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REVIEW ARTICLE

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## PREVALENCE OF ACADEMIC STRESS IN FINAL-YEAR NURSING STUDENTS AT UABJO

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### ABSTRACT

**Objective:** To estimate the prevalence and characteristics of academic stress in undergraduate nursing students at the Autonomous University “Benito Juárez” of Oaxaca (UABJO) during the 2024-2025 academic year. **Method:** A descriptive-correlational cross-sectional study was conducted with 206 students (83% female; mean age  $21.4 \pm 3.2$  years). The SISCO Academic Stress Inventory (Barraza-Macías, 2007) was administered via a digital form. Descriptive statistics were used for the analysis. **Results:** The mean total score was  $131.5 \pm 29.8$  (median 132). 68% of the students presented high (44.7%) or very high (23.3%) levels of academic stress, a figure higher than that reported in international meta-analyses and previous Mexican studies. The most prevalent symptoms (“almost always/always”) were fatigue at the end of the day (79.1%), excessive tension before exams (74.3%), and excessive workload (71.8%). Women showed significantly higher scores in all dimensions ( $p < 0.01$ ). **Conclusion:** Nursing students at UABJO exhibit one of the highest documented prevalences of academic stress in Mexico and Latin America, with a greater impact on women and in advanced semesters. These findings underscore the urgent need to implement specific institutional programs for prevention and psychological support.

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## INTRODUCTION

Academic stress has emerged in the last two decades as one of the most frequent and concerning mental health problems among university students worldwide, reaching particular relevance in health sciences programs. In these disciplines, the combination of a heavy academic workload, early exposure to emotionally intense clinical environments, and the awareness of the enormous responsibility placed upon future professionals generates greater psychological vulnerability (Pulido-Criollo et al., 2018; Labrague et al., 2017; Chernomas & Shapiro, 2013). In the specific case of nursing students, their training involves not only a considerable volume of theoretical content and continuous assessment demands, but also long days of hospital clinical rotations, night shifts, direct contact with pain, serious illness, and death, as well as the need to develop technical and emotional skills under constant pressure. This combination of factors contributes to the development of high levels of anxiety, depressive symptoms, sleep disorders, and emotional exhaustion or burnout, with potential negative repercussions on both academic performance and the quality of care these future professionals will provide to patients (Rudman & Gustavsson, 2012; Savitsky et al., 2020; Li & Hasson, 2020). International systematic reviews and meta-analyses indicate that between 40% and 80% of nursing students experience moderate

to severe stress during their training, with particularly high rates in low- and middle-income countries, where university psychological support services are scarce or nonexistent (Labrague et al., 2018; García-Iglesias et al., 2022). In the Latin American context, research conducted in Brazil, Chile, Colombia, Peru, and Mexico has consistently identified the same main stressors: an overload of academic work, pressure to obtain good grades on frequent assessments, intense academic competition among peers, lack of time for rest and personal life, and difficulties balancing studies with work or family responsibilities (Silva et al., 2018; Parra-Giordano et al., 2021; Rojas-Barahona et al., 2022; González-Ramírez et al., 2019). In Mexico, although some studies exist on stress among university students in general, specific evidence on nursing students at public universities—especially in states with high rates of marginalization and poverty, such as Oaxaca—remains very limited. The Autonomous University “Benito Juárez” of Oaxaca (UABJO) presents a particularly critical scenario: it is a public institution with high admissions demands, limited infrastructure and budget, and a student body largely comprised of students from rural, indigenous, and low-income communities. These socioeconomic and cultural factors, coupled with geographical barriers and the limited availability of mental health services in the region, create an environment that can significantly amplify the perception and intensity of academic stress (INEGI, 2020; CONEVAL, 2021). Therefore, the main objective of

this study was to determine the prevalence, severity, and characteristics of self-perceived academic stress among nursing students at the Faculty of Nursing and Obstetrics of the Autonomous University "Benito Juárez" of Oaxaca during the 2024-2025 academic year.

## MATERIALS AND METHODS

**Study Design:** A cross-sectional, descriptive study was conducted during the academic year from August 2024 to June 2025. The research was carried out with students enrolled in the Bachelor of Science in Nursing program at the Faculty of Nursing and Obstetrics of the Autonomous University "Benito Juárez" of Oaxaca (UABJO), Mexico.

**Participants:** The target population consisted of active students in the Bachelor of Science in Nursing program. Students from all semesters were invited to participate. The inclusion criteria were as follows:

- Regular enrollment in the Bachelor of Science in Nursing program at UABJO during the 2024-2025 academic year.
- Voluntary participation.
- Completion of at least 95% of the questionnaire.

