

PREDICTORS OF BURNOUT SYNDROME IN NURSES - COVID VS NON-COVID AMBULANCE

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ABSTRACT

Burnout syndrome is persistent dissatisfaction with one's job, workplace, environment, or atmosphere in the immediate work setting. It frequently occurs among nurses due to the nature of their professional responsibilities. Since the onset of the COVID-19 pandemic, the prevalence of burnout syndrome has reached unprecedented levels.

The research, conducted in February 2023, included 120 nurses employed at the Health Centers Zemun and New Belgrade 60 nurses in the COVID-19 outpatient clinic and 60 nurses in the NON-COVID outpatient clinic. A descriptive research method, an indirect observational method (survey), and the Maslach Burnout Inventory were used.

The results indicate that there is no significant difference in the prevalence of burnout syndrome, nor in the subscale scores, between nurses working in COVID and non-COVID outpatient clinics. Nurses employed in healthcare centers face the risk of burnout syndrome due to the nature of their daily responsibilities, regardless of the clinic's focus. Key factors in preventing the onset of burnout syndrome include ensuring a supportive work environment, adequate equipment, harmonious interpersonal relationships, and minimizing workplace conflict, all aimed at safeguarding the mental well-being of nurses.

Keywords: burnout syndrome, COVID-19, mental support, chronic stress, COVID–NON-COVID ambulance

JEL: I12, J24, J28

DOI: 10.5937/intrev2504158S

UDC: 331.101.37:616-051(497.11)

159.944.4.072

COBISS.SR-ID 183712521

INTRODUCTION

Burnout syndrome involves a prolonged response to chronic emotional and interpersonal stressors associated with the workplace. Nursing is one such profession. Daily work in highly stressful conditions poses a risk of burnout syndrome, which represents the cumulative effect of long-term and persistent stress.

The global COVID-19 pandemic significantly exacerbated pre-existing weaknesses within healthcare systems worldwide, and nursing was no exception. Although nurses are educated and trained to handle crisis situations, many were unprepared for the extraordinary physical and psychological pressure. Many experienced severe exhaustion, while their mental health needs often remained insufficiently recognized.

Numerous studies conducted over the past three years have confirmed the impact of the COVID-19 pandemic on the increased occurrence of burnout syndrome among nurses.

BURNOUT SYNDROME

Burnout syndrome represents persistent dissatisfaction with one's job, workplace, environment, or atmosphere in the immediate work setting [1]. It develops as a result of uncontrolled chronic workplace stress and is characterized by exhaustion, reduced energy, increased psychological distance from work, negative or cynical attitudes toward work, and reduced professional efficiency [2].

For many years, burnout syndrome has been acknowledged as a significant occupational risk across various people-centric professions, including service delivery, education, and healthcare [3]. The therapeutic or service-oriented relationships that providers develop with recipients require continuous and intense personal and emotional engagement [3]. Given the profound consequences that burnout syndrome can have on individuals and society, it is crucial to identify at-risk groups among nurses and technicians and to improve the overall quality of healthcare services [3].

Burnout syndrome emerges as the final outcome of excessive workplace stress [4]. According to World Health Organization research (in Dobroch et al.), nursing ranks as the fourth most stressful profession, significantly affecting both the professional and private lives of nurses [4]. Some of the potential consequences of burnout syndrome include substance abuse, job resignation, infertility, disrupted family relationships, and, in extreme cases, suicide [5].

THE IMPACT OF THE COVID-19 PANDEMIC ON THE OCCURRENCE OF BURNOUT SYNDROME IN NURSES

Burnout syndrome is the main professional problem affecting nurses, who belong to a group at high risk of COVID-19 infection—at a higher risk than the general population [6]. While maintaining high standards of healthcare during a major health crisis, nurses face numerous organizational and clinical challenges that place a heavy burden on them and can lead to burnout syndrome [7].

Some nurses, particularly younger nurses and/or those without previous experience, were required to actively contribute to the control of this infectious disease and global pandemic [8]. Working at a constant pace, under ongoing pressure and uncertain circumstances, nurses caring for patients with COVID-19 infection face challenges associated with increased work intensity and workload [8].

