



## ORIGINALES

### **Burnout syndrome, occupational stress and quality of life among nursing workers**

Síndrome de burnout, estresse ocupacional e qualidade de vida entre trabalhadores de enfermagem

Síndrome de burnout, estrés laboral y calidad de vida en trabajadores de enfermería

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#### **ABSTRACT:**

**Objective:** To analyze the prevalence of burnout syndrome and its correlation with occupational stress and quality of life among nursing workers.

**Method:** Cross-sectional study addressing 502 nursing professionals from a philanthropic general hospital in the South of Brazil. Data were collected using an instrument addressing sociodemographic, occupational, and lifestyle characteristics, the Maslach Burnout Inventory, the Demand-Control-Support Questionnaire and the World Health Organization Quality of Life – WHOQOL-Bref. Data were analyzed using descriptive and inferential statistics by using Spearman's rank correlation coefficient.

**Results:** The prevalence of burnout syndrome was 20.9% and its dimensions were related to high demand, low control over work, low social support at work, and negative perceptions of physical, psychological, and social quality of life and of the work environment.

**Conclusion:** Burnout syndrome was related to high levels of stress and a negative perception of quality of life among nursing workers.

**Key words:** Burnout professional; Stress psychological; Quality of life; Workplace; Nursing.

#### **RESUMO:**

**Objetivo:** Analisar a ocorrência da síndrome de *burnout* e sua correlação com o estresse ocupacional e a qualidade de vida entre trabalhadores de enfermagem.

**Método:** Estudo transversal realizado com 502 profissionais de enfermagem de um hospital geral filantrópico da Região Sul do Brasil. Os dados foram coletados por meio de um instrumento com

questões de caracterização sociodemográfica, ocupacional e de hábitos de vida, o *Maslach Burnout Inventory*, o *Demand-Control-Support Questionnaire* e o *World Health Organization Quality of Life - Bref*. Os dados foram analisados por estatística descritiva e inferencial, em que utilizou-se o coeficiente de correlação de Spearman.

**Resultados:** A ocorrência de síndrome de *burnout* foi de 20,9% e suas dimensões relacionaram-se a alta demanda, baixo controle sobre o trabalho, baixo apoio social recebido no trabalho, menores percepções da qualidade de vida física, psicológica, das relações sociais e do meio ambiente.

**Conclusão:** A síndrome de *burnout* esteve correlacionada aos altos níveis de estresse e à percepção negativa de qualidade de vida dos trabalhadores de enfermagem.

**Palavras chave:** Esgotamento profissional; Estresse psicológico; Qualidade de vida; Condições de trabalho; Enfermagem.

## RESUMEN:

**Objetivo:** Analizar la ocurrencia del síndrome de Burnout y su relación con el estrés laboral y la calidad de vida entre trabajadores de enfermería.

**Método:** Se trata de un estudio transversal realizado entre 502 profesionales de enfermería de un hospital general filantrópico de la región sur de Brasil. Los datos se recogieron mediante instrumento con preguntas de caracterización sociodemográfica, ocupacional y de hábitos de vida, el *Maslach Burnout Inventory*, el *Demand-Control-Support Questionnaire* y el *World Health Organization Quality of Life - Bref*. WHOQOL-BREF. Los datos se analizaron por medio de estadística descriptiva e inferencial, en la que se utilizó el coeficiente de correlación de Spearman.

**Resultados:** La ocurrencia del síndrome de burnout fue del 20,9% y sus dimensiones estaban relacionadas con la alta demanda, el bajo control sobre el trabajo, el poco apoyo social recibido en el trabajo, menores percepciones de la calidad de vida física, psicológica, de las relaciones sociales y del medio ambiente.

**Conclusión:** El síndrome de Burnout estaba relacionado con altos niveles de estrés y a la percepción negativa de la calidad de vida de los trabajadores de enfermería.

