Academic Burnout in Peruvian University Students

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Academic burnout is a persistent disorder characterized by fatigue that affects academic performance and student motivation. The objective was to analyze academic burnout in Peruvian university students, comparing the results with the socio-academic characteristics of the students, such as age, sex, area and year of study. The study was descriptive, quantitative, non-experimental – ex-post facto. 1241 university students participated and were selected intentionally, and the Maslach Burnout Student Survey Inventory (MBISS) Peruvian validation was applied. High scores were found regarding emotional exhaustion and depersonalization, and low scores on personal accomplishment, determined the presence of academic burnout in the students. It is concluded that academic burnout is associated with gender (women), age (under 18 years old) and area of study (social sciences), being these students those who develop greater exhaustion, depersonalization and personal fulfillment.

Keywords: academic burnout, university students, burnout, depersonalization, personal fulfillment

INTRODUCTION

Academic demands in university educational institutions cause severe repercussions on students' health (Seperak-Viera et al., 2021) impairing the academic, physical and mental performance of university students (Puertas-Neyra et al., 2020). Therefore, the different academic activities wear out and exhaust students, evidencing disinterest, self-sabotage, feelings of incompetence and general discomfort, situations that increased during the pandemic and still continue to impact academic development (Comella et al., 2022; Xiong et al., 2020; Pérez et al., 2020).

In that sense, academic burnout syndrome is a persistent disorder characterized by fatigue that affects the student's academic performance and motivation, leads to a decrease in academic performance and affects other aspects of life, both physically and mentally. It can be manifested in three aspects: emotional exhaustion, depersonalization and lack of personal fulfillment (Ardiles-Irarrázabal et al., 2022; Avecillas et al., 2021; Zumárraga & Ceballos, 2023).

In this regard, the study dimensions also categorized and adapted in Maslach's study (1976), explain that the academic exhaustion dimension, originates from the academic demands or requirements decreasing the student's commitment (Alvarez-Pérez & López-Aguilar, 2021). The cynicism or depersonalization dimension is focused on the cynical attitude taken towards studies (Salazar et al., 2021); and the student's self-fulfillment dimension is based on the affection of their self-efficacy beliefs demonstrating incompetence, all of which is evidenced by the presence of psychosomatic and cognitive symptoms and behavioral problems (Amor et al., 2020; Ardiles-Irarrázabal et al., 2022).

From the review of previous studies, most of the research in Peru, relates burnout with academic stress highlighting that a significant percentage suffer high levels of academic stress resulting from the demands of the activities requested by teachers (excessive amount of tasks, unclear indications, little time for presentation and little information to assume such responsibility) stressors that are distinguished by gender, age, area of study and occupation of students, in addition, that stress symptoms are evident in physical and mental health (Calizaya-López et al.,2022; Estrada et al., 2021).

In this regard, in Peru there is little current scientific evidence that explains the behavior of academic burnout, finding some studies that reveal this situation: the prevalence and severity of academic burnout in university students during the pandemic was reported, finding a high level of burnout, with women scoring higher, finding no differences by year of study, concluding that burnout is associated with anxiety and depression (Seperak-Viera et al., 2021); Estrada et al. (2021) described academic burnout in students at a public university, finding that most students exhibited moderate levels of burnout and that gender, age group, employment status and year of study are significantly associated with burnout. Also, personality and burnout in university students were analyzed, finding that personality traits significantly explain emotional exhaustion, considering that poor coping with academic stress has harmful consequences on the psychological health of students (Prada-Chapoñan et al., 2020). Puertas-Neyra et al. (2020) determined the prevalence and factors associated with academic burnout, explaining that students display severe levels of emotional exhaustion and cynicism, finding some factors such as year of study, gender, alcohol and tobacco

consumption are associated with burnout, also suggesting that sleep quality, sports practice and adequate housing may be the support to reduce burnout levels.