Previous studies on other infectious diseases, such as severe acute respiratory syndrome (SARS) and Middle East respiratory syndrome (MERS), have shown that nurses are susceptible to significant emotional stress during a pandemic [8]. Moreover, outbreaks of infectious diseases may increase the likelihood of burnout, traumatic stress, and other mental health issues among nurses, with these effects potentially persisting even after the pandemic ends [8].

The lack of effective vaccines or treatments, as well as the possibility of new waves of the COVID-19 pandemic, represents an additional burden for nurses [9][10]. In this context, mental health plays a key role during the pandemic because it is directly linked to the functioning of health systems worldwide [9][10].

SPECIFIC EFFECTS OF BURNOUT SYNDROME ON NURSES

The work of a nurse is critical and highly important within the healthcare system, and some authors even argue that it may be more stressful than firefighting [11]. The strain and pressure of a new work environment, along with insufficient professional experience in some areas, can further contribute to burnout—sometimes even at the very beginning of a nurse's career [11][12]. Burnout can occur at any stage of professional development [12]. Understanding the underlying mechanisms of nurse burnout is essential in order to introduce preventive measures or develop programs to support nurses facing this issue [12].

Emotional exhaustion is a key symptom of burnout syndrome and may give rise to negative feelings toward oneself and one's professional duties [13]. This altered attitude negatively affects the work environment and the nurse's daily performance [14]. Alongside emotional exhaustion, another characteristic symptom that may develop is depersonalization [13]. Since depersonalization involves low self-esteem and a reduced sense of personal accomplishment, it can further contribute to emotional exhaustion among nurses [15].

Burnout among healthcare professionals is an emerging challenge affecting healthcare systems and patient safety worldwide [15]. Health workers may experience anxiety, irritability, mood swings, insomnia, depression, feelings of failure, and ultimately burnout [15].

Previous studies have shown that job burnout is associated with stressful working environments and leads to poor health outcomes among nurses [16]. Factors such as job satisfaction, workplace environmental characteristics, workload, daily working hours, and perceived anxiety related to working conditions may all influence the likelihood of burnout [16].

Increasing physical and mental demands on hospital nursing staff have led to the identification of symptoms and workplace risk factors associated with professional burnout [17]. The stress, fear, and overload caused by the pandemic pushed nurses beyond their capacity to cope with prolonged physical and mental strain [17]. These factors can lead to multiple problems, including anxiety, depression, and chronic fatigue [17].

High levels of fear and extended working hours during the spread of COVID-19 have contributed to increased professional burnout among nurses [18]. Burnout, in turn, affected their family lives and their ability to provide quality patient care, prompting managerial interventions in some healthcare institutions [18]. These interventions focused on providing emotional support to help nurses manage their responses to work demands and hazardous conditions [18]. In recent years, a major goal of management has been workforce retention due to the persistent phenomenon of "brain drain," often triggered by dissatisfaction with the work environment [19].

A high level of nurse burnout can have several negative effects on employees, patients, and healthcare institutions [18][20]. These effects may manifest in various ways, but the overall impact of burnout is consistently negative for all parties involved [18,20].

RESEARCH METHODOLOGY

The primary aim of this study was to assess whether there are significant differences in the prevalence of burnout syndrome based on the type of outpatient clinic in which nurses are employed. Additionally, we examined whether there are statistically significant differences in the subscales of burnout syndrome—emotional exhaustion, depersonalization, and reduced personal accomplishment—depending on the type of outpatient clinic where the nurses work.

For this research, a general survey questionnaire with fifteen questions was created. The questionnaire contains mostly closed-ended questions and a smaller number of open-ended questions. The questions refer to sociodemographic data, education, economic status, employment, and job satisfaction. One part of the questionnaire includes a self-assessment of feelings during working hours, the presence of certain physical symptoms resulting from work-related stress, as well as methods for overcoming stress.

