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Burnout syndrome in multi-professional healthcare residents

Síndrome de Burnout em residentes multiprofissionais em saúde

Síndrome de Burnout en residentes multiprofesionales en salud

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ABSTRACT

Objective: to estimate the prevalence of Burnout Syndrome, and identify the sociodemographic, occupational, lifestyle, and health profile of multi-professional healthcare residents at a public university in Bahia, Brazil. **Methods:** a descriptive, cross-sectional study was conducted with 63 residents, using the Maslach Burnout Inventory and a questionnaire on sociodemographic, labor, lifestyle, and health issues. **Results:** on examining the dimensions of the syndrome, 82.5% were found to present high levels of emotional exhaustion; 55.5%, moderate levels of depersonalization; and 88.8%, high levels of diminished professional fulfilment. Burnout occurred most often in nurses (50%), professionals working in hospitals (71.4%) and recent graduates (mean 2.1 years), while 60.3% of the residents regarded their diet at unhealthy, and 29.5% were overweight. **Conclusion:** the results indicate a significant prevalence of Burnout Syndrome, and marked changes in the three dimensions of the syndrome were found in 22.2% of the residents.
Descriptors: Education graduate; occupational stress; burnout professional; occupational health.

RESUMO

Objetivo: estimar a prevalência da Síndrome de *Burnout* e identificar o perfil sociodemográfico, laboral, estilo de vida e saúde de residentes multiprofissionais de saúde de uma Universidade pública da Bahia, Brasil. **Metodologia:** estudo transversal, descritivo, realizado com 63 residentes. Utilizou-se o *Maslach Burnout Inventory* e um questionário contendo questões sociodemográficas, laborais, estilo de vida e saúde. **Resultados:** ao analisar as dimensões da síndrome, 82,5% apresentaram nível alto de exaustão emocional; 55,5% nível moderado de despersonalização e 88,8% nível alto de reduzida realização profissional. Destaca-se a maior ocorrência do *Burnout* em enfermeiros (50%), profissionais atuantes no âmbito hospitalar (71,4%) e em recém-formados (média 2,1 anos). 60,3% dos residentes consideraram não ter uma alimentação saudável e 29,5% apresentaram excesso de peso. **Conclusão:** os resultados apontam uma prevalência significativa de síndrome de *burnout*, sendo encontradas altas alterações nas três dimensões da síndrome em 22,2% dos residentes.
Descritores: Educação de pós-graduação; estresse ocupacional; esgotamento profissional; saúde do trabalhador.

RESUMEN

Objetivo: estimar la prevalencia del Síndrome de Burnout e identificar el perfil sociodemográfico, laboral, estilo de vida y salud de residentes multiprofesionales de salud de una universidad pública de Bahía, Brasil. **Método:** estudio transversal, descriptivo, realizado junto a 63 residentes. Se utilizó el *Maslach Burnout Inventory* y un cuestionario que contenía cuestiones sociodemográficas, laborales, estilo de vida y salud. **Resultados:** al analizar las dimensiones del síndrome, el 82,5% presentó un alto nivel de agotamiento emocional; 55,5% nivel moderado de despersonalización y 88,8% nivel alto de reducida realización profesional. Se destaca la mayor ocurrencia de *Burnout* en enfermeros (50%), profesionales actuantes en el ámbito hospitalario (71,4%) y recién graduados (promedio 2,1 años). El 60,3% de los residentes consideró no tener una alimentación sana y el 29,5% presentó un exceso de peso. **Conclusión:** los resultados apuntan a una prevalencia significativa de síndrome de *Burnout* y se encontraron grandes alteraciones en las tres dimensiones del síndrome en el 22,2% de los residentes.
Descriptores: Educación de postgrado; estrés ocupacional; agotamiento profesional; salud del trabajador.

INTRODUCTION

It is known that work can lead to illness, and stress can be a causal factor for diseases. Stress is defined as a reaction triggered in the body by a stimulus seen as threatening, which exceeds the adaptive capacities of the individual, where there is activation of neuroendocrine manifestations with a view to coping and to reach homeostatic balance. Stress intensity and the ways of coping can lead to health problems, such as the *Burnout* Syndrome (BS)[1,2].

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In undergraduate and postgraduate vocational training activities there are degrading situations that can be assessed as stressful. In view of the postgraduate scenario, we highlight the Multi-professional Health Residency Programs, framed as a specialization (*lato sensu*), which emerged in Brazil following the promulgation of Law No. 11,129 of 2005 and of interministerial ordinance No. 1,117 of 2005, established within the scope of the Health and Education Ministry, with the purpose of training and qualifying non-medical health professionals in the Unified Health System (*Sistema Único de Saúde*, SUS) and, as a strategy, teaching/learning and in-service training, through monitoring and supervision[3].

