Original Article

FREQUENCY OF BURNOUT SYNDROME AMONG NURSES AT THE HEALTH CENTER IN SREMSKA MITROVICA

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Abstract

Background: When it comes to professional stress, the work environment is one of its most important sources. Today, great attention is paid to researching the specifics of professional stress. Its sources and consequences for physical and mental health, as well as work productivity, are particularly important.

Aim: To examine how many nurses and medical technicians employed at the Sremska Mitrovica Health Center are affected by burnout syndrome.

Materials and Methods: A cross-sectional, descriptive study was conducted using the Burnout Syndrome Intensity at Work questionnaire, which is publicly available under the name "Burnout Syndrome" – HDOD. The study included 50 nurses and medical technicians employed at the Health Center in Sremska Mitrovica. The research was conducted during June and July 2025.

Results: Of the total number of respondents, burnout syndrome was present in 14%. Additionally, 2% of respondents were already burned out at work, 38% were at risk of burnout syndrome, 26% were at risk, and 20% reported feeling well. No statistically significant correlation was found between gender, education level, workplace, and subjective feelings of burnout. A statistically significant positive correlation was found between respondents' age and the length of their work experience.

Conclusion: Nurses and medical technicians are exposed to relatively high levels of stress. Burnout syndrome represents not only a psychological but also a physical disorder; therefore, it is important to recognize its onset in time before it seriously threatens health, daily functioning, and work productivity.

Keywords: *burnout syndrome, nursing personnel, occupational stress*

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Introduction

Many theories of stress are aimed at understanding the pathophysiology of psychosomatic disorders. The stress response spiral implies that an individual's response to a stressor can manifest through changes at the psychological, somatic, or behavioral level. Stress is a natural reaction of organisms to certain stimuli from the environment. The way an individual experiences stress is highly subjective and varies from person to person. The external "event" that triggers stress is referred to as a stressor, while the organism's reaction is defined as stress. When the brain assesses that it is in a stressful situation - whether physical or psychological - it raises its level of alertness to the maximum[1]

Workplace stress manifests through specific patterns of emotional, cognitive, behavioral, and physiological reactions of the body, which arise in response to various harmful influences related to the content and organization of work, as well as the work environment[2]. The concept of work stress encompasses changes that result from the cumulative effect of workplace stressors over a prolonged period of time. Regardless of whether it is referred to as professional stress, work stress, or occupational stress, the same phenomenon is being described. Understanding work-related stress and recognizing the importance of its study are of great significance.

The intensity of stress is recognized as particularly high in the health professions. Nurses, in various positions within the healthcare system, face numerous stressful working conditions - such as working under constant pressure, shift and night work, conflicting relationships with colleagues, physicians, patients, and their families, exposure to inevitable suffering and death, and inadequate preparation for providing emotional support to patients and their families - which increases their predisposition to developing psychosomatic disorders[3]. Additionally, some authors point out that stress levels increase as early as during nursing education[4]. Accordingly, there is a clear need for a deeper examination of the relationship between stress and psychosomatic illnesses among healthcare professionals.

Materials and Methods

This cross-sectional descriptive study examined indicators of burnout syndrome among nurses employed at the Health Center in Sremska Mitrovica, Serbia. The research was conducted on a sample of 50 nurses and was carried out during June and July 2025.

The research tasks were to examine the relationship between burnout syndrome and the following characteristics of the respondents: gender, age, length of service, professional qualifications, and personal perception of burnout.

The study used the Burnout Syndrome Intensity at Work questionnaire, which is publicly available under the name "Burnout Syndrome" – Croatian Society of Family Doctors[5]. The questionnaire consisted of 15 items assessing involvement in burnout syndrome according to the Freudenberger Burnout Scale. Each item was rated by the respondents using a Likert scale ranging from 1 to 5, where 1 indicated the weakest intensity of feeling and 5 the strongest.

In addition to the Freudenberger Burnout Scale, respondents completed questions related to selected sociodemographic characteristics, including gender, age, length of employment, level of professional education, and workplace. The final question asked respondents to indicate whether they personally felt burned out at work.

If the total score did not exceed 25 points, the respondent was considered to feel well. Scores between 26 and 35 points indicated a risk zone, scores from 36 to 50 points suggested susceptibility to burnout syndrome, scores from 51 to 65 points indicated the presence of burnout syndrome, and scores above 65 points indicated severe burnout at work.

The survey was conducted anonymously and voluntarily, with verbal consent obtained from each respondent. At the beginning of each section of the questionnaire, detailed instructions for completion were provided. Upon submission of the completed questionnaires, respondents who

requested it were given a verbal interpretation of their results. Statistical analysis was performed using the IBM SPSS Statistics version 23 software package. Variables were presented descriptively using frequencies and percentages. The research tasks were tested using Spearman's correlation coefficient.

