

PREVALENCE OF BURNOUT IN BRAZILIAN MILITARY NURSING PERSONNEL IN RIO GRANDE DO SUL

PREVALÊNCIA DE BURNOUT EM MILITARES DE ENFERMAGEM DO EXÉRCITO BRASILEIRO NO RIO GRANDE DO SUL

PREVALENCIA DE BURNOUT EN LA ENFERMERÍA MILITAR DEL EJÉRCITO BRASILEIRO DEL ESTADO DE RIO GRANDE DO SUL

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ABSTRACT

Objective: to verify the prevalence of burnout in military nursing professionals of military hospitals of the *Exército Brasileiro* in Rio Grande do Sul. **Method:** cross-sectional study carried out in five military hospitals between December 2015 and May 2016, with 167 military nurses. Questionnaires were applied for sociodemographic and work characterization, as well as the Maslach Burnout Inventory. **Results:** a prevalence of burnout of 13.8% was observed in the nursing personnel participating in the study, 2.4% in nurses and 11.4% in nursing technicians. **Conclusions:** burnout is also present among the nursing staff of the *Exército Brasileiro*. Therefore, measures to promote the health of workers are essential for the constitution of healthy and satisfactory work environments for nursing care.

Keywords: Occupational Health; Burnout Professional; Nursing; Military Nursing.

RESUMO

Objetivo: verificar a prevalência de burnout em militares de enfermagem de Hospitais Militares do Exército Brasileiro do Rio Grande do Sul. **Método:** estudo transversal, desenvolvido em cinco hospitais militares, no período de dezembro de 2015 a maio de 2016, com 167 militares de enfermagem. Foram aplicados um questionário de caracterização sociodemográfica e laboral e o Maslach Burnout Inventory. **Resultados:** observou-se prevalência de burnout de 13,8% nos militares de enfermagem participantes da pesquisa, sendo 2,4% em enfermeiros e 11,4% em técnicos de enfermagem. **Conclusões:** o burnout também está presente entre os militares de enfermagem do Exército Brasileiro, portanto, medidas de promoção da saúde dos trabalhadores se fazem essenciais para constituição de ambientes de trabalho saudáveis e satisfatórios à realização do cuidado de enfermagem.

Palavras-chave: Saúde do Trabalhador; Esgotamento Profissional; Enfermagem; Enfermagem Militar.

RESUMEN

Objetivo: verificar la prevalencia de burnout en la enfermería militar de Hospitales Militares del Exército Brasileiro de Río Grande do Sul. **Método:** estudio transversal realizado en cinco hospitales militares entre diciembre de 2015 y mayo de 2016, con 167 militares de enfermería. Se aplicó un cuestionario de caracterización sociodemográfica y laboral y el Maslach Burnout Inventory. **Resultados:** se observó prevalencia de burnout del 13,8% en los militares participantes de la investigación: el 2,4% entre enfermeros y el 11,4% entre técnicos de enfermería. **Conclusiones:** el burnout también está presente entre los militares de enfermería del Exército Brasileiro y, por ello, es esencial implementar medidas de promoción de la salud de los trabajadores con miras a lograr ambientes de trabajo saludables y satisfactorios para realizar los cuidados de enfermería.

Palabras clave: Salud Laboral; Esgotamiento Profesional; Enfermería; Enfermería Militar.

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INTRODUCTION

Work can be considered an activity that occupies a large portion of the time of individuals and of their community life. Work may provide professional accomplishment, but also lead to dissatisfaction and exhaustion in certain situations. Technological innovations that have occurred over the centuries have changed the way work is configured. As a consequence, new diseases have been manifested as a result of this evolution, among them burnout.¹

Burnout refers to something that ceases to work well due to energy exhaustion, represented as a response to chronic labor stressors, characterized by signs of emotional exhaustion, depersonalization and loss of professional accomplishment.²

In the multidimensional model of burnout, emotional exhaustion is related to the sensation of exhaustion of physical and emotive resources, fatigue and loss of energy. Depersonalization is characterized by the negative, evasive or insensitive response to the work performed or to another individual, being a component of the social context of work, that is, it concerns the reduction of work motivation and loss of ideality and commitment to results. In this process, there is also a decrease in professional accomplishment.^{2,3}

Nursing workers are part of a profession defined in its essence as continuous care for patients and their families, constituting the professional category of the health area that spend more time passes in contact with patients and their families within the hospital environment. For this reason, nursing is a group under recognized vulnerability for the development of burnout.^{1,3}

These characteristics are also present in the military nursing of the *Exército Brasileiro* (EB-BR). Military nursing is organized based on hierarchy and discipline along with the other values of a military professional - patriotism, civility, faith in the mission of the *Forças Armadas*, spirit of body, love for the profession and professional technical improvement. Military nursing actively participates in health services in military organizations at all levels of health care; whether in times of war or peace, trying to support the health team to ease the suffering of people. They also work in health promotion and disease prevention activities.³⁻⁵

In this sense, it can be said that with the approximations evidenced by the nursing work process itself, such as the issue of care, proximity to patients and family members, and greater interaction with them, there is the possibility that the military nursing personnel also experience burnout in their work environments.

