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Professional burnout in nurses measured by the Maslach Burnout Inventory questionnaire in the scientific literature between 2008 and 2022

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ABSTRACT

In professions such as nursing, close, intensive contact with other people and high emotional involvement can cause the occurrence of professional burnout syndrome.
The aim of the study was to investigate work-related burnout by analysing articles describing research on this issue among nurses published in medical journals (2008-2022).
Data were obtained from a review (March-April 2023) of electronic databases: PubMed, Google Scholar, and EBSCO. By analysing selected articles, the work describes the research tools that are most often used to study occupational burnout (Maslach Burnout Inventory [MBI], Oldenburg Burnout Inventory [OLBI], Copenhagen Burnout Inventory [CBI]) and the broader purpose of the conducted research and the main risk factors related to professional burnout. The article describes the phenomenon of burnout, its causes, symptoms, consequences, and correlating phenomena. The results of occupational burnout research conducted with the use of MBI were presented. Despite the in-depth analysis of the research results of selected articles, it is impossible to clearly tell which of the symptoms of occupational burnout is dominant. The average burnout in 3 dimensions of the MBI ranges due to organisational and cultural differences in healthcare systems in various countries where nurse burnout was studied.
Key words: professional burnout, nurses, MBI questionnaire.

INTRODUCTION

Burnout researchers and their definitions of the phenomenon

The term "burn-out" is a metaphor conjuring up the image of an extinguished fire or a burnt-out candle. This phenomenon in the context of professional work began to be first dealt with in the 1970s. One of the first scientists to study burnout was the psychoanalyst Herbert Freudenberger, who introduced the term professional burnout [1].

According to numerous studies, occupations with increased burnout risk are those based on interpersonal relationships. Herbert Freudenberger and Gail North analysed burnout syndrome among people in social professions. They defined it as "a state that crystallises slowly over a prolonged period of experiencing constant stress and engaging all one's energy, which in turn has a negative impact on motivation, beliefs, and behaviour" [1, 2]. Ayala Pines, who studies the existential aspect of professional burnout, claims that the cause of burnout is "an ineffective search for answers about the meaning of life". People working in social professions often look for a job in which they find a greater sense of fulfilment and therefore set themselves exorbitant goals. However, when they realise that the set goals are unattainable, they become even more vulnerable to professional burnout [3, 4].

Other researchers of the phenomenon of burnout, Sven Litzke and Horst Schuh, also show the relationship between social occupations and burnout. In their papers, they described the most common attitudes of people performing social professions that are conducive to the occurrence of professional burnout: high commitment to work, high expectations towards themselves, pushing the limits of their own abilities, frequently ignoring one's exhaustion (this has been even more the case during the pandemic), not paying attention to one's own interests and needs, and tak-

ing on new responsibilities and tasks despite already feeling exhausted [5].

Further development of the concept of occupational burnout was due to Christina Maslach's research. Maslach noted, similarly to the researchers cited above, that occupational burnout most often affects professions in which there is much contact directed at another person. And the more that person is suffering, expresses their demands, expects support, and has a great need to interact with the professional – the more quickly it causes the professional to burn out [6, 7].

Maslach created a model of burnout and is the author of a tool for measuring it. Together with Susan Jackson they defined the occupational burnout using a 3-factor model, which includes emotional exhaustion syndrome, depersonalisation, and reduced sense of personal achievement, which may occur in subjects working with other people [8].

Emotional exhaustion is defined by the authors as a sense of excessive emotional burden with a simultaneous deficit of resources at one's disposal. It is a feeling of emptiness and lack of strength caused by excessive demands placed on the professional by their work (or by the professional themselves despite their limited capabilities).

Depersonalisation is a negative reaction to other people (clients, patients, pupils), which consists of objectifying the other person. It is a feeling of soullessness, impersonality, looking at others cynically, and a lowering sensitivity. Of course, this phenomenon may be a result of the defence mechanism triggered by excessive demands placed on the professional.

