Psychological factors predicting emotional eating in university students: challenges for health and overall well-being

Factores psicológicos que predicen la alimentación emocional en estudiantes universitarios: retos para la salud y el bienestar integral

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How to cite in APA

Estrada-Araoz, E. G., Malaga-Yllpa, Y., Quispe-Aquise, J., Farfán-Latorre , M., Lavilla-Condori, W. G., Chura-Quispe, G., & Cruz-Laricano, E. O. (2025). Psychological factors predicting emotional eating in university students: challenges for health and overall well-being . *Retos*, *70*, 386–398. https://doi.org/10.47197/retos.v70.116301

Abstract

Introduction: in recent years, emotional eating has received increasing attention due to its impact on health and well-being. Various studies have shown that emotions can influence eating patterns, leading individuals to eat in response to affective states rather than physiological needs.
Objective: to determine whether depression, anxiety, and stress predict emotional eating in a sample of university students from the Peruvian Amazon.
Methodology: a quantitative approach was adopted, using a non-experimental predictive design. The sample consisted of 436 university students who completed the Depression, Anxiety, and Stress Scale (DASS-21) and the Emotional Eating Questionnaire, both instruments with adequate psychometric properties.
Results: the regression model was statistically significant (F= 75.692, p<0.05), explaining 34.5% of the variance in emotional eating (R^2= 0.345). Among the variables assessed, de-pression (β= 0.153, p<0.05), anxiety (β= 0.227, p<0.05), and stress (β= 0.258, p<0.05) significantly predicted higher levels of emotional eating. Additionally, it was observed that women exhibited higher levels of depression, anxiety, stress, and emotional eating, while younger students showed higher levels of anxiety (p<0.05). On the other hand, no statistically significant differences were found based on employment status or relationship status, except for anxiety (p>0.05).
Discussion: although some studies support these findings, further research is needed to corroborate and expand upon these results.
Conclusions: depression, anxiety, and stress significantly predict emotional eating among university students from the Peruvian Amazon.

Keywords

Emotional eating; health and well-being; mental health; nutrition; quality of life.

Resumen

Introducción: en los últimos años, la alimentación emocional ha recibido una creciente atención debido a su impacto en la salud y el bienestar. Diversas investigaciones han demostrado cómo las emociones pueden influir en los patrones de consumo, llevando a las personas a comer en respuesta a estados afectivos más que por necesidades fisiológicas.
Objetivo: determinar si la depresión, ansiedad y estrés predicen la alimentación emocional en una muestra de estudiantes universitarios de la Amazonía peruana.
Metodología: se adoptó un enfoque cuantitativo, bajo un diseño no experimental de tipo predictivo. La muestra estuvo compuesta por 436 estudiantes universitarios, quienes completaron la Escala de Depresión, Ansiedad y Estrés (DASS-21) y el Cuestionario sobre Alimentación Emocional, ambos instrumentos con propiedades psicométricas adecuadas.
Resultados: el modelo de regresión fue estadísticamente significativo (F= 75.692, p<0.05), explicando el 34.5% de la varianza en la alimentación emocional (R^2= .345). Entre las variables evaluadas, la depresión (β= 0.153, p<0.05), la ansiedad (β= 0.227, p<0.05) y el estrés (β= 0.258, p<0.05) predijeron significativamente mayores niveles de alimentación emocional. Además, se observó que las mujeres presentaron mayores niveles de depresión, ansiedad, estrés y alimentación emocional, mientras que los estudiantes más jóvenes mostraron mayor ansiedad (p<0.05). Por otro lado, no se encontraron diferencias estadísticamente significativas según la condición laboral ni en la situación sentimental, salvo en ansiedad (p>0.05).
Discusión: a pesar de que algunos estudios respaldan estos hallazgos, se requieren investigaciones adicionales para corroborar y ampliar estos resultados.
Conclusiones: la depresión, ansiedad y estrés predicen la alimentación emocional en una muestra de estudiantes universitarios de la Amazonía peruana.

