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de Azevedo Guido, Laura; Marques da Silva, Rodrigo; Tonini Goulart, Carolina; de Oliveira Bolzan, Maria Elaine; Dias Lopes, Luiz Felipe

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Burnout Syndrome in multiprofessional residents of a public university

SÍNDROME DE BURNOUT EM RESIDENTES MULTIPROFISSIONAIS DE UMA UNIVERSIDADE PÚBLICA

SÍNDROME DE BURNOUT EN RESIDENTES MULTIPROFESIONALES DE UNA UNIVERSIDAD PÚBLICA

Laura de Azevedo Guido¹ Rodrigo Marques da Silva², Carolina Tonini Goulart³, Maria Elaine de Oliveira Bolzan⁴, Luiz Felipe Dias Lopes⁵

ABSTRACT

The multiprofessional residency programs seek to break paradigms regarding the education and training of professionals for the Unified Health System (Sistema Único de Saúde - SUS) and contribute to qualify health services by promoting innovative strategies. Therefore, some aspects may be evaluated as stressors, and later lead to burnout syndrome. Therefore, we assessed the occurrence of burnout syndrome among the multiprofessional residents at the Federal University of Santa Maria. This is a descriptive, cross-sectional and quantitative study. A sociodemographic data form and the MBI-HSS were administered to 37 residents between April and June of 2011. It was observed that 37.84% presented with High Emotional Stress, 43.24% with High Depersonalization and 48.65% with Low Professional Fulfillment. In terms of the association between domains, it was found that 27% of the residents presented with signs of Burnout Syndrome. The studied residents will be exposed to the stressors of the profession and education/training, which may favor the occurrence of the syndrome in these professionals.

DESCRIPTORS

Stress
Burnout, professional
Internship and residency
Inservice training
Education, nursing

RESUMO

Os Programas de Residência Multiprofissional buscam romper com os paradigmas em relação à formação de profissionais para o Sistema Único de Saúde (SUS) e contribuir para qualificar os serviços de saúde a partir de ações inovadoras. Assim, alguns aspectos podem ser avaliados como estressores e, posteriormente, levarem à Síndrome de Burnout. Dessa forma, verificou-se a ocorrência da Síndrome de Burnout nos Residentes Multiprofissionais da Universidade Federal de Santa Maria. Este estudo trata-se de um estudo descritivo, transversal e quantitativo. Aplicaram-se um formulário de dados sociodemográficos e o MBI-HSS em 37 residentes, entre abril e junho de 2011. Observou-se que 37,84% apresentaram Alta Exaustão Emocional; 43,24%, Alta Despersonalização; e 48,65%, Baixa Realização Profissional. Na associação dos domínios, verificou-se que 27% apresentaram indicativo para Síndrome de Burnout. Os residentes pesquisados estão expostos aos estressores da profissão e da formação, o que pode favorecer a ocorrência da síndrome nesses profissionais.

DESCRIPTORES

Estresse
Esgotamento profissional
Internato e residência
Capacitação em Serviço
Educação em enfermagem

RESUMEN

Los Programas de Residencia Multiprofesional buscan romper los paradigmas relativos a la formación de profesionales para el Sistema Único de Salud (SUS) y contribuir a calificar los servicios de salud con acciones innovadoras. Algunos aspectos pueden ser evaluados como estresores y llevar al Síndrome de Burnout. Se verificó la presencia de Síndrome de Burnout en los Residentes Multiprofesionales de la Universidad Federal de Santa Maria. Estudio descriptivo, transversal, cuantitativo. Se aplicó un formulario de datos sociodemográficos y el MBI-HSS a 37 residentes de abril a junio de 2011. Se observó que 37,84% presentaba Alto Agotamiento Emocional, 43,4% Alta Despersonalización y 48,65% Baja Realización Profesional. En la asociación de dominios, se verificó que 27% presentaba indicativo de Síndrome de Burnout. Los residentes investigados están expuestos a los estresores de la profesión y de la formación, lo cual puede favorecer la aparición del síndrome entre ellos.

DESCRIPTORES

Estrés
Agotamiento profesional
Internado y residencia
Capacitación en servicio
Educación en enfermería

¹PhD in Nursing. Associate Professor, Federal University of Santa Maria. Director of the Work, Health, Education and Nursing Research Group. Line of Research Stress, Coping and Burnout. Santa Maria, RS, Brazil. lguido344@gmail.com ²RN. MSc, Graduate Nursing Program, Federal University of Santa Maria. Santa Maria, RS, Brazil. marques-sm@hotmail.com ³RN. MSc in Rural Extension. Master's student in the Graduate Nursing Program, Federal University of Santa Maria. Fellowship FAPERGS/CAPEs, Santa Maria, RS, Brazil. carolintonini@yahoo.com.br ⁴RN. MSc in Nursing. Specialist in Pedagogy of Medical-Surgical Nursing, Professional Education in Health and Occupational Health. Nurse at the University Hospital of Santa Maria. Santa Maria, RS, Brazil. mariaelaine.bolzan@bol.com.br ⁵PhD in Production Engineering. Specialist in Statistics and Quantitative Modeling. Associate Professor, Federal University of Santa Maria. Santa Maria, RS, Brazil. lflopes67@yahoo.com.br

INTRODUCTION

Stress is currently indicated as a factor causing heart diseases, psychological and gastrointestinal disorders⁽¹⁾. It is present in the daily routine of people and impacts one's quality of life, a fact confirmed by the World Health Organization (WHO)⁽¹⁾.

