

Prevalence of burnout syndrome among resident nurses

Ocorrência da síndrome de *Burnout* em enfermeiros residentes

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Abstract

Objective: To identify the prevalence of burnout syndrome among nursing residents.

Methods: Cross-sectional study with 48 second-year nursing residents. The Maslach Burnout Inventory (MBI) was used for data collection, as well as a survey with sociodemographic variables.

Results: Ten residents (20.83%) presented alterations in three dimensions of the inventory (Emotional Exhaustion, Depersonalization and Personal Accomplishment), which indicates a developing burnout syndrome.

Conclusion: The occurrence of burnout syndrome was identified in the group of nursing residents, with the following determining factors: young and female individuals, single, childless, recently graduated and assigned to high-complexity sectors.

Resumo

Objetivos: Identificar a ocorrência da síndrome de *Burnout* em residentes de enfermagem.

Métodos: Estudo transversal com 48 residentes de enfermagem do segundo ano. O instrumento de coleta de dados foi o *Maslach Burnout Inventory* e um formulário com as variáveis sociodemográficas.

Resultados: Foram encontrados dez residentes (20,83%) com alterações em três dimensões (Exaustão Emocional, Despersonalização e Realização Profissional), sugerindo o desenvolvimento da síndrome.

Conclusão: A ocorrência da síndrome de *Burnout* foi identificada no grupo de residentes de enfermagem, os quais apresentaram os seguintes fatores determinantes: indivíduos jovens, do gênero feminino, solteiros, sem filhos, recém-formados e inseridos em setores de alta complexidade.

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Conflicts of interest: there are no conflicts of interest to declare.

Introduction

The term “burnout” has been coined to define a set of symptoms presented mainly by professionals who work with people – teachers, nurses and doctors, for example –, and who complain of physical and mental exhaustion, irritability, loss of interest in work and self-depreciation.

Workers with burnout syndrome find that the meaning of their relationship with work is lost; work activities lose their importance; and any effort seems useless. These symptoms indicate an upcoming collapse, which occurs after all available energy is consumed.⁽¹⁾ In this perspective, it has been determined that burnout syndrome is a result of chronic work-related stress, with negative consequences to individual, professional, family, social and institutional spheres. Workers lose the ability to (re)adapt to the existing demands of the workplace.⁽¹⁻³⁾

Residency programs place recent graduates into the work market, providing them with an opportunity to gain professional experience and become specialists in their chosen area.^(3,4) However, we must consider that this professional may present predisposing factors for developing physical and emotional fatigue. We must also consider other characteristics such as age, marital status, idealism, time in the profession, time in the institution, role conflict and lack of family support, which can increase vulnerability to burnout syndrome.⁽⁴⁾

Nursing residents practice a profession geared towards the caring/helping of others. This is also an element which can lead to intense psychological suffering, for it means dealing with pain, suffering, death and unhappiness, as well as with the concerns and problems of other human beings.^(2,4)

Given this context, multiple factors act as possible causes of burnout syndrome among residents. In this light, the guiding question for our study was: What is the prevalence of burnout syndrome among resident nurses? Thus, the objective was to identify the prevalence of burnout syndrome among nursing residents.

Methods

A cross-sectional study was carried out in a teaching hospital in Rio de Janeiro, a city located in the State of Rio de Janeiro, in the Southeast region of Brazil. Data were collected between July and September of 2011.

The sample population consisted of 48 second-year nursing residents, assigned to the following programs: internal medicine (9), intensive care (7), clinical surgery (6), cardiovascular (5), nephrology (5), obstetrics (4), pediatrics (3), adolescent health (3), surgical center (2), psychiatry and mental health (2), neonatology (1) and worker’s health (1). We chose second-year nursing students to refrain from inducing the results towards positively scoring for burnout syndrome, for people who have less time in their workplace reality are more pre-disposed to develop the syndrome.

We used the Maslach Burnout Inventory–General Survey for gathering data, as well a survey regarding sociodemographic and work characteristics.

The data were charted on Excel, and logical and statistical functions were used to qualify and quantify the sociodemographic and work characteristics, in addition to the three dimensions of burnout syndrome. The results were analyzed in light of a literature review, emphasizing aspects regarding hospital work organization, burnout syndrome and content relative to the nursing residency.

Cutoff points were calculated using percentiles and coefficients of variation for each dimension, analogous to the study of the group mentioned above. Thus, for Emotional Exhaustion we obtained ≥ 0.68 and ≤ 0.29 percentiles, which correspond to 27 and 20 points, respectively; for Depersonalization, we obtained ≥ 0.69 and ≤ 0.21 percentiles, represented by 11 and 3 points, respectively; and for Lack of Personal Accomplishment, ≥ 0.76 and ≤ 0.28 percentiles, which correspond to 32 and 24, respectively.

