

Original research article

STUDYING UNDER PRESSURE: KNOWLEDGE, COPING STRATEGIES, AND BURNOUT AMONG GENERAL NURSING STUDENTS

Tereza Šourková *, Lenka Horáková, Petra Pažoutová, Pavla Šafránková

Technical University of Liberec, Faculty of Health Studies, Liberec, Czech Republic

Abstract

Objective: This study aimed to determine whether students in the General Nursing program know burnout syndrome's risk factors and symptoms. It aimed to identify their preventive methods, coping strategies, and how frequently they apply them. The study also sought to assess how many students are at risk of, or already affected by, the individual dimensions of burnout, namely emotional exhaustion, depersonalization, and a reduced sense of personal accomplishment or performance.

Methods: The research sample consisted of 104 second and third-year full-time General Nursing program students from various Czech Republic universities. Data were collected through an online anonymous questionnaire using a quantitative research design.

Results: The results showed that students demonstrated a high level of knowledge of both burnout risk factors (80.2%) and symptoms (89.7%). Almost all participants (98.1%) reported using at least one preventive method against burnout. The most commonly used coping strategies included sharing feelings with loved ones, seeking support from family and friends, and pursuing personal interests. A significant proportion of respondents (66.3%) reported being affected by at least one burnout dimension.

Conclusion: Overall, students demonstrated good knowledge and awareness of burnout syndrome. Although they use some coping strategies, many do not apply them consistently enough. The findings also indicate a significant prevalence of burnout dimensions among nursing students.

Keywords: Burnout syndrome; Coping strategies; General nursing students; Knowledge; Risk factors; Symptoms

INTRODUCTION

Burnout syndrome, commonly referred to as burnout, has become a growing concern for healthcare professionals due to its impact on both personal well-being and professional performance (Prieß, 2015, p. 163). It arises from prolonged exposure to stress and manifests as physical and psychological exhaustion, depersonalization, and a reduced sense of accomplishment (Pešek and Praško, 2016, p. 16). The World Health Organisation classifies burnout as an occupational disease in the International Statistical Classification of Diseases and Related Health Problems

(ICD-11) (Cañadas et al., 2023). While traditionally associated with high-stress professions – such as doctors, nurses, teachers, and managers – burnout has also been identified in students enrolled in demanding programs, including nursing and medicine (Pešek and Praško, 2016, p. 16). Nursing students, in particular, face elevated stress levels as they balance theoretical instruction with unpredictable clinical responsibilities (Gurková and Zeleníková, 2017, p. 24; Li et al., 2025).

This academic pressure, known as academic burnout, is characterized by stress, exhaustion, anxiety, depression, reduced self-confidence, frustration, and emotional

withdrawal, which negatively affect learning outcomes and engagement (Hwang and Kim, 2022). Students experiencing burnout may distance themselves from their studies, professors, and peers, develop negative attitudes toward learning, and exhibit lower academic achievement, reduced motivation, disengagement from theoretical and practical training, increased absenteeism, and a higher likelihood of dropping out (Ghods et al., 2023; Quina Galdino et al., 2020).

The level of academic burnout can be measured using the Maslach Burnout Inventory – Student Survey (MBI-SS), which assesses emotional exhaustion, depersonalization (or cynicism), and reduced academic efficacy. Cynicism and depersonalization manifest as indifference, emotional detachment, and impersonal interactions with patients and colleagues (Ghods et al., 2023; Gómez-Urquiza et al., 2023a). High emotional exhaustion and cynicism, combined with low academic efficacy, increase the risk of burnout (Ghods et al., 2023). Predictive models indicate that neuroticism predicts all three burnout dimensions (Cañadas et al., 2023), while attachment insecurity, particularly when coupled with low empathy or limited mentalization capacity, also contributes to higher susceptibility (Bordoagni et al., 2021). Internal factors such as personality, health, stress, anxiety, depression, self-esteem, interpersonal relationships, adaptability, professionalism, and overall life satisfaction further influence burnout (Hwang and Kim, 2022).

Burnout among newly graduated nurses is a growing research focus due to its association with clinical performance and intentions to leave the profession. Evidence shows that academic burnout may begin during education, and students who experience this condition are more likely to exhibit higher turnover rates and job burnout after employment (Sveinsdóttir et al., 2021; Zhou et al., 2022). Both nursing students and professionals are at increased risk of stress-related injuries and burnout – a situation exacerbated during the COVID-19 pandemic, which has heightened concern for university students' mental health and prompted calls for prevention measures (Alghtany et al., 2024; Boamah et al., 2024; Peterson et al., 2023).