In accordance with what has been described, it is necessary to continue researching academic burnout in the university environment in order to understand the true behavior to continue accumulating scientific evidence, allowing to understand how the socio-academic characteristics differentiate or not the presence of burnout in the selected sample, in addition, it may allow making objective decisions through the programs of attention to the student's university welfare that can help to address this problem and set goals to reduce the high rates of academic stress.

Therefore, the objective was to analyze academic burnout in Peruvian university students by comparing the results with the socio-academic characteristics of the students such as: age, sex, area and year of study.

METHODOLOGY

The study was descriptive, quantitative, non-experimental- ex post facto (Román & Smida, 2017), the data collection was conducted during the months of May to July 2023.

Participants
A total of 1455 university students from one public and two private universities in the city of Arequipa - Peru participated, 214 surveys were identified with error being the real sample (n=1241). Undergraduates were selected intentionally, including students who were enrolled in 2023, attended regularly and participated voluntarily, excluding students who did not wish to participate and who did not attend classes regularly.

Instrument
The Maslach Burnout Student Survey (MBISS) inventory was used, validated for Peruvian students by Bellido et al. (2022); which is a questionnaire for the evaluation of academic burnout syndrome of collective and individual application. It evaluates the feeling of not being able to give more of oneself, both physically and psychologically (burnout), the presence of a negative attitude of devaluation and loss of interest in studying (cynicism) and the existence of doubts about one's own ability to perform academic work (academic self-efficacy). All items in each of these three subscales are scored on a 7-point value scale, ranging from 0 (never) to 6 (always). The scale validated in Peru obtained results that indicate that the test has a factorial structure of three dimensions: emotional exhaustion, personal fulfillment and depersonalization. The omega coefficient for the three factors reveals high reliability indicators (0.89). It is concluded that the inventory shows adequate validity and reliability indicators for the measurement of burnout syndrome in university students in the Peruvian context. For the reliability of the instrument to the local sample, the Omega test was used (McDonald, 2013; Ventura-León, 2017), finding a coefficient of 0.85, demonstrating high reliability. In addition, socio-academic attributes were added to the scale for comparison of academic burnout results.

Procedure
In order to apply the instrument to the selected sample, formal authorization was requested from the educational institutions, coordination was made with the teachers so that they would allow the application of the scale in strategic hours, then the students were contacted to explain the purpose of the research, the instructions of the instrument, the confidentiality of the data, accepting to participate voluntarily and signing the respective informed consent.

Data Analysis
The distribution, skewness, kurtosis and normality of the data were analyzed with the Kolgomorov-Smirnov test, finding that there is no normal distribution (p<0.000). Therefore, the use of nonparametric tests was considered. A descriptive and comparative analysis of burnout syndrome was performed according to gender, university, academic area and year of study.

In order to compare two independent samples, the Mann-Whitney U was used with its respective effect size (ES), the calculation of the superiority probability (P_{Sest}) was performed, obtaining that the interpretation standards are: no effect ($P_{Sest} \leq = 0.0$), small ($P_{Sest} \geq 0.56$), medium ($P_{Sest} \geq 0.64$) and large ($P_{Sest} \geq 0.71$) (Rendon-Macias et al., 2021). Comparison of k independent samples was performed with Kruskal Wallis H and Pos Hoc tests, their effect size used was epsilon squared (ε^2) (Tomczak & Tomczak, 2014), with their interpretive norms being small $\varepsilon^2 \geq 0.01$, medium $\varepsilon^2 \geq 0.06$ and large $\varepsilon^2 \geq 0.14$ (Cohen, 1992). The JASP 0.13.1.0 program was used for statistical analysis.