On the other hand, a reduced sense of personal achievement refers to a lowered belief of one's competences and successes at work. It is the feeling of wasting time and effort at one's workplace [9]. Using the tool created by Maslach, one can easily diagnose the level of professional burnout and describe the key factors that affect whether the professional will experience this syndrome.

Maslach emphasises that occupational burnout is not a manifestation of psychopathology of an individual but instead that it potentially threatens every professionally active person [10, 11]. Barry Farber also recognises burnout as a multifaceted syndrome, the causes of which lie in individual, interpersonal, as well as organisational and contextual factors [12]. A leading Polish researcher, Helena Sęk, is of a similar opinion, admitting the possibility of developing burnout in anyone who uses unconstructive strategies of coping with long-term stress in the workplace [1, 13, 14].

As a social psychologist, Maslach emphasises the importance of organisational factors as the key mechanisms in the development of burnout syndrome. Risk factors for burnout inherent in the context of work include workload, control and co-determination, compensation, community, fairness, and values in the organisation. At the same time, Maslach draws attention to the mediating influence of personality traits – not every person working in similar conditions will experience occupational burnout [15, 16].

Causes of professional burnout

Professional burnout can affect people from all occupations, especially if one works in a so-called social profession.

The degree of burnout will also be influenced by the system in which one functions – the sense of reward for the work performed, work organisation, procedures, and intensity of stress factors. It can be noted that humans have in varying degrees an internal resistance to the outside world in which there are many factors triggering the development of burnout syndrome. It is therefore worth looking for solutions on how to build the internal resistance of everyone in order not to succumb to this disorder and how to counteract external, systemic factors, which are conducive to the emergence of burnout.

There are many factors that contribute to the emergence of this phenomenon. Some researchers emphasise the reasons inherent in organisational issues, while others in the subject's personality. Litzke believes that the causes of burnout are organisational (systemic) – too many tasks to be performed, lack of autonomy and independence in each position, too low payment while being underestimated at the same time. Pines, on the other hand, believes that this phenomenon is due to the feeling of alienation, the experience of depression or anxiety, stress combined with elevated expectations and a strong motivation to work [17]. In such intricate phenomena, however, it is difficult to distinguish what is the cause and what is the effect – whether depression is the result of burnout or vice versa.

Carolyn Walter has created a comprehensive breakdown of factors contributing to burnout, which include: organisational burdens (such as work pace, lack of flexible working hours, task difficulty, norms and procedures, and excessive overtime), social burdens (group work vs. individual work, conflicts, mobbing), physical strain (in addition to typical muscle strain; this also includes stress resulting from excessive noise, poor lighting, unfavorable temperature, restrictions related to wearing protective clothing – overalls, masks) and mental strain (e.g. criticism, fear, failure, job insecurity, time pressure, lack of recognition and support) [5].

Another researcher of the phenomenon of burnout, Cary Cherniss, defines it as "a process in which negative changes in attitudes and behaviours occur under the influence of work-induced tension" [18].

She splits the causes of burnout in social professions, which are acutely experienced especially by young workers, into 5 groups:

- Lack of confidence in their own competences – despite many years of professional training, young employees very often do not feel sufficiently prepared to perform efficiently in each professional role;
- Negative traits in clients, aggressive, disrespectful behaviour of clients (patients);
- Bureaucracy, feeling overwhelmed with administrative work;
- Feeling of lack of fulfilment, lack of motivation to develop oneself, which leads to falling into a routine and a feeling of superficiality in the activities performed;
- Lack of a sense of belonging to a supporting group, feeling of loneliness and lack of people capable of supporting and motivating to improve professional competences. The occurrence of rivalry, conflicts, tensions between colleagues [18-20].