Health residents are exposed to occupational hazards and consequently to a high degree of work stress. Many are the predictors for this issue, certainly due to the professional responsibilities, compliance with guidelines requested by the supervisions and coordination of the residency program, exhaustive working hours, and study routines necessary for the construction of knowledge in the area. These challenging situations cause feelings of tension, anxiety and fear, which can be assessed as stressful and directly interfere with the quality of life and the emergence of the *Burnout* Syndrome, which derives from occupational stress[4].

Given the contextualization presented, there is scarce scientific production on the mental health of the multi-professional residents, with greater emphasis on publications on *burnout* in medical residency professionals. Studies on *burnout* in medical residents point to a significant prevalence of the syndrome[5,6]. It is noteworthy that recently the World Health Organization included *burnout* as a work-related phenomenon in the international classification of diseases in its 11th edition.

In this perspective, the following research question was raised: What is the occurrence of the *Burnout* Syndrome in multi-professional health residents? Thus, the objective was to estimate the prevalence of the *Burnout* Syndrome and to identify the sociodemographic, work, lifestyle and health profile of multi-professional health residents.

THEORETICAL REFERENCE

In this way, the BS results from the chronification of occupational stress, through a prolonged process of attempts to deal with certain stress conditions, and is characterized by the presence of high levels of Emotional Exhaustion (EE), Depersonalization (DP) and Reduction of Professional Achievement (RPA). The syndrome is considered an extreme mental clinical picture of occupational stress, implying deleterious effects on the workers' health[7-9].

One of the main descriptions of the BS was made in the 1970s by Freudenberger in his article *Staff Burn-out*, of 1974, which alerts the scientific community about the problems that the health professionals are exposed to because of their work[10]. *Burnout* has a number of emotional, physical and social/behavioral consequences, such as: (i) professional dissatisfaction (frustration and feelings of incompetence), (ii) pain, insomnia, overweight, (iii) absenteeism, social isolation and eating problems[11,12]. It contributes to a negative impact on the mental and physical health of the workers[13,14].

Regarding the dimensions of *burnout*, EE presents feelings of physical, mental and emotional exhaustion, mostly due to overload; in DP, negative conducts and responses are observed to colleagues and patients, with cynicism and isolation. It does not mean that the individual has no personality, but that it has suffered or is still suffering changes, leading the professional to a cold and impersonal contact; in RPA, on the other hand, the professional does not feel competent and fulfilled in the role, presenting low self-esteem, demotivation and sometimes impulses to quit the job[15,16].

METHODOLOGY

A descriptive cross-sectional study conducted with multi-professional health residents linked to a Public University, located in Bahia, northeastern Brazil. Data collection took place from July to November 2018.

A total of 74 (100%) first and second year residents were invited to participate in this study. Resident professionals who did not sign the Free and Informed Consent Form (FICF) were excluded after explanation of the research 02 (2.7%), as well as those who underwent psychiatric treatment, 04 (5.4%), and the women in the period of puerperal pregnancy cycle 01 (1.3%); there were 04 (5.4%) refusals. The final research population consisted of 63 multi-professional health residents, with a response rate of 94%.

A questionnaire was made up of questions related to sociodemographic, working, lifestyle and health conditions. The *Burnout* Syndrome was assessed by the *Maslach Burnout Inventory (MBI) - Human Services Survey*[17], and

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dichotomized according to the criteria of Ramirez et al. (1996), as present or absent, when considering the existence of high scores in the dimensions of EE and DP, and low scores in RPA[18].

Once the *MBI* scores are obtained, the cut-off points for each dimension are established, classified into high, moderate and low levels. For emotional exhaustion (EE): high (≥27 points), moderate (19 to 26 points) and low (≤18 points); reduced professional achievement (RPA): high (≤33 points), moderate (34 to 39 points) and low (≥40points); depersonalization (DP): high (≥10 points), moderate (6 to 9 points) and low (≤5 points).

The internal reliability of the *MBI* instrument categories was evaluated using the *Cronbach's alpha* coefficient. *Alpha* values above 0.70 indicate an acceptable internal consistency, supporting the reliability of the instrument: 0.82 for EE, 0.79 for DP and 0.81 for RPA.