Palabras clave

Alimentación emocional; calidad de vida; nutrición; salud mental; salud y bienestar.

Introduction

The university stage represents a period of profound changes and challenges for young people, during which academic demands, social adaptation, vocational decision-making, and often the process of personal and economic independence converge (Paricahua et al., 2024). These transformations frequently generate high levels of pressure, anxiety, and stress, affecting not only emotional well-being but also various lifestyle habits, including eating, sleep, and physical activity (Oftedal et al., 2023). The transition from adolescence to adulthood involves not only taking on new responsibilities but also facing situations that may exceed students' coping resources (Perzow et al., 2021). In this context, it becomes necessary to analyze how these conditions impact university students' lifestyles, with particular attention to behaviors such as eating, which are deeply modulated by emotional states.

Among the many behaviors affected by the tensions of university life, emotional eating has garnered particular interest in contemporary scientific research. An increasing number of studies indicate that a significant proportion of students turn to food not in response to physiological hunger signals, but as a coping mechanism for negative emotions such as stress, anxiety, sadness, or frustration (Ha & Lim, 2023). Although this behavior may offer temporary relief, it entails considerable risks to physical and mental health in the medium and long term (Dakanalis et al., 2023). However, despite its relevance, questions remain as to which emotional factors most strongly predispose individuals to this type of eating behavior. Therefore, there is a need to further explore the influence of variables such as depression, anxiety, and stress—emotional conditions that are prevalent in university settings (Ramón et al., 2020).

Emotional eating is defined as the act of consuming food in response to negative emotions—such as sadness, anxiety, or stress—rather than actual physiological hunger (Reichenberger et al., 2020). The literature suggests that emotional eating functions as a coping strategy aimed at alleviating or mitigating unpleasant emotional states immediately, albeit temporarily (Bagrowska & Gawęda, 2023). This type of eating behavior is typically characterized by the preference for high-calorie foods rich in fats and sugars, reflecting a tendency to seek out "comfort foods" during periods of emotional distress (Fuente et al., 2022). Various factors may trigger emotional eating among university students. These include academic stress, social pressure, family problems, low self-esteem, mood disturbances, and difficulties in emotional regulation (Silva et al., 2025; Houminer et al., 2024). The perception of being unable to adequately cope with environmental demands may lead individuals to seek comfort in food as a quick source of relief (Ljubičić et al., 2023). Furthermore, early learning experiences in which food was associated with emotional comfort may predispose individuals to develop this behavior (Chawner & Filippetti, 2024).

The consequences of emotional eating are numerous and affect both physical and psychological health (Javadi et al., 2023). Among the most common effects is an increased risk of developing eating disorders such as binge eating disorder and the deterioration of metabolic health (Frayn et al., 2018). Psychologically, emotional eating may contribute to the persistence of feelings of guilt, low self-esteem, and a vicious cycle of emotional distress that reinforces dysfunctional eating behavior (Fonseca et al., 2023). Therefore, it is essential to identify the emotional factors that predict emotional eating, among which depression, anxiety, and stress stand out.

Depression is a mood disorder characterized by the persistent presence of sadness, emptiness, hopelessness, and a loss of interest or pleasure in daily activities (Huang et al., 2024). It is understood to affect how a person feels, thinks, and handles everyday tasks, and can range in severity from mild to severe (Jin & Jing, 2024). Common symptoms include decreased energy, sleep disturbances, concentration difficulties, and recurring thoughts of worthlessness or guilt, all of which significantly impair the quality of life of those affected (Alberti et al., 2024). The causes of depression are multifactorial and complex, resulting from the interaction of biological, psychological, and social factors (Remes et al., 2021). Among the biological factors, notable contributors include neurochemical imbalances in the brain, genetic predispositions, and hormonal disturbances (Shadrina et al., 2018). On the psychological level, dysfunctional coping styles, low self-esteem, and traumatic experiences during early life stages increase vulnerability to the disorder (Kim et al., 2022). In the social domain, stressful events such as the loss of loved ones, social isolation, financial difficulties, or academic problems can act as triggers or exacerbators of depressive symptoms (Deng et al., 2022).