RESULTS

TABLE 1
DESCRIPTIVE ANALYSIS OF ACADEMIC BURNOUT IN UNIVERSITY STUDENTS

Dimensions	M	D	Med.	Min	Max
Academic burnout	5.01	1.41	5.1	0	6
Depersonalization	4.87	1.32	4.1	0	6
Personal fulfillment	2.42	1.25	2.5	0	6

Note: M = Mean; D = Standard deviation; Md = Median; Min. = minimum; Max. = maximum

In Table 1, academic burnout in university students is analyzed, finding high scores in the dimension's academic burnout and depersonalization and low scores in personal fulfillment, indicating that there is academic burnout syndrome, therefore, the large amount of academic activities, cynical behavior towards responsibility as a student and self-sufficiency, highlight the presence of this symptom.

TABLE 2
U-TEST OF ACADEMIC BURNOUT ACCORDING TO STUDENT'S GENDER

Dimensions	Men (n= 521)	Women (n= 720)	Statistical test		P_{Sest}
	Average range	Average range	U	p	
Academic burnout	409.42	415.02	31327.0	0.001	0.46
Depersonalization	427.20	390.51	30112.0	0.000	0.45
Personal fulfillment	453.21	420.60	29530.5	0.001	0.49

Note: n = sample size; M = Mean; U = Mann Withney U; p = significance (0.05); P_{Sest}= Probability of Superiority (effect size).

In Table 2, the results of academic burnout were compared according to the gender of the student through the U-test, finding that women present higher levels of burnout and men greater depersonalization and personal fulfillment, the effect size being small.

TABLE 3
U-TEST OF ACADEMIC BURNOUT ACCORDING TO STUDENT'S AGE

Dimensions	< 18 years old (n= 791)	> 19 years old (n= 450)	Statistical test		P_{Sest}
	Average range	Average range	U	p	
Academic burnout	325.65	268.06	36751.0	0.001	0.39
Depersonalization	298.54	295.38	37654.0	0.000	0.47
Personal fulfillment	301.54	292.40	31358.5	0.002	0.35

Note: n = sample size; M = Mean; U = Mann Withney U; p = significance (0.05); P_{Sest}= Probability of Superiority (effect size).

In Table 3, academic burnout was compared according to the age of the student, finding that students younger than 18 years old show higher levels of burnout, depersonalization and personal fulfillment compared to students older than 19 years old (with a small effect size), with age being an important factor in determining the presence of burnout, finding that the younger the age, the greater the probability of developing the syndrome.

TABLE 4
H-TEST FOR ACADEMIC BURNOUT ACCORDING TO AREA OF STUDY

Dimensions	Social Sciences (n= 565)	Health sciences (n=320)	Science and engineering (n= 356)	Statistical test		ε^2
	Average range	Average range	Average range	U	p	
Academic burnout	295.89	285.41	291.78	16441.0	0.001	0.09
Depersonalization	289.70	278.13	281.99	15743.0	0.001	0.04
Personal fulfillment	285.90	28065	267.96	14936.0	0.010	0.02

Note. N= sample; H= Kruskal Wallis statistic: p= significance (0.05); ε^2= Epsilon squared.

In the table, the results of burnout according to the area of study were compared, finding that students in the social sciences have higher levels of burnout, depersonalization and personal fulfillment compared to students in the social sciences and engineering (small effect size).

CONCLUSIONS

In accordance with the proposed objective, the presence of burnout syndrome was found to be associated with age (women), age (under 18 years old) and area of study (social sciences), being these students those who develop greater exhaustion, depersonalization and personal fulfillment.

It is concluded that the study is original, clearly demonstrating the differences in the behavior of academic burnout among students according to their socio-academic variables, being a significant contribution to the sciences and disciplines that are interested in the different problems that arise in the educational environment in the current context.

Similarly, academic burnout tends to develop more in students in the area of social sciences, especially in the dimensions of emotional burnout and depersonalization, considering the academic demands developed in the specialties of this area. Likewise, the students under 19 years old (from the first cycles) show greater symptoms in the dimensions of emotional burnout, depersonalization and personal fulfillment

than students in the other age groups, due to the fact that they are in the process of adapting to the university environment.