**Palabras Clave:** Agotamiento profesional; Estrés psicológico; Calidad de vida; Condiciones de trabajo; Enfermería.

## INTRODUCTION

Hospital working environments expose nursing workers to occupational risks on a daily basis, especially psychosocial risks, because these workers are subject to a working process that is particularly intense in psychological terms, given the close contact with suffering and death, having to deal with high demand from patients, shift work, conflicts in interpersonal relationships, as well as the fact the profession receives little recognition and is underappreciated<sup>(1,2)</sup>. In this sense, studies have shown that these stressors trigger mental disorders in many nursing workers, which is the main cause of absenteeism and incapacity for work<sup>(3,4)</sup>.

Occupational stress stems from dealing with a large number of psychological demands, while at the same time, having little power to make decisions over work and receiving poor social support from peers and/or from workplace management, that is, when one has to deal with conflictive relationships in a unpleasant and tense workplace<sup>(5)</sup>.

Stress interferes in one's perception of the satisfaction and pleasure derived from work and level of quality of life<sup>(2)</sup>. An individual's perception changes according to experiences and involves subjective and individual aspects<sup>(6)</sup>. Even though quality of life is a polysemic expression, the concept adopted in this study is the one proposed by the World Health Organization (WHO), which defines it as "an individual's perception of their position in life in the context of the culture and value system in which they live and in relation to their goals, expectations, standards and concerns"<sup>(7)</sup>.

Therefore, high levels of stress and a poor quality of life are risk factors for the development of burnout syndrome<sup>(8,9)</sup>. Dealing with occupational stress for long periods of time while not having internal and external mechanisms aiding one in adapting to work situations may cause the syndrome to become chronic and the individual will consequently be susceptible to illness<sup>(10)</sup>.

Burnout syndrome is characterized by a set of symptoms that denote exhaustion, expressed by a lack of physical and mental energy (emotional exhaustion), lack of interest in work (depersonalization) and self-devaluation (decreased professional fulfillment)<sup>(11)</sup>. The consequences of burnout syndrome are detrimental to both individuals and organizations because a decline in one's biopsychosocial health leads to absenteeism, presenteeism, work dissatisfaction, early retirement, which in turn jeopardize the safety of patients<sup>(12,13)</sup>.

Even though the literature reports occupational stress and burnout syndrome among nursing workers, studies relating it to quality of life are still incipient<sup>(9,14)</sup>, especially among workers from philanthropic hospitals. Therefore, studies addressing this topic can provide information to managers, who together with workers, can devise plans to prevent burnout syndrome, and consequently, encourage nursing care delivered to patients seeking hospital services.

Therefore, this study's objective was to analyze the occurrence of burnout syndrome and its correlation with occupational stress and the quality of nursing workers.

## METHOD

This descriptive study with a cross-sectional design was conducted in a philanthropic general hospital located in a city in the southern of Brazil. This facility provides high complexity care and has 347 beds distributed among surgical, minimal care, intermediate, semi-intensive and intensive care units.

This study population is composed of the facility's 698 nursing workers. Eligibility criteria included: working in the facility under study and providing direct care to patients for at least one year; not being on leave; not exclusively working in managerial positions.

A total of 510 workers met the criteria so that a minimum sample size would be 219, with a 95% confidence interval and maximum error of 5%. Nonetheless, we opted to invite all 510 eligible participants, eight (1.6%) of which refused to participate.

The primary author interviewed the participants and provided clarification regarding the study between August and November 2016 in a private room on the premises of their workplace. After consenting, they received a sealed envelope that contained a questionnaire addressing the participants' characteristics, the Maslach Burnout Inventory - Human Service Survey (MBI-HSS), the Demand-Control-Support Questionnaire (DCSQ) and the World Health Organization Quality of Life - Bref (WHOQOL-bref). The participants were instructed to deposit the completed questionnaires in a sealed urn to keep secrecy of information provided.