The consequences of depression are profound and affect multiple areas of a person's life (Steger & Kashdan, 2009). On an individual level, it can lead to impairments in academic, occupational, and social

functioning, as well as increase the risk of developing other mental health conditions, such as anxiety disorders or substance abuse (Cui et al., 2024). It may also result in diminished motivation, social withdrawal, the deterioration of interpersonal relationships, and, in severe cases, suicide risk (Szymkowicz et al., 2023). In university settings, depression especially impacts academic performance and adaptation to the educational environment, thereby compromising students' personal and professional development (Duncan et al., 2021).

Anxiety, in turn, is an emotional response characterized by feelings of tension, worry, and physical changes such as increased heart rate or sweating (Fell et al., 2023). In the field of mental health, anxiety is considered a normal reaction to perceived threats or uncertainty; however, when it becomes excessive, persistent, and irrational, it may constitute a disorder that significantly interferes with daily life (Mangoulia et al., 2025). Anxiety disorders include various clinical manifestations, such as generalized anxiety disorder, panic disorder, specific phobias, and social anxiety disorder, all of which involve a level of worry that is disproportionate to the triggering stimulus (Ströhle et al., 2018). The causes of anxiety are also multifactorial, stemming from the interaction of biological, psychological, and environmental factors (Narmandakh et al., 2021). From a biological standpoint, alterations in neurotransmitter systems—particularly serotonin and norepinephrine—have been linked to an increased risk of developing anxiety disorders (Martin et al., 2009). Psychologically, early experiences of insecurity, trauma, or exposure to stressful environments contribute to the development of anxious thought patterns (Lähdepuro et al., 2019). Additionally, environmental pressures—such as academic, occupational, social, and economic demands, especially during critical developmental periods like university years—can trigger or amplify anxiety symptoms (Mofatteh, 2021).

The consequences of chronic anxiety are extensive and affect multiple life domains. Psychologically, anxiety can lead to concentration difficulties, sleep disturbances, irritability, and low self-esteem (Bai et al., 2025). In academic and occupational settings, it interferes with performance, decision-making, and problem-solving, thereby reducing productivity and hindering interpersonal relationships (Robinson et al., 2013). Sustained high levels of anxiety are also associated with an increased risk of other mental health problems, such as depression, as well as physical complications like cardiovascular and gastrointestinal disorders, ultimately compromising overall well-being and quality of life (Niles et al., 2015).

Finally, stress is defined as a set of physiological, emotional, and behavioral reactions that occur when an individual perceives that environmental demands exceed their coping resources (Cohen et al., 2016). From a biological perspective, stress involves the activation of the hypothalamic-pituitary-adrenal (HPA) axis, leading to the release of cortisol and other hormones that prepare the body to face challenging situations (Herman et al., 2016). Although stress is not inherently negative—moderate levels can enhance attention and performance—its persistence or excessive intensity can adversely affect physical and mental health (Slimmen et al., 2022). In the university context, the causes of stress are diverse, but the main contributing factors include academic pressure, uncertainty about the future, financial difficulties, and interpersonal relationships (Pérez et al., 2025). Workload and tight deadlines for projects and exams are common sources of stress, as are the challenges of adapting to university life and managing new responsibilities (Silva et al., 2020). Personal relationships—such as interactions with peers or family members—also play a significant role, as social tensions or lack of support can intensify perceived stress levels (Hostinar, 2015).

The consequences of stress among university students are varied and can affect both mental health and academic performance (Barbayannis et al., 2022). Chronic stress may lead to anxiety, depression, and other emotional disorders, which in turn can hinder students' ability to concentrate, study, and maintain good health (Farfán et al., 2023). Physically, stress may manifest through sleep disturbances, headaches, gastrointestinal problems, and fatigue (Antoniadou et al., 2024). Moreover, stress not only impacts emotional and physical well-being but can also negatively affect students' motivation and satisfaction with university life (Córdova et al., 2023). Inadequate stress management may result in poor academic performance, which may, in turn, increase feelings of helplessness and perpetuate the cycle of stress (Limone & Toto, 2022).

