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The Stress Management and Mental Literacy Trends of Health Science Student on Mental Health in Makassar

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ABSTRACT

Background: There are more than 40% who experience depression in adolescents but go undetected and untreated. The incidence of mental emotional disorders is increasing from year to year. The Prevalence of mental emotional disorders in Indonesia reached 6% in 2013 and increased to 9.8% in 2018. Riskesdas data in 2018 stated that the number of cases of mental emotional disorders in South Sulawesi Province reached 10% in 2013 and increased to 13%.

Objective: The aim of this study was to examine the association between stress management strategies (Problem-Focused Coping, Emotion-Focused Coping, and Maladaptive Coping) and academic stress with mental health among health science students in Makassar City.

Methods: This research is quantitative research with a cross-sectional study approach. The research will start from September-November 2024. Data collection with proportional random sampling. The research was conducted in Makassar City at Hasanuddin University and Muslim Indonesia University) on health science students (Faculty of Medicine, Dentistry, Pharmacy, Public Health, Nursing. Data analysis using regression test between independent variables and dependent variables.

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Results: Among 121 health science students, Problem-Focused Coping, Emotion-Focused Coping, academic stress, and Maladaptive Coping were significantly associated with mental health ($p < 0.05$). Higher maladaptive coping scores were significantly associated with poorer mental health ($B = -0.822$; $p = 0.003$).

Conclusion: Problem-Focused Coping, Emotion-Focused Coping, academic stress, and Maladaptive Coping were significantly associated with mental health among health science students in Makassar. Higher maladaptive coping was associated with poorer mental health. Universities should strengthen mental health promotion programs and encourage adaptive coping strategies to improve students' psychological well-being.

Keywords: Stress management; literacy trends; mental health; students

INTRODUCTION

Stress is classified into two types: constructive stress, known as eustress^{1,2-5}. Eustress motivates a person and improves concentration while studying, whereas stress that is unpleasant and negative in nature is known as distress. Distress causes various negative effects, such as nervousness, high blood pressure, irritability, and difficulty concentrating. Academic stress falls under the category of negative stress (distress)⁶. Academic stress occurs within an educational setting. This negative stress arises when students are faced with demands and assignments they must complete. Prolonged stress can lead to depression⁷. More than 40% of adolescents with depression go undiagnosed and untreated. The incidence of emotional mental disorders has been rising year after year. The prevalence of emotional mental disorders in Indonesia reached 6% in 2013 and increased to 9.8% in 2018⁸. Data from the 2018 Riskesda survey indicates that the number of cases of emotional mental disorders in South Sulawesi Province reached 10% in 2013 and increased to 13%⁸. The results of Samosir's (2021) study⁷, which surveyed 139 respondents, revealed that 54 people (38.85%) experienced mental health issues. The types of disorders experienced included stress in 32 people (23%), anxiety in 54 people (38.85%), and depression in 36 people (25.9%)⁷. Among them, 14 people (10.07%) had a college education⁷. The city of Makassar is the region with the highest number of higher education institutions among all districts and cities in South Sulawesi. The long term effects of stress are influenced by various factors. Therefore, the researchers were interested in conducting further mental health studies among students in Makassar City. The objective of this study was to examine the association between stress management strategies (Problem-Focused Coping, Emotion-Focused Coping, Maladaptive Coping), academic stress, and mental health among health science students in Makassar City.

METHODS

This study is a quantitative study using a cross-sectional design was conducted from September to November 2024 among 121 undergraduate health science students from Universitas Hasanuddin and Universitas Muslim Indonesia, Makassar. Participants were selected using proportional random sampling. Data were collected using a structured questionnaire assessing stress management strategies (Problem-Focused Coping, Emotion-Focused Coping, Maladaptive Coping), academic stress, and mental health. Descriptive statistics and simple linear regression were performed using IBM SPSS Statistics to examine associations between study variables. Statistical significance was determined at $p < 0.05$. Ethical approval was obtained from the Institutional Ethics Committee, and informed consent was obtained from all participants before data collection.

RESULTS

Based on Table 1, out of 121 respondents, the majority were female, totaling 105 people (86.8%), while males numbered 16 people (13.2%).