The characterization questionnaire was developed by the authors and contained four sociodemographic questions (sex, age, marital status, and number of children), five

questions regarding occupation (profession, work shift, time working in the facility, number of jobs, and individual monthly income) and three addressing lifestyle (number of hours of sleep, weekly hours dedicated to leisure and exercise). This questionnaire was previously tested with 30 nursing workers from a facility similar to the one addressed in this study to test its relevance.

The MBI-HSS is a self-report instrument developed to identify burnout syndrome among workers. The Brazilian version contains 22 items, assessed on a seven-point Likert scale. The analysis of its psychometric properties confirms that the three dimensions presented good reliability: emotional exhaustion (nine questions); depersonalization (five questions); and professional realization (eight questions), with Cronbach's alphas of 0.85, 0.65 and 0.94, respectively<sup>(15)</sup>.

These dimensions can be dichotomized using the median and the results classified into five latent profiles: engaged (low emotional exhaustion and depersonalization with high professional fulfillment); exhausted (high emotional exhaustion only); unengaged (high depersonalization only); inefficacious (low professional realization only); and finally, burnout syndrome (high emotional exhaustion and depersonalization and low professional efficacy)<sup>(11)</sup>, the profile adopted for this study.

The DCSQ was developed to assess occupational stress through 17 items assessed on a four-point Likert scale. This self-report instrument is composed of three dimensions: psychological demand (five items); control over work (six items); and social support at work (six items), respectively presenting satisfactory Cronbach's alphas of 0.72, 0.63 and 0.86<sup>(16)</sup>.

The WHOQOL-bref was used to assess quality of life. It contains 26 questions, two of which address self-perception of quality of life and satisfaction with health, and the remaining were divided into four domains that assess physical quality of life (seven questions), psychological (six questions), social relations (three questions) and environment where the individual is inserted (eight questions). The answers are assessed on a five-point Likert scale that permits calculating the score per dimension and after mathematical calculation, scores range from 0 to 100; the higher the scores the higher one's quality of life. The Brazilian version of the WHOQOL-bref presented good reliability, with a Cronbach's alpha of 0.91<sup>(6)</sup>.

Data were analyzed using the Software Statistical Package for the Social Sciences™, version 20.0. The qualitative variables were expressed in absolute and relative frequencies and quantitative variables were expressed using central and dispersion measures. The Shapiro-Wilk test indicated asymmetric distribution of the numerical variables, thus, to verify the correlation between the burnout syndrome dimensions, occupation stress and quality of life, the Spearman's rank correlation coefficient (Rho) was used. It ranges from -1 to 1, in which values close to the extremes indicate perfect correlation and correlations close to zero indicate a lack of correlation. Statistical significance was set at  $p < 0.05$ .

The study complied with all current Brazilian and internal ethical guidelines, including the need to gain approval by the Institutional Review Board at the State University of Londrina, according to opinion protocol No. 1,643,147 from 2016. All the participants signed free and informed consent forms.

## RESULTS

This study's participants were 502 nursing workers, 193 (38.4%) of whom were nurses; 273 (54.4%) were nursing technicians; and 36 (7.2%) were nursing aids. Most were women (454; 90.4%), aged between 20 and 40 years old (393; 78.3%), married/in a stable union (264; 52.6%), with children (305; 60.8%).

In regard to their occupational profile, the median time working in the facility was two years, ranging from one to 36 years. Most workers had only one job (437;87%); worked in the day shift (271; 54%); and had a monthly income between R\$ 1,001.00 and R\$ 2,000.00 (318; 63.3%). In regard to lifestyle, workers slept a median of seven hours daily; three weekly hours were designated for leisure; and most did not exercise (330; 65.7%).

In regard to the latent profiles of the MBI-HSS, 20.3% (102) classified themselves as engaged, 20.7% (104) were exhausted, 14.7% (74) were unengaged, 16.3% (82) were inefficient; and 20.9% (105) presented indications of burnout syndrome; 7.0% (35) did not fit any of the profiles for simultaneously presenting high emotional exhaustion and depersonalization, so they were considered to be predisposed to the syndrome.