Understanding emotional eating among university students is relevant due to its potential implications for overall health, academic performance, and quality of life. Identifying the emotional factors that contribute to its development not only enriches scientific understanding of eating behaviors during this critical stage, but also lays the groundwork for designing intervention programs that promote healthier

lifestyles. Considering the high level of exposure to stress, frustration, and anxiety that characterizes university life, it is imperative to address emotional eating as an emerging public health concern. In this regard, investigating the influence of emotional variables on emotional eating responds to an urgent need for timely intervention and the provision of more adaptive coping strategies for students.

Therefore, the aim of the present study was to determine whether depression, anxiety, and stress predict emotional eating in a sample of university students from the Peruvian Amazon.

Method

This study employed a quantitative approach, which facilitated the collection and analysis of numerical data to describe phenomena related to university students' lifestyles. Additionally, an observational design was adopted. A cross-sectional predictive design was also selected with the aim of determining whether depression, anxiety, and stress are capable of predicting emotional eating at a specific point in time.

Participants

The sample consisted of 436 students enrolled in the 2025-I academic term at a public university in the Peruvian Amazon. Participants were selected through probabilistic sampling with a 95% confidence level and a 5% significance level. Inclusion criteria were: being enrolled in the 2025-I semester, studying in an in-person modality, and providing informed consent to participate in the study. Exclusion criteria included students in the process of withdrawing from the semester and those who did not complete the data collection instruments adequately. Table 1 shows that 66.1% of the participants were female and 33.9% were male. Regarding age, 62.4% were between 16 and 20 years old, while 37.6% were older than 20. In terms of employment status, 64.2% were employed and 35.8% were not. As for marital status, 79.4% reported being in a stable relationship, while 20.6% were not.

Table 1. Sociodemographic characteristics of the sample

Variables		n= 436	%
Sex	Male	148	33.9
	Female	288	66.1
Age	Between 16 and 20 years	272	62.4
	Over 20 years	164	37.6
Employment status	Employed	280	64.2
	Unemployed	156	35.8
Relationship status	In a stable relationship	346	79.4
	Not in a stable relationship	90	20.6

Procedure

To carry out data collection, the necessary authorization was obtained from university authorities. Subsequently, students were invited to participate via WhatsApp, through which a survey link was shared along with a clear explanation of the study's objective. Informed consent was requested, and participants were provided with guidance on how to properly complete the questionnaire. The participation process lasted approximately 10 minutes, and once the responses from all 436 students were confirmed, access to the survey was disabled.

Instrument

Regarding the instruments used for data collection, a digital form was created using the Google Forms platform. The first section of the form gathered sociodemographic information from participants, including variables such as sex, age, employment status, and relationship status. Subsequently, the Depression, Anxiety, and Stress Scale (DASS-21) and the Emotional Eating Questionnaire were administered.

Depression, Anxiety, and Stress Scale (DASS-21)

This instrument provides a comprehensive measure of the primary negative emotional states affecting psychological well-being. The scale consists of 21 items distributed across three dimensions—depression, anxiety, and stress—with 7 items assigned to each. Responses are rated on a 4-point Likert scale,

ranging from 0 ("Did not apply to me at all") to 3 ("Applied to me very much or most of the time"). The design allows for the identification of both the presence and severity of emotional symptoms, making it suitable for academic research due to its brief administration time and clear structure. Regarding its psychometric properties, the scale has demonstrated adequate reliability in various populations. Specifically in Peru, a recent study by Becerra et al. (2024) confirmed its internal consistency in university students (α = .969).

