Coping Strategies for Strengthening Students' Mental Health

Maya Oktaviani[1]*, Uswatun Hasanah[1], and Elmanora Elmanora[1]

[1] Family Welfare Education Study Program, Faculty of Engineering, Universitas Negeri Jakarta, East Jakarta 13220, Indonesia
*maya.oktaviani@unj.ac.id

Abstract. During the Covid-19 pandemic, students had mental health challenges to prevent increased mental health issues, so students need to have a strong coping strategy. This study analyzed coping strategies for strengthening mental health. This study used a quantitative method with a cross-sectional approach. This study involved 675 students at the Universitas Negeri Jakarta in 2022. The measurement of mental health issues used the modified Depression Anxiety Stress Scale (DASS) instrument with 12 items while coping strategies used the modified Academic Coping Strategies Scale (ACSS) with 16 items. Data analysis used Confirmatory Factor Analysis (CFA) and simple linear regression. The analysis results show that all items have an outer loading of more than 0.6 with an Average Variance Extractive (AVE) above 0.5. Each item from the two instruments meets the outer and inner model criteria so that all items fit the model. Regression testing concluded that there was a significant negative influence between coping strategies and students' mental health issues. The higher the coping strategies students use, the lower the chances of students having mental health issues. So, it is necessary to strengthen students' mental health through counselling or psychotherapy.

Keywords: Coping Strategies, Mental health Issues, Student.

1 Introduction

The global community is worried about the coronavirus disease 2019 (COVID-19) and its long-term effects, which affect many areas of life, including the economy, industry, global market, agriculture, and human health [1]. The World Health Organization (WHO) examines the spread and severity of the problem and declares it a pandemic [2]. Society faces three mental health challenges: (1) preventing an increase in mental issues and an overall decline in mental well-being; (2) protecting people with mental illnesses from COVID-19 and its consequences; and (3) providing appropriate community mental health treatments for health workers [3].

Unfortunately, society continues to disregard mental health, which is damaging and detrimental in the long run [4]. Most mental health problems develop throughout early adulthood [4]. Early adulthood lasts from the ages of 18 to 40 [5]. Students are in

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their early twenties, according to this classification. Depression and anxiety connected with lower GPA, higher self-harm behavior, and withdrawal from college are examples of mental issues in college students [6], and social phobia [4]. As the nation's next generation, students must face current problems [7]. Because parents frequently underestimate their children's discomfort, an open discussion about their reactions and worries should be encouraged [8].

The findings by [6] revealed that the diagnosis of mental health issues among college students increased dramatically over six years. According to [9], 71% of students experienced heightened stress and anxiety due to the Covid-19 epidemic. Because measles coverage can be emotionally upsetting, exposure to pandemic-related news should be monitored and limited [8]. During and after an infectious disease outbreak, the population's psychological reactions play a crucial role in influencing disease propagation and the occurrence of emotional suffering and social issue [10].

Individuals' health, safety, and well-being can be impacted by public health emergencies (e.g., generating insecurity, bewilderment, emotional isolation, and stigma) as well as communities (due to economic loss, work and school closures, insufficient resources for medical treatment, and under-distribution of needs) [8]. The stigma connected with mental health issues might make people hesitant to seek help [1].

The most significant problem in reducing the COVID-19 pandemic's mental health implications is a shortage of mental health specialists, practitioners, counsellors, and health institutions that may be called for such support [1]. Healthcare practitioners can counsel patients on stress management and coping skills (such as arranging activities and sticking to routines), connect them with social and mental health resources, and advise them to seek professional mental health help when necessary [8]. Depression is one of the most prevalent psychosocial issues [11].

Students experience tremendous stress due to their education and academic progress [12]. Stress is a state of depression in a person due to environmental triggering events [13]. Academic stress can harm physical and mental health [13], [14]. There are three primary reasons why stress is an excellent framework for studying mental health: (1) the orientation emphasizes environmental and situational factors as potential causes of psychological distress, just as they do for intra-psychological factors; (2) the stress model allows for the inclusion of social and psychological influences on the process of seeking help; and (3) the stress perspective focuses on one of the more positive aspects of successful problem solving [15]. Teenagers must learn to cope with stress [16]. Individuals will not allow the consequences of stress to continue to affect them. Thus, they will engage in coping behavior [17].