Thus, the study of *burnout* in the nursing area still needs to be deepened because there are aspects that need to be evaluated, such as those related to military nursing of EB-BR. This is justified by searches conducted in the Literatura Latino-Americana em Ciências de Saúde (LILACS) and the Biblioteca Nacional de Medicina dos Estados Unidos (PUBMED) databases and the Scientific Electronic Library Online (SCIELO) in 2017 using the de-

scriptors "workers' health and military", in which no studies on burnout were found in this population in the Brazilian scenario.

This study was, therefore, delineated based on the following research question: "What is the prevalence of burnout in the nursing staff of Military Hospitals of the *Exército Brasileiro* of Rio Grande do Sul (RS)?" The purpose of this study was to verify the prevalence of burnout in the nursing staff of military hospitals in RS.

METHOD

This is a cross-sectional study was carried out in five military hospitals in RS: Area Military Hospital, based in the city of Porto Alegre (HM1), and four Garrison Military Hospitals located in the cities of Santa Maria (HM2), Santiago (HM3), Alegrete (HM4) and Bagé (HM5). Area Military Hospital corresponds to a hospital of great size and Garrison Military Hospital, to a hospital of small size.

Temporary and permanent military nurses and nursing technicians were selected for to participate in this research, with a minimum of one year of military service in the military hospitals of the EB-BR in RS. Temporary military personnel are those who can remain in military activity for up to eight years of public service, differing from the permanent military personnel their whole career.⁵ Those who were not in the institutions during data collection, or who were on leave of any nature were excluded. The sampling technique selected was for convenience.

For statistical purposes, a minimum sample for finite population was calculated based on the population of 212 nursing professionals, 31 nurses and 181 nursing technicians, estimated prevalence of burnout of 20% and alpha error of 5%. A sample size of 115 participants was estimated. An additional of 20% was considered for possible losses, totaling the minimum of 138 participants in the sample. This sample was stratified proportionally among the professional categories mentioned, estimating a minimum of 21 nurses and 117 nursing technicians.

Data collection was carried out from December 2015 to May 2016 by collectors previously trained by the responsible researcher. The participants were approached during working hours, in the military environment, according to their willingness to participate in the study.

At first, there was a general presentation of the research to the military nursing personnel, inviting them to participate. All who were in the workplace during the collections were invited to participate in the study. Those who accepted received an envelope containing the data collection instrument and the Informed Consent Form (ICF) in two copies. A date was scheduled for data collection with each participant. Up to three attempts were made to collect the research instruments, and the signed ICF. If not delivered, the participant would be excluded.

The research instrument comprised a questionnaire with sociodemographic questions (military health organization; age; sex; marital status; number of children; schooling; studies in progress) and work-related questions (position or graduation; professional category; bond; time of professional exercise in nursing and military nursing; hours worked in the last month) and the Maslach Burnout Inventory (MBI), considered the most used instrument to evaluate burnout and validated for use in Brazil since 1995.^{2,6} The MBI is composed of 22 questions in a Likert-type scale from zero to six points, being: zero – never, one – once a year or less, two – once a month or less, three – sometimes in the month, four – once a week, five – sometimes per week, six – every day. The questions are distributed in three dimensions: emotional exhaustion, composed of nine questions (1, 2, 3, 6, 8, 13, 14, 16 and 20); depersonalization, composed of five questions (5, 10, 11, 15 and 22); and professional accomplishment, consisting of eight questions (4, 7, 9, 12, 17, 18, 19 and 21).²

In order to investigate the prevalence of burnout as a whole (the three dimensions altogether), the criteria that defined burnout were used when high scores were found on emotional exhaustion and depersonalization and low scores on professional accomplishment.² The cut-off points for emotional exhaustion and depersonalization were obtained by the 75th percentile, and for professional accomplishment by the 25th percentile, as the latter has a reverse score.⁶

Thus, each dimension considered as cut-off point the division of the sample into tertiles, with the lower tertile corresponding to light intensity, the medium tertile to moderate intensity, and the superior tertile to severe intensity. The scores in each dimension were considered separately and were not pooled, which resulted in three scores for each participant, where each dimension was assessed separately.⁶ The cut-off points and scores for each burnout dimension in the sample are shown in Table 1.

