

Psychological distress as a predictor of emotional exhaustion in university students: a cross-sectional study

Distresse psicológico como predictor do cansaço emocional em estudantes universitários: um estudo transversal

Distrés psicológico como predictor del cansancio emocional en estudiantes universitarios: un estudio transversal

Edwin Gustavo Estrada-Araoz

<https://orcid.org/0000-0003-4159-934X>

Professor and Researcher at the Universidad Nacional Amazónica de Madre de Dios (UNAMAD), Peru

gestrada@unamad.edu.pe (correspondence)

Néstor Antonio Gallegos-Ramos

<https://orcid.org/0000-0003-1436-9207>

Professor and Researcher at the Universidad Nacional Amazónica de Madre de Dios (UNAMAD), Peru

María Isabel Huamani-Pérez

<https://orcid.org/0000-0002-9226-4083>

Professor and Researcher at the Universidad Nacional Amazónica de Madre de Dios (UNAMAD), Peru

Yasser Malaga-Yllpa

<https://orcid.org/0000-0003-0220-8297>

Professor and Researcher at the Universidad Andina del Cusco (UAC), Peru

Jhemy Quispe-Aquise

<https://orcid.org/0000-0001-6339-3399>

Professor and Researcher at the Universidad Nacional Amazónica de Madre de Dios (UNAMAD), Peru

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Psychological distress predicts emotional exhaustion in Amazonian university students, highlighting the need for culturally tailored support programs enhancing coping strategies and stress reduction.

Originality/value:

This study provides evidence on the predictive role of psychological distress on emotional exhaustion in Amazonian university students, offering key insights for future interventions and studies.

ABSTRACT

Background: This research is predictive and aims to determine if psychological distress predicts emotional exhaustion in a sample of university students from the Peruvian Amazon. **Methods:** The study employed a quantitative approach with a non-experimental predictive cross-sectional design. The sample consisted of 163 students who completed the Psychological Distress Scale and the Emotional Exhaustion Scale, both instruments with adequate levels of validity and reliability. **Results:** Initially, it was found that the predominant level of psychological distress and emotional exhaustion was moderate. Furthermore, it was determined that both variables correlated directly and significantly ($r = 0.549$; $p < 0.05$). Additionally, simple linear regression analysis demonstrated a good fit of the model ($F = 117.055$; $p < 0.05$), where psychological distress ($\beta = 0.549$; $p < 0.05$) explained 29.8% of the total variance in emotional exhaustion. **Conclusions:** It was concluded that psychological distress predicts emotional exhaustion in a sample of university students from the Peruvian Amazon. This suggests that higher levels of psychological distress are directly associated with increased levels of emotional exhaustion among university students. Therefore, it is recommended to develop psychological and emotional support programs within universities, focusing on coping techniques and stress reduction tailored to the cultural and environmental specificities of the context.

Keywords: psychological distress; emotional exhaustion; university students; mental health; higher education.

RESUMO

Introdução: Esta pesquisa é preditiva e tem como objetivo determinar se o distresse psicológico prediz o cansaço emocional em uma amostra de estudantes universitários da Amazônia peruana. **Métodos:** O estudo adotou uma abordagem quantitativa, com um design não experimental e do tipo preditivo de corte transversal. A amostra consistiu de 163 estudantes aos quais foram aplicadas a Escala de Distresse Psicológico e a Escala de Cansaço Emocional, instrumentos com níveis adequados de validade e confiabilidade. **Resultados:** Preliminarmente, constatou-se que o nível predominante de distresse psicológico e cansaço emocional era moderado. Além disso, foi determinado que ambas as variáveis se correlacionavam de maneira direta e significativa ($r = 0,549$; $p < 0,05$). Por outro lado, a análise de regressão linear simples mostrou um ajuste adequado do modelo ($F = 117,055$; $p < 0,05$), no qual o distresse psicológico ($\beta = 0,549$; $p < 0,05$) explicou 29,8% da variância total do cansaço emocional. **Conclusões:** Concluiu-se que o distresse psicológico prediz o cansaço emocional em uma amostra de estudantes universitários da Amazônia peruana. Isso sugere que níveis mais altos de distresse psicológico estão diretamente relacionados a maiores níveis de cansaço emocional entre os estudantes universitários. Portanto, recomenda-se desenvolver programas de apoio psicológico e emocional dentro das universidades, focados em técnicas de enfrentamento e redução do estresse, adaptados às particularidades culturais e ambientais do contexto.

