



## THE RELATIONSHIP BETWEEN EMOTIONAL DISORDERS AND EMOTIONAL EATING IN FINAL YEAR STUDENTS

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### ABSTRACT

Emotional disorders such as anxiety, stress, and depression are prevalent among university students, particularly in their final year due to academic pressures. These conditions can influence daily behavior, including eating patterns, and may trigger emotional eating, which threatens both physical and psychological health. Self-esteem is considered a protective factor that may buffer these effects. This study aimed to examine the relationship between emotional disorders and emotional eating among final-year female students and to analyze the moderating role of self-esteem. A cross-sectional design was conducted involving 222 students from Universitas Muhammadiyah Aceh. Data were collected using the DASS-21, Emotional Eating Scale (EES), and Rosenberg Self-Esteem Scale (RSES). Logistic regression analysis showed that 38.74% of respondents experienced moderate depression, 27.48% moderate anxiety, 15.77% moderate stress, and 22.17% reported emotional eating. Significant associations were found between moderate anxiety ( $p=0.045$ ) and severe stress ( $p=0.021$ ) with emotional eating. Moreover, self-esteem moderated the relationship between stress and emotional eating, suggesting that higher self-esteem helps students control eating behavior under stress. These findings emphasize the importance of early detection and psychosocial interventions to promote students' mental health and healthy eating patterns.

Keywords: anxiety; depression; emotional eating; stress

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## INTRODUCTION

Stress, anxiety, and depression are feelings associated with undersirable eating behaviors. The physical and emotional exhaustion caused by stress disrupts a person's eating patterns and the absorption of nutrient (Shen, 2020). Untreated stress can have detrimental health consequences, including sleep disturbances, difficulty concentrating sleep negative thoughts, anxiety, and changes in eating patterns. Stress also influences a person's eating behavior through processes occurring in the central nervous system and body hormones, which influence various aspects of eating behavior, such as food choices, food intake, and appetite (Saleh & Amelia, 2022). The more severe the level of stress experienced, the greater the desire to overeat because it is perceived as a stress reliever (Syarofi, 2020).

In a field survey of university students in Indonesia, more than 40% of respondents admitted to frequently overeating during periods of emotional stress, particularly before exams or when facing personal challenges. Emotional eating, if left unchecked, can lead to eating disorders, weight gain, and overall poor health. It can also exacerbate feelings of guilt and low self-esteem, creating a negative cycle between emotions and eating behaviors (Irzanti, 2023). College students are particularly vulnerable to stress. As a requirement for their degrees, they are required to complete postgraduate research. Some students experience difficulties in completing this assignment,

including difficulty accessing data sources, literature, and respondents, as well as difficulty finding time for counseling with their supervisors. If not addressed appropriately, these issues can lead to emotional disorders such as stress and severe depression (Abdurrahman et al., 2021). As intellectuals, students carry professional roles and responsibilities in their respective fields for the development of the nation and its people. To achieve this, all students undertake formal education at universities and are required to complete various assignments as part of their graduation requirements (Sagala, 2023). The burden of writing a dissertation or thesis is one of the causes of depression and anxiety among students. Facing various obstacles in the writing process can lead to various kinds of stress and anxiety (Laoli et al., 2022).

Students experiencing anxiety, depression, or severe stress tend to have difficulty concentrating and processing information, leading to decreased motivation to learn. Furthermore, maladaptive coping behaviors, such as emotional eating, can be a response to emotional stress and indirectly impact study habits and academic productivity (Praniwi, 2023). In this context, self-esteem can play a crucial role as a protective factor, either strengthening or weakening the influence of emotional factors on academic achievement. Therefore, a thorough understanding of the dynamics between emotional states, eating behaviors, and self-esteem is crucial for improving students' academic performance (Jiang, 2023). Emotional disorders such as anxiety and depression are often associated with low self-esteem. People experiencing anxiety or depression may have negative views of themselves, which can exacerbate their emotional problems. Decreased self-esteem is often a symptom or consequence of emotional disorders, and these disorders can exacerbate feelings of worthlessness or inadequacy (HAFIZ, 2024 ). The aim of this study was to determine whether there is a relationship between emotional disorders and emotional eating.