Emotional Eating Questionnaire

This questionnaire consists of 10 items designed to measure the tendency of individuals to eat in response to negative emotions such as sadness, anxiety, or frustration. Each item is answered using a 4-point Likert scale ranging from "Never" (0) to "Always" (3), allowing for the identification of both the presence and frequency of this behavior in daily life. The scale enables a quantitative interpretation of eating behavior related to emotional regulation and is a valuable tool in studies seeking to understand the links between emotions and eating habits. Moreover, the questionnaire has demonstrated solid psychometric properties in the Peruvian population; a previous study by Saintila et al. (2024) reported acceptable reliability for its use in similar research contexts (α = .750).

Data analysis

Data were analyzed using SPSS statistical software, version 25. First, descriptive statistics were calculated for the study variables, including the mean, standard deviation, skewness, and kurtosis. Subsequently, the independent samples t-test was applied to compare the variables according to sociodemographic characteristics. To complement this analysis, effect size was calculated using Cohen's d coefficient. According to the criteria established by Dominguez (2018), values of .20, .50, and .80 were interpreted as small, medium, and large effects, respectively. Pearson's correlation coefficient was then used to examine statistically significant relationships between the variables, with a significance level of $p < .05$. Finally, a multiple linear regression analysis was conducted to determine whether depression, anxiety, and stress significantly predicted emotional eating.

Ethical considerations

This study was conducted in accordance with the principles outlined in the Declaration of Helsinki. Students were provided with clear information regarding the objectives and characteristics of the study, and informed consent was obtained voluntarily, ensuring their autonomy and right to withdraw at any time. Additionally, measures were taken to protect the privacy and confidentiality of the data, guaranteeing the anonymity of participants and the secure handling of the information collected.

Results

Table 2 presents the descriptive statistics of the variables analyzed in the study. The mean scores for depression, anxiety, and stress were 5.49 (SD = 3.756), 5.05 (SD = 4.143), and 5.64 (SD = 4.248), respectively. Regarding emotional eating, the recorded mean was 10.66 (SD = 5.505). Additionally, the skewness and kurtosis coefficients for all variables were within the ±2 range, indicating that the data distribution can be considered approximately normal, as suggested by Gravetter & Wallnau (2014).

Table 2. Descriptive statistics of the study variables

	N	Minimum	Maximum	Mean	SD	Skewness	Kurtosis
Depression	436	0	17	5.49	3.756	0.685	0.111
Anxiety	436	0	19	5.05	4.143	0.912	0.651
Stress	436	0	21	5.64	4.248	0.824	0.658
Emotional eating	436	0	28	10.66	5.505	0.341	-0.213

Table 3 presents the differences in levels of depression, anxiety, stress, and emotional eating according to sex. The results indicate that women reported significantly higher scores than men in all variables analyzed ($p<0.05$). Specifically, significant differences were observed in depression, anxiety, stress, and emotional eating. Moreover, the effect sizes, measured using Cohen's d, ranged from small to moderate, with the most pronounced difference found in anxiety. These findings suggest that women exhibit higher levels of depression, anxiety, stress, and emotional eating behaviors compared to men.

Table 3. Comparison of depression, anxiety, stress, and emotional eating by sex

Variable and dimensions	Male		Female		t	p	d
	M	SD	M	SD			
Depression	4.55	3.385	5.97	3.851	-3.790	0.000	0.392
Anxiety	3.46	3.126	5.87	4.362	-6.627	0.000	0.635
Stress	4.72	4.335	6.12	4.129	-3.300	0.001	0.331
Emotional eating	9.36	5.742	11.32	5.267	-3.557	0.000	0.356

Table 4 presents the comparison of depression, anxiety, stress, and emotional eating levels according to age group. It was found that students aged between 16 and 20 years scored significantly higher in anxiety compared to those over 20 years old ($p<0.05$), although the effect size was small. In the case of depression, although younger students showed a higher mean, the difference did not reach statistical significance ($p>0.05$). Additionally, no significant differences were observed between the two groups in levels of stress, depression, or emotional eating. These findings suggest that younger students tend to experience higher anxiety, while age-related differences in other emotional variables are not substantial.