The abdominal circumference was measured and assessed by the following cut-off points: normal (<88 cm for women and 102 cm for men) and high risk (≥88 cm for women and ≥102 cm for men). Overweight was assessed using the Body Mass Index (BMI) and classified according to the World Health Organization (WHO) as underweight (BMI <18.5 kg/m^2), eutrophic (BMI < 25.0 kg/m^2) and overweight (BMI >25.0 kg/m^2)[19].

Data analyses were performed with the aid of the *Statistic Package for Social Sciences* (SPSS)® software, version 22 for *Windows*® at the State University of Bahia (*Universidade do Estado da Bahia*, UNEB). The descriptive analysis was performed to characterize the population and the absolute and relative frequencies of the variables of interest were calculated.

The development of the study complied with the national standards of ethics in research involving human beings, in line with resolution No. 466/2012. The project was submitted to the Ethics Committee for Research with Human Beings of the UNEB, and was approved under opinion number 2,724,131.

RESULTS

The study population corresponded to 63 (100%) multi-professional residents, of which 31 (49.2%) belonged to the first year of study and 32 (50.8%) to the second year, in the following areas: Family Health: 26 (41.3%), Intensive Care: 13 (20.6%), Clinical Nutrition: 9 (14.3%), and Oncology: 15 (23.8%). Regarding the professional categories, 25 (39.7%) were nurses, 7 (11.1%) nutritionists, 7 (11.1%) pharmacists, 7 (11.1%) psychologists; 6 (9.5%) physiotherapists; 6 (9.5%) phonoaudiologists; 4 (6.3%) dental surgeons and 1 (1.6%) social worker, according to Table 1.

The sociodemographic characteristics of the professionals showed a young population (79.3%) with a mean age of 26.7 years old (SD ± 2.9), predominantly female (92.1%), black (79.3%), single (85.7%) and Catholic (36.5%). Regarding the working characteristics, 71.4% reported satisfaction with the current occupation; however, 65.1% were dissatisfied with their economic situation. 93.7% considered the residence stressful. When asked about moral harassment, 69.8% felt harassed by preceptors or service professionals and 19% by patients. 71.4% of the residents reported having rest breaks in the internship/work field, as shown in Table 1.

Regarding lifestyle and health characteristics, 52.3% of the residents did not practice any physical activity routinely during the week; 98.4% were non-smokers and 77.8% consumed alcohol. 57.1% reported sleep patterns from 6 to 8 hours a day and 39.7% up to 5 hours a day. The presence of back pain at the end of a working day was reported by 76.2%. Headache and digestive problems were mentioned by 73% and 54% of the residents, respectively. 60.3% reported not having healthy eating habits; in this way, overweight represented by the BMI was present in 29.5%. Findings of waist circumference measurements revealed a prevalence of abdominal adiposity of 5.3%, highlighting the absence in male professionals, presented in Table 2.

By distributing the levels of each *MBI* dimension among the multi-professional residents in health, it was observed that 82.5% had a high level of Emotional Exhaustion (EE); 55.5% scored a moderate level of Depersonalization (DP); and, in the Reduction of Professional Achievement (RPA), 88.8% presented a high level. When analyzing the means of each dimension, there was a high EE, moderate DP and high RPA, according to Table 3.

When checking the BS, the prevalence presented was 14 (22.2%), indicating high levels in the three dimensions of the BS, alerting to the development of the syndrome. Of those with indications of BS (22.2%), 50% were nurses, 14.3% nutritionists and, with 7.1% each: physiotherapists, phonoaudiologists, pharmacists, psychologists and dental surgeon. The residents of the intensive care unit were the most affected (42.9%), followed by family health (28.6%), oncology (14.3%) and clinical nutrition (14.3%); in this way, the professionals working in the hospital sectors

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scored 71.4%. The mean time since graduation was 2.1 years, with a predominance of women (85.7%) and black people (92.8%), according to Table 3.