## **METHOD**

This study is quantitative with a cross-sectional design, meaning that data collection for both the independent variable (emotional disorders) and the dependent variable (emotional eating) was collected at a single point in time from the population studied. This study was conducted at the Muhammadiyah University of Aceh from June 13-30, 2025. The population in this study were students of the class of 2022 who were working on their final assignments in the undergraduate program at the Muhammadiyah University of Aceh, who were officially registered and undergoing the academic process leading up to graduation. Final year students were selected because they are in the early adult development phase and are vulnerable to emotional stress, both from academic and social demands, and the transition to the world of work. This stress has the potential to affect their emotional state, eating patterns, self-confidence, and academic achievement. The sample in this study was taken using the Accidental Sampling Technique, which is determining the sample based on certain criteria that are in accordance with the research objectives with a total sample of 222 respondents. The data was collected by distributing questionnaires to respondents, then the data was collected and analyzed. The researcher did not conduct validity and reliability tests because the questionnaire used was standard and had a Cronbach's Alpha value.

## **RESULT**

Based on the results of the logistic regression test to determine the relationship between emotional disorders and emotional eating, the results showed that none of the variables were related to emotional eating. However, the variables for moderate depression (2.4) and very severe depression (1.8) had quite high OR values. This means that moderate and very severe depression tend to be related to emotional eating. The Confident Interval values can also be seen to have a fairly wide range (0.92-6.60), indicating that the data distribution is uneven. This means that if the data distribution were more even and the sample size were larger, it could be predicted that there would be an influence between depression and emotional eating.

Tabel 1  
 Analisis Bivariat Hubungan Emotional Disorders dengan Emotional Eating dan Capaian Akademik Menggunakan Uji Logistic Regresi

No	Variabel	Emotional Eating		OR (95% CI)	P-Value	Capaian Akademik			OR (95% CI)	P-Value
		Tinggi f (%)	Rendah f (%)			Rendah f (%)	Sedang f (%)	Tinggi		
1	Depresi									
	Normal	6 (2,70)	33(14,86)			3((25,00%)	17(18,48)	19(16,10)		
	Ringan	14 (6,31)	60 (27,3)	0.6(0.45-3.65)	0.640	3(25,00%)	34(36,96)	37(31,36)	1.12 (0.52-2.38)	0,766
	Sedang	26 (11,71)	60 (27,3)	2.4(0.92-6.60)	0.073	4(33,3%)	32(34,78)	49(41,53)	1.46 (0.69-3.09)	0,315
	Berat	3 (1,35)	18 (8,11)	0.8(0.19-3.87)	0.853	2(16,67%)	8(8,70)	12(10,17)	1.20(0.42-3.40)	0,724
	Sangat Berat	0 (0,00)	2(0,98)	1.8(0)	0.091	0 (0,00%)	1(1,09)	1(0,85)	1.20(0.79-18.17)	0,893
2	Kecemasan									
	Normal	7(3,15)	37(16,67)			2(16,67)	4(4,35)	16(13,56)		
	Ringan	21(9,46)	51(22,97)	1.11 (0.387-3.209)	0.840	6(50,00)	33(35,87)	39(33,05)	0.3(0.14-1.13)	0.084
	Sedang	14(6,31)	47(21,17)	0.48 (0.156-1.524)	0.218	1(8,33)	32(34,78)	39(33,05)	0.51(0.18-1.48)	0.221
	Berat	3(1,35)	30(13,51)	0.62 (0.178-2.167)	0.456	2(16,67)	20(21,74)	15(12,71)	0.30(0.09-0.93)	0.037*
	Sangat Berat	4 (1,80)	8(3,60)	0.48 (0.082-2.860)	0.424	1(8,33)	3(3,26)	9(7,63)	0.86(0.18-3.93)	0.850
3	Stress									
	Normal	15(6,76)	62(27,93)			3(25,00)	13(14,13)	47(39,83)		
	Ringan	11(4,95)	55(24,77)	1.16 (0.519-2.619)	0.709	5(41,67)	34(36,96)	30(25,42)	0.27(0.13-0.56)	0.001 *
	Sedang	13(5,86)	22(9,91)	0.72(0.263-1.973)	0.524	0(0,00)	20(21,74)	21(17,80)	0.40(0.17-0.92)	0.032*
	Berat	9(4,05)	34(15,32)	0.94 (0.378-2.366)	0.905	4(33,33)	24(26,09)	19(16,10)	0.23(0.10-0.52)	0.001*
	Sangat Berat	1(0,45)	0(0,00)	3.5 (0.205-59.59)	0.386	0(0,00)	1(0,85)	1(0,85)	0.39(0.25-5.89)	0.497

Based on the results of a logistic regression test to determine the relationship between emotional disorders and academic achievement, the depression variable showed no association with academic achievement. However, it had an OR value >1, indicating that depression poses a risk and tends to be associated with academic achievement. This can also be seen in the Confident Interval values, which are quite wide apart, indicating that the data distribution is not evenly distributed. This means that if the data distribution were more even and the sample size were larger, an influence between depression and emotional eating could be predicted.