Burnout symptoms

Cherniss distinguishes groups of burnout symptoms, the so-called warning signs, including:

- decrease in energy: physical exhaustion, fatigue, loss of weight and appetite, insomnia, increased muscle tone, headaches, migraine, gastric problems, frequent colds, excessive use of medications;
- lowered aspirations and work-related anxiety, loss of motivation and uncertainty;
- increase in helplessness and a sense of failure, increase in anger, guilt, negativism, reluctance to change, indifference, tendencies to isolate oneself;
- emotional distance, difficulty in showing positive feelings towards patients, slowly developing cynicism, most often resulting from the loss of faith in the ideals one used to strive for;
- isolation in the work environment, losing sight of one's goals, avoidance of contact with colleagues, indifference to the exchange of professional experiences, higher absenteeism at work, increased conflict both at work and outside of it [21].

Methods of measuring burnout

The most used tools for measuring burnout include: Maslach Burnout Inventory (MBI; 1981), The Copenhagen Burnout Inventory (CBI) by Kristensen, Borritz, Villadsen, and Christensen (2005), Oldenburg Burnout Inventory (OLBI) by Demerouti and Bakker (2008).

Maslach Burnout Inventory

The most used tool in the world, including Poland, is the professional burnout questionnaire called the Maslach Burnout Inventory. It was constructed in several versions, and it is considered the best standardised tool for assessing burnout. The first version was developed by Maslach and Jackson in 1981, and it underwent several modifications in the following years. The MBI is a self-report questionnaire consisting of 22 statements that evaluate an individual's feelings. It measures 3 dimensions of burnout:

- 9 statements pertain to emotional exhaustion (EE),
- 5 statements focus on depersonalisation (DEP),
- 8 statements address a reduced sense of personal achievement (PA).

Responses are given on a 7-point frequency scale of the occurrence of a particular feeling. In the EE and DEP scales, the higher the scores, the more intense the level of occupational burnout, while in the PA scale, the lower the score, the higher the occupational burnout index. For each subscale, the results are calculated separately, but later it is possible to find the overall indicator of occupational burnout. Thus, high scores in the EE and DEP subscales and low scores in the PA subscale allow the researcher to conclude that the examined person is professionally burnt out. In addition to the version of the questionnaire for representatives of social professions (MBI – Human Services Survey) [22], there is a version for people working in education (MBI – Educators Survey [23]) and a general version that can be used to measure burnout outside the social services sector (MBI – General Survey) [24]. In this latest version, the dimensions of burnout have been redefined to describe attitudes towards the job, not towards the people one works with [9].

Numerous studies have shown satisfactory psychometric properties of the MBI-HSS, both in its original version and in its version adapted in various countries, including Poland [25]. Currently, the MBI questionnaire is used in over 90% of empirical research on burnout [26]. The MBI-GS questionnaire also shows good psychometric properties, and studies of various occupational groups confirm the 3-dimensional structure of the burnout syndrome [27].

Copenhagen Burnout Inventory

Copenhagen Burnout Inventory is a questionnaire with 3 sub-dimensions: personal burnout, work-related burnout, and client-related burnout ("client" is a broad term that includes terms such as patients, prisoners, children, students, residents). The CBI addresses 2 key dimensions of burnout: fatigue and exhaustion. These 2 words appear in numerous definitions of the phenomenon. In 2001, researchers Schaufeli and Greenglass defined burnout as "a state of physical, emotional, and mental exhaustion that results from prolonged involvement in emotionally demanding work situations" [28].

Personal burnout is defined as "the degree of physical and mental fatigue and exhaustion experienced by a person". This scale is designed to answer a simple question: how tired or exhausted does the participant feel?

The dimension of work-related burnout is "the degree of physical and mental fatigue and exhaustion that a person perceives as related to their work".

The client-related burnout dimension is "the degree of physical and mental fatigue and exhaustion that a person perceives to be related to collaborating with clients".

Copenhagen Burnout Inventory, like the earlier tool, is a self-report questionnaire with 19 questions covering the following:

- personal burnout – 6 questions,
- work-related burnout – 7 questions,
- client burnout – 6 questions.