The MBI-HSS (Maslach Burnout Inventory – Human Services Survey) was employed to assess the degree of burnout among healthcare workers. This self-assessment tool consists of 22 statements, each rated on a scale from 0 to 6 (0 – never, 1 – several times a year or less, 2 – once a month or less, 3 – several times a month, 4 – once a week, 5 – several times a week, 6 – every day). It includes three subscales designed to measure:

1. Feeling of emotional exhaustion (Emotional Exhaustion – EE) – refers to the feeling of depletion of emotional and physical resources. This subscale contains 9 items (1, 2, 3, 6, 8, 13, 14, 16, 20). A score of 18 or lower on the emotional exhaustion subscale indicates a low risk of developing burnout syndrome. A score between 19 and 26 signifies a moderate risk, while a score above 26 suggests a high risk of burnout.

Depersonalization (Depersonalization – DP) – refers to a negative, distant, or excessively indifferent reaction to various aspects of work, including loss of care and emotional or physical distancing from clients, patients, and residents. The depersonalization subscale contains 5 items (5, 10, 11, 15, 22). A score of less than 5 indicates a low risk of burnout, a score between 6 and 9 represents a moderate risk, and a score above 9 suggests a high risk of developing burnout syndrome.

Feeling of lack of personal accomplishment (Personal Accomplishment – PA) – refers to a sense of incompetence and reduced achievement and productivity at work. This subscale consists of 8 items (4, 7, 9, 12, 17, 18, 19, 21). A score of 40 or higher indicates a low risk of burnout syndrome, a score between 34 and 39 represents a moderate risk, and a score of 33 or lower suggests a high risk. However, a definitive conclusion about the presence of burnout syndrome cannot be drawn solely from the PA subscale; the EE and DP subscales hold greater relevance. The PA subscale is meaningful only when validated alongside the EE or DP scale. The total possible score ranges from 0 to 132.

Burnout syndrome, which is assessed through these three subscales, is ranked into three categories:

2. A high level of burnout is expressed through high scores on the emotional exhaustion and depersonalization subscales and low scores on the personal accomplishment subscale.

An average level of burnout is expressed through average scores on all subscales.

A low level of burnout is characterized by low scores on the emotional exhaustion and depersonalization subscales, coupled with a high score on the personal accomplishment subscale.

The research sample comprised 120 nurses and technicians employed at the Zemun and New Belgrade Health Centers, with 60 nurses and technicians working in the COVID-19 outpatient clinic and 60 working in the non-COVID outpatient clinic. The study was conducted in February 2023.

Statistical data processing and analysis were performed using IBM SPSS (Statistical Package for the Social Sciences), version 25. Descriptive statistics were used to describe the sample and determine the frequency of burnout syndrome in relation to employment. An independent-samples t-test was used to detect differences in burnout syndrome with respect to employment, and regression analysis was applied to determine significant predictors of stress syndrome. In accordance with the study requirements, only part of the obtained results will be presented.

RESEARCH RESULTS

Table 1: Distribution of respondents by gender

	Frequency	Percentage [%]
Male	4	3.3
Female	116	96.7
Total	120	100

Table 1 shows that 120 respondents participated in the research, of whom 116 (96.7%) were female and 4 (3.3%) were male.

Table 2: Distribution of respondents regarding the prevalence of burnout syndrome in relation to the type of clinic where nurses work

	COVID ambulance (N=60)	Non COVID ambulance (N=60)	t value	p
Middle value				
Burnout syndrome	64.03 ± 9.05	63.51 ± 21.11	0.121	0.904
Emotional exhaustion	26.13 ± 7.04	23.72 ± 12.81	0.889	0.379
Depersonalization	6.79 ± 4.08	8.68 ± 7.44	-1.203	0.236
Lack of personal achievement	31.10 ± 5.68	31.11 ± 10.26	0.001	0.999