Participation in academic exchange programs (national or international) during the data collection period was an exclusion criterion.

**Instrument:** Academic stress was assessed using the SISCO Academic Stress Inventory (Barraza-Macias, 2007). This instrument was originally validated in a Mexican population and is widely used in Latin American studies with university students in health sciences fields (Barraza-Macias, 2012; Castillo-Navarrete et al., 2020; Garcia-Iglesias et al., 2022). The questionnaire consists of 38 items answered on a five-point Likert scale (1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Almost always, 5 = Always).

**Procedure:** The instrument was administered digitally via an online form. Participation was entirely voluntary, anonymous, and free of charge. Students accessed the questionnaire on their own initiative after receiving the corresponding invitation.

**Ethical Considerations:** The study was conducted in accordance with the ethical principles established in the General Health Law on Health Research of the United Mexican States and the Declaration of Helsinki of the World Medical Association. There were no conflicts of interest of any kind. All data were processed in aggregate and completely anonymized form, guaranteeing at all times the confidentiality and protection of the information provided by the participants.

## RESULTS

**Characteristics of the Study Population:** The study included 206 active students enrolled in the Bachelor of Science in Nursing program at the Faculty of Nursing and Obstetrics of the Autonomous University "Benito Juárez" of Oaxaca (UABJO). The mean age of the participants was 21.4 years (standard deviation = 3.2 years), with a range from 18 to 38 years, reflecting the typical age heterogeneity of undergraduate programs in Mexican public institutions. Regarding the gender distribution, the sample was predominantly female, with 83.0% women (n = 171) and only 17.0% men (n = 35). Nearly all students, specifically 96.1% (n = 198), reported experiencing moments of worry or nervousness throughout the current semester, which constitutes a preliminary indicator of high exposure to emotional distress related to academic life. Furthermore, when assessing the overall self-perceived intensity of stress using a 1-to-5 analog-numerical scale (where 1 represents total absence of stress and 5 extreme stress), a mean of 3.78 (Standard Deviation = 0.96) and a median of 4 were obtained, indicating that the predominant

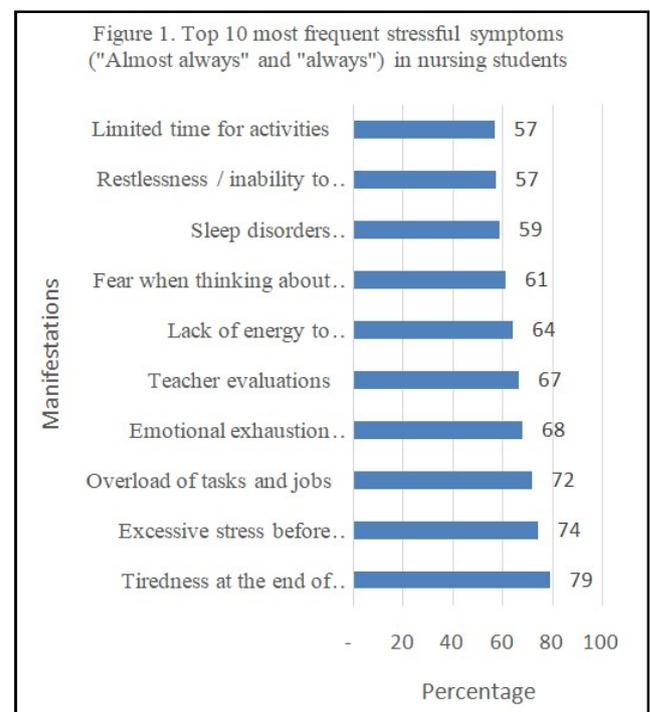
perception falls within the moderate-to-high range and reinforcing the relevance of further quantitative measurement of this construct.

**Overall Level of Academic Stress:** The mean score on the SISCO Inventory was 131.5 points (Standard Deviation = 29.8; median = 132; observed range 62–188). According to the cut-off points established by Barraza (2007) Table 1. Consequently, 68.0% of the students presented high or very high levels of academic stress.