Palavras-chave: Angústia psicológica; cansaço emocional; estudantes universitários; saúde mental; educação superior.

RESUMEN

Antecedentes: La presente investigación es predictiva y tiene como objetivo determinar si el distrés psicológico predice el cansancio emocional en una muestra de estudiantes universitarios de la Amazonía peruana. **Métodos:** La investigación adoptó un enfoque cuantitativo, el diseño fue no experimental y el tipo, predictivo de corte transversal. La muestra estuvo conformada por 163 estudiantes a quienes se les aplicó la Escala de Distrés Psicológico y la Escala de Cansancio Emocional, instrumentos con adecuados niveles de validez y confiabilidad. **Resultados:** Preliminarmente, se halló que el nivel predominante de distrés psicológico y cansancio emocional era moderado. Además, se determinó que ambas variables se correlacionaban de manera directa y significativa ($r = 0,549$; $p < 0,05$). Por otro lado, el análisis de regresión lineal simple mostró un ajuste adecuado del modelo ($F = 117,055$; $p < 0,05$), en el que el distrés psicológico ($\beta = 0,549$; $p < 0,05$) explicó el 29,8% de la varianza total del cansancio emocional. **Conclusiones:** Se concluyó que el distrés psicológico predice el cansancio emocional en una muestra de estudiantes universitarios de la Amazonía peruana. Esto sugiere que niveles más altos de distrés psicológico están directamente relacionados con mayores niveles de cansancio emocional entre los estudiantes universitarios. Por lo tanto, se recomienda desarrollar programas de apoyo psicológico y emocional dentro de las universidades, enfocados en técnicas de afrontamiento y reducción del estrés, adaptados a las particularidades culturales y ambientales del contexto.

Palabras clave: distrés psicológico; cansancio emocional; estudiantes universitarios; salud mental; educación superior.

INTRODUCTION

University higher education involves a series of challenges and demands that can have a significant impact on the mental health of students (Parichua et al., 2024). The process of adapting to a new academic environment, high performance expectations, constant pressure to excel, and peer competition are some of the most common stressors faced by college students (Souza et al., 2017). In addition, the effort to balance academic, social, and personal responsibilities can be extremely challenging, especially for those who also work or have other obligations outside the university setting (Córdova et al., 2023). These multiple challenges, in addition to negatively affecting students' general well-being and academic performance (Farfán et al., 2023), can lead to a phenomenon that is quite recurrent in the context described: psychological distress.

Psychological distress is defined as the uncomfortable and unique emotional state experienced by an individual in response to a specific stressor or demand, which may result in temporary or permanent harm (Ridner, 2004). It is further conceptualized as a state of emotional distress characterized by symptoms of depression, such as loss of interest, unhappiness, or despair, and symptoms of anxiety, such as restlessness or a feeling of tension (Granieri et al., 2021). Although psychological distress does not constitute a nosological picture, it encompasses a variety of clinical manifestations and focuses on symptoms of depression and anxiety, which are the prelude to various disorders of greater severity and maintain high rates of comorbidity (Gallegos et al., 2019).

Psychological distress arises from exposure to a stressful event that may affect physical or mental health. This state is characterized by the inability to effectively manage the stressor and the emotional chaos that emerges from ineffective coping (Horwitz, 2007). In addition, psychological distress allows obtaining valuable information about self-perceived thoughts, feelings and behaviors, which could configure a mental health problem (Carranza et al., 2022a).

Among college students, psychological distress is associated with a variety of factors in various domains, including economics, social communication, academic pressure, and coping skills (Li et al., 2020). The rapid development of higher education and the high expectations imposed put great pressure on students (Ip et al., 2016). However, discussions of psychological distress in this context are limited and mainly conducted in Western societies (Tang et al., 2018).