Answers are given on a 5-point scale of frequency: always, often, sometimes, rarely, never. According to Kristensen's burnout level criteria, scores of 50 to 74 are considered moderate, scores of 75 to 99 are considered high, and scores of 100 are considered severe burnout. Studies have shown satisfactory psychometric properties of the CBI questionnaire, both in the original version and in the version adapted in various countries [29-31].

Oldenburg Burnout Inventory

The OLBI questionnaire was developed by Demerouti to measure burnout among representatives of various occupational groups in Germany [32]. The OLBI questionnaire measures 2 dimensions of burnout: exhaustion and disengagement. Exhaustion in this paradigm is the result of exceeding demands on one's physical strength as well as too much mental and emotional tension. Disengagement, on the other hand, describes the declining identification with one's work and a lack of commitment to continue working in one's role.

In the OLBI questionnaire, the researcher should interpret the result separately for each subscale. The tool has 16 items, 8 for exhaustion and 8 for disengagement. Each subscale contains 4 items formulated in a positive way (e.g. "I always find new and interesting aspects of my work", "I face positive challenges at work") and 4 items formulated in a negative way (e.g. "I often feel exhausted at work emotionally", "Sometimes I get sick thinking about work"). Respondents answer on a 4-point scale, from 1 (*strongly agree*) to 4 (*strongly disagree*). Studies have shown satisfactory psychometric properties of the questionnaire. It is addressed to all kinds of professionals (from a diversity of occupations) and has been evaluated in non-English-speaking populations, including Poland [33-35].

MATERIAL AND METHODS

In professions such as nursing, close, intensive contact with other people and high emotional involvement can cause the occurrence of professional burnout syndrome.

In the analysis conducted for the purposes of this study, an attempt was made to qualitatively assess the selected articles in terms of the following questions:

1. What research tools are most often used to study occupational burnout in Poland and in the world?
2. What is the broader purpose of the conducted research and what are the risk factors related to professional burnout?

The PubMed, Google Scholar, and EBSCO databases were searched for articles describing research on occupational burnout among nurses. The inclusion criteria for the analysis included the following:

1. Articles and research conducted and published in the period from 2008 to 2022.
2. Studies in which 3 standardised research tools were used to examine the phenomenon of occupational burnout – MBI, OLBI, and CBI.
3. The research was published in a medical journal.

For the purposes of this article, the results of occupational burnout research conducted with the use of MBI were presented (Table 1) [36-46].

CONCLUSIONS

The most used standardised tool to study professional burnout is the Maslach Burnout Inventory.

The analysed articles examine the correlation between occupational burnout and the following: selected socio-demographic and occupational factors, patient care quality, work environment, workload, musculoskeletal disorders, sleep quality, stress and depression, and job satisfaction.

When examining the correlations of occupational burnout, the authors used the following tools: Practice Environment Scale of the Nursing Work Index (PES-NWI), Authentic Leadership Questionnaire (ALQ), Practice Environment Scale of the Nursing Work Index (PES-NWI), Taiwan Depression Questionnaire (TDQ), Utrecht Work Engagement Scale (UWES), Authentic Leadership Questionnaire (ALQ), Subjective Job Assessment Questionnaire (SOP), Utrecht Work Engagement Scale (UWES), Leiden Quality of Work Questionnaire for Nurses, Goal Orientation Questionnaire, The Pittsburgh Sleep Quality Index, Job Performance Scale, Hospital Anxiety and Depression Scale (HADS), Frankfurt Emotion Work Scales (FEWS), Trauma Screening Questionnaire (TSQ), Post-traumatic Growth Inventory-Short Form (PTGI-SF), Beck Depression Inventory, Job Stress Scale (JSS), and the Job Satisfaction Index (JSI). Musculoskeletal ailments were

Table 1. Professional burnout measured by Maslach Burnout Inventory (MBI) in selected nursing specialties

