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AGE, NURSING EXPERIENCE, MARITAL STATUS AND CHILDREN AS RISK FACTORS FOR BURNOUT IN LITHUANIAN PROFESSIONAL NURSES

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Annotation. Skilled healthcare providers often experience perceived stress, which may affect up to 71% of nurses, resulting in seriuos mental outcome such as burnout syndrome. Emotional exhaustion, depersonalization and poor personal accomplishment are three core components responsible for the development of burnout. In October–December 2024, a total of 148 female nurses were pooled for a cross-sectional study. The Maslach Burnout Inventory (MBI) was used to assess the self-perceived professional burnout experienced by Lithuanian clinical nurses, respectively. This study highlighted a worrying proportion of nurses found to be at an increased risk of professional burnout syndrome after more than 50% of nurses had experienced the symptoms of emotional exhaustion and depersonalization. More specifically, depersonalization as a core component of burnout was identified as having a higher rank in childless, single nurses (η^2_p = 0.11, $p < 0.001$) 22–39 years of age (d = 0.4, $p = 0.012$), who had less than five years of nursing experience ($\eta^2_p = 0.04$, $p = 0.048$). These variables must be taken into account when designing risk profiles for professional nurses. This would contribute to the implementation of health management programs or mindfulness-based cognitive therapies for the groups of nurses who are tending to full-blown occupational burnout, and in this fashion, some of its more severe mental disorders could be circumvented.

Keywords: burnout; depersonalization; emotional exhaustion; mental health; nurses

INTRODUCTION

Nurses, due to the nature of their profession, represent one of the most vulnerable groups in society, being significantly affected by a variety of stress-inducing factors. These include constant interaction with emotionally demanding patients (Trbojevic-Stankovic et al., 2015), high workloads and time pressures (Bamonti et al., 2019), rapidly evolving technologies, and institutional as well as professional ethical challenges. Additionally, nurses often face insufficient resources to effectively meet the demands of their workforce (Bamonti et al., 2019).

For these reasons, healthcare workers frequently experience not only acute (short-term) but also chronic psychological stress, which can affect up to 71% of nurses (Vahedian-Azimi et al., 2019). Prolonged perceived psychological stress can significantly disrupt mental health equilibrium, resulting in both physical and emotional exhaustion, which may subsequently lead to the development of professional burnout syndrome (Cañadas-De la Fuente et al., 2015; Payne, 2001; Skorobogatova et al., 2017).

According to some researchers, professional burnout is defined as a long-term response to chronic physical and emotional workplace stressors, characterized by physical and emotional exhaustion, anxiety, anger, cynicism, loss of self-confidence, negative attitudes toward work, and decreased work performance (Cañadas-De la Fuente et al., 2015; World Health Organization, 2019). The World Health Organization (WHO) has recently classified professional burnout as a syndrome "resulting from chronic workplace stress that has not been successfully managed" (World Health Organization, 2018). Burnout syndrome is also included in the International Classification of Diseases (ICD-10-AM) under code Z73.0 ("Burnout syndrome. Emotional exhaustion").

It is important to note that emotional exhaustion, depersonalization, and reduced personal accomplishment are the three core components driving the development of burnout syndrome (Maslach et al., 1997). Specifically, emotional exhaustion is the central element of burnout, characterized by feelings of inner emptiness, loneliness, chronic fatigue, and hopelessness. As a protective mechanism, emotional exhaustion cognitively distances the individual from excessive work demands. Depersonalization, another symptom of burnout, involves the development of cynical, negative, and impersonal attitudes toward others, where interactions with patients become cold, formal, irritable, indifferent, or negative—viewing patients more as problems or illnesses rather than as people.

Next, the third symptom of professional burnout is equally important, referring to reduced personal accomplishment in the workplace—that is, a negative evaluation of one's skills and professional achievements, a loss of perceived competence, and a decrease in professional activity and effectiveness. It is crucial to note that all three aforementioned components of burnout are closely interconnected. Nevertheless, emotional exhaustion is considered the most critical symptom, acting as a precursor that promotes the development of depersonalization, which in turn leads to reduced personal accomplishment.

It is also important to emphasize that, in later stages, as the pathological process of professional burnout associated with perceived stress develops (Maslach et al., 1997; Pisanti et al., 2013), nurses' job satisfaction and work efficiency may decline (Giorgi et al., 2018; Jiang et al., 2017), which, in turn, can negatively impact patient satisfaction with nursing care (Baranauskas et al., 2025; Mažionienė et al., 2019; McHugh et al.; Vahey et al., 2004).