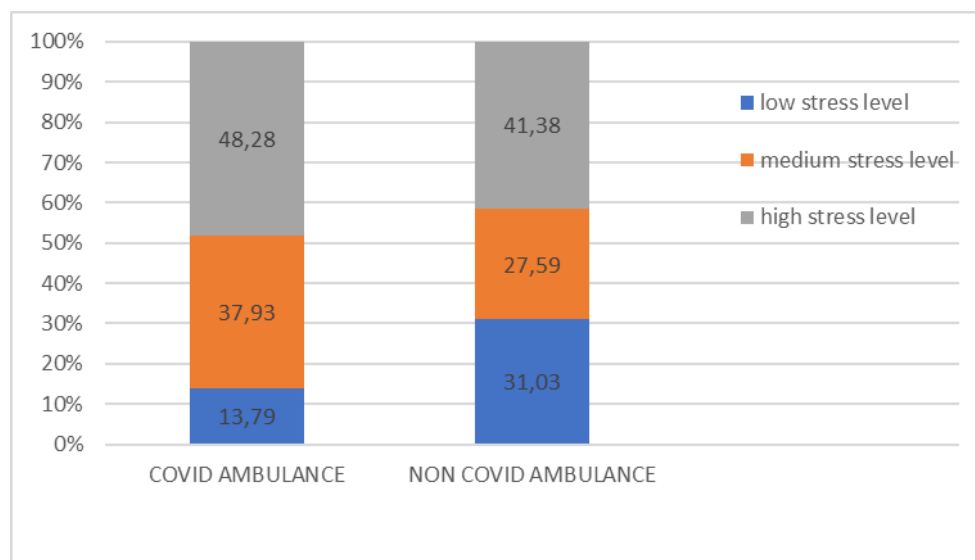
*Statistical significance at the 0.05 level

From Table 2, we can see that the mean value for burnout syndrome among employees in the COVID ambulance is 64.03 ± 9.05 , while among employees in the non-COVID ambulance it is 63.51 ± 21.11 . The t-value is 0.121 and the p-value is 0.904, indicating that there is no significant difference in the prevalence of burnout syndrome based on the type of ambulance where nurses work.

The mean score for emotional exhaustion among employees of the COVID ambulance is 26.13 ± 7.04 , while for employees of the non-COVID ambulance it is 23.72 ± 12.81 . The t-value is 0.889 and the p-value is 0.379, which also indicates no significant difference.

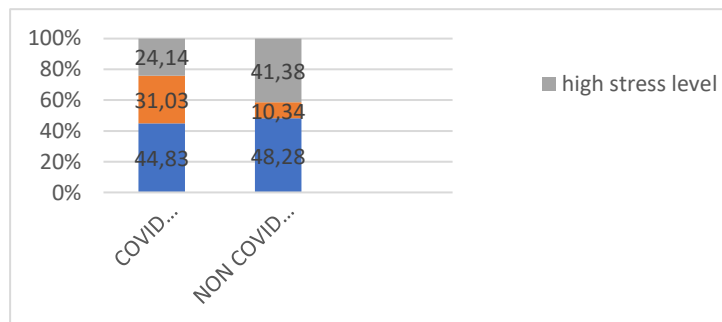
The mean score for depersonalization among COVID ambulance employees is 6.79 ± 4.08 , compared to 8.68 ± 7.44 among non-COVID ambulance employees. The t-value is -1.203 , with a p-value of 0.236, again showing no significant difference.

The mean score for the sense of lack of personal accomplishment among COVID ambulance employees is 31.10 ± 5.68 , while for non-COVID ambulance employees it is 31.11 ± 10.26 . The t-value is 0.001, with a p-value of 0.999, further confirming that there is no significant difference in the subscales of burnout syndrome (emotional exhaustion, depersonalization, and lack of personal accomplishment) based on the type of ambulance where nurses work.



Graph 1: Degree of stress related to emotional exhaustion

According to Graph 1, in the COVID ambulance, 13.79% of employees report a low level of emotional exhaustion, 37.93% exhibit a moderate level, and 48.28% experience a high level of emotional exhaustion. In contrast, in the non-COVID ambulance, 31.03% of employees report a low level of emotional exhaustion, 27.59% show a moderate level, and 41.38% display a high level. This indicates that employees in the COVID ambulance experience a higher degree of stress and emotional exhaustion compared to their counterparts in the non-COVID ambulance.