Author Title of the article Year	Aim of research	Research group	Main results
Li-feng Z, Li-ming Y, Ke L, *et al.* [36] The association of Chinese hospital work environment with nurse burnout, job satisfaction, and intention to leave Nurs Outlook 2014; 62: 128-137	Describe nurse burnout, job satisfaction, and intention to leave and to explore the relationship of work environment to nursing outcomes	9698 nurses from 181 hospitals in China All the data were collected between September 2008 and June 2010	Nurses reported moderate levels of emotional exhaustion and depersonalisation and elevated levels of reduced personal accomplishment. One-fifth of the nurses reported elevated levels of burnout on all 3 dimensions. Nurses reporting mixed and excellent work environments were less likely to report high burnout, job dissatisfaction, and intention to leave compared with those in poor work environments. A large number of nurses in this sample reported elevated levels of burnout in all three dimensions; nurses exhibited moderate levels of EE and DP and high levels of PA (half of them reported high levels in PA) EE – 23.95 DP – 6.63 PA – 32.46
Van Bogaert P, Clarke S, Wouters K, *et al.* [37] Impacts of unit-level nurse practice environment, workload and burnout on nurse reported outcomes in psychiatric hospitals: A multilevel modelling approach Int J Nurs Stud 2013; 50: 357-365	To investigate impacts of practice environment factors, nurse perceptions of workload and self-reported burnout at the unit-level on job outcomes and nurse-assessed quality of care in psychiatric hospitals	357 staff members from thirty-four acute and chronic care nursing in 2 psychiatric Hospitals Belgium December 2010 and April 2011	Multiple multilevel models identified depersonalisation and nurse–physician relations as predictors of turnover intentions and quality of care of the interdisciplinary team. Ratings of nursing management at the unit level were predictors of all the quality-of-care variables. Emotional exhaustion was predictive of quality of care at the unit level. While workload was correlated with burnout, it was not predictive of any of the outcomes examined in multiple multilevel models EE – 11.64 DP – 4.30 PA – 34.60
Dyrbye LN, West CP, Johnson PO, *et al.* [38] Burnout and satisfaction with work–life integration among nurses J Occup Environ Med 2019; 61: 689-698	To evaluate characteristics associated with burnout and satisfaction with work–life integration (WLI) among nurses and compare their experience to other American workers	8638 nurses and 5198 workers to evaluate factors associated with burnout and satisfaction with WLI and compare nurses to workers in other fields 8638 (9.9%) completed the electronic survey. Among these survey responders, 7077 (81.9%) provided complete responses to the MBI items and demographic items and are included in this analysis	In this cohort of nurses, a third had substantial symptoms of burnout and half were dissatisfied with their WLI. Greater work hours were associated with higher odds of burnout while higher academic degree related to nursing was associated with lower odds of burnout EE – 21.80 DP – 5.40
Morawska-Jóźwiak B, Olejniczak P, Rasmus P [39] Burnout of nurses working in hospital wards Pielęgniarstwo Polskie 2016; 3: 317-323	To examine the level of burnout and occupational stress in the group of nurses from four hospital wards	Eighty nurses working in the III City Hospital name of Karola Jonschera in Lodz: Ophthalmology, Internal Medicine, and Cardiology, General Surgery and Intensive Care, and Anaesthesiology	The highest levels of burnout – Ophthalmology: the lowest – Intensive Care and Anaesthesiology: Ophthalmology EE – 20.8 DP – 11.9 PA – 22.8 Surgery Intensive Care EE – 19.1 DP – 6.5 PA – 21.8 Internal medicine EE – 20.4 DP – 9.9 PA – 25.4 Surgery EE – 17.6 DP – 7.8 PA – 29.7

Table 1. Professional burnout measured by MBI (Maslach Burnout Inventory) in selected nursing specialties (cont.)