**Table 1. Level of academic stress in nursing students**

Level of academic stress	Score	n	Percentage
Low	≤ 85	12	5.8 %
Medium	86 – 120	54	26.2 %
High	121 – 155	92	44.7 %
Very High	≥ 156	48	23.3 %

**SISCO Inventory Dimensional Scores:** Analyzing the frequency with which students reported experiencing each situation "almost always" or "always" (score ≥ 4 on the 5-point scale), a clearly dominant group of symptoms was identified, affecting more than half of the sample. The most prevalent symptom was fatigue at the end of the study day, present in 79.1% of participants, followed closely by excessive exam anxiety (74.3%) and the perception of being overloaded with homework and school assignments (71.8%). More than two-thirds (68.0%) reported feeling emotionally exhausted by their studies, and 66.5% acknowledged that teacher assessments (exams, essays, research papers, etc.) constitute a significant source of stress. Other prominent symptoms included lack of energy to concentrate on some days (64.1%), anticipatory anxiety about exams (61.2%), sleep disturbances such as insomnia or nightmares (58.7%), restlessness or inability to relax (57.3%), and a feeling of having limited time to complete academic activities (56.8%). Figure 1.



These ten items, all with prevalences exceeding 56%, constitute a profile of academic stress characterized by chronic physical and emotional exhaustion, heightened arousal during assessments, and a persistent perception of overload and lack of time. Women obtained significantly higher scores than men on the total scale and in all dimensions (Mann-Whitney U test,  $p < 0.01$  in all cases). The means obtained for each dimension are shown in Table 2. The mean scores, medians, observed ranges, and internal consistency coefficients for each dimension confirm the reliability of the instrument in this population (Cronbach's  $\alpha$  between 0.887 and 0.934 for the subscales, and 0.954 for the total score).

**Table 2. Descriptive scores and internal reliability of the SISCO dimensions (n = 206)**

Dimension	Number of items	Mean ± DE	Median	Observed range	α de Cronbach
Academic stressors	8	31.8 ± 7.4	32	11 – 40	0.912
Physical reactions	5	16.6 ± 5.1	17	5 – 25	0.887
Psychological reactions	4	14.1 ± 4.2	14	4 – 20	0.901
Behavioral reactions	4	11.9 ± 4.0	12	4 – 20	0.894
Specific symptoms (test and study anxiety)	17	57.1 ± 14.3	58	20 – 85	0.934
Total score	38	131.5 ± 29.8	132	62 – 188	0.954

## DISCUSSION

The results of this study reveal a high prevalence of academic stress among nursing students at the Autonomous University of Benito Juárez of Oaxaca (UABJO): 68.0% presented high or very high levels according to the SISCO Inventory, a figure that significantly exceeds that reported in international systematic reviews (44–60%; Labrague et al., 2018; García-Iglesias et al., 2022) and in previous Mexican studies (47–58%; Castillo-Navarrete et al., 2020; Morales-Rodríguez et al., 2021). This difference is likely explained by the confluence of structural factors specific to the Oaxacan context: a high theoretical-practical workload, limited institutional resources, the rural and indigenous origin of a large portion of the student body, and the scarce availability of university mental health services (INEGI, 2020; CONEVAL, 2021). The main stressors identified—task overload, anxiety related to assessments, and exhaustion at the end of the day—are consistent with the most common findings in the literature on nursing students in Latin America (Silva et al., 2018; Parra-Giordano et al., 2021; Rojas-Barahona et al., 2022) and confirm that the theoretical model of Lazarus and Folkman (1984) remains valid: the perception of demands that exceed available resources generates an intense and sustained stress response. A marked difference by sex is noteworthy: women obtained significantly higher scores in all dimensions, replicating the findings of recent meta-analyses (Li & Hasson, 2020; Ramón-Arбуés et al., 2020; García-Iglesias et al., 2022). This gap has been attributed to the greater burden of domestic and caregiving responsibilities placed on female students, more emotion-focused coping styles, and a greater tendency to verbalize distress (Matud et al., 2019). The significant increase in stress in the final semesters (7th–8th) contrasts with some studies that place the peak in the middle semesters (Aloufi et al., 2021), but it is consistent with research conducted in Mexican and Latin American nursing programs where pressure progressively increases due to the incorporation into highly complex clinical placements, rotating internships, and thesis writing (Hernández-Torrano et al., 2020; Castillo-Navarrete et al., 2020).

## CONCLUSION

This study demonstrates that nursing students at the Autonomous University “Benito Juárez” of Oaxaca face one of the highest documented rates of academic stress in Mexico and Latin America, with 68% of the sample reaching high or very high levels according to the SISCO Inventory. This percentage far exceeds the figures reported in international systematic reviews (44–60%) and previous Mexican studies (47–58%), placing this population in a particularly vulnerable situation. The main triggers identified are chronic fatigue, excessive workload, excessive tension before exams, and emotional exhaustion, which together constitute a high-intensity academic stress syndrome that simultaneously affects the physical, psychological, and behavioral spheres. A marked difference exists between genders (women are significantly more affected), and stress progressively increases toward the final semesters.

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