From a national perspective, nearly a decade ago, in 2016–2017, the Lithuanian Hygiene Institute (HI) conducted a study to evaluate the factors contributing to professional burnout among nurses in psychiatry, surgery, and palliative care wards (Žiedelis & Pajarskienė, 2017). The study found that burnout among nurses was largely independent of the ward type or individual characteristics (age, work experience, workload, or shift type), but was closely associated with an unfavorable psychosocial work environment. Conversely, studies from other countries reported partially opposite findings, suggesting that burnout risk may be influenced not only by work environment factors but also by sociodemographic characteristics (Cañadas-De la Fuente et al., 2018).

Although the need for interventions to reduce professional burnout among nurses in the workplace has been publicly recognized, no detailed studies have yet been conducted in Lithuania to confirm or refute the influence of nurses' sociodemographic characteristics on burnout development. To address this knowledge gap, **the aim of this study** was to investigate the associations between perceived stress–induced professional burnout and sociodemographic characteristics in a cohort of nurses working in Lithuanian healthcare institutions.

MATERIALS AND METHODS

On the initiative of the Faculty of Biomedical Sciences at Panevėžys College, a cross-sectional study was conducted from October to December 2024. The target population consisted of female nurses working in Lithuanian healthcare institutions (excluding midwives).

In the initial study planning phase, a representative sample size (n = 150) was calculated using the official OpenEpi software (version 3.01), with an 8% margin of error and 95% confidence level, according to the formula:

$$n = \frac{\text{DEFF} \times Np(1-p)}{\left(\frac{d^2}{Z^2_{1-\alpha/2}} \times (N-1) + p(1-p)\right)}$$

where N is the target population size (nurses and midwives; N = 23,160), DEFF is the design effect, p is the expected proportion of the analyzed event, and Z is the quantile of the Gaussian distribution ($Z_{1-\alpha/2}$).

In the subsequent data collection phase, the non-probability snowball sampling method was applied, and primary empirical data were collected from respondents through official social media groups using a web-based survey system (E-survey Research Application version 204). Among all nurses in Lithuanian healthcare institutions who were invited to participate (n = 23,989), the final response rate was 0.6% (n = 153).

The initial dataset represented nurses from the most urbanized Lithuanian cities (Vilnius, Kaunas, Klaipėda, Panevėžys, Ukmergė, Anykščiai, Telšiai, Marijampolė) with a mean age of 38.1 ± 12.6 years. Prior to data classification, five participants (n = 5) were excluded based on exclusion criteria:

Four (n = 4) female nurses who had received inpatient treatment for mental health disorders within the last 12 months.

One (n = 1) female participant identified as not holding nurse status during the initial data verification.

Ultimately, 148 female nurses were included in the study data analysis.

The nurse assessment was conducted using a confidential survey method, and the questionnaire consisted of two parts: a sociodemographic section and a professional burnout assessment instrument, the Maslach Burnout Inventory (MBI) (Maslach et al., 1997).

The questionnaire was structured in two parts. The first part included 17 questions collecting information on participants' sociodemographic characteristics, such as biological sex, age, education, marital status, average monthly net income, job position, type of work performed, workload, working hours, department, and other relevant factors.

The second part consisted of 22 statements assessing nurses' burnout syndrome using the Maslach Burnout Inventory (MBI) (Maslach et al., 1997). These items were subsequently divided into three subscales: emotional exhaustion (MBI-EE; 9 items), depersonalization (MBI-D; 5 items), and personal accomplishment (MBI-PA; 5 items).

Responses were scored on a Likert-type scale from 0 to 6, where 0 indicated "never" and 6 indicated "every day". Higher scores on the MBI-EE and MBI-D subscales, along with lower (inverse) scores on the MBI-PA subscale, indicated a greater level of burnout symptoms. Symptom levels were assessed using cut-off points for each MBI dimension:

MBI-EE (emotional exhaustion): low ≤16, moderate 18–29, high ≥27.

MBI-D (depersonalization): low ≤6, moderate 6–11, high ≥13.

MBI-PA (personal accomplishment): reverse scoring; high ≤31, moderate 24–39, low ≥40.

The Lithuanian version of the MBI demonstrated high internal consistency, with Cronbach's alpha (α) values ranging from 0.8 to 0.9 across dimensions (Mažionienė et al., 2019).