The prevalence of *burnout* was estimated using the numerator of the total number of military nursing professionals who presented this condition over the total number of the sample multiplied by 100.^{2,6}

For data inclusion and subsequent analysis, the Excel 2010 application was used, with double independent typing to verify errors and inconsistencies. Afterwards, data analysis was per-

formed in the PASW Statistic® (Predictive Analytics Software, SPSS Inc., Chicago, USA) version 18.0 for *Windows*, using descriptive statistics. Absolute and relative frequency distributions were used for qualitative variables, and measures of central tendency and dispersion were used for quantitative variables, namely, mode, median and interquartile range, according to the asymmetric distribution of the data through the normality test (Kolmogorov-Smirnov).

For the development of the study, the legal procedures were respected with the authorization of the Command of the 3rd Military Region of the EB-BR and the ethical aspects stated in the Resolution 466/12⁷ that establish the guidelines and norms ruling research involving human beings were observed. The study had a favorable Opinion of the Local Research Ethics Committee, Certificate of Presentation for Ethical Appraisal nº 51069615.2.0000.5346 and Opinion nº 1,372,295.

RESULTS

A total of 173 questionnaires, corresponding to 82% of the population, were collected from the population of 212 nursing military in the military hospitals of the EB-BR in RS, in December 2015, according to the database of the General Department of EB-BR Personnel.

Among the 173 participants, six were excluded because the length of military service which was less than one year, leaving the final sample composed of 167 participants. Of these, 25 (15%) were nurses and 142 (85%), nursing technicians. The median age was 34 years; the median time of professional exercise in nursing was 11 years, and in military nursing was four years. Among the participants, 77 (46.1%) were from the MH1; 46 (27.5%) from the MH2; 20 (12%) from the MH3; 15 (9%) from the MH4; and nine (5.4%) from the MH5.

Sociodemographic and work-related data are presented in Table 2.

In addition to the aspects discussed in Table 2, 82 (49.1%) of the participants were studying, 25 (15%) of them were undergraduate students of Nursing, seven (4.2%) undergraduate students of the health area, 21 (12.6%) undergraduate students of other areas, 12 (7.2%) were attending preparatory courses and technical updating, and seven (4.2%) were attending postgraduate programs.

Table 1 - Description of the scores obtained in the study sample to the diagnosis of *burnout* dimensions. Santa Maria/RS, Brazil, 2016

Dimensions	Standard for scoring*				
	High level	Medium level	Low level	Minimum	Maximum
Emotional exhaustion	≥ 28	18-27	≤17	8	45
Depersonalization	≥ 21	19-20	≤18	4	30
Professional accomplishment	≤ 18	19-24	≥25	4	47

* Source: Research results.

Table 2 - Socio-demographic and work-related data of the military nursing personnel of the EB-BR in RS, Santa Maria/RS, Brazil, 2016 (n = 167)

Variables		Frequency**	
		N	%
Sex	Male	34	20.4
	Female	125	74.9
	A*	8	4.7
Marital Status	Single	54	32.3
	Married, common-law married or living with partner	99	59.3
	Divorced, widow or widower	12	7.2
	A*	2	1.2
Children	Up to one child	124	74.2
	Two to three children	41	24.6
	A*	2	1.2
Schooling	Nursing technician	103	61.7
	Nursing Post-Technician	14	8.4
	Nurse	16	9.6
	Postgraduate studies	34	20.3
Nature of bond	Permanent military	44	26.3
	Temporary military	121	72.5
	A*	2	1.2

Note: * A = no answer to the question; ** Source = research results.

As for the nature of the military bond, the majority were temporary military professionals. Regarding the type of bond with the EB-BR, six (3.6%) were intermediate and superior officers (nurses - four Captains, one Major and one Lieutenant-Colonel); 19 (11.4%) were junior officers (nurses - two aspiring officers, 12 Second Lieutenants and five First Lieutenants); and 142 (85%) were Officers (nursing technicians - 131 Third Sergeants, Nine Second Sergeants and two First Sergeants). The results of the frequency of the participants' responses to the MBI instrument questions are described in Table 3.

We observed in Table 3 that there are some differences in responses between nurses and nursing technicians in the three dimensions. It was identified that in questions 3, 5, 8, 9, 10, 14, 17, 19 and 20, nurses had higher medians than nursing technicians. And in questions 2, 6, 11 and 22, the highest medians were found among nursing technicians.