Results

Sociodemographic data

The survey included 50 nurses/technicians, of whom 22% were men and 78% were women. The majority of respondents (68%) were between 41 and 60 years of age, with 40% aged 41–50 and 28% aged 51–60. Sixteen percent of respondents were older than 60 years. The smallest proportion of respondents belonged to the younger age groups: 14% were aged 31–40, and only 2% were aged 19–30. The mean length of service among respondents was 22.8 ± 16.54 years. The shortest length of service was up to one year, while the longest was 45 years.

The highest proportion of respondents had completed secondary education (44; 88%), followed by those with higher education - professional nurses (4; 8%). A smaller proportion of respondents (4%) had completed second-cycle education, corresponding to professional master's studies.

The largest proportion of respondents, six (12%) each, were employed in school dispensaries, pediatric dispensaries, gynecology dispensaries, dentistry, home care, and patronage services. Seven respondents (14%) were employed in general medicine and emergency medical services. The largest number of respondents, 16 (32%) have over 30 years of work experience, then 14 (28%) have between 11-20 years of work experience, 13 (26%) have between 21-30 years of work experience, 5 (10%) have between 6-10 and 2 (4%) have up to 5 years of work experience behind them.

Scale of degree of burnout syndrome

The total results were categorized according to the respondents' overall scores, which placed them into one of five categories representing the degree of burnout syndrome.. According to the tabulated data, the research results are concerning. Of the total number of respondents, 14% were affected by burnout syndrome, 2% had already experienced burnout at work, and 38% were identified as candidates for burnout syndrome. Additionally, 26% of respondents were in the risk zone, while only 20% reported feeling well (Table 1).

Table 1. Distribution of respondents according to the category of burnout syndrome

Category of Burnout Syndrome	Points	n	%
Feeling good	Up to 25	10	20
Risk zone	26-35	13	26
Candidate for burnout	36-50	19	38
Affected by burnout	51-65	7	14
Burned out at work	> 65	1	2

The relationship between sociodemographic factors and burnout syndrome among the investigated nurses/technicians is shown on Table 2.

Table 2. Correlation between some socio-demographixc factors and Burnout Syndrome among nurses

Sociodemographic variable	Correlation coefficient	p
Gender	r = 0,10	> 0.05
Age	r = 0,50	< 0.01
Years of work	r = 0,42	< 0.01
Education	r = 0,00	> 0.05
Workplace	r = 0,00	> 0.05
Personal perception of burnout at work	r = 0,19	> 0.05

To determine whether there was a relationship between respondents' gender and the presence of burnout syndrome, Spearman's correlation analysis was performed. No statistically significant relationship was found between gender and the incidence of burnout syndrome ($p > 0.05$), indicating that nurses and technicians are equally affected by burnout at work.

When examining the relationship between respondents' age and the prevalence of burnout syndrome, it was assumed that older respondents would be more affected than younger ones. A statistically significant positive correlation was identified between age and the incidence of burnout ($p < 0.01$), confirming that exposure to burnout increases with age.

The relationship between years of work experience and burnout involvement was also analyzed. It was hypothesized that respondents with longer work experience would be more affected by burnout syndrome. The results showed a statistically significant positive orrelation between years of service and burnout incidence ($p < 0.01$). This indicates that as the number of years spent at work increases, exposure to burnout syndrome also increases.

Furthermore, the relationship between respondents' level of professional education and the incidence of burnout syndrome was examined. It was assumed that no significant relationship would exist, regardless of educational level. The analysis confirmed that there was no statistically significant association between professional education and burnout incidence ($p > 0.05$). Respondents were equally exposed to burnout syndrome irrespective of their level of education.

The relationship between workplace assignment and burnout incidence was also tested. No statistically significant correlation was found between the workplace and the presence of burnout syndrome ($p > 0.05$), suggesting that respondents are equally exposed to burnout regardless of their specific work setting.

Finally, the relationship between respondents' subjective perception of burnout and the objectively measured degree of burnout was analyzed. No statistically significant positive correlation was found between the subjective feeling of burnout and the incidence of burnout syndrome determined by the questionnaire ($p > 0.01$). This suggests that respondents do not have an accurate personal perception of burnout; those who reported feeling burned out were not necessarily affected by burnout syndrome according to the scale.

The relationship between workplace assignment and burnout incidence was also tested. No statistically significant correlation was found between the workplace and the presence of burnout syndrome ($p > 0.05$), suggesting that respondents are equally exposed to burnout regardless of their specific work setting.

According to Mazzi and Ferlin[5], the burnout intensity scale demonstrates good internal consistency, with a Cronbach's alpha coefficient of 0.85. In the present study, the internal consistency of the variables was excellent, with a Cronbach's alpha of 0.92.

