78***<br>(4,04)   | 2,89***<br>(4,19)   | 2,82***<br>(3,98)   |
| Semester          |                         |                         |                         |                     | 0,47**<br>(2,19)    | 0,13<br>(0,54)      | 0,04<br>(0,18)      | 0,03<br>(0,13)      | 0,02<br>(0,10)      | -0,01<br>(-0,03)    | -0,01<br>(-0,04)    | -0,02<br>(-0,07)    |

|                        |         |         |          |          |          |          |           |          |          |          |          |          |
|------------------------|---------|---------|----------|----------|----------|----------|-----------|----------|----------|----------|----------|----------|
| GPA                    |         |         |          |          | 1,96***  | 2,18***  | 2,16***   | 2,19***  | 1,94**   | 1,91***  | 1,89**   |          |
|                        |         |         |          |          | (3,04)   | (3,50)   | (3,48)    | (3,53)   | (3,13)   | (3,08)   | (3,04)   |          |
| Medical History        |         |         |          |          |          | 7,45***  | 7,45***   | 7,51***  | 7,15***  | 6,99***  | 6,99***  |          |
|                        |         |         |          |          |          | (8,58)   | (8,59)    | (8,67)   | (8,25)   | (8,00)   | (8,01)   |          |
| Expenditure per Capita |         |         |          |          |          |          | 0,04      | 0,04     | 0,04     | 0,04     | 0,04     |          |
|                        |         |         |          |          |          |          | (0,92)    | (0,91)   | (0,99)   | (1,11)   | (1,11)   |          |
| Wellness/Fitness       |         |         |          |          |          |          |           | -0,43**  |          | -0,48**  | -0,48**  |          |
|                        |         |         |          |          |          |          |           | (-2,15)  | (-2,15)  | (-2,36)  | (-2,39)  |          |
| Social Media           |         |         |          |          |          |          |           |          | 0,24***  | 0,25***  | 0,25***  |          |
|                        |         |         |          |          |          |          |           |          | 3,53     | (3,63)   | (3,64)   |          |
| University status      |         |         |          |          |          |          |           |          |          | -1,26    | -1,42    |          |
|                        |         |         |          |          |          |          |           |          |          | (-1,54)  | (-1,61)  |          |
| University location    |         |         |          |          |          |          |           |          |          |          | -0,37    |          |
|                        |         |         |          |          |          |          |           |          |          |          | (-0,50)  |          |
| Cons                   | 11,82   | 12,21   | 20,46*** | 19,67*** | 25,09*** | 16,04*** | 12,1031** | 11,20**  | 12,13**  | 10,46*   | 11,48**  | 11,63**  |
| Obs                    | 451     | 451     | 451      | 451      | 451      | 451      | 451       | 451      | 451      | 451      | 451      | 451      |
| R2                     | 0,0247  | 0,0266  | 0,0305   | 0,0451   | 0,0502   | 0,0599   | 0,1316    | 0,1325   | 0,1369   | 0,1488   | 0,1511   | 0,1513   |
| Adj. R2                | 0,0214  | 0,0222  | 0,0251   | 0,0387   | 0,0427   | 0,0515   | 0,1229    | 0,1227   | 0,1263   | 0,1374   | 0,1387   | 0,1379   |
| F-statistic            | 7,57*** | 6,12*** | 5,64***  | 7,04***  | 6,75***  | 7,11***  | 15,02***  | 13,60*** | 12,84*** | 12,96*** | 12,16*** | 11,30*** |

Description: Significant \*\*\* p<0.01, \*\*p<0.05, \*p<0.1

Based on the estimation results shown in Table 5, students who get access to financial assistance experienced a significant decrease in average psychological pressure of 4.56 points after receiving treatment. In addition, researchers tested the effect of access to financial assistance based on the type of UKT aid obtained in the form of discounts and installment schemes. Students who get access to financial assistance in the form of discounts experienced a significant decrease in psychological pressure average of 3.36 points. Meanwhile, students who got access to financial assistance in the form of installment schemes experienced a significant decrease in average psychological pressure of 3.40 points. If the results of the descriptive analysis are used as a reference for the level of psychological pressure, with an average psychological pressure of 12.81 points, access to financial assistance can reduce the average psychological pressure by 35.5%. Therefore, it is worth saying that access to financial assistance has a significant effect on decreasing the average psychological pressure of students.