The central descriptive and dispersion measures concerning the scores obtained by this study's participants are presented in Table 1.

**Table 1: Descriptive measures of the dimensions burnout syndrome, occupational stress and quality of life among nursing workers(n=502). Paraná, Brazil, 2016.**

Dimensions	Mean ± Standard deviation	Median (interquartile interval)	Minimum - Maximum
<b>Burnout Syndrome</b>			
Emotional Exhaustion	24.5±7.3	24.0(19.0-29.0)	9.0-36.0
Depersonalization	9.9±3.4	10.0(7.0-13.0)	5.0-20.0
Professional Realization	26.8±3.7	27.0(25.0-29.0)	16.0-48.0
<b>Occupational Stress</b>			
Demand	16.3±2.1	17.0(15.0-18.0)	8.0-20.0
Control	19.1±2.1	19.0(18.0-20.0)	13.0-24.0
Social Support	20.2±2.9	21.0(19.0-22.0)	8.0-24.0
<b>Quality of Life</b>			
Physical	68.3±15.3	67.9(57.1-78.6)	21.4-100.0
Psychological	68.4±14.9	70.8(58.3-79.2)	12.5-100.0
Social Relationships	67.8±19.3	75.0(58.3-83.3)	0.0-100.0
Environment	57.0±14.3	56.2(50.0-65.6)	12.5-93.7

Table 2 shows that the dimensions of the burnout syndrome are correlated with high demand, low control over work, and low social support at work, as well as a perception of lower quality of physical and psychological life, of social relationships and of the environment.

**Table 2: Correlation of the dimensions of burnout syndrome with occupational stress and quality of life among nursing workers (n=502). Paraná, Brazil, 2016.**

Dimensions	Burnout Syndrome					
	Emotional Exhaustion		Depersonalization		Professional Realization	
	Rho*	p-value	Rho*	p-value	Rho*	p-value
Occupational Stress						
Demand	0.195	<0.001	0.190	<0.001	0.061	0.176
Control	-0.126	0.005	-0.092	0.040	0.167	<0.001
Social support	-0.231	<0.001	-0.315	<0.001	0.356	<0.001
Quality of Life						
Physical	-0.325	<0.001	-0.376	<0.001	0.310	<0.001
Psychological	-0.230	<0.001	-0.387	<0.001	0.355	<0.001
Social Relationships	-0.162	<0.001	-0.262	<0.001	0.236	<0.001
Environment	-0.224	<0.001	-0.266	<0.001	0.311	<0.001

\*Rho: Spearman's rank correlation coefficient

## DISCUSSION

The characterization of this study's participants shows that most workers were women, married and with children. Other studies also report that individuals fitting this profile are predisposed to the syndrome. Double burden, that is, workload that comprises time dedicated at a paid job and time spent at home with domestic labor is conducive to exhaustion and often impedes workers from dedicating proper time to sleep, leisure or exercise, given the various activities they need to perform in their daily routines<sup>(17-19)</sup>.

The prevalence of burnout syndrome and scores obtained in the dimension emotional exhaustion, depersonalization and professional realization obtained by the participants were similar to those reported by other studies developed in Brazil and internationally<sup>(12,20,21)</sup>.

In regard to the remaining latent profiles, 58.7% of the participants presented a high score in at least one of the dimensions, reflecting their level of exhaustion, psychological estrangement at work or feeling professionally incompetent. On the other hand, 20.3% appear as engaged, that is, they were committed, meaning that they have a positive experience at work, as opposed to experiencing burnout<sup>(11)</sup>.

The greater one's psychological demand, the greater one's perception of exhaustion and depersonalization, a finding that is corroborated in a study conducted in the United States with nursing workers<sup>(22)</sup>.