Coping is a continually changing cognitive and behavioral endeavor to manage specific external and internal pressures that strain or surpass one's resources [18]. Coping is a psychological stress reaction (typically prompted by change) used to sustain mental health and emotional well-being [19]. Coping is the process by which people manage the gap between their demands (both from others and from the environment) and their resources [20]. Coping is divided into two types: (1) emotion-focused coping, which focuses on managing emotional responses to stressful situations, and (2) problem-focused coping, which focuses on changing problematic parts of stressful experiences [21], [22]. Coping methods emerge to deal with conflict [23],

[24] and to produce long-term adaptations [25]. Positive coping interventions promote well-being for individuals [26].

Given the importance of coping techniques for student development and academic performance, school psychologists and counsellors who interact with students of all ages should investigate coping [27], [28]. According to research findings [28], students encounter considerable mental health issues during a pandemic; thus, understanding the correct coping methods can assist in explaining their experiences and discovering the best way to reach their goals.

2 Method

2.1 Sample

This study analyzed coping strategies for strengthening mental health. This study used a quantitative method with a cross-sectional approach. Researchers need at least 10 to 15 target participants per item to validate the questionnaire [29]. So, the researchers targeted a minimum sample size of 280 people. This study involved 675 students (female = 544, male = 131) at the Universitas Negeri Jakarta in 2022.

2.2 Instruments and Data Collection Process

The measurement of mental health issues used the modified Depression Anxiety Stress Scale (DASS). [30] developed the original DASS version with 42 items. Then [31] revised it to 18 items (DASS-18). The instrument items contain statements; participants must rank how each item applies to them in the last few weeks. Answer choices range from "did not apply to me at all" to "applied to me very much or most of the time" (3-point Likert scale). The revised-version of DASS-18 with three factor model was acceptable fit ($\chi 2 = 1877.51$, df = 186, RMSEA = 0.10, GFI = 0.84, CFI = 0.43, NFI = 0.36). The internal reliability of DASS-18 was good within the Asian samples.

The measurement of coping strategies used the modified Academic Coping Strategies Scale (ACSS). ACSS, developed by [27], contains 56 coping items based on how they react when facing academic stressors. Each item will describe a particular coping strategy; participants must rank how often they do this coping strategy. Answer choices range from never to almost always (5-point Likert scale). After removing some items with either highly correlated error items or large cross-loading, all 34 items were acceptable fit ($\chi 2 = 383.303$, df = 103, $p < 0.05$, CFI = 0.896, TLI = 0.948, RMSEA = 0.085). Cronbach's alpha coefficient for each factor is more prominent than 0.7.

2.3 Data Analysis

This research collects the data through online forms, documented in Microsoft Excel, and then imported into Smart PLS version 3.8 for factor analysis. According to [32],

in Confirmatory Factor Analysis (CFA), researchers need to pay attention to the following three things:

1. Outer Model
   The outer model is an analysis to determine the relationship between latent variables and their dimensions/factors. In the outer model analysis, researchers will look at construct validity (through outer loading and average variance extractive), discriminant validity (through cross-loading and Fornell-Larcker), Cronbach's Alpha, and composite reliability.
2. Inner Model
   The inner model is an analysis to determine the relationship between latent variables. There are four things that researchers will look at, namely R Square, Q Square, f Square, and Goodness of Fit (GoF).
3. Hypothesis Testing
   Hypothesis testing is an analysis to test temporary conjectures according to the researcher's model.

3 Result and Discussion

3.1 Participants

Researchers distributed questionnaires to 675 Universitas Negeri Jakarta undergraduate students, 544 females (80.6%) and 131 males (19.4%). All participants belonged to the early adult, aged between 18 to 22, with a mean age of 19.49 (±0.80). Of all the students, 137 passed Universitas Negeri Jakarta through the grade report result selection, 269 passed the joint examination, 264 passed the independent exam, and five passed with achievement. Of all the participants, 65.2% were second-year students, while 34.8% were first-year students. Of all the participants, 252 students were the eldest children (only had younger siblings), 157 students were the middle children (had older siblings and younger siblings), 213 students were the youngest children (only had older siblings), and 53 students were the only children (no siblings). Most participants had fathers who graduated from high school (55.3%) and mothers who graduated from high school (50.4%). Most of the participants had mothers who were housewives (72.7%), while their fathers worked as private employees (27.1%).

3.2 Outer Model

In the outer model analysis, the researcher analyzed the validity and reliability of the instrument by paying attention to outer loading, Average Variance Extractive (AVE), cross-loading, Fornell-Larcker, Cronbach's Alpha, and composite reliability. The results of the validity analysis showed that not all the 18 items DASS had an outer loading of more than 0.6, and the AVE was still less than 0.5, so there was a need for reduction. After removing the six items, DASS-12 had an outer loading of more than 0.6 with an AVE of more than 0.5. On the other hand, ACSS also needs adjustments by removing some items and leaving 16 items that fit the model.