The internal reliability of the instrument was measured using Cronbach’s alpha, which resulted in a value of > 0.70 . In other words, the Maslach Burnout Inventory obtained a coefficient of 0.7694, indi-

cating reliability and good internal consistency. Thus, the reliability coefficient for the Emotional Exhaustion dimension was 0.8050, for Depersonalization 0.8287, and Personal Accomplishment 0.8227.

The study complied with national and international guidelines for studies involving human research.

Results

The sample group presented the following socio-demographic characteristics: predominately female (91.66%), mean age of 26 years (standard deviation ± 2.9), single (83.33%), childless (87.50%), from Rio de Janeiro (52.33%), living with their families (77.08%), having graduated 1 to 2 years before data collection (70.83%).

Ten residents (20.83%) displayed alterations in all three dimensions (Emotional Exhaustion, Depersonalization and Personal Accomplishment), which are warning signs for the syndrome. This number was reached by calculating the sum of points obtained on the responses given by the 48 residents – cutoff points which did not take into consideration particular socio-demographic and occupational variables.

The residents who presented such alterations in all three dimensions possessed the following sociodemographic characteristics: individuals with a mean age of 26 years, in the 23 to 33 age group, all female, single (90%) and childless (70%). Regarding their origin and place of residence, 80% were

from the state of Rio de Janeiro and 77.77% lived with their family.

It is also important to emphasize that the nursing residents who presented alterations in all three dimensions took an average of 1 hour and 12 minutes to commute to work, and 90% had graduated less than three years before the study. In other words, they were recent graduates.

Regarding the participants that presented such alterations, 60% worked in specialized care units – 20% in the cardiovascular program and 40% in intensive care; the remaining residents were distributed among the surgical center (10%), internal medicine (10%), nephrology (10%) and obstetrics (10%).

With respect to their work characteristics, 60% had taken temporary leaves of absence from work (up to 15 days) due to musculoskeletal disorders, stress, anxiety, herpes and labyrinthitis, among other pathologies. It is also significant that some individuals took leaves of absence for more than one disease and more than once throughout their time as nursing residents, up to the time of data collection.

Although the number of residents with alterations in all three dimensions of burnout syndrome is not representative, several individuals presented scores close to the cutoff points used for classifying dimension alterations. In other words, 43.75% presented the medium-ranged values of Emotional Exhaustion, 37.50% presented the medium-ranged values of Depersonalization, and 66.6% had low values of Personal Accomplishment (Table 1), which led us to classify them as pre-disposed to develop the syndrome.

Table 1. Result distribution of Maslach Burnout Inventory (MBI) dimensions

MBI dimensions		n (%)	Mean points (SD)	Coefficient of variation	Cut of point		Cronbach's Alpha	Cronbach's Alpha (MBI)
					Minimum	Maximum		
EE	High	16(33.33)	24(± 7)	0.303	0.29	0.68	0.805	0.7694
	Medium	21(43.75)						
	Low	11(22.91)						
DE	High	16(33.33)	8(± 6)	0.746	0.21	0.69	0.8287	
	Medium	18(37.50)						
	Low	14(29.16)						
PA	High	16(33.33)	28(± 6)	0.223	0.28	0.76	0.8227	
	Medium	-						
	Low	32(66.66)						
Burnout syndrome		10(20.83)						

SD - standard deviation; EE - Emotional Exhaustion; DE - Depersonalization; PA - Personal Accomplishment

Upon conducting an individualized analysis of the cutoff points per variable, we found four other individuals (8.33%) with altered burnout dimensions scores. Thus, they were classified as being pre-disposed to develop the syndrome. These individuals possessed similar characteristics to those who displayed alterations for burnout in all three dimensions: they lived by themselves or with others; lived in other municipalities; took an average of 1 hour and 23 minutes to commute to work; and were assigned to surgical and adolescent health nursing programs.

Discussion

One limitation of this study was its cross-sectional design, which did not allow us to establish causal relations. The health of nursing residents deserves special attention, for we confirmed that they present vulnerability for mental illness. This confirmation was based on their profile and the data obtained in this study, which indicate that the participants possess characteristics that make them particularly susceptible to burnout.

These results can lead to relevant points for teaching-learning institutions and worker health services to reflect upon, including prevention, detection and practices that minimize burnout syndrome in nursing residents.

In light of the results described, we notice that there is a parallel with those found in the literature, which demonstrate that individuals with alterations indicating possible burnout possess similar susceptibility characteristics. Studies with nursing residents and physical therapy professionals found individuals who were young, female, single, childless and at the start of their professional career.^(4,5) Another characteristic which deserves special mention is that, in addition to carrying out their professional work activities, residents also accumulate other academic activities, leading to stress and physical and mental fatigue. These include academic work, exams, term papers, and theoretical classes, among others.⁽⁵⁾

Regarding the age group (23 to 33 years), results show that the group of residents displayed very sin-

gular characteristics. In other words, they were, for the most part, recent graduates – with 1 or 2 years since graduation – and inserted in the work market. In this sense, they were possibly lacking in skills and practical experience, making them even more insecure or vulnerable to burnout. In this perspective, limited time of professional experience and young age can influence their health, for events such as graduating and entering the work market usually generate stress. They are new experiences, which are unfamiliar and can cause fear.⁽¹⁾ Thus, the recent graduate does not usually have the tools for dealing with the tensions of the working world. Therefore, this is a relevant variable for a deeper understanding of the issue at hand.

