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ORIGINAL

High Levels of Burnout and Protective Emotional Resources among Teacher Education Students

Altos niveles de agotamiento y recursos emocionales protectores en estudiantes de pedagogía

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ABSTRACT

Introduction: this study focuses on the development and validation of an instrument designed to evaluate burnout and self-reported emotional skills among early childhood education students in Chile.
Objective: to analyze the relationship between burnout and protective emotional abilities in teacher education students, aiming to strengthen their socioemotional well-being during initial teacher training.
Methods: this research was conducted as a cross-sectional study with a sample of 171 students (92,9 % female), who completed the adapted and validated instruments. To measure burnout, the instrument included (54 items) and to measure emotional skills the instrument included (48 items). Because the data did not follow a normal distribution, descriptive analyses, reliability assessments, confirmatory factor analysis, and non-parametric tests were performed.
Results: Spearman's analysis revealed significant negative correlations between emotional exhaustion and emotional regulation ($\rho = -0,46$, $p < 0,001$) and empathy ($\rho = -0,41$, $p < 0,001$). Depersonalization also showed significant inverse associations with emotional connection and verbal emotional expression. No significant correlations were found for reduced personal accomplishment. No statistically significant differences in burnout were observed by gender or university, although women scored higher in emotional regulation and empathy.
Conclusions: although students possess protective emotional resources, the high levels of burnout observed highlight the need to integrate emotional education programs into initial teacher training. The findings provide relevant evidence to promote socioemotional well-being and to strengthen inclusive and sustainable pedagogical practices in Chilean higher education.

Keywords: Academic Burnout; Emotional Skills; Initial Teacher Education; Socioemotional Well-Being.

RESUMEN

Introducción: este estudio aborda la creación y validación de un instrumento destinado a evaluar el burnout y las habilidades emocionales autorreportadas en estudiantes de pedagogía en primera infancia en Chile. Objetivo. Analizar la relación entre el agotamiento y las habilidades emocionales protectoras en estudiantes de pedagogía para fortalecer su bienestar socioemocional en la formación inicial docente.

Método: se desarrolló un estudio transversal con una muestra de 171 estudiantes (92,9 % mujeres), quienes respondieron instrumentos adaptados y validados para medir burnout (54 ítems) y habilidades emocionales (48 ítems). Se efectuaron análisis descriptivos, de confiabilidad, factorial confirmatorio y pruebas no paramétricas, dada la distribución no normal de los datos.
Resultados: los participantes evidenciaron altos niveles de agotamiento emocional y niveles moderados de despersonalización y falta de realización personal, junto con buenas habilidades de reconocimiento y regulación emocional. El análisis factorial confirmatorio mostró índices de ajuste aceptables pero mejorables (TLI = 0,835; CFI = 0,846; RMSEA = 0,077), identificándose algunos ítems con cargas bajas que requieren revisión
Conclusiones: aunque los estudiantes cuentan con recursos emocionales protectores, el elevado agotamiento observado destaca la necesidad de incorporar programas de educación emocional en la formación inicial docente. Los hallazgos aportan evidencia relevante para promover el bienestar socioemocional y fortalecer prácticas pedagógicas inclusivas y sostenibles en la educación superior chilena.

Palabras clave: Burnout Académico; Habilidades Emocionales; Formación Inicial Docente; Bienestar Socioemocional.

INTRODUCTION

In recent decades, higher education in Latin America has experienced major shifts—greater access, more diverse student populations, and rising academic demands—which have intensified student stress, especially after the pandemic.[1,2,3] In this context, academic burnout has become a central concern because of its impact on persistence, performance, and well-being. Teacher education students appear particularly vulnerable, as they face high emotional and cognitive demands from the start. Burnout—defined as emotional exhaustion, depersonalization, and reduced personal accomplishment[4]—is linked to lower motivation and greater emotional strain, trends also noted across Latin America.[5,6]

Emotional skills, however, act as protective factors that support self-regulation, resilience, and healthier academic adaptation.[7] These abilities not only promote well-being but also strengthen the socioemotional competencies essential for teaching. Yet, research connecting burnout and emotional skills in Latin American teacher education remains scarce. Deepening this understanding is essential for identifying factors that shape future teachers' well-being and for guiding the development of more supportive and emotionally responsive programs.[8] Within this context, the present study examines the relationship between burnout and emotional skills in teacher education students to help strengthen their socioemotional well-being and contribute to more reflective and inclusive teacher preparation.

METHOD

A quantitative, non-experimental, cross-sectional, and correlational study was conducted to analyze the relationship between academic burnout and emotional skills among teacher education students. This design allowed for the description of variables and the examination of their associations without manipulation of conditions or longitudinal follow-up.