Effective stress management is essential for promoting nurse retention and mitigat-

ing burnout during the transition into professional practice. Mentorship programs that pair students with mentors provide tailored support, fostering resilience and professional growth (Li et al., 2025). Universities also play a crucial role, as academic environment and curriculum organization can contribute to burnout. Higher education institutions should therefore implement preventive strategies to support student health and well-being throughout their studies (Li et al., 2025; Quina Galdino et al., 2020). The consequences of academic burnout syndrome can be severe, affecting both students' well-being and the quality of care they will provide as future professionals, underscoring the importance of addressing this issue during education (Gómez-Urquiza et al., 2023a; Velando-Soriano et al., 2023).

MATERIALS AND METHODS

The research employed an anonymous, non-standardized questionnaire as the primary data collection tool. This was designed to gather quantitative data on respondents' knowledge, attitudes, and experiences. The questionnaire consisted of closed-ended questions to ensure clarity and ease of understanding. The individual items were developed based on a review of available studies and relevant literature in the field, ensuring content relevance and conceptual consistency with current research findings. The questionnaire was distributed online via Google Forms and disseminated through the faculty offices of institutions offering full-time General Nursing programs, allowing access to a broad range of respondents. The main data collection took place from December 2024 to January 2025. A total of 104 students from six universities completed the questionnaire. The collected data were processed using Google Sheets. The sample included second- and third-year full-time General Nursing students at selected Czech universities. These students were deliberately chosen because they had prior experience with both theoretical instruction and practical training, which allowed them to better assess the program's demands and objectively evaluate psychological stress.

The study was conducted in accordance with general ethical principles for research

involving human participants. Permission to conduct the research was formally granted by the home university. Approval from an ethics committee was not required due to the anonymous and non interventional nature of the study. Data were collected through an electronic questionnaire distributed to students from the home institution as well as from other participating universities. Informed consent was implied by participants' voluntary completion of the questionnaire, which explicitly stated that participation was voluntary. No personal identifiers, such as names or email addresses, were collected, ensuring the complete anonymity of all respondents.

RESULTS

Of the respondents, 100 were female (96.2%) and four were male (3.8%). The majority (62.5%) were aged 21–23, followed by 28.8%

aged 18–20. Respondents aged 24 and older made up 8.7% of the sample. Regarding the year of study, 53.8% were in their second year, and 46.2% were in their third year. The analysis did not differentiate between study years, and the data were evaluated collectively. Although the research included only second- and third-year students, the lower age category (18–20 years) was intentionally defined to ensure a balanced distribution of respondents across comparable age groups and to facilitate more precise data interpretation.

Students' knowledge

The questionnaire assessed students' knowledge of risk factors and symptoms of burnout syndrome, their coping strategies, and the extent to which they are at risk or affected by its dimensions. The overall average of correct responses across five questions was 80.2% (Chart 1).

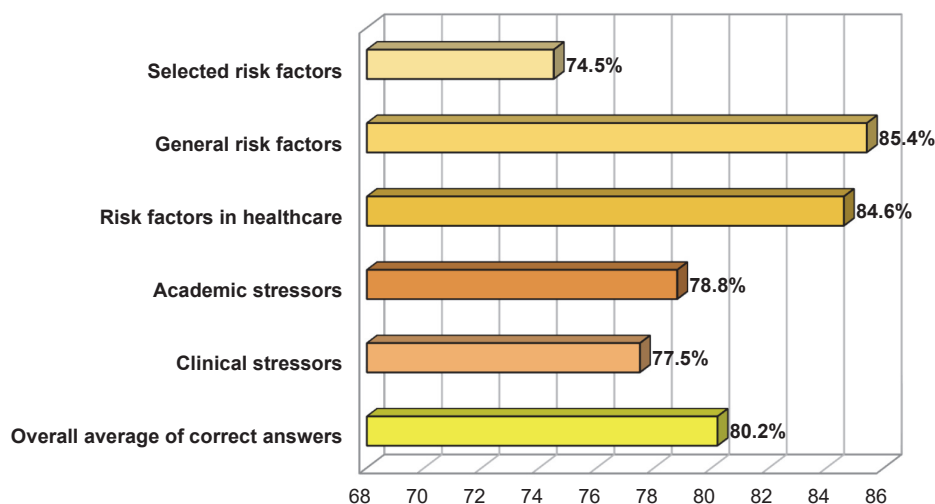


Chart 1 – Students' knowledge of risk factors

Respondents had the lowest rate of correct responses (74.5%) on questions related to specific academic and clinical stressors. In questions focused on perceptions of the nursing curriculum and the identification of stressors and risk factors in the healthcare workplace, students demonstrated a basic level of understanding, though with some limitations. A higher success rate of 85.4% was recorded for general risk factors, where students accu-