Psychological distress could also lead to the development of other conditions, such as emotional exhaustion. Emotional exhaustion is defined as a psychological state, where a decrease in energy, a feeling of emotional and physical exhaustion and a perception of frustration and failure predominate (Carranza et al., 2023). This state can arise when a person faces constant emotional demands without having the time or resources to recover (Galbán et al., 2021). In addition, Maslach & Jackson (1981) describe it as one of the dimensions of burnout syndrome, along with depersonalization and decreased personal accomplishment. It is important to note that emotional exhaustion is the predominant dimension among university students, as the other two dimensions of burnout syndrome are not significantly observed in this population (Domínguez & Merino, 2018).

Currently, emotional exhaustion is considered a response to chronic stress, particularly in work and academic contexts, where demands can be overwhelming (Seperak et al., 2021). Manifestations of emotional exhaustion include feelings of overload, mental and emotional fatigue, decreased motivation, and difficulty concentrating (Barreto & Salazar, 2021). Individuals experiencing it may feel emotionally worn out and less able to engage with studies effectively (Carranza et al., 2022b). This condition may also be accompanied by physical symptoms such as headaches, sleep disturbances, and gastrointestinal problems (Maslach & Leiter, 2016).

According to several studies, there is a positive relationship between emotional exhaustion and various factors such as depression, anxiety, academic stress, self-blame, evaluation anxiety, catastrophizing, rumination, and suicidal ideation (Jiménez et al., 2019; Huber et al., 2023). In addition, emotional exhaustion has been found to be negatively associated with self-esteem, academic self-efficacy, emotional intelligence, and engagement (Méndez et al., 2020; Rigg et al., 2013). This phenomenon highlights the critical need to address these factors through mental health interventions in order to mitigate the associated adverse effects.

This research is relevant because it addresses a recurrent problem in the academic and mental health of university students in the Peruvian Amazon. Given the academic context of this population, it is crucial to identify how psychological distress, characterized by elevated levels of anxiety, depression or other emotional symptoms, may influence the development of emotional exhaustion, which negatively affects well-being and academic performance. This analysis can provide relevant information for the design of interventions aimed at improving students' mental health, promoting stress management strategies and emotional support to ensure a healthier academic environment conducive to learning.

The relevance of this investigation is further underscored by existing literature which highlights similar phenomena in different contexts and populations, emphasizing the importance of psychological well-being and its impact on various aspects of life and performance.

For instance, Kanten and Yesiltas (2015) demonstrated that positive perfectionism positively affects work engagement and psychological well-being, whereas negative perfectionism adversely affects psychological well-being, indirectly influencing emotional exhaustion through mediating factors. Similarly, Esteban et al. (2022) found that psychological distress and workload significantly predict satisfaction with life among Peruvian female university professors with family burdens, emphasizing the multifaceted impacts of psychological distress. Moreover, research by Esteban et al. (2023) on healthcare personnel during the COVID-19 pandemic indicated that psychological distress is significantly predicted by concerns about infection and workload, highlighting the pervasive nature of psychological distress across different professions and settings. Liu and Yu (2019) further elucidated the relationship between emotional stability, emotional exhaustion, and job stressors, suggesting that emotional stability can mitigate the effects of emotional exhaustion, particularly under high-stress conditions.

Additional studies have explored various factors contributing to emotional exhaustion and psychological distress. For example, Rubio et al. (2015) examined the reciprocal relationship between work-family conflict and emotional exhaustion, highlighting the complex interplay between personal and professional stressors. Chen et al. (2020) investigated how work engagement and personality traits influence emotional exhaustion, demonstrating that conscientiousness and emotional stability can either exacerbate or alleviate emotional exhaustion depending on individual differences. Furthermore, Altintas et al. (2022) explored the impact of the COVID-19 pandemic on nursing home staff, revealing significant levels of distress and emotional exhaustion related to fear of infection. Lin et al. (2021) identified distinct psychological distress profiles among U.S. college students, emphasizing the importance of targeted mental health interventions for different subgroups. Lastly, Gilbert et al. (2023) examined the predictors and outcomes of psychological distress profiles among undergraduate students, underscoring the critical role of a supportive educational climate and individual traits like self-control in mitigating distress and promoting adaptive outcomes. These studies underscore the crucial importance of comprehending and tackling psychological distress and emotional exhaustion across diverse contexts and populations, thereby presenting compelling evidence for the development of effective mental health interventions.

The purpose of this study is to examine if psychological distress is a predictor of emotional exhaustion among university students from the Peruvian Amazon. The goal is to enhance our understanding of mental well-being in academic environments and to help create interventions that specifically assist students in their mental health and academic achievement.