For the anxiety variable, only severe anxiety was associated with academic achievement. Meanwhile, the other three anxiety categories were unrelated to academic achievement and had OR values <1, indicating no risk to academic achievement. For the stress variable, there was a relationship between mild, moderate, and severe stress with academic achievement. However, with OR values <1, indicating no risk to academic achievement. However, the focus here is the P-value for moderate stress (0.032) being greater than that for severe stress (0.000), indicating that stress is not entirely the cause of the decline in academic achievement; other factors may be involved.

The results of the multiple logistic test analysis in model 1 showed that when the variables of age, gender, and residential status were controlled simultaneously with the variables of depression, anxiety, and stress, none of the variables were significant or unrelated. Then in model 2, the results showed that when the variables of age, gender, and residential status were controlled simultaneously but by adding the self-esteem variable, the variables of moderate anxiety and very severe stress changed to be significant or related. This means that when all variables were controlled simultaneously but respondents had low self-esteem, they were 20 times more at risk of experiencing emotional eating than people with all variables controlled simultaneously but had high self-esteem.

Tabel 2  
Analisis multivariat Emotional Disorders dengan Emotional Eating Pada Mahasiswa

No	Variabel	Model 1		Model 2	
		AOR (95%CI)	P-Value	AOR (95%CI)	P-Value
1	Umur	0.55	0.992	13.1(0.52-52.04)	0.996
	Jenis Kelamin	2.57 (0.39-16.85)	0.323	14.93 (0.20-30.39)	0.805
	Status tinggal	0.41 (0.79-2.12)	0.289	0.22(2.06-1.60)	0.147
2	Depresi				
	Ringan	1.53 (0.51-4.54)	0.444	1.4(0.48-4.41)	0.503
	Sedang	2.31 (0.83-6.36)	0.105	2.3(0.87-6.47)	0.115
	Berat	0.92 (0.18-4.57)	0.921	0.99(0.19-5.14)	0.994
	Sangat berat	4.62 (0)	0.994	1.9(0)	0.991
3	Kecemasan				
	Ringan	0.64 (0.18-2.25)	0.491	0.5 (0.13-1.93)	0.318
	Sedang	0.23 (0.47-1.14)	0.073	0.18(0.03-0.96)	0.045*
	Berat	0.20 (0.02-1.74)	0.145	0.17(0.18-1.73)	0.137
	Sangat Berat	0.78 (0.04-1.36)	0.081	0.6(0.00-1.22)	0.068
4	Stres				
	Ringan	1.74 (0.64-4.71)	0.274	1.54(0.55-24.28)	0.400
	Sedang	2.41 (0.56-10.3)	0.235	2.2(0.53-9.93)	0.266
	Berat	3.58 (0.61-21.0)	0.156	3.0(0.47-18.9)	0.243
	Sangat Berat	43.5 (0.89-21.20)	0.057	20.6(2.22-19.1)	0.021*
5	Self Esteem			2.4(0.87-7.05)	0.086
		Pseudo R2=0.0652		Pseudo R2 = 0.0974	

Tabel 3  
Analisis Multivariat Emotional Disorders dengan Capaian Akademik pada Mahasiswa