The concept of stress in the biological sciences was developed by Hans Selye in the 20th century and highlights neuroendocrine manifestations that occur in individuals as a response to internal or external stimuli. Based on the studies of Claude Bernard and Walter Cannon on organic homeostasis, Hans defined stress as the organism's unspecific response to any type of stimulus⁽²⁾.

Stress is also conceptualized based on the interactionist model, which asserts that the relationship between the environment and a person or group is active and is responsible for the process⁽³⁾. In this model, stress is defined as any stimulus that makes demands of the external or internal environment and taxes or exceeds the adaptive sources of an individual or social system with a determinant factor of the stressor's severity⁽³⁾.

We note that, according to the interactionist model, a cognitive evaluation takes place, which is a mental process in which one locates the event or situation in a series of evaluative categories that are related to the person's representation of wellbeing⁽³⁾. This categorization process allows evaluations that result in responses (primary, secondary evaluations and re-evaluations). In the first evaluation, the individual identifies the demands of a given situation and defines the meaning of such an event, which may result in action. This event may represent a challenge, a threat or be irrelevant to the individual⁽²⁻³⁾.

If the stressor is identified as a threat (negative) or as challenge (positive), a response to the stress takes place and the individual will then perform a second evaluation. This second evaluation verifies alternatives and coping and/or adaptation strategies to deal with the stressful event. The use of these strategies to deal with the situation, cognitively identified as a stressor, is called coping. If these strategies are not used or if they fail, the stressor remains and stress may become chronic and lead to the Burnout Syndrome⁽²⁾.

Burnout syndrome is an occupational disorder and is seen as a process that takes place in response to chronic stress, with potential negative consequences at the individual, professional, family and social levels⁽⁴⁾.

Burnout, as a consequence of the work process, is observed in the health field. For this reason, the predominance of nurses writing scientific papers on this subject

may be linked to the occurrence of this syndrome in this profession. Burnout syndrome may be linked to nursing because it is a profession characterized by a lack of professionals, which leads to work overload, by proximity to patients and families experiencing stressful events, direct contact with illnesses, and by a lack of autonomy and authority in the decision-making process⁽⁵⁾.

There are also situations experienced during education, both in undergraduate and graduate programs, which can be seen as stressful. In this context, we note that Multidisciplinary Residency Programs in the Brazilian health field, regulated as non-degree programs, seek to break with the traditional paradigm in relation to the education of professionals preparing for the Brazilian Unified Health System (SUS) and contribute to the qualification of the local health services offered to communities. These programs present a variety of methodological designs but all of them are unanimous in defending the implementation of active and participatory methodologies and continuous education as the pedagogical axis^(6,7).

Burnout, as a consequence of the work process, is observed in the health field. For this reason, the predominance of nurses writing scientific papers on this subject may be linked to the occurrence of this syndrome in this profession.

Additionally, the intrinsic interdisciplinary characteristic confers an innovative character onto the programs, which is mainly shown through the inclusion of 14 professions in the field of health. This way of proceeding with 'inter-categories' aims for collective education included in the same 'field' of practice while giving priority to and acknowledging the specific 'core' of each profession⁽⁷⁾. The population, social control, the unit's staff, and schools in the neighborhood are invited to think and produce health spaces and quality of life in the teaching-learning process of residents⁽⁶⁾.

The multidisciplinary residency program in the studied institution began in 2009 and was offered for the following professions: Nursing, Psychology, Nutrition, Social Work, Physical Therapy, Speech Therapy, Pharmacology, Occupational Therapy, and Dentistry. Physical Education was included in 2010⁽⁶⁾.

In the first year, the program was financed by the Ministry of Health and focused on three concentrations: *Health Management and Policies, Family Primary Health Care, and Hospital Care*. In 2010, the Ministry of Education and Culture (MEC) started financing residency programs in university hospitals and the original program was divided into two concentrations. Hence, the program linked to the Ministry of Health was then composed of: *Family Primary Health Care and Health Surveillance*. The concentration *Hospital Management and Care* was then linked to and financed by MEC⁽⁶⁾.

Given this context, in which we observed the philosophy of the educational process in the health field with innovative actions, some aspects can be seen as stressors, especially because they are not included in the traditional

educational model. Among them, the following stand out: teamwork, active and participatory methodologies, interpersonal relationships established with other professionals, and the responsibility to deliver integral and humanized care.