METHODOLOGY

Design

A quantitative approach was used, which implied the collection and analysis of numerical data. The design was non-experimental, since no intentional manipulation of the variables was carried out; only observations and recordings were made in their natural context. In addition, the study was framed as cross-sectional predictive, since it sought to determine whether psychological distress predicted emotional exhaustion and because data collection occurred at a single point in time, respectively (Hernández & Mendoza, 2018).

Population and sample

The population consisted of 947 students enrolled in the 2023-II cycle at a private university located in the city of Puerto Maldonado (Peru), while the sample consisted of 274 students, selected by probability sampling with a 95% confidence level and a significance level of 5%. Of these participants, 57.3% were women and 42.7% were men. Regarding the age group to which they belonged, 68.2% were between 16 and 25 years old, 22.3% were between 26 and 35 years old, while 9.5% were over 35 years old. With regard to their professional career, 35.4% were studying law, 34.7% administration and 29.9% accounting.

Table 1. Distribution of the sample

Variables	Sociodemographic characteristics	n= 274	%
Sex	Man	117	42.7
	Woman	157	57.3
Age	Between 16 and 25 years old	187	68.2
	Between 26 and 35 years old	61	22.3
	More than 35 years old	26	9.5
Professional Career	Administration	95	34.7
	Accounting	82	29.9
	Law	97	35.4

Source: Own elaboration

Instruments

Regarding the instruments used for data collection, a structured form was used through the Google Forms platform. In the first section, students were required to provide sociodemographic information, which included sociodemographic variables such as gender, age, and professional career.

In the second section, the Psychological Distress Scale (Kessler et al., 2003) was applied. This instrument assesses anxiety and depression by means of the frequency of nonspecific symptoms during the last 30 days. The scale is unifactorial and consists of 10 items that are scored quantitatively on a 5-point Likert scale, ranging from 1 (never) to 5 (always). Research conducted in Peru (Estrada et al., 2023a) determined that this scale has adequate levels of content-based validity (Aiken's V= 0.845) and reliability ($\alpha= 0.862$).

In the third section, the Emotional Fatigue Scale was administered, designed to assess the feeling of being emotionally exhausted due to academic demands (Gonzales & Landero, 2007). This single-factor instrument also consists of 10 items on a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). A previous study (Estrada et al., 2024) established that this scale has an adequate level of content-based validity (Aiken's V= 0.902) and reliability ($\alpha= 0.911$).

Procedures

Prior to data collection, authorization was sought and obtained from the university authorities. Subsequently, students were invited to participate in the research via WhatsApp, providing them with a link to the survey and explaining the purpose of the study. Their informed consent was requested and they were offered guidance to complete the instruments. This process took approximately 20 minutes. After confirming the participation of 274 students, access to the survey was disabled to ensure data integrity.

Data analysis

SPSS V.25 software was used for data analysis. Initially, descriptive statistics were calculated for each study variable, including mean, standard deviation, kurtosis and skewness. Subsequently, Student's t-test was used to determine whether there were statistically significant differences between the psychological distress and emotional exhaustion scores according to the sex of the participants. Then, a Pearson correlation analysis was performed to evaluate the relationships between these variables ($p<0.05$). Finally, a simple linear regression analysis was performed to investigate whether psychological distress predicts the level of emotional exhaustion experienced by the students.

Ethical aspects

The study was conducted following the ethical principles of the Declaration of Helsinki. Students were informed about the purpose and nature of the research, and their informed consent was obtained on a voluntary basis. Likewise, the anonymity of the participants was guaranteed, assuring them that their identities would not be revealed and that they could withdraw from the study at any time without consequences. These measures were essential to protect the rights and confidentiality of the participants' data.

RESULTS AND DISCUSSION

Table 2 shows the descriptive statistics for the variables psychological distress and emotional fatigue. In the case of psychological distress, the mean was 3.06 (SD= 0.819) and was categorized at a moderate level considering the maximum and minimum value. Regarding emotional exhaustion, the mean was 3.29 (SD= 0.861) and was also categorized at a moderate level. On the other hand, it is observed that the skewness and kurtosis coefficients of the two variables are within the range of ± 1.5 ; which suggests that the data tend to follow a normal distribution.