rately identified influences from both work and personal life, including individual predispositions. Similarly, a success rate of 84.6% was observed for recognizing healthcare-specific risk factors. Most students correctly identified issues such as time pressure, poorly scheduled shifts, feelings of helplessness in the face of suffering, patient behavior, and administrative overload.

For learning-related stressors, students achieved a success rate of 78.8%, successfully identifying factors such as academic overload, dissatisfaction with the quality of practical training and instruction, lack of support from faculty, disillusionment with their chosen field, and a significant gap between expectations and reality. Regarding clinical stressors, while many respondents correctly identified relevant factors, such as stress related to staff behavior, responsibility for patients, and confronting death, approximately half mistakenly included financial or family problems, which do not fall under clinical stressors. This suggests some gaps in students' understanding of the specific nature of occupational stressors.

Students' knowledge of the symptoms of burnout syndrome was generally high, as indicated by an average correct response rate of 89.7% (Chart 2). The highest success rate

was recorded for the item asking respondents to identify 'loss of meaning in life' as a possible manifestation of burnout, with 94.2% of students answering correctly. In the category of psychological symptoms, which included emotional exhaustion, depression, anxiety, frustration, aggression, loss of self-esteem, and increased alcohol craving, the success rate was 87.5%. The correct response rate for physical symptoms was 88.7%, with students identifying reduced performance, impaired concentration, headaches, digestive issues, and increased susceptibility to illness. Social symptoms were correctly identified in 88.5% of cases, with isolation and increased substance use cited as the most typical manifestations. These results suggest that students possess a strong awareness of the specific symptoms of burnout syndrome, which may play a key role in its early recognition and prevention.

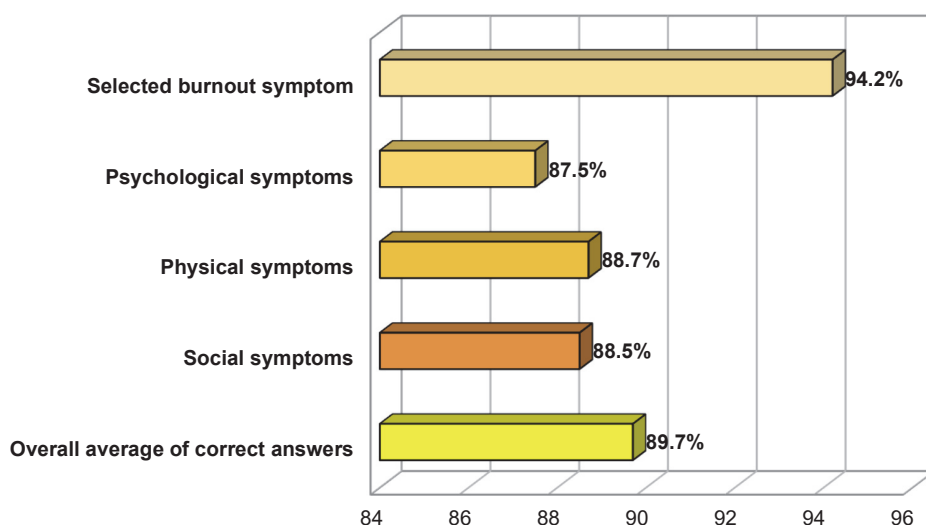


Chart 2 – Students' knowledge of burnout symptoms

Coping strategies

Students were asked which methods they actively use to prevent stress and burnout (Chart 3). They could select multiple options from a list and also provide their own responses. The results showed that 98.1% of students use at least one preventive method. The most frequently reported coping strategies included sharing feelings with loved ones (78.8%), receiving support from family and

friends (73.1%), and engaging in personal interests (70.2%). Subsequently, students were asked three questions assessing whether their preventive efforts were sufficient based on the frequency of use. A frequency of at least twice a week was considered adequate. Specifically, they were asked how often they engage in personal interests, participate in sports, and practice relaxation techniques. About 54.8% engage in hobbies at least twice a week,

37.5% exercise with the same frequency, and only 12.5% practice relaxation techniques that often. Over one-quarter exercise no more than

once a month, and one-third do not use relaxation techniques.