It is considered that academic burnout is a psychological condition experienced by students and is characterized by low motivation and a greater sense of failure due to the inability to cope with stress or excessive academic demands, a situation that would jeopardize the effort they make in the development of their academic activities, as well as their quality of life and personal well-being.

The data obtained and analyzed in this, and other studies highlight the need for effective interventions with university students to improve teaching methods and study habits. In addition, psychoemotional programs and healthy lifestyles should be integrated and enhanced to support students at risk of burnout.

Academic institutions should focus on promoting within the curricular plans the promotion of sports and recreation, considering the relevant factors identified in the research to determine appropriate corrective and preventive actions.

It is important to highlight that the research used a non-probabilistic sample, so the results described should be interpreted with caution, especially when generalizing the results.

It is recommended to carry out regular evaluations of students in order to develop preventive or intervention programs, based on those elements identified as protective factors, such as engagement, self-efficacy, life satisfaction, resilience, among others, that allow obtaining relevant information to explain and deal with the consequences of high burnout, since positive emotional experiences help to better cope with difficulties.

Finally, future longitudinal studies are recommended to determine whether the rates of presence of burnout syndrome are maintained or change over time. It should also be conducted on a broader sample of students, including all diverse majors.

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REFERENCES

Álvarez-Pérez, P.R., & López-Aguilar, D. (2021). El burnout académico y la intención de abandono de los estudios universitarios en tiempos de covid-19. *Revista Mexicana de Investigación Educativa*, *26*(90), 663–689.

Amor, E., Baños, J., & Sentí, M. (2020). Prevalencia del síndrome de burnout entre los estudiantes de medicina y su relación con variables demográficas, personales y académicas. *FEM: Revista de la Fundación Educación Médica*, *23*(1), 25–33. https://dx.doi.org/10.33588/fem.231.1036

Ardiles-Irarrázabal, R., Cortés-Sandoval, C., Diamond-Orellana, S., Gutiérrez-Leal, C., Paucar-Evanan, M., & Toledo-Valderrama, K. (2022). Burnout académico como factor predictivo del riesgo suicida en estudiantes de enfermería. *Index de Enfermería*, *31*(1), 14–18. Retrieved from http://scielo.isciii.es/scielo.php?script=sci_arttext&pid=S1132-12962022000100005&lng=es&tlng=es

Avecillas Cazho, J.A., Mejía Rodríguez, I., Contreras Briceño, J.I., & Quintero de Contreras, Á.M. (2021). Burnout académico. Factores destacados en estudiantes de enfermería. *Revista Eugenio Espejo*, *15*(2), 57–67. https://doi.org/10.37135/ee.04.11.08

Bellido-Medina, R., Evangelista-Aliaga, J.L., Gamarra-Castellanos, M.E., García-Apaza, J.Y., Gonzales-Manrique, E.J., Palao, B.M., & Calizaya-López, J. (2022). Validación de la encuesta de estudiantes del inventario de burnout de Maslach (MBISS) en el contexto académico peruano. *Revista Internacional de Ciencias de la Salud*, *6*(S8), 5609–5616. Retrieved from https://sciencescholar.us/journal/index.php/ijhs/article/view/13551

Cohen, J. (1992). Una imprimación de poder. *Boletín Psicológico*, *112*(1), 155–159. https://doi.org/10.1037/0033-2909.112.1.155

Comella, A., Casas-Baroy, J., Comella-Company, A., Galbany-Estragués, P., Pujol, R., & Marc-Amengual, J. (2021). Burnout y rendimiento académico: Efecto de la combinación de la actividad laboral remunerada e iniciar los estudios de grado universitario. *Retos*, *41*, 844–853. https://doi.org/10.47197/RETOS.V41I0.85971

Estrada, E., Mamani, M., Gallegos, N., Mamani, H., & Zuloaga, M. (2021). *Estrés académico en estudiantes universitarios peruanos en tiempos de la pandemia del COVID-19*. https://doi.org/10.5281/zenodo.4675923

Estrada, E.G., Gallegos, N.A., & Mamani, H.J. (2021). Burnout académico en estudiantes universitarios peruanos. *Apuntes Universitarios*, *11*(2), 48–62. https://doi.org/10.17162/au.v11i2.631

Maslach, C. (1976). Burnout. *Human Behavior*, *5*(9), 16–22.