Statistical analysis was performed using IBM SPSS Statistics v. 25.0 for Windows. Normality of data was checked using the Shapiro–Wilk test. For descriptive analysis, percentages (%) were calculated.

Bivariate analysis of sociodemographic differences in MBI subscale scores was conducted using:

Independent samples t-test (Student's t) with Cohen's d effect sizes, interpreted as small ($0.2 \leq d < 0.5$), medium ($0.5 \leq d < 0.8$), and large ($d \geq 0.8$).

Analysis of variance (ANOVA) with partial eta-squared (η^2p) effect sizes, interpreted as small ($0.01 \leq \eta^2p < 0.06$), medium ($0.06 \leq \eta^2p < 0.14$), and large ($\eta^2p \geq 0.14$).

Arithmetic means and standard deviations (SD) were calculated for MBI subscale scores. A p-value ≤ 0.05 was considered statistically significant to ensure observed differences were not due to chance.

RESULTS AND DISCUSSION

The study sample consisted of 148 female nurses working in healthcare institutions, with a mean age of 38.1 ± 12.6 years.

Regarding work experience, 46.6% of nurses had 1–5 years of professional experience, while the remaining 53.4% had 6–20 years or more of experience.

Concerning work departments, participants were distributed as follows: internal medicine – 26.4%, emergency care – 19.6%, surgery – 15.5%, and intensive care, rehabilitation, neurology, and cardiology – 38.5%.

In terms of shift work, 37.8% of nurses worked day shifts, while 62.2% worked night shifts (Table 1).

For educational attainment, 37.2% held a university degree, 52% had a college degree, and 10.8% completed postgraduate studies.

Regarding marital status, 79.1% were in a relationship or married, 14.2% were single without children, and 6.8% were divorced.

Analysis of average monthly net income revealed that 14.9% earned ≤1000 EUR, 72.3% earned 1001–1500 EUR, and 12.8% earned ≥2001 EUR per month.

A more detailed breakdown of participants' sociodemographic characteristics is provided in Table 1.

Table 1

The categorization of nurses depending on the sociodemographic characteristics (n = 148)

Variables		n	%
Age groups	22 to 39-year-old	42	28.4
	40 to 67-year-old	106	71.6
Education levels	Post-secondary non-tertiary	16	10.8
	College	77	52.0
	University	55	37.2
Marital status	Single and childless	21	14.2
	In a relationship or married	117	79.1
	Divorced	10	6.8
Net average monthly salary (in Euro (EUR))	≤1000 EUR	22	14.9
	1001–2000 EUR	107	72.3
	≥2001 EUR	19	12.8
Workplace	Internal medicine unit	39	26.4
	Emergency profile unit	29	19.6
	Intensive care unit	16	10.8
	Surgical profile unit	23	15.5
	Rehabilitation unit	19	12.8
	Neurology unit	14	9.5
	Cardiac care unit	8	5.4
Duration of nursing experience	1–5 years	69	46.6
	6–20 years	38	25.7
	≥20 years	41	27.7
Nursing shifts	Non-shift work	56	37.8
	Shift work	92	62.2

As shown in Figure 1, nurse burnout was assessed for each dimension separately. According to the study results, among female nurses, high levels of emotional exhaustion, depersonalization, and reduced personal accomplishment were observed in 70.9%, 50.0%, and 81.8% of participants, respectively. A more detailed analysis confirmed that the mean scores for the MBI-EE, MBI-D, and MBI-PA subscales were 15.7 ± 7.1, 11.8 ± 7.7, and 23.2 ± 10.1, respectively.

Additionally, as shown in Table 2, bivariate analysis revealed significant differences between the MBI depersonalization subscale scores and sociodemographic parameters such as age, nursing experience, and marital status. Specifically, burnout symptoms related to depersonalization were statistically significantly more frequent among nurses aged 22–39 years ($d = 0.4$, $p = 0.012$), those with shorter nursing experience ($\eta^2p = 0.04$, $p = 0.048$), and single, childless women ($\eta^2p = 0.11$, $p < 0.001$).