Table 1. Respondent Characteristics by Gender, 2024

Gender	Number (People)	Percentage (%)
Male	16	13,2
Female	105	86,8
Total	121	100,0

(Taken From Primary Data)

Based on Table 2, the Faculty of Medicine (FK) had the highest number of respondents, totaling 59 people (48.8%). Next, the Faculty of Public Health (FKM) contributed 53 respondents (43.8%), while the Faculty of Pharmacy had the fewest respondents, totaling 9 people (7.4%).

Table 2. Respondent Characteristics By Faculty, 2024

Faculty Name	Number (People)	Percentage (%)
Pharmacy	9	7,4
Medicine	59	48,8
FKM	53	43,8
Total	121	100,0

(Taken From Primary Data)

Based on Table 3, the 17–20 age group is the largest, with 84 respondents (69.4%). The 21–23 age group accounts for 35 respondents (28.9%), while the ≥ 30 age group has the fewest respondents, with only 2 people (1.7%). Table 3: Respondent Characteristics by Age Group, 2024 Age Group Number (People) Percentage (%).

Table 3. Respondent Characteristics By Age Group, 2024

Age Group	Number (People)	Percentage (%)
17-20	84	69,4
21-23	35	28,9
30.00= $\leq$	2	1,7
Total	121	100,0

(Taken From Primary Data)

Table 4 shows that students in their third semester had the highest number of respondents, namely 44 (36.4%), followed by students in their seventh semester with 30 respondents (24.8%) and those in their fifth semester with 21 respondents (17.4%). The number of respondents in the first semester reached 15 (12.4%), while the sixth semester had 6 (5.0%). The fourth semester had fewer respondents, namely 3 (2.5%), and the second semester recorded the lowest number, namely only 2 (1.7%).

Table 4. Respondent Characteristics By Semester (2024)

Semester	Number (People)	Percentage (%)
Semester 1	15	12,4
semester 2	2	1,7
semester 3	44	36,4
semester 4	3	2,5
semester 5	21	17,4
semester 6	6	5,0
semester 7	30	24,8

(Taken From Primary Data)

Hypothesis Testing

Table 5. Table of Stress Management Analysis Based on Problem-Focused Coping on Students' Mental Health

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
Constant	38,753	7,621		5,085	0,000
	1,354	0,402	0,295	3,368	0,001
Mental Health Dependent Variable					

Based on Table 5, it can be seen that $t = 3.368$ with a correlation value of $0.001 < 0.05$. The statistical test results indicate that Problem-coping ability has a positive and significant effect on mental health. In other words, the higher an individual's ability to cope with problems, the better their mental health.

Table 6. Table of Stress Management Analysis Based on Focus on Emotional Coping () on the Mental Health of Health Science Students in Makassar City

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
	47,949	7,116		6,738	0,000
Total Emosional Coping	0,583	0,253	0,207	2,307	0,023

Mental Health Dependent Variable

Based on Table 6, it can be seen that the t-value is 2.307 and the correlation coefficient is ($p = 0.023$ or < 0.05), which means there is sufficient evidence to conclude that "emotional coping ability" has a significant effect on the decline in mental health. Based on the results of the statistical test above, it can be concluded that every increase in "emotional coping ability" will lead to a "decline in mental health," and this relationship is quite strong, as evidenced by the significant t-value.

Table 7. Table of Stress Management Analysis Based on Maladaptive Coping s on the Mental Health of Health Science Students in Makassar City

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
Constant	84,358	6,777		12,448	0,000
Total Maladaptif	-0,822	0,273	-0,266	-3,011	0,003

Mental Health Dependent Variable

Based on Table 7, the correlation value $p = 0.003$ ($p < 0.05$) indicates that the relationship between Total Maladaptive Behavior and Total Mental Health is statistically significant. This means there is sufficient evidence to conclude that Total Maladaptive Behavior has a significant effect on mental health. The statistical test results show that maladaptive behavior has a negative and significant effect on mental health. Every increase in maladaptive behavior will lead to a greater decline in mental health. Therefore, it is important to address maladaptive behavior among individuals, especially college students, to prevent negative impacts on their mental health.