TABLE 1: Sociodemographic, economic and labor characteristics of Multiprofessional Residents in Health. Salvador, Bahia, Brazil, 2018 (N=63)

Variables	N	%
Age		
Up to 30 years old	50	79.3
Over 30 years old	13	20.7
Gender		
Female	58	92.1
Male	5	7.9
Race/Skin color		
Black	50	79.3
Not black	13	20.7
Marital status		
Single	54	85.7
Married	9	14.3
Religion		
Catholic	23	36.5
Evangelical	12	19.0
Spiritualist	9	14.3
African Religion	1	1.6
Others	18	28.6
Professional category		
Nurse	25	39.7
Physiotherapist	6	9.5
Speech-Language Pathologist	6	9.5
Nutritionist	7	11.1
Pharmacist	7	11.1
Psychologist	7	11.1
Social Worker	1	1.6
Dental Surgeon	4	6.4
Working area		
Family Health	26	41.3
Intensive Care	13	20.6
Oncology	15	23.8
Clinical Nutrition	9	14.3
Year of the residency		
First Year	31	49.2
Second Year	32	50.8
Economic situation		
Satisfied	22	34.9
Dissatisfied	41	65.1
Satisfaction with current occupation		
Yes	45	71.4
No	18	28.6
Considers residency stressing		
Yes	59	93.7
No	4	6.3
Harassment by preceptor or service professional		
Yes	44	69.8
No	19	30.2
Harassment by patients		
Yes	12	19.0
No	51	81.0
Rest break during work		
Yes	45	71.4
No	18	28.6

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TABLE 2: Lifestyle and health characteristics of Multi-professional Residents in Health. Salvador, Bahia, Brazil, 2018. (N=63)

Variables	N	%
Does physical activity regularly		
Yes	30	47.7
No	33	52.3
Smoker		
Yes	1	1.6
No	62	98.4
Consumption of alcoholic beverage		
Yes	49	77.8
No	14	22.2
Sleep pattern		
Up to 5 hours a day	25	39.7
6 to 8 hours a day	36	57.1
More than 8 hours a day	2	3.2
Need for psychological accompaniment**		
Yes	21	33.3
No	42	66.7
Back pain at the end of the workday**		
Yes	48	76.2
No	15	23.8
Headaches**		
Yes	46	73.0
No	17	27.0
Dizziness**		
Yes	23	36.5
No	40	63.5
Tremors**		
Yes	11	17.5
No	52	82.5
Shortness of breath**		
Yes	20	31.7
No	43	68.3
Digestive problems**		
Yes	34	54.0
No	29	46.0
Considers to have a healthy diet**		
Yes	25	39.7
No	38	60.3
BMI (kg/m2)*		
Eutrophic	39	64.0
Low Weight	4	6.5
Excess Weight	18	29.5
Waist circumference (cm)		
Women		
≥ 88	3	5.8
< 88	49	94.2
Men		
≥ 102	0	0.0
< 102	5	100
Abdominal adiposity		
Present	3	5.3
Absent	54	94.7

*Variable with missing data **Self-referred data.

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TABLE 3: Distribution of the *Maslach Burnout Inventory* results among Multi-professional Residents in Health. Salvador, Bahia, Brazil, 2018. (N=63)

Dimensions	N Levels (%)			Mean of Points	Standard Deviation	Amplitude
	Low	Moderate	High			
Emotional Exhaustion	01 (1.6)	10 (15.9)	52 (82.5)	30.7	4.99	26 (16-42)
Depersonalization	10 (16)	35 (55.5)	18 (28.5)	8.4	2.85	13 (5-18)
Reduction of Professional Achievement	-	07 (11.2)	56 (88.8)	28.3	3.60	08 (22-30)

DISCUSSION

The mental and occupational health of the health professionals and especially of the multi-professional residents is a matter of great relevance in the present society. Of course, mental health is important not only for the health professionals but, when it comes to a professional field specifically concerned with care, being mentally and physically well is extremely important. Different factors contribute for an individual to "be well" with him/herself and others; however, it is argued here that work can be a central issue in life and directly influence personal and social issues[20].

In fact, work is the way of social insertion and can only be understood as social work. In this scenario, it is plausible to reflect the complex scenario that is experienced in the world of work, highlighting the issues of its widespread precariousness, outsourcing, the overload of functions, complex inter-professional relationships and excessive hours in which many professionals are inserted. These are issues certainly inherited from the capitalist model of production[21].

A balanced mental health of the health worker is fundamental for a dignified and safe care, and measures for the prevention of *burnout* must be thought, since this syndrome is exclusively related to the work generating personal and institutional consequences, as large cases of presenteeism, absenteeism and leave[13,14].

The sociodemographic characteristics of all the professionals evidenced a young population, predominantly female, black and single. 71.4% reported satisfaction with the current occupation; however, 65.1% were dissatisfied with their economic situation and 93.7% consider the residence stressful. In a study that aimed to describe the sociodemographic, professional and academic profile of multi-professional residents of a university hospital, similar findings were obtained, pointing out the predominance of women, single, without children, aged between 25 and 29 years old, and working in the hospital area[22].