In summary, this cross-sectional study revealed the issue of professional burnout among female nurses in Lithuania. High levels of emotional exhaustion, depersonalization, and reduced personal accomplishment were confirmed

by relatively elevated MBI-EE, MBI-D, and MBI-PA scores: approximately 16, 12, and 23, respectively. Similarly, in France (Sturzu et al., 2019), Spain (Blanca-Gutiérrez & Arias-Herrera, 2018), the Czech Republic and Slovakia (Łopatkiewicz et al., 2023), and the United Kingdom (Berry & Robertson, 2019), the emotional exhaustion level among nurses (MBI-EE scores ranging from 13 to 19) was comparable to that of Lithuanian nurses. However, it should be noted that in other EU countries such as Poland, Germany, Italy, Hungary (Łopatkiewicz et al., 2023), and Greece (Bogiatzaki et al., 2019; Konstantinoua et al., 2018), nurses were reported to experience significantly higher levels of emotional exhaustion compared to the Lithuanian cohort.

It is noteworthy that depersonalization symptoms among Lithuanian female nurses (MBI-D ≈ 12) were relatively high, compared to depersonalization levels observed in France (Sturzu et al., 2019), the UK (Berry & Robertson, 2019), Spain (Blanca-Gutiérrez & Arias-Herrera, 2018), Greece (Bogiatzaki et al., 2019; Konstantinoua et al., 2018), Italy, Hungary, and the Czech Republic (Łopatkiewicz et al., 2023), where MBI-D scores were approximately 8.

On the other hand, the level of depersonalization among Lithuanian nurses corresponded to similar values observed in nurses working in healthcare institutions in geographically neighboring countries, namely Germany and Poland (Łopatkiewicz et al., 2023).

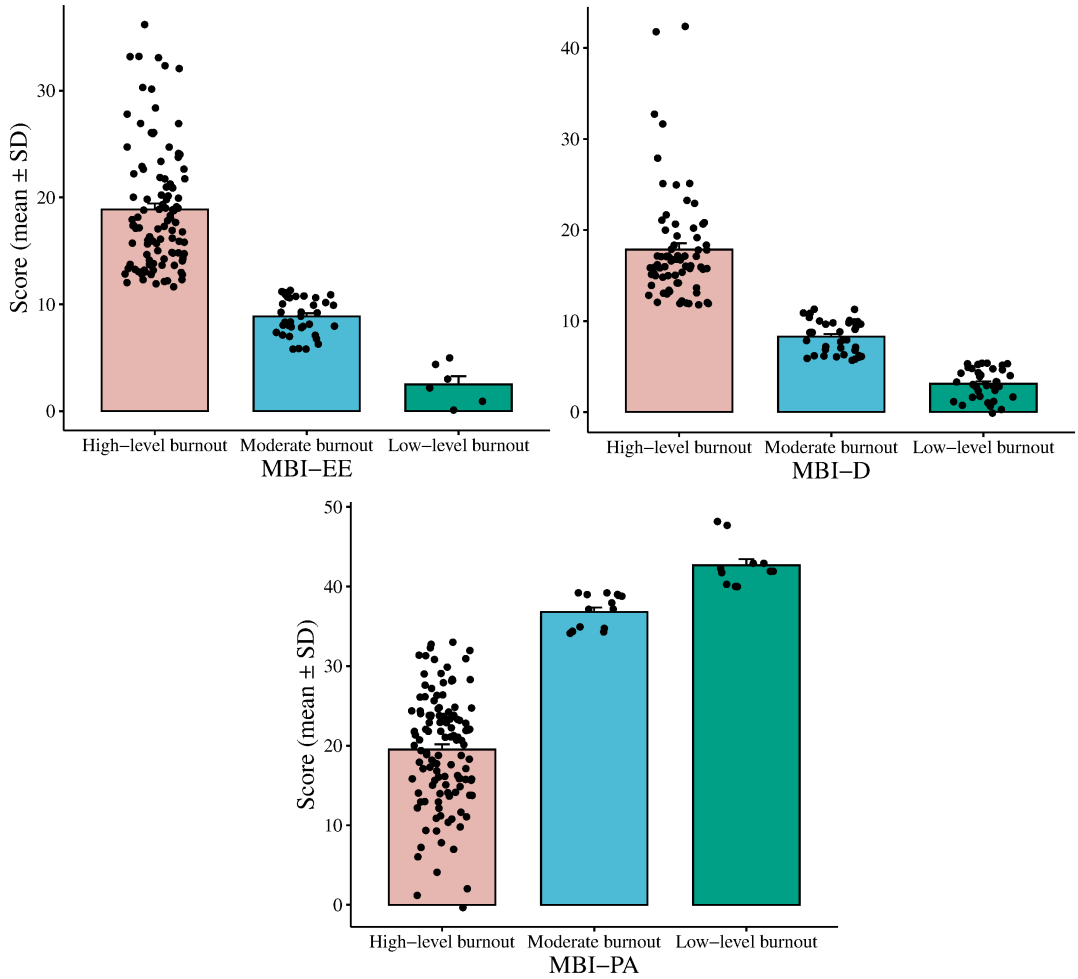

Figure 1. **Distribution of the results from the MBI-E, MBI-D and MBI-PA subscales of the MBI**