The assessment of burnout dimensions is described in Table 4.

The analysis of the burnout dimensions, considering professionals with high emotional exhaustion, high depersonalization and low professional accomplishment, showed that 23 (13.8%) of the military nursing professionals were experiencing burnout, of whom four (2.4%) were nurses and 19 (11.4%) nursing technicians (Table 4).

Table 3 - Frequency of responses of nursing professionals to MBI questions by dimensions (emotional exhaustion, depersonalization and professional accomplishment). Santa Maria/RS, Brazil, 2016 (n = 167)

Dimension	Nurses		Nursing technicians	
	Median	Interquartile Interval	Median	Interquartile Interval
Emotional Exhaustion				
1- I feel full of energy.	5.00	(4.00-5.00)	5.00	(4.00-5.00)
2- I feel exhausted by the end of a working day.	4.00	(3.00-5.00)	4.50	(3.00-5.00)
3- I feel that clients/patients make me responsible for some of their problems.	1.00	(0.00-3.00)	0.00	(0.00-3.00)
6. In my work, I handle emotional problems very calmly.	5.00	(4.00-5.00)	6.00	(5.00-6.00)
8- I feel frustrated by my work.	2.00	(0.00-3.00)	0.00	(0.00-2.00)
13- I feel I look after certain patients/clients impersonally, as if they are objects.	0.00	(0.00-0.50)	0.00	(0.00-0.00)
14- I feel like I work too hard at my work.	3.00	(2.00-5.00)	2.00	(1.00-4.00)
16- I feel tired when I get up in the morning and have to face another day at work.	2.00	(1.00-4.50)	2.00	(1.00-4.00)
20- I'm afraid that this job is making me uncaring.	1.00	(0.00-3.00)	0.50	(0.00-3.00)
Depersonalization				
5- I feel like I'm at the end of my rope.	2.00	(1.00-3.00)	1.00	(0.00-3.00)
10- I feel drained by my work.	2.00	(0.50-3.00)	1.00	(0.00-3.00)
11- I am easily able to create a relaxed atmosphere with my patients/clients.	5.00	(4.00-6.00)	6.00	(5.00-6.00)
15- I look after my patients'/clients' problems very effectively.	6.00	(5.00-6.00)	6.00	(5.00-6.00)
22- I accomplish many worthwhile things in this job.	5.00	(5.00-6.00)	6.00	(5.00-6.00)
Professional accomplishment				
4- I feel refreshed when I have been close to my patients/clients at work.	5.00	(4.00-6.00)	5.00	(4.00-6.00)

Continued...

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Table 3 - Frequency of responses of nursing professionals to MBI questions by dimensions (emotional exhaustion, depersonalization and professional accomplishment). Santa Maria/RS, Brazil, 2016 (n = 167)

Dimension	Nurses		Nursing technicians	
	Median	Interquartile Interval	Median	Interquartile Interval
Professional accomplishment				
7- I feel emotionally drained by my work.	2.00	(1.00-3.00)	2.00	(1.00-4.00)
9- Working directly with people leaves me very exhausted.	2.00	(1.00-3.00)	1.00	(0.00-2.00)
12- Through my work, I feel that I have a positive influence on people.	5.00	(5.00-6.00)	5.00	(5.00-6.00)
17- Working with people all day long requires a great deal of effort.	1.00	(0.00-3.00)	0.00	(0.00-1.00)
18- I am easily able to understand what my patients/clients feel.	5.00	(5.00-6.00)	5.00	(5.00-6.00)
19- I have become more insensitive to people since I've been working.	1.00	(0.00-3.00)	0.00	(0.00-3.00)
21- I really don't care about what happens to some of my patients/clients.	0.00	(0.00-1.00)	0.00	(0.00-0.00)

Source: research results.

Table 4 - MBI results among the nursing military of the Military Hospitals of the EB-BR in RS. Santa Maria/RS, Brazil, 2016 (n = 167)

Dimensions	n (%)
Emotional Exhaustion	
Low	45 (26.9)
Medium	79 (47.3)
High	43 (25.7)
Depersonalization	
Low	76 (45.5)
Medium	41 (24.6)
High	50 (29.9)
Professional accomplishment	
Low	53 (31.7)
Medium	72 (43.1)
High	42 (25.1)
Nursing military with burnout^{2,6}	
Nurses	4 (2.4%)
Nursing technicians	19 (11.4%)

Source: search results.