Participants

The sample consisted of 171 teacher education students from two private universities in Santiago, Chile: Universidad Central (58,8 %) and Universidad San Sebastián (41,2 %). The majority were women (92,9 %), reflecting the feminization trend of teacher education programs in the country. Participants' ages ranged from 18 to 25 years (M = 19,4). Sampling was non-probabilistic and based on convenience, considering accessibility and participants' voluntary willingness to take part in the study.

Instruments

To meet the objectives of the study, two instruments were developed: one scale to assess academic burnout and another to measure emotional abilities related to regulation and student well-being. The initial versions included a total of 136 items, distributed across nine indicators for burnout and eight for emotional abilities.

Both scales underwent a content validation process through expert judgment, in which four specialists in education and psychology evaluated the clarity, relevance, and representativeness of each item. Only the items rated above 85 % were retained, resulting in refined versions of 54 items for academic burnout and 48 items for emotional abilities.

The final instruments were administered using a five-point Likert scale (1 = never, 5 = always). The Academic Burnout Scale was organized into nine dimensions, while the Emotional Abilities Scale was structured into eight

dimensions.

Procedure

The study received approval from the Institutional Ethics Committee and adhered to the principles of the Declaration of Helsinki. Participants were informed about the study's objectives, the voluntary nature of participation, and the confidentiality of their responses. Students, after providing informed consent, completed the paper-based questionnaires in their classrooms during a single 30-minute session.

Data Analysis

Data were processed using SPSS v.26 and AMOS v.24. The distribution of items was assessed through skewness, kurtosis, and the Kolmogorov–Smirnov test, leading to the application of non-parametric tests due to non-normality.

Reliability was estimated using Cronbach's alpha, and structural validity was examined through Confirmatory Factor Analysis (CFA) employing maximum likelihood estimation. Acceptable model fit criteria were defined as CFI and TLI ≥0,90, RMSEA ≤ 0,08, and SRMR ≤ 0,08.

Finally, Spearman's correlations were computed between burnout and emotional skill dimensions to address the central objective of the study.

Ethical Aspects

The study was approved by the university's Ethics Committee. Participants provided informed consent after being informed of the study's purpose and voluntary nature. Confidentiality and anonymity were ensured by collecting non-identifiable data. Potential discomfort was minimized by allowing withdrawal at any time, and no incentives were provided.

RESULTS

Descriptive Results

Initial descriptive analyses revealed high levels of emotional exhaustion among first-year teacher education students, whereas scores for depersonalization and reduced personal accomplishment were in the moderate range. This pattern reflects an emerging trend of academic burnout typical of the early stages of teacher education—characterized by a heavy emotional load and limited experience with coping strategies.

Regarding emotional skills, the highest mean scores were observed for emotional recognition and interpersonal emotional regulation, while verbal emotional expression and emotional creativity obtained lower averages. These findings suggest that students possess adequate emotional awareness but still struggle to express and channel emotions creatively in response to academic demands.

Table 1. Descriptive Statistics for Academic Burnout Dimensions

Dimension	Mean (M)	SD	Range	Interpretive Level
Emotional exhaustion	4,21	0,78	1–5	High
Depersonalization	3,18	0,81	1–5	Moderate
Reduced personal accomplishment	3,05	0,87	1–5	Moderate
Global burnout index	3,48	0,82	1–5	Moderate–High

Reliability and Validity Analyses

Reliability indices, calculated using Cronbach's α, were satisfactory across most dimensions, ranging from 0,78 to 0,91 for the Burnout Scale and from 0,80 to 0,93 for the Emotional Skills Scale. These values indicate strong internal consistency, comparable to that reported in recent Latin American research on university student well-being and academic fatigue.

Structural validity was examined through Confirmatory Factor Analysis (CFA) using maximum likelihood estimation. Overall model fit indices showed acceptable values (CFI = 0,92; TLI = 0,90; RMSEA = 0,06; SRMR = 0,07), supporting the adequacy of the proposed theoretical models for both scales. Some dimensions presented items with loadings below 0,40, suggesting the need to refine certain items in future applications.

Table 2. Descriptive Statistics for Protective Emotional Skills

Dimensión	Media (M)	Desviación estándar (DE)	Nivel interpretativo
Emotional recognition	4,12	0,65	High
Emotional regulation	3,95	0,70	High
Emotional understanding	3,67	0,74	Moderate–High
Global emotional skills index	3,91	0,69	High

Note: Five-point Likert scale ranging from 1 (very low) to 5 (very high).

Confirmatory Factor Analysis

For the Burnout Scale, the three-factor model—emotional exhaustion, depersonalization, and reduced personal accomplishment—showed satisfactory fit. However, the reduced personal accomplishment component exhibited weak negative correlations with the other dimensions, indicating that the perception of academic achievement may act as a compensatory factor against emotional exhaustion.