Table 4. Comparison of depression, anxiety, stress, and emotional eating by age group

Variable and dimensions	Between 16 and 20 years		Over 20 years		t	p	d
	M	SD	M	SD			
Depression	5.76	3.600	5.04	3.971	1.967	0.051	0.190
Anxiety	5.48	4.177	4.34	3.998	2.797	0.005	0.279
Stress	5.88	4.225	5.26	4.269	1.476	0.142	0.146
Emotional eating	10.65	5.606	10.67	5.349	-0.043	0.965	0.004

Table 5 shows the comparison of depression, anxiety, stress, and emotional eating levels according to employment status. No statistically significant differences were found between students who were employed and those who were not in any of the variables evaluated. In all cases, p-values were greater than 0.05, and the effect sizes (d) were very small, indicating that employment status does not appear to have a relevant influence on the variables studied.

Table 5. Comparison of depression, anxiety, stress, and emotional eating according to employment status

Variable and dimensions	Employed		Unemployed		t	p	d
	M	SD	M	SD			
Depression	5.24	3.553	5.63	3.864	-1.026	0.305	0.105
Anxiety	4.73	3.970	5.23	4.232	-1.203	0.229	0.121
Stress	5.47	4.167	5.74	4.297	-0.615	0.539	0.064
Emotional eating	10.71	5.467	10.63	5.536	0.139	0.889	0.015

Table 6 displays the comparison of depression, anxiety, stress, and emotional eating based on relationship status. A significant difference was observed only in anxiety levels, which were higher among students without a stable partner ($p<0.05$), although the effect size was small. For the remaining variables (depression, stress, and emotional eating), no statistically significant differences were found, and effect sizes were also small, suggesting that relationship status does not substantially influence most of the variables analyzed.

Table 6. Comparison of depression, anxiety, stress, and emotional eating according to relationship status

Variable and dimensions	In a stable relationship		Not in a stable relationship		t	p	d
	M	SD	M	SD			
Depression	5.00	4.067	5.62	3.666	-1.393	0.164	0.160
Anxiety	4.27	4.140	5.25	4.125	-2.022	0.044	0.237
Stress	5.09	4.071	5.79	4.286	-1.389	0.166	0.168
Emotional eating	10.78	5.278	10.62	5.569	0.235	0.814	0.030

Table 7 presents the correlation matrix between depression, anxiety, stress, and emotional eating. All variables were found to be positively and significantly correlated with each other ($p<0.01$). The strongest correlations were observed between anxiety and stress ($r= 0.816$) and between depression and

stress (r= 0.725), while emotional eating showed moderate correlations with depression (r= 0.503), anxiety (r= 0.548), and stress (r= 0.554). These results suggest that higher levels of depression, anxiety, and stress are associated with a greater tendency to engage in emotional eating behaviors.

Table 7. Correlation matrix between depression, anxiety, stress, and emotional eating

	Depression	Anxiety	Stress	Emotional eating
Depression	1	-	-	-
Anxiety	0.718**	1	-	-
Stress	0.725**	0.816**	1	-
Emotional eating	0.503**	0.548**	0.554**	1

** p<0.01

The results of the multiple linear regression model shown in Table 8 indicate that depression (β= 0.153, p<0.05), anxiety (β= 0.227, p<0.05), and stress (β= 0.258, p<0.05) serve as predictors of emotional eating. This implies that higher levels of psychological distress are not only associated with a greater tendency toward emotional eating but also significantly explain variations in this behavior. Collectively, the predictors account for 34.5% of the variance in emotional eating (R^2= 0.345), a result that was statistically significant (F= 75.692, p<0.05).

Table 8. Predictors of emotional eating

Predictors	B	SD	β	t	p
(Constant)	-1.964	0.925		-2.125	0.034
Depression	0.184	0.072	0.153	2.565	0.011
Anxiety	0.227	0.071	0.227	3.202	0.001
Stress	0.275	0.076	0.258	3.599	0.000
R^2			0.345		
Adjusted R^2			0.340		
F			75.692 (p<0.05)		

Note: Dependent variable= Emotional eating.