DISCUSSION

A comparison of the results found in this study with others available in the literature shows that the prevalence of burnout presents variations in different populations of workers, and can be influenced by the type of work performed or the working environment, varying from 4 to 89.1%^{8,9}. For example, with civilian and military professors from the *Colégio Militar de Campo Grande* EB-BR, the prevalence of burnout was 31.3%, evaluated as a serious level.¹⁰ The prevalence in nursing workers from a general hospital in Pará was 28%,¹¹ and 89.1% in the military of the EB-BR of a battalion in the countryside of Minas Gerais.⁸

The variations observed in the analysis of prevalence of burnout, likewise, also occur when analyzing each dimension in different populations, such as military workers,⁸ nursing workers,¹¹⁻¹³ and teachers,¹⁰ ranging from 6 to 41.2 % for high emotional exhaustion, from 7.02 to 52.1% for high depersonalization, from 2.35 to 60.5% for low professional accomplishment. Considering these aspects, it is important to consider that there are permanent or occasional constituents of each work scenario that may influence the well-being and health of workers, as well as the level of burnout.

Therefore, in the descriptive analysis of MBI questions, there were differences in the findings between nurses and nursing technicians. The issues related to blame, fatigue, exhaustion, insensitivity, direct work with people and frustration stood out among nurses and may be linked to the complex managerial function of these workers, where they are exposed to the inherent burden of leadership that can lead to progressive tiredness. It is noteworthy that nurses consider management and leadership as essential competencies to enable the execution of plans linked to direct and indirect nursing care.^{14,15}

Regarding the answers of nursing technicians, questions related to exhaustion at the end of a working day stood out and may be associated with a high number of daily tasks, often in a more operational and elementary care setting. Despite the exhaustion evidenced, there were also situations of more serenity before emotional problems and with regard to the establishment of interpersonal relations in the workplace, as well as of the valorization of their work for the health of people. We emphasize that all of these conditions may favor a better nursing care.^{16,17}

However, the highest prevalence of burnout among nursing military was found in the graduation of health officers which corresponds to the professional category of nursing technician, similar to results found in other studies. The higher prevalence of burnout among nursing technicians is probably due to the high number of workers in this category in relation

to others in the nursing profession or because of their nursing care involves close contact with patients and family members, possibly generating more physical and mental exhaustion.^{9,11}

In a general context, military nurses and military nursing technicians presented optimistic responses to MBI issues, demonstrating the understanding that their work helps improving the quality of life of those they serve. This perception was also recognized in researches with nursing military from other armies worldwide, highlighting the characteristics of the military work as participation in work decision processes, commitment to the mission and to nursing care, and the satisfaction of being able to help patients and injured people.¹⁸⁻²¹

Finally, we observed in the results of this study that the dimensions and prevalence of burnout evaluated in the military nursing personnel when compared to the literature had variations with other different workers, presenting, in most cases, a lower global prevalence than the analyzed studies, as well as median prevalences in the burnout dimensions. This situation makes it possible to state that the prevalence of burnout in military nursing is low compared to the literature, but it may increase considerably because the groups with high emotional exhaustion and high depersonalization, alone, already have much higher scores.

In this sense, it is also important to note the variations observed in burnout assessments with different military workers of the EB-BR, because the comparison of the prevalence of burnout between military nurses of military hospitals of the state of RS and the military personnel of the *Batalhão Militar de Minas Gerais* and professors of the *Colégio Militar de Campo Grande* shows that, although the three studies were carried out with military personnel of the same organization, they present variations on the same phenomenon.^{8,11}

Therefore, it is possible to affirm that the particularities of each work process, as well as the object and working conditions, type of service performed by the worker, type of institution, organizational and local policies, along with several other factors, seem to influence the development of burnout.

We expose as a limitation of the study the small number of researches available in the literature on burnout in military nursing personnel of the Armed Forces, hindering comparisons.

CONCLUSION

This study evidenced *burnout* among the military nursing personnel of the EB-BR in RS, occurring more often among nursing technicians. The prevalence found was lower than that reported in other studies with military professional and this may be associated with the object of work, because military activities vary according to the type of military organization.

Considering, however, that the high emotional exhaustion and high depersonalization groups presented a considerable

prevalence, it is necessary to implement health promotion and education measures to favor the creation of favorable work environments and actions that may help reducing the physical and mental effects of burnout on workers.

This study contributed to fill the gaps in the literature on burnout in a population not yet studied in the Brazilian scenario. However, it is necessary to carry out more studies on burnout involving its associated factors and predictors, as well as studies with nursing military personnel from other Brazilian Military Forces, such as the *Marinha do Brasil* and the *Força Aérea Brasileira*.

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