Researchers observed discriminant validity through the appropriate cross-loading. Based on Table 1, each item that makes up the factor has the highest cross-loading value among the other factors. This figure shows that each item can measure the factors according to the model. Furthermore, the average factor through Fornell-Larcker has a more excellent value than the correlation between the factors (see Table 2).

Table 1. DASS and ACSS Cross and Outer Loading

Items	Depression	Anxiety	Stress	Approach	Avoidance	Social Support
Mental Health Issues						
Items-01	**0.793**	0.343	0.414	-0.113	0.264	-0.081
Items-02	**0.831**	0.348	0.407	-0.053	0.237	-0.067
Items-03	**0.832**	0.373	0.427	-0.072	0.272	-0.006
Items-04	0.438	**0.730**	0.519	-0.049	0.209	-0.025
Items-05	0.296	**0.846**	0.571	0.020	0.214	0.036
Items-06	0.317	**0.861**	0.573	0.027	0.202	0.024
Items-07	0.281	**0.732**	0.481	-0.058	0.147	-0.027
Items-08	0.366	**0.734**	0.576	-0.025	0.227	0.044
Items-09	0.328	0.435	**0.723**	0.037	0.200	0.062
Items-10	0.499	0.646	**0.855**	-0.003	0.290	0.098
Items-11	0.378	0.462	**0.739**	0.020	0.223	0.059
Items-12	0.358	0.596	**0.788**	-0.036	0.231	0.004
Coping Strategies						
Items-01	-0.050	-0.050	-0.004	**0.685**	0.075	0.140
Items-02	-0.064	-0.048	-0.009	**0.719**	0.097	0.149
Items-03	-0.063	-0.064	-0.031	**0.695**	0.060	0.119
Items-04	-0.053	0.027	0.018	**0.737**	0.180	0.160
Items-05	-0.069	-0.002	0.002	**0.715**	0.132	0.152
Items-06	-0.127	-0.015	-0.042	**0.705**	0.111	0.169
Items-07	-0.072	0.017	0.023	**0.742**	0.139	0.201
Items-08	-0.050	0.014	0.058	**0.665**	0.221	0.164
Items-09	0.211	0.159	0.238	0.117	**0.823**	0.073
Items-10	0.190	0.153	0.206	0.143	**0.847**	0.138
Items-11	0.331	0.281	0.278	0.164	**0.716**	0.128
Items-12	-0.051	0.024	0.071	0.101	0.124	**0.723**
Items-13	-0.028	0.018	0.022	0.165	0.090	**0.685**
Items-14	-0.074	-0.009	0.026	0.127	0.031	**0.740**
Items-15	-0.048	0.009	0.070	0.197	0.086	**0.708**
Items-16	-0.030	0.011	0.072	0.203	0.181	**0.781**

In the reliability analysis, each factor must have a Cronbach's Alpha of more than 0.6 and a composite reliability of more than 0.7. The factor analysis results showed that the three DASS factors and the three ACSS factors each had Cronbach's Alpha > 0.712 with composite reliability > 0.839. The CA and CR results are in Table 3. Tables 1 to 3 show that 12 DASS and 16 ACSS items fit the model.

Table 2. Fornell-Larcker Criterion

Factors	Depression	Anxiety	Stress	Approach	Avoidance	Social Support
Depression	0.818					
Anxiety	0.434	0.783				
Stress	0.508	0.697	0.778			
Approach	-0.097	-0.020	0.003	0.708		
Avoidance	0.315	0.257	0.307	0.181	0.797	
Social Support	-0.062	0.015	0.073	0.222	0.145	0.728

Table 3. Average Variance Extractive (AVE), Cronbach's Alpha, and Composite Reliability

Factors	AVE	Cronbach's Alpha	Composite Reliability
Depression	0.670	0.753	0.859
Anxiety	0.613	0.840	0.887
Stress	0.605	0.781	0.859
Approach	0.502	0.858	0.889
Avoidance	0.636	0.712	0.839
Social Support	0.530	0.779	0.849

3.3 Inner Model

The value of R Square indicates the percentage of factors that can explain the observed variable, while Q Square indicates the percentage of factors that can explain the entire model. The analysis results show that depression, anxiety, and stress factors can explain mental health issues by 98%, while approach, avoidance, and social support factors can explain coping strategies by 90.7%. The value of f Square indicates the adequacy of the sample. The analysis results show that each factor has f Square > 0.15. The goodness of fit test determines how precisely the observed frequency matches the expected frequency, with a minimum limit of 0.38. Table 4 shows that each factor in the variables of mental health issues and coping strategies validates the model.