Table 8: Table of Analysis of Academic Stress on the Decline in Mental Health

Model	Unstandardized Coefficients		Standardized Coefficients Beta	T	Sig.
	B	Std. Error			
Constant	14,934	4,799		3,112	0,002
Total Stress	0,971	0,093	0,690	10,397	0,000

Mental Health Dependent Variable

From Table 8, we obtain a p-value of 0.000 or < 0.05 , indicating that the relationship between "academic stress" and "decline in mental health" is statistically significant. Based on these results, we can conclude that stress in learning has a highly significant positive influence on the decline in students' mental health.

DISCUSSION

The present study found that Problem-Focused Coping was positively and significantly associated with mental health ($B = 1.354$; $p = 0.001$). Students who used problem-solving strategies more frequently tended to have better mental health outcomes. This finding is consistent with Lazarus and Folkman's stress and coping theory, which suggests that actively addressing stressors can reduce psychological distress. Similar findings have also been reported among university students, indicating that adaptive coping strategies promote psychological well-being.

Based on an analysis of stress management focusing on problem-focused coping, it was found that, according to mental health theory, psychological factors and an individual's ability to cope with stress significantly influence students' mental well-being. One important concept is coping ability, which refers to an individual's capacity to address challenges and problems. Lazarus and Folkman's theory of coping states that coping can be divided into two types: problem-focused coping (focused on problem-solving) and emotion-focused coping (focused on emotion regulation). Problem-focused coping refers to an individual's ability to seek solutions to the problems they face, which can help mitigate negative impacts on mental health. The relationship between emotional maturity, problem-focused coping, and emotion-focused coping aligns with the statement by Beck and Alford (2019), who noted that depressive tendencies can be caused by many factors. Durand and Barlow (2013) categorized the factors influencing depressive tendencies into three groups: biological factors, psychological factors, and sociocultural factors. Emotional maturity, problem focused coping, and emotion-focused coping fall under psychological factors, which are internal factors contributing to depressive tendencies. For health science students, who frequently face academic pressure and other challenges, coping skills are crucial.

Students in this field often encounter issues related to their studies or social interactions that impact their psychological well-being. Therefore, strong problem-coping skills can help them reduce stress and maintain emotional stability. Overall, these findings support mental health theories stating that problem-solving skills play a significant role in maintaining mental health. By improving problem-coping skills, students will be better equipped to handle academic and social pressures without experiencing a significant decline in mental health.

Based on the results of a statistical analysis of the relationship between Emotion-Focused Coping and the mental health of health science students in Makassar, it was found that Emotion-Focused Coping was significantly associated with mental health ($B = 0.583$; $p = 0.023$). This finding suggests that greater reliance on emotion-focused coping alone may be associated with poorer mental health. Previous studies have reported that emotion regulation without addressing the source of stress may be less effective under prolonged academic stress. Therefore, emotion-focused coping should be balanced with problem-focused coping. These results suggest that healthy students who possess the ability to manage their emotions tend to experience a greater decline in mental health, which may indicate that they are coping with it in a less effective manner in the long term. Therefore, it is important for students to develop more balanced coping skills, including problem-focused coping, which is more focused on finding concrete solutions rather than merely managing their feelings.

In general, mental health is influenced by how individuals manage stress, emotions, and life's challenges. Emotional coping refers to how a person responds to and manages emotions that arise in stressful or difficult situations, which is a key aspect of maintaining psychological well-being.

Emotion-focused coping theory explains how individuals manage emotions that arise as a result of stress or problems. In this context, emotional coping ability refers to a person's skill in managing their negative feelings or emotions, such as anxiety, stress, or depression. According to Lazarus and Folkman's theory, emotion-focused coping focuses on managing feelings rather than trying to change the problem itself. An individual's ability to cope with these emotions can influence their mental well-being, either by reducing the negative impact of stress or even exacerbating it if coping is ineffective.

The results of the analysis indicate that Maladaptive Coping showed a significant negative association with mental health ($B = -0.822$; $p = 0.003$). Students who frequently used avoidance, denial, or other maladaptive coping strategies tended to experience poorer mental health. This finding supports Lazarus and Folkman's stress and coping theory and is consistent with previous studies showing that maladaptive coping increases the risk of anxiety, depression, and psychological distress among university students.