Graph 2: Degree of stress for depersonalization

From Graph 2, we can see that in the COVID ambulance, 44.83% of employees exhibit a low level of depersonalization stress, 31.03% exhibit a medium level, and 24.14% exhibit a high level of depersonalization stress. In the non-COVID ambulance, 48.28% of employees exhibit a low level of depersonalization stress, 10.34% exhibit a medium level, and 41.38% exhibit a high level of depersonalization stress. This indicates that employees in the non-COVID ambulance experience a higher degree of depersonalization stress than employees in the COVID clinic.

Table 3: Distribution of respondents according to the degree of satisfaction with working conditions at the workplace

	Frequency	Percent [%]
Very dissatisfied	4	3.3
Dissatisfied	14	11.7
Neither satisfied nor dissatisfied	36	30.0
Satisfied	56	46.7
Very satisfied	10	8.3
Total	120	100

From Table 3, we can conclude that the largest number of respondents are either satisfied with the working conditions or undecided (neither satisfied nor dissatisfied). A smaller number of employees are dissatisfied with the working conditions, an even smaller number are very satisfied, and the smallest number are very dissatisfied.

Table 4: Reliability of scales and subscales of burnout syndrome

	Number of items	Cronbach α coefficient
Burnout syndrome	22	0.837
Emotional exhaustion	9	0.876
Depersonalization	5	0.802
Lack of personal accomplishment	8	0.881

From Table 4, we can see that the scale for determining burnout syndrome has 22 items with a Cronbach's α coefficient of 0.837. Based on these results, we can conclude that the burnout syndrome scale has good reliability. The emotional exhaustion subscale consists of 9 items and has a Cronbach's α coefficient of 0.876. The depersonalization subscale includes 5 items, with a Cronbach's α coefficient of 0.802, while the personal accomplishment subscale contains 8 items and has a Cronbach's α coefficient of 0.881. These results suggest that the subscales measuring emotional exhaustion, depersonalization, and lack of personal accomplishment exhibit good reliability.

Based on the data analysis, we can conclude that respondents rarely experience frustration at work and do not find working with people overly stressful. However, they most often feel that they are working too much. Respondents seldom perceive patients as being treated as impersonal objects, but more frequently feel that patients hold them responsible for their problems. While respondents rarely feel empowered, they most often report being able to solve their patients' problems effectively and easily understand their patients' feelings.

DISCUSSION AND CONCLUSION

Each individual has a unique temperament, follows different customs, and possesses varying levels of education and upbringing. Consequently, any job that involves interacting and communicating with people is inherently complex, demanding, and at times stressful. One such profession where communication and human interaction are central is nursing. Regardless of whether nurses work in general or specialized hospitals, research institutes, health centers, or clinical and clinical-hospital centers, one undeniable truth remains nurses perform a highly demanding, responsible, and often stressful job on a daily basis.

While nurses employed in hospitals typically work longer hours and provide direct hospital care to patients, those in health centers despite shorter working hours and the absence of direct hospital care duties still face the risk of burnout syndrome, regardless of the type of clinic. The large influx of patients with diverse needs, reduced staffing of nurses and doctors in non-COVID clinics (to fill positions in COVID units), short working hours, occasionally missed breaks to attend to as many patients as possible, as well as patient misunderstandings, disrespect, and anger, are just some of the contributing factors to the increased risk of burnout syndrome among nurses in non-COVID ambulances.

Similarly, nurses working in COVID clinics face factors that may increase the risk of burnout, with the added challenge of working with infected patients. While one might expect that the risk of burnout would be higher in the COVID clinic, the findings of this research suggest otherwise—there is no significant difference in the prevalence of burnout syndrome or its subscales between nurses working in COVID and non-COVID clinics. However, this does not imply that the risk of burnout syndrome among nurses in health centers is absent or negligible.

Nurses in the COVID clinic report a higher level of stress related to emotional exhaustion, while those in the non-COVID clinic exhibit a higher level of stress related to depersonalization. Nurses in both clinics show similarly high levels of stress related to feelings of reduced personal accomplishment.

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<https://doi.org/10.3934/publichealth.2022008>

Article history:

Received 23 July 2024

First revision 25 August 2024

Second revision 22 February 2025

Third revision 19 March 2025

Accepted 20 October 2025