No	Variabel	Model 1		Model 2	
		AOR (95%CI)	P-Value	AOR (95%CI)	P-Value
1	Umur	3.33(0)	0.983	9.0(0)	0.991
	Jenis Kelamin	0.04(0.007-0.265)	0.001*	0.02(0.03-0.15)	0.000*
	Status tinggal	2.2(6.77-7.151)	0.189	1.6(0.3-7.0)	0.526
2	Depresi				
	Ringan	1.0(0.47-2.37)	0.890	1.14(0.50-2.58)	0.749
	Sedang	1.5(0.70-3.50)	0.266	1.55(0.69-3.51)	0.285
	Berat	0.9(0.29-2.84)	0.869	0.8(0.27-2.91)	0.857
	Sangat berat	1.3(0.07-24.2)	0.824	0.99(0.047-20.7)	0.996
3	Kecemasan				
	Ringan	1.0(0.31-3.63)	0.906	1.0(0.27-3.64)	0.999
	Sedang	2.5(0.61-10.9)	0.197	2.0(0.45-9.6)	0.344
	Berat	6.5(0.90-48.1)	0.063	5.4(0.69-43.0)	0.107
	Sangat Berat	20.5(2.03-20.6)	0.010*	17.5(1.64-18.6)	0.018*
4	Stres				
	Ringan	0.19(0.07-0.47)	0.000*	0.16(0.65-0.43)	0.000*
	Sedang	0.18(0.05-0.61)	0.006*	0.16(0.04-0.56)	0.004*
	Berat	0.04(0.08-0.23)	0.000*	0.3(0.06-0.21)	0.000*
	Sangat Berat	0.02(0.00-0.82)	0.038*	0.14(0.00-0.60)	0.026*
5	Self Esteem			1.01(0.49-2.08)	0.976
		Pseudo = 0.0778		Pseudo = 0.1183	

The results of the multiple logistic test analysis in Model 1 showed that when age, gender, and residential status were simultaneously controlled, they showed that severe anxiety, mild, moderate, severe, and very severe stress were associated with a risk to academic achievement. The highest risk factors were severe and mild stress, with the highest P-values being 0.000. Similarly, in Model 2, when age, gender, gender, and residential status were simultaneously controlled but self-esteem was added, there was no significant change between these variables and academic achievement. The results showed that the variables of severe anxiety, mild, moderate, severe, and very severe stress remained associated with academic achievement. The only significant change was in the P-value.

## **DISCUSSION**

Emotional disorders are psychological conditions characterized by significant emotional instability, such as prolonged feelings of sadness, excessive anxiety, and difficult-to-control tension (Sinval, 2025). These disorders can arise in response to life stress, academic burdens, interpersonal problems, or traumatic experiences, and often impact an individual's daily functioning, including social, cognitive, and behavioral aspects (Chai, 2024). Emotional disorders not only impact mental health but can also disrupt physiological functions, such as sleep patterns, appetite, and hormonal balance (Zhou, 2024). This study was conducted over 18 days, from June 13, 2025, to June 30, 2025, at the Muhammadiyah University of Aceh. Data collection methods included distributing questionnaires to final-semester students. The questionnaires included questions about aspects of depression, anxiety, stress, emotional eating, self-esteem, and academic achievement. A standardized scale was used to measure the level of emotional disorders and emotional eating in students (Wang, 2025).

Initial results from bivariate tests indicated that none of the variables were associated with emotional eating. However, for the dependent variable of academic achievement, severe anxiety, mild, moderate, and severe stress were associated with academic achievement (El-Zayat, 2025). Afterward, a multivariate test using multiple logistic regression modeling was conducted. The results of Model 1 showed that when age, gender, and residential status were simultaneously controlled, they showed that severe anxiety, mild, moderate, severe, and very severe stress were associated with a risk to academic achievement (Caso, 2020). Severe and mild stress were the greatest risk factors, with the highest P-values being 0.000.

Similarly, in Model 2, when age, gender, gender, and residential status were simultaneously controlled, but self-esteem was added, no significant changes were found between these variables and academic achievement (Acosta-Gonzaga, 2023). The results showed that severe anxiety, mild, moderate, severe, and very severe stress remained associated with academic achievement. The P-values were only slightly different, but remained significant (Rahmadhani, 2021). Both models demonstrate a relationship between gender and emotional eating and academic achievement. This means that female respondents are at greater risk of emotional eating and academic achievement than male respondents (Chamberlin, 2020). The results of this study indicate that mild stress has a higher P-value than severe stress, indicating that stress is not a primary factor in the association between emotional eating and academic achievement (Abuzar, 2024). This research demonstrates the importance of managing emotional disorders. Frequent emotional distress can lead to difficulty concentrating and a loss of motivation to learn (Sinval, 2025). Left untreated, these conditions can develop into more serious psychological problems. Therefore, appropriately managing emotional disorders can help students build emotional resilience, improve self-esteem, and prevent long-term impacts on their well-being (Chai, 2024).

## **CONCLUSION**

Self-esteem moderated the relationship between stress and emotional eating, suggesting that higher self-esteem helps students control eating behavior under stress. These findings emphasize the importance of early detection and psychosocial interventions to promote students' mental health and healthy eating patterns.

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