However, there is a deeper explanation here: a high capacity for emotional copying may be linked to difficulties managing emotions in stressful situations, which can cause individuals to experience greater or longer-lasting stress. In some cases, even if individuals have the ability to manage their feelings, if there are no more effective coping mechanisms or if they focus more on managing their feelings than on finding concrete solutions to problems, this can actually worsen their mental state in the long run.

Among health science students, particularly those in the final stages of their studies or experiencing in high levels of academic pressure, the ability to manage emotions is crucial. A decline in mental health among health science students can result from intense academic pressure, clinical experiences, or even personal challenges related to social life or work. Therefore, while emotional coping skills can help manage feelings, if students are not trained to balance their emotions and adopt a solution-focused approach to problems, this can contribute to a decline in their mental health. Overall, the results of this statistical analysis indicate that emotional coping ability does indeed have a significant impact on declining mental health, with a positive correlation between the two. These findings suggest that health science students who possess the ability to manage their emotions tend to experience a greater decline in mental health, which may indicate that they are coping with it in ways that are less effective in the long term. Therefore, students need to develop more balanced coping skills, including problem-focused coping, which focuses more on finding concrete solutions rather than merely managing their feelings.

Academic stress had the strongest association with mental health ($B = 0.971$; $p < 0.001$). Higher academic stress was associated with poorer mental health among health science students. This finding is consistent with previous studies reporting that academic workload, examinations, and clinical training are major contributors to psychological distress. Universities should therefore strengthen stress management and mental health support programs for students.

The results of an analysis of stress management based on maladaptive coping and its impact on the mental health of health science students in Makassar revealed that *maladaptive behaviors* have a negative effect on *mental health*. This decline in mental health occurs with each one-unit increase in maladaptive behavior. In the context of mental health theory, maladaptive behaviors can be explained through *Lazarus and Folkman's Stress and Coping Model*.

According to this theory, individuals experiencing stress may develop maladaptive ways of coping, such as avoiding problems, excessive anxiety, or even the use of unhealthy defense mechanisms. Maladaptive behavior hinders the healthy adaptation process to stress, thereby increasing the risk of mental health issues, such as anxiety and depression. In this context, maladaptive behavior is directly linked to declining mental health because individuals cannot effectively manage stress, which ultimately

worsens their mental state. In real life, maladaptive behavior can manifest in various forms, such as withdrawing from social interactions, excessive anxiety, or a sense of being unable to handle the problems faced. For students, especially those in major cities like Makassar, the challenges of campus life often involve high academic, social, and emotional pressures. If students lack healthy coping strategies and instead rely on maladaptive mechanisms, they are more likely to experience a greater decline in mental health. Health science students in Makassar, who should be trained in managing both physical and mental health, can actually be significantly affected by *maladaptive behavior*. They frequently face significant academic pressures, such as exams, lab sessions, and heavy course loads. Additionally, they must cope with emotions and stress arising from uncertainty about their future careers or social challenges. If they adopt maladaptive behaviors – such as avoiding problems, withdrawing from social settings, or experiencing excessive anxiety– they risk a decline in mental health. Based on statistical test results showing a significant negative correlation between *maladaptive behavior* and *mental health*, it is important for students in Makassar – particularly those in health sciences– to recognize the signs of maladaptive behavior in themselves and develop more adaptive ways to cope with them. Given that Makassar is an educational hub with a large student population, universities and educational institutions need to provide psychological support, training in healthy coping strategies, and resources to help students manage stress and mental health issues. Increased maladaptive behavior can lead to a significant decline in mental health. Therefore, it is crucial to identify maladaptive behavior among students, particularly health science students in Makassar, and provide interventions that encourage them to develop healthier coping mechanisms. In this way, students can maintain or even improve their mental health despite facing academic pressures and the challenges of campus life.

CONCLUSION

There is a positive and significant association between stress management based on specifically *Problem-Focused Coping* and *Emotional-Focused Coping* and *academic stress* on the mental health of health science students in Makassar. Meanwhile, stress management based on specifically *Maladaptive Coping* has a negative impact on the mental health of health science students in Makassar.

Conflicts of Interest

The authors declare that there are no conflicts of interest regarding the publication of this research.

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