Author Title of the article Year	Aim of research	Research group	Main results
Nowacka A, Piskorz A, Wolfshaut-Wolak R, *et al.* [40] Selected socio-demographic and occupational factors of burnout syndrome in nurses employed in medical facilities in Małopolska – preliminary results Int J Environ Res Public Health 2018; 15: 2083	The study examined the relationship between socio-demographic and occupational factors and the level of occupational burnout using the dimensions of emotional exhaustion (EE), depersonalisation (DEP), and personal accomplishment (PA)	560 nurses working in hospitals and primary healthcare units	Education, period of employment, additional employment, and managerial position had a significant influence on the level of occupational burnout EE – 22.90 DP – 6.0 PE – 27.63
Hayes B, Douglas C, Bonner A [41] Work environment, job satisfaction, stress and burnout among haemodialysis nurses J Nurs Manag 2015; 23: 588-598	To examine the relationships among nurse and work characteristics, job satisfaction, stress, burnout, and the work environment of haemodialysis nurses	417 haemodialysis nurses Australian and New Zealand	Haemodialysis nurses reported an acceptable level of job satisfaction and perceived their work environment positively, although high levels of burnout were found. Nurses who were older and had worked in haemodialysis the longest had higher satisfaction levels, experienced less stress and lower levels of burnout than younger nurses. The in-centre type of haemodialysis unit had greater levels of stress and burnout than home training units. Greater satisfaction with the work environment was strongly correlated with job satisfaction, lower job stress and emotional exhaustion EE In-centre haemodialysis nurses – 30.71 nurses who worked in satellite units – 30.48 home haemodialysis nurses – 28.29 DP 31-40-year age – 13.67 51-60-year age – 10.83
Azoulay E, De Waele J, Ferrer R, *et al.* [42] Symptoms of burnout in intensive care unit specialists facing the COVID-19 outbreak Ann Intensive Care 2020; 10: 110	To examine the prevalence of burnout syndrome amongst intensivists facing the COVID-19 outbreak	85 countries 1132 30 April 30 and 25 May 2020	The pandemic has had an overwhelming impact on ICU specialists. With about half the ICU physicians having symptoms of severe burnout and anxiety as well as 30% with symptoms of depression, we can consider that COVID-19 has generated a mental health emergency. The lack of knowledge and experience about the disease was most probably a source of anxiety EE – 18 DP – 8 PA – 35
Chen R, Sun C, Chen J, *et al.* [43] A large-scale survey on trauma, burnout, and post-traumatic growth among nurses during the COVID-19 pandemic Int J Ment Health Nurs 2021; 30: 102-116	To assess trauma, burnout, post-traumatic growth, and associated factors for nurses in the COVID-19 pandemic A logistic regression analysis was conducted to determine whether gender, working in critical care units, working in departments related to COVID-19, providing care for patients with COVID-19, and providing care for patients who died because of COVID-19 were associated factors with respect to trauma	12,596 completed the survey, and 52.3% worked in COVID-19 designated hospitals working in ICUs, COVID-19 designated hospitals, and departments involved with treating COVID-19 patients had higher scores in mental health outcomes	In the multiple linear regression analysis, tenure, PTGI score, emotional exhaustion, depersonalisation, and lack of personal accomplishment were influential factors relating to trauma. Specifically, emotional exhaustion in the burnout dimension was the most influential factor and exhibited the highest explanatory variance. The average scores of burnout for each of the 3 subscales were in the low-to-moderate range EE – 19.01 DP – 5.5 PA – 19.00

Table 1. Professional burnout measured by MBI (Maslach Burnout Inventory) in selected nursing specialties (cont.)