Note: MBI-D—depersonalization subscale of the MBI; MBI-EE—emotional exhaustion subscale of the MBI; MBI-PA—personal accomplishment subscale of the MBI; MBI—the Maslach Burnout Inventory; SD—standard deviation.

Furthermore, based on the results of this study, a relationship was identified between younger age and shorter nursing experience and a higher level of depersonalization. When compared with findings from other authors, these results appear inconsistent. Specifically, other studies report that older female nurses with more work experience are at greater risk of depersonalization (Beier et al., 2023; Cañadas-De la Fuente et al., 2018). Therefore, in larger nursing populations, it is necessary to verify our findings, which highlighted an association between younger age and depersonalization among Lithuanian nurses.

Additionally, our study revealed that being single and childless was associated with higher depersonalization symptoms. These findings can be explained by the fact that a family environment, in which a couple resides, serves as a protective factor, providing security and social support. In this way, a supportive family environment may prevent the development of cynical or negative attitudes toward colleagues or patients.

Table 2

Distribution of MBI scores according to various descriptive characteristics of clinical nurses

Variables	Maslach Burnout Inventory		
	Emotional exhaustion	**Depersonalization**	**Personal accomplishment**
Total score	15.7 ± 7.1	11.8 ± 7.7	23.2 ± 10.1
Age groups			
22 to 39-year-old	16.2 ± 7.4	13.2 ± 8.2	22.5 ± 9.2
40 to 67-year-old	15.1 ± 6.6	10.1 ± 6.8	24.1 ± 11.3
Marital status			
Single and childless	17.5 ± 7.8	17.5 ± 10.5	21.8 ± 11.4
In a relationship or married	15.5 ± 6.7	11.2 ± 6.5	23.2 ± 9.6
Divorced	14.7 ± 7.2	8.7 ± 6.6	28.5 ± 10.3
Duration of nursing experience			
1–5 years	16.3 ± 7.2	13.2 ± 8.6	23.2 ± 9.7
6–20 years	16.6 ± 7.1	11.8 ± 6.2	23.1 ± 9.6
≥20 years	14.2 ± 6.5	9.6 ± 6.4	23.5 ± 10.8
Effect sizes (d or η^2_p) (*p*)			
d_{age} #	0.2 (0.224)	0.4 (0.012)	−0.1 (0.455)
$\eta^2_{p\ marital\ status}$ *	0.02 (0.266)	0.11 (<0.001)	0.01 (0.563)
$\eta^2_{p\ nursing\ experience}$ *	0.03 (0.164)	0.04 (0.048)	<0.01 (0.994)

Note: All data are presented as means ± SD values. #–the *t*-test coupled with Cohen's D (d) effect sizes; *–the analysis of variance (ANOVA) expressed with the standardized effect size (η^2_p); SD–Standard Deviation; *p*–*p*-value.

Moreover, the aforementioned study findings were consistent with other published research in the field (Aytekin et al., 2013; Cañadas-De la Fuente et al., 2014). Thus, the responsibility of raising children most likely does not worsen, and may in fact reduce, the allostatic overload experienced by nurses due to excessive work demands (Cañadas-De la Fuente et al., 2018).

CONCLUSIONS

More than half of nurses working in Lithuanian healthcare institutions exhibited elevated levels of emotional exhaustion and depersonalization. The study identified associations between sociodemographic characteristics and the development of burnout syndrome in a cohort of professional female nurses. Specifically, depersonalization, as one of the core components of burnout, was recognized as a potential risk factor among childless nurses aged 22–39 with no more than five years of nursing experience. Therefore, these sociodemographic criteria could be useful for identifying nurses at higher risk, enabling the implementation of wellness programs and/or Mindfulness-based interventions to prevent the development of more severe clinically significant mental health disorders at later stages.

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