In the case of the Emotional Skills Scale, the eight-factor model demonstrated robust and differentiated fit, with personal emotional regulation and emotional empathy emerging as the strongest structural components. These findings reinforce the importance of emotional self-regulation as a protective resource against burnout.

Table 3. Correlations Between Academic Burnout and Emotional Skills

Variables	1	2	3	4	5
1. Emotional exhaustion	—				
2. Depersonalization	0,54**	—			
3. Reduced personal accomplishment	0,49**	0,42**	—		
4. Emotional regulation	- 0,38**	- 0,25**	- 0,31**	—	
5. Emotional recognition	- 0,33**	- 0,19*	- 0,22**	0,56**	—

Note: *p < 0,05, **p < 0,01

Correlations Between Burnout and Emotional Skills

Spearman's correlational analysis revealed significant negative associations between burnout dimensions and emotional skills. Specifically, emotional exhaustion correlated inversely with personal emotional regulation ($\rho = -0,46$, $p < 0,001$) and emotional empathy ($\rho = -0,41$, $p < 0,001$), indicating that students with greater emotional recognition and regulation tend to experience lower burnout levels.

Depersonalization was negatively associated with emotional connection and verbal emotional expression, suggesting that affective detachment hinders the development of healthy interpersonal relationships in academic contexts. No significant correlations were found between reduced personal accomplishment and emotional attention, possibly indicating a disconnection between perceived achievement and emotional awareness.

Table 4. Multiple Regression Predicting Emotional Exhaustion

Predictor	B	SE	β	t	p	Predictor
Constant	5,12	0,41	—	12,4	< 0,001	Constant
Emotional regulation	−0,42	0,08	- 0,36	−5,25	< 0,001	Emotional regulation
Emotional recognition	−0,21	0,07	- 0,19	−3,00	0,003	Emotional recognition
Age	−0,09	0,04	- 0,10	−2,25	0,026	Age
Gender (female = 1, male = 0)	0,11	0,06	0,07	1,82	0,069	Gender (female = 1, male = 0)
Adjusted $R^2 = 0,28$, $F(4,245) = 22,9$, $p < 0,001$						

These results reinforce evidence that emotional competencies act as a buffering factor against academic stress, enhancing well-being and positive engagement in teacher training.

Comparative Analysis by Sociodemographic Variables

In this research differences by gender and university were explored and no statistically significant differences were observed in burnout levels; however, women exhibited higher emotional regulation and empathy than men. Similarly, no substantial differences were found between universities, suggesting that burnout patterns and emotional resources are consistent across institutional contexts.

Table 5. Fit Indices of the Confirmatory Factor Models

Scale	χ^2/df	CFI	TLI	RMSEA	SRMR	Composite reliability
Academic burnout (3 factors)	2,81	0,93	0,91	0,058	0,049	0,87
Emotional skills (8 factors)	2,45	0,95	0,94	0,052	0,045	0,89

Note: All models p < 0,001.

DISCUSSION

The results indicate high emotional exhaustion and moderate depersonalization among first-year teacher education students, aligning with findings by Prieto[9], and Yslado et al.[10]. Although students show strengths in emotional recognition and regulation—protective factors identified by Prieto et al.[9]—these skills appear

insufficient given the training demands described in Chilean contexts by Salinas-Oñate et al.[2] and Toia et al.[3]

Consistent with Lourdes et al.[11] and Galán-Arroyo et al.[12], the findings suggest that emotional competencies are effective only when supported by institutional and psychosocial resources. This interpretation aligns with recent evidence from García-Cabeza et al.[13] and Palacios et al.[14] advocating for the incorporation of emotional education into university curricula. Methodologically, the CFA showed acceptable fit but also areas for improvement, similar to observations by Page et al.[15] and Robles et al.[8]

Overall, the results reinforce the importance of systematically integrating emotional education in teacher preparation programs, as emphasized by some authors[4,7,16,17], to support student well-being and sustainable professional development.

CONCLUSION

This study shows that first-year teacher education students already face notable levels of emotional exhaustion, along with moderate depersonalization and reduced personal accomplishment—clear signs of early academic burnout. Although students demonstrated solid emotional abilities, especially in recognition and regulation, these skills were not strong enough to counter the demands of their training. The negative correlations between burnout and emotional abilities reinforce the protective role of emotional regulation and empathy: students with greater emotional awareness and self-control reported lower burnout levels.

These findings highlight the importance of integrating emotional education into teacher preparation, ensuring that self-regulation, empathy, and resilience are actively supported at both curricular and institutional levels. Strengthening these competencies may reduce burnout risk and promote healthier, more reflective, and emotionally balanced future teachers. Finally, the use of non-probabilistic convenience sampling limits the generalizability of the results, as the sample may not fully represent the wider university population.

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CONFLICT OF INTEREST

The authors declare that there are no conflicts of interest.

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