Author Title of the article Year	Aim of research	Research group	Main results
Murat M, Kose S, Savaser S [44] Determination of stress, depression, and burnout levels of front-line nurses during the COVID-19 pandemic Int J Ment Health Nurs 2020; 30: 533-543	To determine the stress, depression, and burnout levels of front-line nurses	705 nurses May and July 2020	They had high levels of stress and burnout and moderate depression. Those who were younger and had fewer years of work experience felt inadequate about nursing care and had higher levels of stress and burnout. More burnout was detected in nurses who had a positive COVID-19 test and did not want to work voluntarily during the pandemic. Nurses working in COVID-19 wards experienced more burnout in the field of personal success compared with nurses working in other wards (Wu *et al.* 2020) EE – 18.9 DP – 7.3 PA – 11.4
Zhang Y, Wang C, Pan W, *et al.* [45] Stress, burnout, and coping strategies of frontline nurses during the COVID-19 epidemic in Wuhan and Shanghai, China Front Psychiatry 2020: 11: 1-9, Article 565520	The aim of this study was to identify stressors and burnout among frontline nurses caring for COVID-19 patients in Wuhan and Shanghai and to explore perceived effective morale support strategies	110 nurses from Zhongshan Hospital, Shanghai, who were deployed at COVID-19 units in Wuhan and Shanghai March 2020	Burnout was observed in the emotional exhaustion and depersonalisation subscales, with 78.5 and 92.5% of participants presenting mild levels of burnout, respectively. However, 52 (48.6%) participants experienced a severe lack of personal accomplishment. Participants with longer working hours in COVID-19 quarantine units presented higher emotional exhaustion (OR = 2.72, 95% CI: 0.02-5.42, p = 0.049) and depersonalisation (OR = 1.14, 95% CI: 0.10-2.19, p = 0.033). Participants with younger age experienced higher emotional exhaustion (OR = 2.96, 95% CI: 0.11-5.82, p = 0.042) and less personal accomplishment (OR = 3.80, 95% CI: 0.47-7.13, p = 0.033) Nurses who were younger and those working longer shift-time tended to present higher burnout levels EE – 12.27 DP – 2.07 PA – 16.44
Munnangi S, Dupiton L, Boutin A, Angus G [46] Burnout, perceived stress, and job satisfaction among trauma nurses at a Level I safety-net trauma center J Trauma Nurs 2018; 25: 4-13	To explore the levels of burnout, stress, and job satisfaction in nurses providing care to trauma patients at a Level I safety-net trauma centre	Seventy-five nurses working in various units that provide direct care to trauma patients in the trauma centre This cross-sectional survey study was conducted at Nassau University Medical Centre	The extent of emotional exhaustion experienced by the nurses varied with work location and was highest in surgical intensive care unit nurses. In addition, the study revealed that significant relationships exist among perceived stress, burnout, and job satisfaction. Work environment significantly impacts burnout, job satisfaction, and perceived stress experienced by trauma nurses in a safety-net hospital. Burnout and perceived stress are prevalent in trauma nurses working at a Level I safety-net trauma centre. The nurses with higher personal accomplishment scores had lower emotional exhaustion. Work environment significantly impacts burnout, job satisfaction, and perceived stress experienced by trauma nurses in a SafetyNet trauma centre EE – 23.80 DP – 6.72 PA – 35.31

measured by a modified version of the Nordic Musculoskeletal Symptom survey; work values were measured using the short (21-item) version of the Work Values Scale (Eguchi and Tokaji, 2009); structural empowerment was measured using the Conditions of Work Effectiveness-II (CWEQ-II) (Laschinger *et al.,* 2001); job satisfaction was measured using 3 items adapted from Cammann *et al.* (1983), and the Michigan Assessment of Organisations Questionnaire.

Despite the in-depth analysis of the research results of selected articles, it is impossible to clearly tell which of the symptoms of occupational burnout is dominantThe average burnout in 3 dimensions of the MBI ranges from 11.64 to 30.71 in the EE scale, from 2.07 to 13.67 in the DP scale, and from 11.4 to 35.31 in the PA scale. This is due to organisational and cultural differences in healthcare systems in various countries where nurse burnout was studied.

Disclosures

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