Table 2. Descriptive analysis of the variables psychological distress and emotional exhaustion

Variables	AVG	SD	Asymmetry	Kurtosis
Psychological distress	3.06	0.819	0.206	-0.224
Emotional fatigue	3.29	0.861	0.523	-0.275

Note. Own elaboration (2024)

Table 3 shows the t-test for independent samples. In this sense, it can be seen that there are statistically significant differences between men and women with respect to the variable emotional exhaustion ($p<0.05$). This means that the level of emotional exhaustion in women (M=3.47; SD= 0.876) was slightly higher than that of men (M=3.11; SD= 0.864). In the case of the variable psychological distress, no statistically significant differences were reported ($p>0.05$).

Table 3. Psychological distress and emotional exhaustion among men and women

Variables	Men		Women		t	p
	M	DE	M	DE		
Psychological distress	3.01	0.811	3.11	0.825	4.597	0.073
Emotional fatigue	3.11	0.864	3.47	0.876	3.614	0.011

Legend. M= Mean/AVG; SD= Standard deviation; t= Student's t; p= p-value.
Note. Own elaboration (2024).

Following Table 4, the most frequent symptoms associated with psychological distress included the feeling that any activity required great effort (M=3.57; SD= 0.891), a restlessness that prevented one from keeping calm (M=3.34; SD= 0.902), and a feeling of exhaustion for no apparent reason (M=3.22; SD= 0.819).

Table 4. Descriptive analysis of the Psychological Distress Scale items

Items	M	SD
1. How often have you felt exhausted for no apparent reason?	3.22	0.819
2. How often have you felt nervous?	3.09	0.801
3. How often have you felt so nervous that nothing could calm you down?	2.31	0.833
4. How often have you felt hopeless?	2.75	0.806
5. How often have you felt restless or uneasy?	2.59	0.813
6. How often have you felt so impatient that you couldn't keep still?	3.34	0.902
7. How often have you felt depressed?	3.03	0.872
8. How often have you felt that everything was an effort?	3.57	0.891
9. How often did you feel so sad that nothing could cheer you up?	2.62	0.816
10. How often have you felt useless?	2.82	0.854

Legend. M= Mean/AVG; SD= Standard deviation.
Note. Own elaboration (2024).

According to Table 5, the symptoms of emotional exhaustion that students reported most frequently were feeling exhausted at the end of the study day (M=3.78; SD= 0.874), getting stressed thinking about exams (M=3.40; SD= 0.872) and not sleeping well due to studying (M=3.38; SD= 0.823).

Table 5. Descriptive analyses of the items of the Emotional Fatigue Scale

Items	M	SD
1. Exams cause me undue stress.	3.27	0.819
2. I think I try too hard for the little I get out of it.	2.88	0.799
3. I feel low in mood, kind of sad, for no apparent reason.	2.47	0.785
4. There are days when I don't sleep well because of studying.	3.38	0.823
5. I have headaches and other discomforts that affect my performance.	2.59	0.750
6. There are days when I feel more fatigue, and I lack the energy to concentrate.	3.36	0.823
7. I feel emotionally drained by my studies.	3.22	0.832
8. I feel tired at the end of the study day.	3.78	0.874
9. Thinking about exams gives me stress.	3.40	0.872
10. I lack time and I feel overburdened by my studies.	3.10	0.833

Legend. M= Mean/AVG; SD= Standard deviation.
Note. Own elaboration (2024).

Table 6 shows that the Spearman's rho correlation coefficient between the variables psychological distress and emotional fatigue is 0.549, with a p-value below the significance level (p<0.05). The positive correlation coefficient, which is between 0 and 1, indicates a direct and moderate correlation between the variables analyzed. This suggests that when the level of psychological distress experienced by a person increases, his or her level of emotional fatigue also tends to increase.

Table 6. Descriptive analyses of the items of the Emotional Fatigue Scale.

	Psychological distress	Emotional fatigue
Psychological distress	Pearson correlation	1
	Sig. (bilateral)	0.549**
	N	274
Emotional fatigue	Pearson correlation	0.549**
	Sig. (bilateral)	0.000
	N	274

Note: **. Correlation is significant at the 0.01 level (bilateral).