Discussion

In recent years, there has been increasing interest in understanding how physical health, psychological well-being, and quality of life are affected by various factors during the university stage. This period, characterized by multiple academic and personal demands, can lead to disruptions in body perception, emotional regulation, and students' lifestyle habits. Among the main consequences of this imbalance are symptoms of depression, anxiety, and stress, which can significantly influence the way young people cope with their emotions. One of the most common behavioral responses to emotional distress is emotional eating. This behavior may become a dysfunctional coping strategy that, over time, compromises both the student's physical health and psychological balance. In this context, the present study focused on determining whether depression, anxiety, and stress predict emotional eating among university students.

Preliminary findings revealed that women reported higher levels of depression, anxiety, and stress compared to men. This could be explained by the fact that women tend to experience and report negative emotions with greater intensity, partly due to biological factors such as hormonal fluctuations and psychosocial factors related to their role within the family. Many female university students simultaneously take on academic and family responsibilities, such as caring for younger siblings, helping with household chores, or providing emotional support to other family members, which may increase their stress levels and negatively impact their emotional well-being. Previous studies have corroborated this finding (Estrada et al., 2025; Kavvadas et al., 2023; Lopes & Nihei, 2021).

Another emerging result shows that younger students and those without a stable partner reported higher levels of anxiety than their counterparts. This may be due to the fact that, in the early stages of university life, students often face academic, social, and personal adaptation processes that may generate uncertainty, pressure, and feelings of insecurity about their performance and belonging in the new environment (Duche et al., 2020). Additionally, the absence of a stable partner may limit access to a

constant source of emotional support, negatively affecting their perception of social support. This situation may increase feelings of loneliness, enhance vulnerability to everyday challenges, and hinder the management of stressful situations, which together would favor the emergence of higher anxiety levels. This finding is consistent with previous studies reporting similar results (Al-Garni et al., 2025; Nkire et al., 2022).

When analyzing emotional eating by sex, it was observed that women exhibited a greater tendency toward this behavior. This suggests that, compared to men, women may resort more frequently to food as a mechanism to cope with negative emotions. Previous studies have found similar results (Thompson & Romeo, 2015; Camilleri et al., 2014) and indicate that this difference may be explained by biopsychosocial factors, including a greater tendency toward emotional internalization, higher anxiety levels reported in women, and cultural patterns that shape how emotions are managed.

An important finding reveals that depression, anxiety, and stress are inversely and significantly related to emotional eating. Moreover, a predictive analysis determined that these three indicators of mental health are significant predictors of such behavior. This indicates that as levels of depression, anxiety, and stress increase, so does the likelihood that students will turn to food as a coping strategy in response to negative emotions. This behavior may represent an immediate form of emotional relief, although it does not address the underlying causes of distress in the long term. Seeking comfort through food can become a pattern that perpetuates a cycle of inadequate emotional regulation, affecting not only students' mental health but also their lifestyle habits and physical well-being.

This finding is consistent with the report by Silva et al. (2025), who, in a study conducted with university students in Minas Gerais, found that symptoms of anxiety, depression, and stress were significantly and independently associated with high levels of emotional eating. In their logistic regression analysis, even after adjusting for other variables, these emotional conditions continued to be predictors of emotional eating. Similarly, a study conducted in Turkey by Kaner et al. (2023) identified that depression, anxiety, and stress acted as determining factors of emotional eating levels in university students. These results reinforce the evidence that emotional disturbances significantly contribute to explaining the increase in emotional eating behaviors in this population.