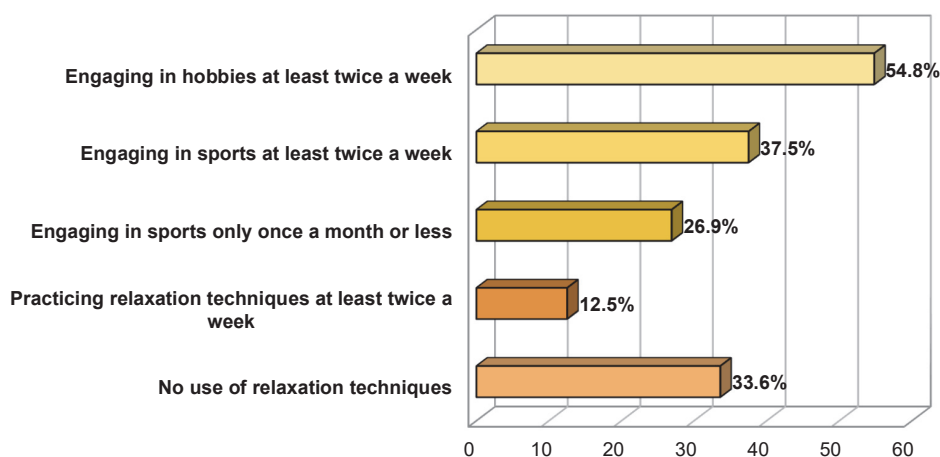


Chart 3 – Coping strategies

Burnout dimensions

The next section of the research focuses on the different dimensions of burnout syndrome among general nursing students, examining the prevalence and the perceived risk of these dimensions. Emotional exhaustion was the most commonly reported, affecting 54.8% of respondents. A reduced sense of personal fulfillment or performance was experienced by 36.5%, while depersonalization and cynicism were reported by 13.5%. Notably, 33.7% of students stated they were unaffected by burnout syndrome. In contrast, 66.3% reported being affected by at least one dimension of burnout. Specifically, 36.4% were affected by one dimension, 21.2% by two dimensions, and 8.7% by all three dimensions.

DISCUSSION

The results indicate that students possess a solid understanding of burnout syndrome, demonstrating knowledge of general risk factors, healthcare-related stressors, and academic and clinical stressors. They also show a strong awareness of burnout's psychological, physical, and social manifestations. Furthermore, the findings reveal that students

recognize the seriousness of burnout and the importance of preventive measures. Support from family and friends and engagement in leisure activities were identified as the most common protective factors.

However, leisure activities, relaxation techniques, and physical exercise appear underutilized. The main barriers to more frequent use of these strategies are a lack of time, energy, or motivation. The survey results showed that more than a quarter of students engage in physical activity no more than once a month, even though incorporating regular exercise into one's routine is essential for maintaining mental and physical health. Additionally, about one-third of respondents reported not using any relaxation methods, which may increase their vulnerability to psychological overload.

The survey revealed a high prevalence of all three burnout syndrome dimensions among general nursing students. To provide context for these findings, a review of studies on PubMed regarding the prevalence of burnout among nursing students was conducted for comparison. Table 1 presents a comparative overview of the prevalence of different burnout syndrome dimensions in these studies and our research.

Table 1 – Comparison of burnout dimensions across studies

Year of publication	Country	Number of respondents	Emotional exhaustion (relative frequency)	Depersonalization (relative frequency)	Reduced sense of personal accomplishment (relative frequency)	Burnout syndrome (relative frequency)	No dimension (relative frequency)
Our research, 2025	Czech Republic	104	54.8%	13.5%	36.5%	8.7%	33.7%
Gómez-Urquiza et al., 2023b	Brazil, Spain, China, and others	10 607	41.0%	25.0%	27.0%	19.0%	?
Szwamel et al., 2025	Poland	841	40.9%	20.3%	16.9%	?	?
Lopes and Nihei, 2020	Brazil	284	36.3%	37.7%	28.2%	6.0%	33.1%
Mufarrih et al., 2024	Pakistan	441	26.8%	8.2%	29.4%	6.7%	?
Total / Overall average		12 277	40.0%	20.9%	27.6%	10.1%	33.4%