Discussion

The stresses experienced in the workplace fall within the category of occupational stress and are associated with dissatisfaction, maladjustment, and the demands and content of job performance[6]. Occupational stress represents a set of harmful physiological, psychological, and behavioral reactions that occur when job demands exceed an employee's capabilities, abilities, and needs.

Burnout symptoms resemble those of psychosomatic illnesses and may include headaches, cardiovascular problems, hypertension, and fatigue[7]. Individuals approaching burnout often experience helplessness, lack of energy, hopelessness, frustration, emotional detachment from their environment, and reduced job satisfaction. They may also exhibit irritability, insecurity, and anger related to insufficient time to complete work tasks. Burnout is not merely a state of excessive stress, but rather a complex response to prolonged exposure to stressful situations. Although its symptoms overlap with stress, burnout is characterized by emotional exhaustion,

depersonalization, and increasingly negative attitudes toward work and life in general[8,9].

Professions that involve helping others are among the most vulnerable to burnout, particularly individuals with high professional potential and strong commitment, which is consistent with the findings of the present study. Factors contributing to burnout may stem from work environment characteristics, organizational structure, communication patterns, individual personality traits, and numerous uncontrollable everyday stressors[10]. These factors can generally be classified into three categories: sources of occupational stress, consequences for individuals and organizations, and individual differences in personality and behavior[11]. In addition to general stressors common to many professions - such as shift work, poor organization, high responsibility with limited control, insufficient staffing, and interpersonal conflicts - healthcare professions are also exposed to specific stressors inherent to patient care[12].

Certain personality traits further increase vulnerability to burnout, including unrealistic work expectations, perfectionism, excessive need for control, strong identification with work as the sole source of self-validation, inefficient time management, and lack of prioritization[13]. These factors were not examined in this study but would contribute to a more comprehensive analysis.

Although nursing offers job security and plays a crucial role in patient safety, insufficient staffing levels are associated with increased errors, infections, and patient dissatisfaction[14.] Despite formal professional recognition in some countries, many nurses continue to experience insufficient professional acknowledgment.

Nurses and technicians are equal members of the healthcare team; however, disparities in treatment persist in practice. Mutual respect, collaboration, and recognition of individual contributions are essential for effective patient care but are not always achieved[15]. Professional autonomy remains a key challenge in the social recognition of nursing.

Meta-analyses and large-scale studies consistently report high prevalence rates of burnout among nurses and health technicians. Pradas et al. [16] reported high emotional exhaustion in 31% and high depersonalization in 24% of respondents. Significant international differences have also been observed, with prevalence ranging from 10% in the Netherlands to 78% in Greece, emphasizing the influence of socioeconomic and cultural factors[17].

An umbrella review by Getie et al [18] highlighted the significant role of sociodemographic factors in nurse burnout. Older nurses exhibited higher levels of emotional exhaustion and depersonalization, which aligns with the findings of the present study. While some studies report greater burnout among women, our results did not confirm gender differences, likely due to the small and gender-imbalanced sample.

Interestingly, while some studies suggest that less experienced nurses are more vulnerable to burnout, our findings indicate that respondents with longer work experience were more affected. This may reflect the cumulative burden of prolonged exposure to occupational stress over time.

These findings underscore the complex and multifactorial nature of burnout and highlight the need for tailored preventive interventions that address the specific needs of different groups within the nursing workforce[19.] Strengthening social support systems is essential not only for nurses' well-being but also for the overall effectiveness of healthcare systems[20].

Ultimately, burnout negatively affects not only individuals but also teams and institutions, leading to reduced trust, interpersonal conflicts, decreased efficiency, and compromised quality of care[2]. In the nursing and technician profession, these consequences are particularly pronounced and potentially dangerous.

The limitations of this study primarily relate to the small number of respondents, which positions it as an initial, exploratory investigation. Future research should expand the sample size and include a larger number of healthcare instituti-

ons across different geographic regions. In the present study, we focused only on the presence or absence and the level of burnout at work; however, a more detailed analysis would be important to identify the specific factors contributing to the observed conditions.

Conclusion

This initial study led to several important conclusions. Only one fifth of the respondents reported feeling well. The remaining respondents were either already affected by burnout syndrome, had experienced burnout at work, were candidates for burnout syndrome, or were in the risk zone. Statistically significant positive correlations were identified between age, length of service, and the incidence of burnout syndrome. This result highlights the need to pay particular attention to older nurses and technicians, as well as those with longer work experience, in efforts to prevent and manage professional burnout. Prevention and early diagnosis of burnout syndrome are crucial for maintaining the psycho-physical health of nurses and technicians, enhancing their resilience to stress, and ensuring the provision of high-quality healthcare.

Conflict of Interest

The authors declare no conflcit of interest.

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