Table 7 presents the correlation coefficient (R), the coefficient of determination (R^2), the adjusted coefficient of determination, the estimate of the standard error (SE) and the F value obtained by the ANOVA test. According to the results, the adjusted coefficient of determination R^2 was 0.298, indicating that psychological distress explains 29.8% of the total variability of emotional exhaustion. Furthermore, the F value was 117.055 ($p < 0.05$), thus suggesting a significant linear relationship between psychological distress (as a predictor variable) and emotional exhaustion (as a dependent variable).

Table 7. Summary of the predictive model.

Model	R	R square	Adjusted R-squared	Standard error	F	p
1	0,549 ^a	0,301	0,298	3,504	117,055	0,000

Note. Predictor= (Constant), Psychological distress

A simple linear regression analysis was performed in Table 8, where emotional exhaustion was included as the dependent variable and psychological distress as the independent or predictor variable. The results show the unstandardized regression coefficients (B), the standardized regression coefficients (β) and other statistical coefficients related to the predictor variable. The coefficient β (0.549) indicates that psychological distress significantly predicts emotional exhaustion. In addition, the t-value of the beta regression coefficient of the predictor variable was found to be statistically significant ($p < 0.05$).

Table 8. Multiple regression coefficients B (unstandardized), β (standardized) and t-test.

Model	Unstandardized coefficients		Standardized coefficients	t	p
	B	Standard error	Beta		
1 (Constant)	12.553	1.141		11.002	0.000
Psychological distress	0.475	0.044	0.549	10.819	0.000

Note. a. Dependent variable= Emotional fatigue.

Discussion

In the university context, psychological distress is particularly relevant due to the high academic demands, the pressure to obtain good results and the need to adapt to new social and educational environments. Therefore, the present study sought to determine whether psychological distress predicts emotional exhaustion in a sample of university students from the Peruvian Amazon.

Preliminarily, it was found that psychological distress was rated by students at a moderate level, indicating that, although they are not in a state of severe distress, a considerable number of students are experiencing a significant level of emotional distress. This level of distress could affect their overall well-being and academic performance. Similar results were obtained in a research conducted in Peru, where it was found that 40.5% of students experienced moderate levels of psychological distress (Estrada & Mamani, 2024). This finding could be explained mainly by the academic pressure derived from exams, expositions and assignments that characterize university higher education, as well as by personal and family problems. Similarly, these results are congruent with the findings of a study developed in Taiwan, where it was identified that students suffered from psychological distress at a moderate level (Castro et al., 2023).

Regarding emotional fatigue, it was identified that the predominant level was also moderate, which means that the students, with some frequency, felt mentally exhausted at the end of their classes and occasionally found themselves without energy, unfocused and worried. This situation is probably due to academic overload and the limited time they had to fulfill their responsibilities. This result is similar to the findings of a research conducted in Peru, which revealed that the level of emotional fatigue among students was moderate (Estrada et al., 2023b). The most common symptoms were an increased feeling of fatigue and lack of energy to concentrate, emotional exhaustion related to studies, and stress at the thought of exams. Likewise, these results are consistent with the findings of a research conducted in Peru, where it was found that the level of emotional exhaustion reported by private university students was average (Seperak et al., 2021).

Another emerging result shows that the level of emotional exhaustion in women was slightly higher than in men. This could be due to the fact that women tend to experience higher levels of stress and often manifest their emotions and physiological responses more frequently (Vidal et al., 2018). On the other hand, in addition to their academic commitments, they also often take on additional responsibilities at home, such as caring for the family and performing household chores (Rodriguez et al., 2019). Therefore, the combination of these factors may contribute to a higher level of emotional exhaustion in women compared to men.

An interesting finding shows that psychological distress predicts emotional exhaustion, indicating that elevated levels of stress and emotional distress may be a determinant of emotional exhaustion. This suggests that proper stress management and improvement of psychological well-being could be effective strategies to reduce emotional exhaustion among college students. Several investigations support our findings (Emerson et al., 2023; Andargeery et al., 2024; March et al., 2022; Chen et al., 2022).