The results of this research are supported by Neighbors & Laveist (1989); Walsemann et al., (2015) statement, where access to financial assistance will reduce the financial burden experienced by students by reducing the economic problems faced to reduce psychological pressure. With access to financial assistance, students can maintain their status as students and continue their education in the university. Following Hobfoll (1989) research, as there is no change in student status during the Covid-19 pandemic, it can be said that it can reduce psychological pressure and improve students' mental health.

**Table 5. Regression Results**

| Variable       | Psychological Pressure |                     |                    |
|----------------|------------------------|---------------------|--------------------|
|                | Access Financial Aid   | Cut                 | Installment Scheme |
| Treatment*Time | -4,56***<br>(-3,56)    | -3,36**<br>(-2,01)  | -3,40**<br>(-2,41) |
| Treatment      | 1,22<br>(1,34)         | -0,44<br>(-0,37)    | 1,34<br>(1,33)     |
| Time           | -0,18<br>(-0,18)       | -2,17***<br>(-2,98) | -1,76**<br>(-2,25) |
| Cons           | 11,63**                | 11,98**             | 11,79**            |
| Obs            | 451                    | 451                 | 451                |
| R2             | 0,1513                 | 0,1466              | 0,1424             |
| Adj. R2        | 0,1379                 | 0,1331              | 0,1289             |
| F-Statistic    | 11,30***               | 10,88***            | 10,52***           |

Description: Significant \*\*\* p<0.01, \*\*p<0.05, \*p<0.1

## Discussion

*The Relationship Between Respondent Characteristics and Students' Mental Health during the COVID-19 Pandemic situation.*

Several chosen factors such as location, wellness/fitness, medical history, social media use, and GPA have contributed to the mental health of students. The results of Table 4. show that there are differences in psychological pressure between students who live in Java and students who live outside

Java. Students who live in Java have an average psychological pressure of 2.82 points. Looking at the GPA variable, it showed a significant effect on mental health which shows that getting 1 point GPA results in an average increase in psychological pressure of 1.89 points. Furthermore, students who have a medical history (illness) have average psychological stress of 6.99 points higher than students who do not have a medical history (illness). In addition, students who exercise 1 hour per week can reduce their psychological pressure by 0.48 points, and students who consume social media 1 hour per week can increase their psychological stress by 0.25 points.

Thus, students who live in Java have higher psychological pressure in this Covid-19 pandemic situation than students outside Java, meaning that in this Covid-19 pandemic situation, psychological pressure is more complex on students in Java than on students who live outside Java. Therefore, it can be said that the mental health of students outside Java is better than the mental health of students in Java. This is also related to the Indonesian population living in Java which is more concentrated in urban areas which have a higher population density. Based on research by Gruebner et al. (2017), people who live and grow in urban areas tend to have higher psychological stress than rural areas. From the research, it is also said that the disparity in the economic conditions of society that occurs in urban areas contributes to an increase in psychological pressure.

The data also shows that an increase in GPA requires higher effort on students, thus causing high psychological pressure as well. It is in line with some previous research saying that there is a relationship between academic achievement and student mental health, which can be explained by the existence of resistance to psychological pressure to a certain extent can improve academic achievement (Kelvin, Lucas, & Ojha, 1965).

Meanwhile, students who have a medical history (illness) have higher psychological stress in the Covid-19 pandemic situation than students who do not have a medical history (illness). It then can be concluded that people who do not have a medical history have better mental health in this Covid-19 pandemic situation. This is supported by Surís, Parera, & Puig (1996); Verhaak, Heijmans, Peters, & Rijken (2005) where the chronic disease will cause functional limitations of the body so that it will change the social aspects of individuals which will reduce their mental health.