Table 4. Inner Model Analysis Results

	Depression	Anxiety	Stress	Approach	Avoidance	Social Support
R Square	0.486	0.808	0.794	0.796	0.298	0.354
Q Square	0.980			0.907		
f Square	0.946	4.215	3.863	3.841	0.240	0.518
GoF	0.662			0.518		

3.4 Hypothesis Test

The simple linear regression testing results show a value of F = 20.791 with a p-value = 0.000 < 0.05. Thus, coping strategies have a significant influence on mental health

issues. With a regression coefficient of -0.241, they are indicating a weak and negative influence. The greater the effort an individual makes when facing a problem, the smaller the mental health issue. Coping strategies can explain mental health issues by 17.3%.

4 Discussion

Mental health is a state of well-being in which people recognize their potential, manage daily challenges, work efficiently, and contribute to their communities [33]. The Covid-19 pandemic has made mental health a significant concern, particularly for students. A variety of stresses can cause stress, anxiety, and even melancholy. This study investigates how the DASS instrument identifies students' mental health difficulties. The investigation revealed that the 12 DASS components could evaluate depression (3 items), anxiety (5 items), and stress (4 items). All items have outer loading > 0.723, AVE > 0.605, cross-loading according to the factor, Fornell-Larcker > 0.778, Cronbach's Alpha > 0.753, and composite reliability > 0.859. In the inner model analysis, each factor can explain the variables of mental health issues well. Thus, all items fit the model. The results of this study corroborate the results of [31], mental health issues include sadness, anxiety, and stress. The redesigned DASS instrument's results with fewer items are appropriate for usage in Asian populations. Psychometric qualities also produce better outcomes on shorter questionnaires. This study's findings revealed DASS and ACSS items with improved psychometric properties, allowing the two instruments to describe mental issues and student coping techniques during the COVID-19 pandemic.

A coping strategy is a technique for students to respond to challenges by confronting them, avoiding them, and seeking social support. According to the findings, ACSS can assess approach (8 items), avoidance (3 items), and social support (5 items). All items have outer loading > 0.665, AVE > 0.502, cross-loading according to the factor, Fornell-Larcker > 0.708, Cronbach's Alpha > 0.712, and composite reliability > 0.839. Each aspect in the inner model analysis can adequately explain coping strategy variables. As a result, all products fit the model. The findings of this study support the findings of prior research [27] that in the student sample, the ACSS test shows acceptable psychometric properties. Because of the multiple elements that influence it, the avoidance strategy produces fewer stable results than the approach and social support strategies.

Depression among students during the COVID-19 pandemic occurred on multiple levels connected to academics, finances, and time, affecting physical and mental health. Hypothesis testing results suggest that coping methods negatively and significantly impact students' mental health difficulties. The stronger an individual's effort when confronted with a challenge, the lesser the mental health condition. Coping techniques can explain 17.3% of mental health issues. The results of this study corroborate the results of [34] research, they concluded that coping methods are a strong predictor of mental health indices. Education about positive thinking, active coping, and social support can assist in dealing with the COVID-19 pandemic's decline in

mental health. Results of [9] research found that several coping mechanisms practiced by college students in America, such as rejection and letting go, proved to be significant predictors of depression. The results of [35] research also state that a person's anxiety is related to the coping he has.

Mental health issues caused by the Covid-19 epidemic can be immediate (short-term) or distant (long-term) [37]. The most significant cause of poor student mental health is stress. Students may experience stress due to extremely enthusiastic settings or poor frustration tolerance. The format of lectures has an impact on students' mental attitudes [40]. To improve students' mental health, institutions must intensify socialization and develop multidisciplinary education programs [41]. People experiencing distress should take various healthy relaxation measures and, if needed, help from a mental health professional [37]. Modifying coping resources, coping processes, and the environment have significant potential for managing stress and avoiding mental health problems [42].

5 Conclusion

Each item from the DASS and ACSS meets the outer and inner model criteria so that all items fit the model. Regression testing concluded that there was a significant negative influence between coping strategies and students' mental health issues. The higher the coping strategies students use, the lower the chances of students having mental health issues. It is necessary to strengthen students' mental health through counselling or psychotherapy.

Students need to use coping strategies that focus on problems more often by dealing with these problems without delaying solving them. Problems will not just disappear. To solve it, students can ask for support from various parties, such as parents, siblings, peers, lecturers, or supervisors. Parents need to adjust expectations with student abilities to minimize academic stress on students. Institutions must intensify socialization, develop multidisciplinary education programs, and provide mental health professionals.

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