The findings also align with and extend upon existing literature on psychological distress and emotional exhaustion among university students. Similar to our results, Castro et al. (2023) reported moderate levels of psychological distress in a sample of university students from Taiwan, highlighting the pervasive nature of academic pressure and its impact on students' mental health across different cultural contexts. Furthermore, Estrada and Mamani (2024) observed that 40.5% of Peruvian students experienced moderate psychological distress, suggesting that this issue is particularly pronounced in regions with high academic demands and familial responsibilities. These consistent findings across diverse populations underscore the global relevance of addressing psychological distress in academic environments and call for interventions aimed at reducing stressors and promoting student well-being.

Additionally, the study's revelation that emotional exhaustion is significantly higher in women than in men mirrors the results of Rodriguez et al. (2019), who found that women often juggle multiple roles, including academic responsibilities and household duties, contributing to greater emotional fatigue. This gender disparity in emotional exhaustion is further corroborated by Vidal et al. (2018), who emphasized that women tend to exhibit higher stress levels and more pronounced emotional responses. The positive correlation between psychological distress and emotional exhaustion observed in this study is also supported by the stress-recovery model proposed by Hobfoll (1989) and the emotional exhaustion model by Maslach and Leiter (1997), both of which posit that chronic stress depletes personal and emotional resources, leading to burnout. Consequently, the findings advocate for targeted support systems and stress management strategies to mitigate emotional exhaustion, particularly among female students who may face additional stressors.

That models are applicable to the university context, where high academic demands, performance pressure, and other stressors can contribute significantly to psychological distress and thus emotional exhaustion. In addition, the emotional exhaustion model initially developed in the work setting has also been applied to the academic context to explain how excessive demands and lack of adequate resources can lead to decreased engagement and an increased sense of emotional exhaustion among college students (Maslach & Leiter, 1997).

CONCLUSIONS

From the results found, it can be concluded that psychological distress predicts emotional exhaustion in a sample of university students from the Peruvian Amazon. According to the simple linear regression analysis, there is an adequate fit for the model ($F= 117.055$; $p<0.05$), where psychological distress ($\beta= 0.549$; $p<0.05$) explained 29.8% of the total variance of emotional exhaustion. These findings suggest that higher levels of psychological distress are directly related to higher levels of emotional exhaustion among college students.

Therefore, it is recommended to implement interventions aimed at improving stress management and promoting mental health. In this sense, it is crucial to develop psychological and emotional support programs within universities, focused on coping and stress reduction techniques, adapted to the cultural and environmental particularities of the context. In addition, it is suggested to integrate mental health education and awareness activities into the academic curriculum in order to strengthen resilience and self-care skills among students. These initiatives could not only help mitigate the impact of psychological distress on students' emotional well-being, but also foster a healthier academic environment conducive to learning.

Main limitations of the study and future research

This study has certain limitations that should be considered when interpreting its results. First, we worked exclusively with a specific university, which restricts the generalizability of the findings to other universities. In addition, the sample was homogeneous in terms of demographic and academic characteristics, which could limit the representativeness of the student population as a whole. On the other hand, data collection was conducted using two surveys, which may introduce social desirability biases, where participants may have responded in a way that reflects what they consider socially acceptable rather than their actual experiences or feelings. These limitations underscore the need for caution in interpreting the results and suggest areas for future research involving more diverse samples and more varied data collection methods.

The Table 9 below outlines a proposed research agenda, highlighting studies aimed at exploring the factors influencing psychological distress and emotional exhaustion among university students in diverse regions. These studies seek to deepen our understanding of the variables involved and suggest potential interventions.

Table 9. Proposed agenda for future research

Future Study	Dependent Variable	Independent Variable(s)	Methods	Context
Impact of academic support services	Emotional exhaustion	Access to academic support services	Surveys, interviews, longitudinal	University students across various regions
Gender differences in stress management	Psychological distress, emotional exhaustion	Gender, stress management strategies	Surveys, experimental	University settings
Role of family support in mental health	Psychological distress	Level of family support	Surveys, case studies	University students with varying family backgrounds
Effects of physical exercise on stress	Psychological distress, emotional exhaustion	Frequency and type of physical exercise	Surveys, randomized control trials	University students from diverse campuses

Note. Own elaboration (2024).

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B. data research and statistical analysis:	40%	15%	15%	15%	15%
C. elaboration of figures and tables:	40%	15%	15%	15%	15%
D. drafting, reviewing and writing of the text:	40%	15%	15%	15%	15%
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