Corroborating this analysis, we infer that the more skills, competence and confidence acquired with time of professional practice, the higher the possibility of dealing with stressful situations. In turn, the chances for developing chronic stress and burnout syndrome are reduced.⁽⁶⁾

Another noteworthy variable is gender. These results are very similar to those of other studies conducted with nursing professionals, which demonstrate that women are more inclined to develop burnout. This profession is represented eminently by women, and in an androcentric world, women still suffer from disadvantages, such as taking on other tiring and stressful unpaid work shifts–, at home with domestic chores and raising children.^(2,7,8)

Studies have demonstrated that marital status and number of children can act as protective factors for the syndrome.⁽³⁾ Our results indicate that the nursing residents who were developing burnout were predominately single and childless, thus corroborating their susceptibility to the syndrome. Studies infer that having a partner with whom to share life and work problems is a significant protective factor against psychological suffering and, consequently, mental illness.^(2,3)

The resident's place of origin was a relevant data for analysis, for most out-of-state residents left their hometowns to specialize in their given residency program. Thus, it is common for them to live by themselves or with others throughout the program. This is a determining factor for re-

duced affective relationships, which corroborates the possibility of psychological suffering. Furthermore, adapting to other customs and even different cultures (considering the size of Brazil and the different colonizing populations) can lead to stress and burnout vulnerability.⁽³⁾

More relevant data is obtained when considering the specialized units of care chosen by residents. Other studies have also found that the intensive care and the cardiovascular nursing units present the highest incidence of residents with the burnout.^(4,5) Residency programs in intensive care units have their particularities, for they involve caring for chronic and/or severely ill patients, which require specialized techniques and different types of procedures. Furthermore, more time availability is required in order to care for the needs of these patients. On the other hand, residents are frequently responsible for providing direct care to the more severely ill patients, which requires a higher set of skills (psycho-cognitive and motor). Such responsibility can translate into psychological suffering due to lack of professional experience.⁽⁴⁾

Nonetheless, residents assigned to other work contexts possess characteristics which are equally relevant to burnout, for they are inserted in a high-complexity teaching hospital, considered a training center of human resources and technology development in the health field. This means that residents carry out multiple and refined activities, which requires that the professional continuously adapt to the characteristics of this work environment, an exhaustive process of inner psychological organization and re-organization.⁽⁹⁾ This can also be considered an important variable which favors psychosomatic illness and lead to burnout syndrome.

With respect to the data found on illness-related work leaves, a high percentage of individuals reported taking leaves of absence. The reasons for these medical leaves were diseases related to stress and psychological suffering.⁽⁶⁾ Musculoskeletal disorders are diseases caused by physical and mental overload; oral herpes frequently emerges in stressful situations, as well as labyrinthitis. Thus, our results corroborate those found in the literature.⁽⁸⁾

Another important result regards the individuals with a pre-disposition for developing burnout, who

presented high scores on Emotional Exhaustion, Depersonalization, and low scores on Personal Accomplishment, but who did not make the cutoff score which characterizes the full syndrome. Nonetheless, these variations are of significant relevance, for in different circumstances, these individuals can maintain, reduce or increase their scores in each dimension. This variance occurs because burnout syndrome involves multiple factors, both dynamic and multifaceted.^(2,9) Therefore, if the individual who is inclined to develop the syndrome is transferred to another sector or meets a partner with whom to share their moments of suffering, these can act as protective factors against burnout, thus reducing their MBI scores.

However, high Emotional Exhaustion scores can suggest a syndrome in the making, for it is one of the initial signs of burnout. This dimension usually results from overload and personal conflict in interpersonal relationships.^(3,5) Emotional Exhaustion is also a predictor of Depersonalization, which in turn is a predictor for lower Personal Accomplishment. Thus, such resident can go from being pre-disposed to burnout to presenting significant alterations for developing the full syndrome.

Conclusion

The present study found individuals developing burnout and uncovered others pre-disposed to the syndrome among a group of nursing residents. Being young, female, single, childless, and at the start of a professional career, as well as being assigned to high-complexity residency programs (cardiovascular and intensive therapy) were found to be predisposing factors for burnout syndrome in a group of nursing residents.

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Collaborations

Tavares KFA contributed with the study's conception and design, data collection, statistical treatment of

data, data analysis and interpretation; drafting of the article and final approval of the version to be published. Souza NVDO collaborated with the study's conception and design, drafting of the article, critical review for important intellectual content and final approval of the version for publication. Silva LD cooperated with the conception and design, critical revision of the relevant intellectual content and final approval of the version to be published. Kestenberg CCF participated in data analysis and interpretation, critical review for important intellectual content and final approval of the version to be published.

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