Likewise, students who exercise tend to be more resistant to psychological pressure in this Covid-19 pandemic situation than students who do not exercise. Therefore, there is a relationship between sports activities and decreased psychological stress due to social interactions when doing sports and increased body resistance to psychological stress caused by the competitive nature and high intensity of certain types of sports (Jewett et al., 2014; Mikkelsen, Stojanovska, Polenakovic, Bosevski, & Apostolopoulos, 2017)

The use of social media increases students' psychological stress, Gao et al. (2020) state that the existence of disinformation and hoaxes about Covid-19 on social media can trigger fear, nervousness, and anxiety among many netizens which can confuse and endanger their mental health.

Therefore, there are other variables that can affect the students' mental health during the Covid-19 pandemic that needs to be considered by government policies to maintain and improve student academic achievement in addition to the factor of economic ability.

#### *The relationship between access to economic assistance for students on mental health*

Table 5 shows that students who get access to financial assistance experienced a significant decrease in average psychological pressure of 4.56 points after receiving treatment. In addition, researchers tested the effect of access to financial assistance based on the type of UKT aid obtained in the form of discounts and installment schemes. Students who get access to financial assistance in the form of discounts experienced a significant decrease in psychological pressure average of 3.36 points. Meanwhile, students who got access to financial assistance in the form of installment schemes experienced a significant decrease in average psychological pressure of 3.40 points. If the results of the descriptive analysis are used as a reference for the level of psychological pressure, with an average

psychological pressure of 12.81 points, access to financial assistance can reduce the average psychological pressure by 35.5%. Therefore, access to financial assistance has a significant effect on decreasing the average psychological pressure of students.

The results of this research are supported by Neighbors & Laveist (1989); Walsemann et al. (2015) statement, where access to financial assistance will reduce the financial burden experienced by students by reducing the economic problems faced to reduce psychological pressure. With access to financial assistance, students can maintain their status as students and continue their education in the university. Following Hobfoll (1989) research, as there is no change in student status during the Covid-19 pandemic, it can be said that it can reduce psychological pressure and improve students' mental health.

## **5. Conclusion, Limitations and Suggestion**

### *Conclusion*

Mental health is one of the determining factors in the success of students' education process as recognized by WHO in its Sustainable Development Goals program. The Covid-19 pandemic situation can increase the psychological pressure on students which in turn can affect their mental health. One of the causes is the inability experienced to pay UKT. To reduce the student's burden, the government through the Minister of Education and Culture Regulation (Permendikbud) Number 25 of 2020 issued a policy on UKT aid.

Based on the research using the Difference in Difference regression method, it turned out that access to UKT assistance has a significant effect on decreasing the average psychological pressure of students where it can improve the quality of their mental health. In addition, it was found that students who had access to financial assistance had better mental health than students who did not receive financial assistance.

There are other variables besides the access to financial aid variables that affect the psychological pressure of students in this Covid-19 pandemic situation are the location, GPA, medical history, wellness/fitness, and social media.

### *Limitations*

The limitation of this research lies in the data collection process. One of the limitations is the existence of mental health conditions based on self-reporting. Therefore, researchers were unable to assess the severity, history, or prognosis of the students' mental health conditions. However, filling out the questionnaire anonymously will reduce the bias caused by the self-reporting method (Surís et al., 1996). With the self-reporting method through an online survey, it is also impossible to see the influence of peer effects on the mental health of university students.

### *Suggestion*

Based on the findings, the access to financial assistance in the Covid-19 pandemic situation can reduce the level of psychological pressure on students who can maintain the quality of their mental health. Therefore, the assistance can contribute to the successful academic achievement of the students. Thus, the government can provide social assistance in the form of access to financial assistance when there is a shock to the economy caused by a disaster or other unexpected factors that serve to maintain the mental health of the people affected by the shock. For universities that provide eligibility requirements for students to receive assistance, they should tighten the criteria for granting UKT so that the provision of UKT is more targeted.

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