McDonald, R.P. (2013). *Test Theory. A unified treatment*. New York: Psychology Press.

Pérez, M., Gómez, J., Tamayo, O., Iparraguirre, A., & Besteiro, E. (2020). Alteraciones psicológicas en estudiantes de medicina durante la pesquisa activa de la COVID-19. *Medisan*, *24*(4), 537–548. Retrieved from http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S1029-30192020000400537&lng=es&tlng=es

Prada-Chapoñan, R., Navarro-Loli, J.S., & Domínguez-Lara, S. (2020). Personalidad y agotamiento emocional académico en estudiantes universitarios peruanos: Un estudio predictivo. *Revista Digital De Investigación En Docencia Universitaria*, *14*(2), e1227. https://doi.org/10.19083/ridu.2020.1227

Puertas-Neyra, K., Mendoza T., G., Cáceres L., S., & Falcón P., N. (2020). Síndrome de Burnout en estudiantes de Medicina Veterinaria. *Revista de Investigaciones Veterinarias del Perú*, *31*(2), e17836. https://dx.doi.org/10.15381/rivep.v31i2.17836

Rendón-Macías, M., Zarco-Villavicencio, I., & Villasís-Keever, M.Á. (2021). Métodos estadísticos para el análisis del tamaño del efecto. *Revista Alergia México*, *68*(2), 128–136. https://doi.org/10.29262/ram.v658i2.949

Román Castillo, R., & Smida, A. (2017). Una reflexión ex post facto sobre la conducción de estudios multicaso para la construcción de teoría en ciencias de gestión. *Innovar*, *27*(64), 129–144. https://doi.org/10.15446/innovar.v27n64.62373

Salazar Gómez, J.F., Dolores Ruiz, E., Valdivia Rivera, M. de J., Hernández Cárdenas, M., & Huerta Mora, I.R. (2021). Síndrome de burnout en estudiantes de educación superior tecnológica del campus Tierra Blanca en tiempo de covid-19. *RIDE Revista Iberoamericana Para la Investigación y el Desarrollo Educativo*, *11*(22). https://doi.org/10.23913/ride.v11i22.896

Seperak-Viera, R., Fernández-Arata, M., & Domínguez, S. (2021). Prevalencia y severidad del burnout académico en estudiantes universitarios durante la pandemia por la COVID-19. *Interacciones*, *7*, e199. https://dx.doi.org/10.24016/2021.v7.199

Tomczak, M., & Tomczak, E. (2014). Se revisó la necesidad de informar las estimaciones del tamaño del efecto. Una descripción general de algunas medidas recomendadas del tamaño del efecto. *Trends Sport Sciences*, *1*(21), 19–25.

Ventura-León, J.L. (2017). Intervalos de confianza para coeficiente Omega: Propuesta para el cálculo. *Adicciones*, *30*(1), 77–78. http://dx.doi.org/10.20882/adicciones.962.

Xiong, J., Lipsitz, O., Nasri, F., Lui, L.M.W., Gill, H., Phan, L., . . . Majeed, M. (2020). Impact of COVID-19 pandemic on mental health in the general population: A systematic review. *Journal of Affective Disorders*. Avance online. http://dx.doi.org/10.1016/j.jad.2020.08.001

Zumárraga, M., & Ceballos, G. (2023). Estudio psicométrico del Inventario de Burnout Académico de Maslach (MBI-SS) en el contexto universitario ecuatoriano. *Ansiedad y Estrés*, *29*(2), 78–87. https://doi.org/10.5093/anyes2023a9