Nursing work is full of physical and psychological demands. These professionals are constantly subject to long and exhausting periods of work due to the uncomfortable physical postures they must assume and physical exertion when providing care to patients, who are often uncooperative. Such care ranges from meeting basic human needs, such as assisting with feeding and eliminations, up to the most complex needs, such as assisting in reacting to cardiorespiratory arrest. These situations combined with an insufficient number of sleep hours, human resources and insufficient material,

problems associated with teamwork, and daily experiencing suffering and death, may lead individuals to exhaustion<sup>(2,22,23)</sup>.

Therefore, depersonalization emerges as a coping strategy and is characterized as lack of involvement with work because it causes negative feelings and emotional exhaustion<sup>(10)</sup>. Note that such aspect can also impact one's physical and psychological quality of life<sup>(24)</sup>, aspects that, in this study, appear correlated to burnout syndrome dimensions.

Another negative repercussion of exhaustion among these professionals is the risk of decreased ability to provide high quality care to patients, suggesting there is a need for managers to more address broadly the fatigue of nursing workers by considering alternative working hours together with more favorable working places to decrease the level of psychological demands<sup>(25)</sup>.

Hence, we assume these workers have a low level of autonomy over their work processes. This study's results show that the lower one's control over work, the greater is one's level of exhaustion, depersonalization, and the lower is one's professional realization. Occupational stress is a result of greater demand and less control over work and these conditions were associated with physical and mental illness<sup>(5)</sup>.

Low social support and poor quality of social life were correlated with burnout syndrome among this study's participants, indicating that the social relationships within and outside work have deteriorated. Social support provided by peers and managers, which represent the interactions that take place in the workplace has the potential to decrease tension and stress, which can be aggravated when such support is lacking<sup>(5)</sup>. The literature shows that extreme social behaviors such as occupational violence may lead nursing workers to experience burnout syndrome<sup>(26)</sup>. However, more subtle behaviors, such as incivility, that is, an organizational climate where there is disrespect and arrogance among working colleagues, has been shown to be one of the main predictors of this syndrome and became the focus of preventive interventions<sup>(10,27)</sup>.

In this study, poor quality of life in different spheres was related to high levels of burnout syndrome, which was also verified in investigations conducted with nurses from Greece and health workers from Spain<sup>(9,14)</sup>. Even though burnout syndrome is exclusively related to the working environment, its effects are extended to the personal lives of nursing workers. Thus, a social support network may relieve stress and burnout syndrome, positively affecting workers' health and quality of life<sup>(9,28)</sup>.

Poor quality of life related to the environment involves dissatisfaction with aspects arising from the environment of which one is part, such as: leisure, financial resources, and access to health services<sup>(6)</sup>, and in this study, it appears correlated to all the dimensions of burnout.

Leisure has already been indicated as an important strategy to prevent and decrease the syndrome because pleasant leisure experiences alleviate exhaustion experienced by workers, especially for those whose activities involve high levels of demand and pressure. Thus, becoming involved in activities that promote positive emotional states improve worker vitality and their capacity to recover, decreasing fatigue<sup>(29)</sup>.

In regard to dissatisfaction with financial resources, nursing workers are usually not paid according to the complexity of actions they perform in health services. One study has shown that receiving a salary that corresponds to one's organizational commitment and qualification generates work satisfaction and a feeling of professional recognition, factors that protect nursing workers from becoming ill<sup>(30)</sup>.

A limitation of this study is the fact it is a cross-sectional study in which cause and effect are assessed at the same time; thus, its results cannot be generalized, considering it was performed in a single hospital facility.

Nonetheless, this study's findings indicate that high levels of demand and low levels of control over work, social support and poor quality of life are associated with burnout syndrome. These results improve understanding over the process nursing workers experience and that leads to exhaustion, supporting future research and also decision-making and planning on the part of managers so that organizational actions enable decreasing stress, preventing the emergence of burnout syndrome and promoting quality of life at work, indirectly favoring the quality of care that is provided to patients.

## CONCLUSION

Burnout syndrome was found in 20.9% of the nursing workers participating in this study and was related to high levels of occupational stress and a negative perception of quality of life.

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