Several authors emphasize that, during the period of the residency, there is a reduction in quality of life, relating it to the characteristics of in-service training, such as extensive weekly workload, care for critically ill patients and sleep deprivation. The residency is a period in which the professional is subjected to distress, which may impair learning and health, in addition to endangering patient safety[23,24]. The consequences of *burnout* are deleterious to health professionals, patients and health institutions, as they may be related to iatrogenesis and adverse conditions to patient safety[25].

It is noteworthy that multi-professional residency is a modality of *lato sensu* postgraduate education with a workload of 60 hours per week and is based on in-service teaching, with duration of two years. Factors such as the extensive workload, the combination of being a postgraduate student and a worker and the lack of previous professional experience in the area of the residency, are predisposing factors to illness[26].

The prevalence of the BS presented in this study was 22.2%, not differing from other national studies. Tavares and collaborators found a prevalence of 20.8%, with predominance in young, female, single, recent graduates and inserted in high complexity sectors[27].

A study with multi-professional residents found a prevalence of 27%, more prevalent among young people and nurses. High EE corresponded to 37.8% and RPA 48.6%, partially approaching the results found in this study[26]. The discrepancy presented in EE and RPA can be explained by the methodological criteria used in the cited reference research[28].

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This study indicates that residents with indications of BS are young professionals, recent graduates, predominantly female and working in hospital settings, in the medium and high complexity sectors. Several studies corroborate these findings and emphasize that the residents accumulate varied academic activities, such as seminars, exams, time-consuming conclusion works, and that the hours devoted to the practical activities are greater than those devoted to the academic ones. It is clear that this accumulation of activities can be evaluated as triggering factors of work stress and that, if the professional does not pay attention to seeking measures to cope with these factors, it can certainly lead to *burnout*[4,24].

An alarmingly data which was pointed out refers to the percentage of residents who reported moral harassment by the preceptors or professionals of the service where they perform their work practices. Moral harassment is characterized by the workers' exposure to repetitive embarrassing and humiliating situations through authoritarian hierarchical relationships. Thus, this type of attitude can affect the health-disease process, leading to physical and psychological consequences, conflict formation, lack of confidence, absenteeism, isolation and withdrawal from the employment relationship[29].

The stressors inherent in each profession linked to those arising from the vocational training provided by multi-professional residency expose the residents to the possibility of acquiring BS. Among the multiple factors that trigger the syndrome, we highlight dissatisfaction with the replacement of employees in the sector, deviation from the function, low pay, physical, mental/emotional exhaustion, reduced leisure time and, especially, the conflicting relation of lack of professional identity. These damages can interfere with family, institutional and social relations. The need to promote educational and stress orientation activities and the promotion of coping strategies is suggested[30-32].

Regarding the characteristics of lifestyle and human biology, it was found that 52.3% of the residents reported not exercising regularly during their weekly routine, and did not have a healthy diet, indicated by 60.3%. In this context, 29.5% were overweight and had a BMI greater than 25 kg/m^2. Despite the low prevalence of abdominal adiposity found in the study (5.3%), there are studies in the literature that point to biological plausibility and an association between stress and consequently *burnout* with increased abdominal adiposity and weight gain[33]. There is possibly a relation between stress and consequently BS with weight gain and abdominal adiposity, leading to the ingestion of caloric food and stimulation of the Hypothalamic-Pituitary-Adrenal (HPA) axis and, as a consequence, the production of cortisol that is related to visceral obesity to increase the amount of energy available for stress coping situations[33-35].

It is emphasized that in the process of vocational training in which the resident is inserted there is the possibility of developing multi-professional activities and consequently greater learning opportunity, being a period of excellent exchange of knowledge and professional growth, empowering the professional in the area of training, being qualified for future professional experiences with mastery and practical and scientific knowledge.

The main limitation of the study is based on the cross-sectional study design that makes it impossible to establish causal relations and the presence of self-reported data. Studies analyzing the mental and occupational health of health residents are extremely important, considering the factors related to work stress and consequently to physical and mental illness.

CONCLUSION

The results indicate a significant prevalence of *burnout* syndrome, with higher occurrence in nurses and professionals working in the hospital sectors. The professionals affected were recent graduates, predominantly female and black. There is a significant presence of moral harassment.

It is expected that the findings of this study may contribute to the introduction of alternative measures to reduce and cope with stress and consequently *burnout* in the professionals analyzed. The creation of mental health policies should be designed to improve the occupational health of the residents. Further studies with more robust methodologies on the subject are pertinent.

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