This phenomenon can be explained through Gross's (1998) Emotion Regulation Theory, which proposes that people attempt to modulate their emotions through various strategies, some more functional than others. In the case of university students experiencing high levels of depression, anxiety, and stress, they may turn to food as an immediate strategy to manage negative emotions such as anxiety, sadness, or frustration. Although this strategy may provide temporary relief, it is neither functional nor healthy in the long term. From this perspective, emotional eating constitutes a dysfunctional emotional regulation response to the inability to adequately handle psychological distress, which contributes to a cycle of inappropriate eating and deterioration of emotional and physical health.

The evidence found in this study highlights the close relationship between psychological well-being and eating behaviors among university students, underscoring the importance of addressing physical and mental health integrally in this context. In this regard, promoting not only physical activity but also the development of emotional skills and mental self-care strategies is key to improving students' overall well-being. These findings suggest that by intervening in emotional health, it is possible to generate a positive impact on other aspects of university life, including academic and personal adaptation.

One of the main strengths of this research lies in its relevance and novelty, as it addresses a little-explored topic both nationally and internationally. This study contributes not only to the field of psychology but also offers a significant contribution to the sciences related to student physical health. By identifying how psychological disorders predict emotional eating behaviors, this analysis has direct implications for the design of intervention programs and health promotion strategies in university settings. Furthermore, the research highlights the need to consider mental health as a determining factor in academic performance, physical health, and students' quality of life. This is not only innovative but also essential for the development of policies and concrete actions that foster comprehensive education, enhancing students' academic, physical, and emotional well-being.

It is essential to acknowledge certain limitations of this study that should be considered when interpreting the results. First, the study was conducted in a single university, which limits the generalizability of

the findings to other universities or different student populations. Additionally, the use of self-administered instruments may have introduced response biases, particularly due to social desirability. Moreover, since the study design was cross-sectional, the data collected reflect only a specific moment in time, without allowing the identification of changes or trends over time. These limitations highlight the need to interpret the results with caution and suggest that future research should adopt longitudinal approaches, include more diverse samples, and use complementary data collection methods. This would enable a more comprehensive, dynamic, and in-depth understanding of the variables studied.

Conclusions

The findings allow us to conclude that depression, anxiety, and stress are significant predictors of emotional eating. These results suggest that psychological distress is not only associated with a greater tendency to turn to food as an emotional response but also explains a considerable portion of the variation in emotional eating behaviors. In this way, individuals experiencing high levels of depression, anxiety, and stress may be more prone to use food as a means of regulating their emotions, highlighting the interconnection between mental health and eating habits, and the need to consider both dimensions together when addressing eating disorders.

Moreover, the significant impact of these predictors reflects how emotional distress can directly influence eating behaviors, suggesting that psychological disorders such as depression, anxiety, and stress may be factors that modulate individuals' responses to negative emotions. This finding underscores the importance of understanding emotional eating not merely as a behavioral response, but also as a manifestation of emotional and psychological difficulties that individuals face. In this context, emotional eating emerges as a potentially dysfunctional mechanism for coping with stress and negative emotions, revealing the complexity of the psychological and behavioral factors involved in emotion regulation through food.

To address emotional eating from a holistic perspective, it is necessary to develop intervention programs that focus not only on eating behaviors but also on the management of psychological distress. Programs that promote emotional regulation and the management of anxiety, depression, and stress may be highly useful in preventing or treating emotional eating. These programs should include adaptive coping techniques such as meditation, mindfulness, or cognitive-behavioral therapy, which allow individuals to identify and manage their emotions in a healthier way without resorting to food as a means of escape. Furthermore, it is important to consider the social and environmental context, as these factors can influence emotional responses and eating habits.

Additionally, education on the negative effects of emotional eating should be a fundamental part of prevention campaigns. Promoting a balanced perspective on food and mental health within educational and community settings can help reduce the stigma surrounding psychological disorders related to eating. Creating spaces where individuals can openly discuss stress, anxiety, and depression, as well as their possible manifestations in eating habits, can foster greater awareness and understanding of the issue. Likewise, healthcare professionals must be trained to identify and address the relationship between psychological disorders and emotional eating at an early stage, ensuring that individuals receive appropriate and personalized treatment.

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