In our study, emotional exhaustion was reported by 54.8% of respondents, which is higher than the values reported in comparable international studies. Specifically, Gómez-Urquiza et al. (2023b) reported 41% in a Spanish sample, while the prevalence was 40.9% in a Polish study, 36.3% in a Brazilian study, and 26.8% in a Pakistani study. The prevalence of depersonalization in our sample was 13.5%, notably lower than in the Spanish study (25%), the Polish study (20.3%), and particularly the Brazilian study, which recorded the highest value at 37.7%. The lowest level of depersonalization was observed in the Pakistani study, at 8.2%. Regarding reduced personal fulfillment, 36.5% of our respondents reported experiencing this dimension of burnout. This is again higher than the levels found in the Spanish study (27%), the Polish study (16.9%), the Brazilian study (21.1%), and the Pakistani study (29.4%) (Gómez-Urquiza et al., 2023b; Lopes and Nihei, 2020; Mufarrih et al., 2024; Szwamel et al., 2025).

The Brazilian study recorded no burnout dimension in 33.1% of students (Lopes and Nihei, 2020). Similarly, in our research, 33.7% of respondents reported that they did not experience any burnout dimension. This means that 66.3% of students feel affected

by at least one dimension. Furthermore, our research showed that 21.2% of students are affected by two dimensions, and 8.7% of respondents reported that they are affected by three dimensions. According to the study by Gómez Urquiza et al., (2023b) burnout is considered a condition in which a student is affected by all three dimensions.

Based on this statement, the prevalence of burnout in our research can be quantified at 8.7% for the surveyed group of respondents. In a Spanish meta-analysis, the prevalence of burnout reached 19%; in a Brazilian study it was 6%, and in a Pakistani survey, 6.7%. These last two values are closest to the results of our investigation. The overall prevalence of burnout was not specified in the Polish research (Gómez Urquiza et al., 2023b; Lopes and Nihei, 2020; Mufarrih et al., 2024; Szwamel et al., 2025).

The results suggest that burnout among general nursing students is a serious global issue. The prevalence of individual dimensions may be influenced by various factors, including the methodology of data collection, regional, cultural, and institutional differences, the timing of data collection, and the availability of psychological support.

According to our findings, students are most affected by emotional exhaustion. This is particularly concerning, as emotional exhaustion is considered a core component of burnout. If not addressed promptly, it can contribute to the development of other dimensions, such as a reduced sense of personal fulfillment, decreased academic or clinical performance, and the onset of depersonalization and cynicism (Gómez-Urquiza et al., 2023a).

Limitations of the study

The respondents' answers – particularly when it comes to the dimensions of burnout syndrome – are subjective and may have been influenced by their psychological state at the time of completing the questionnaire. Moreover, it was impossible to objectively verify whether the respondents were actually exhibiting symptoms of specific dimensions of the syndrome. The results may also have been affected by self selection bias, as the research likely attracted students who are either particularly interested in the topic of burnout or who perceive themselves to be at risk. Another limitation is that the findings can only be generalized to the specific group of general nursing students surveyed.

CONCLUSION

The results indicate that nursing students are generally aware of burnout syndrome, recognize its risk factors and symptoms, and

acknowledge the importance of prevention. While they do employ coping strategies, these are not applied consistently or regularly. The high prevalence of burnout symptoms among students is a concerning finding. Given the evolving needs of today's student population, it is essential to consider preventive measures and systemic support at the university level. Integrating topics such as stress management, relaxation techniques, time management, and mental health education into the curriculum could significantly reduce the risk of burnout. Additionally, ensuring the availability of psychological counseling and increasing awareness of mental hygiene are essential steps. Future research should explore the underlying causes and consequences of student overload in greater depth. Comparative studies examining the impact of access to and utilization of institutional support mechanisms could offer valuable insights into their effectiveness in managing stress and preventing burnout.

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Ethical aspects and conflict of interest

The authors have no conflict of interest to declare.

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* **Corresponding author:** Tereza Šourková, Technical University of Liberec, Faculty of Health Studies, Studentská 1402/2, 461 17 Liberec, Czech Republic; e-mail: tershow@seznam.cz
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