Stress can also be associated with professionalization and the role of the professional within society (such as managing professional liability, dealing with patients and problem situations, managing the growing volume of knowledge, and establishing the limits of one's personal and professional identity)⁽⁸⁾. Additionally, stress can be a result of the characteristics of training programs, sleep deprivation, fatigue, heavy workload, excessive administrative work, problems related to the quality of teaching, and the educational environment *per se*. Individual characteristics and personal contexts such as gender, personality and psychological vulnerabilities can also be related to stress⁽⁸⁾. Depression and sleep deprivation are described in the literature as the most significant problems affecting residents⁽⁸⁾. Therefore, we ask: Is there an occurrence of burnout syndrome among multidisciplinary residents in a Federal University in the interior of the state of Rio Grande do Sul, Brazil?

The objective of this study was to verify the occurrence of burnout syndrome in multidisciplinary residents from a public university in Rio Grande do Sul, Brazil.

METHOD

This is a descriptive, cross-sectional, quantitative study. Descriptive studies analyze facts and/or phenomena, provide a detailed description of how they are present and address broad aspects of a society⁽⁹⁾. In a cross-sectional study, investigated phenomena are learned as they manifest, during data collection, at a certain point in time⁽¹⁰⁻¹¹⁾. The quantitative approach is widely used and, in principle, represents the intention to ensure results are precise, avoid distortions of analysis and interpretation, and consequently provide a margin of safety against interference⁽¹¹⁾.

The study was conducted in a Federal University in the interior of the state of Rio Grande do Sul, Brazil. Residents from the concentrations *Family Primary Health Care, Health Surveillance, and Hospital Management and Care*, including all the professions in the program, regularly enrolled in the classes 2009, 2010, and 2011 were included in the study. Residents on leave were not included. There were 85 residents enrolled in the program at the time of data collection. All met the inclusion criteria, however, 47.07% did not consent to participate and 9.41% did not complete the questionnaires, totaling 37 participants.

Data were collected from April to June 2011 through a form addressing sociodemographic and professional data and the Maslach Burnout Inventory – Human Services Survey (MBI-HSS)⁽¹²⁾, after the respondents were informed

of the study's objectives and voluntarily consented to participate in the study. The participants were initially invited to meetings and individually approached when necessary.

The sociodemographic and professional form addressed the following variables: age, whether they had children and the number of children, gender, marital status, and living conditions. The MBI-HSS was elaborated by Christina Maslach and Susan Jackson in 1981 and was translated and adapted for the Brazilian culture by Liana Lautert in 1995⁽¹²⁾.

It is a self-applied questionnaire with a five-point Likert scale that ranges from 0 to 4: 0 – never, 1 – a few times a year, 2 – a few times a month, 3 – a few times a week, 4 – daily. Hence, the minimum value is zero and the maximum is four to convey the individuals' experience at work. The instrument is composed of 22 items distributed in three subscales: Emotional Exhaustion (EE), composed of items 1, 2, 3, 6, 8, 13, 14, 16 and 20; Depersonalization (DP), composed of items 5, 10, 11, 15 and 22; and Professional Incompetence (PI), composed of items 4, 7, 9, 12, 17, 18, 19 and 21⁽¹²⁾. A more recent denomination, however, is used in this study: Emotional Exhaustion (EE), Depersonalization (DP), and Professional Realization (PR)⁽¹³⁾.

Emotional Exhaustion reflects the individuals' feelings toward their jobs and is characterized as emotional overload. It is the initial trait of burnout, marked by psychological and physical manifestations, with a reduced capacity for production. Depersonalization is the specific characteristic of the Syndrome, defined as insensitivity and dehumanization in care practice and treating clients and colleagues with coldness and indifference. Low Professional Realization corresponds to low efficiency and productivity at work⁽¹⁴⁾.

High scores in Emotional Exhaustion and Depersonalization associated with a low score in Professional Realization indicate the individual is experiencing burnout⁽¹²⁾. It is worth noting that the score on the Professional Realization subscale presents a reverse score, that is, the higher the score in this dimension, the more positive the individuals' perceptions concerning their professional realization⁽¹²⁾.

After collection, data were organized and stored in an electronic spreadsheet in Excel 2007 (Office XP) to be analyzed later using the Statistical Analysis System, (SAS) version 8.02. The qualitative variables were presented in absolute (n) and relative (%) values and the quantitative variables in descriptive measures, such as minimum and maximum values, average and standard deviation.

The MBI-HSS scores assigned to each item were totaled and then divided by the total number of items in the subscale, which resulted in an average per subscale. Based on this average, the subscales were divided into *high* and *low*. Thus, values above the subscale's average were classified as *high* and below the average were considered to be *low*. Additionally, the classifications obtained by each

individual on the three subscales were associated. Hence, when this association was concomitantly High Emotional Exhaustion, High Depersonalization and Low Professional Realization, the resident was considered to be experiencing Burnout Syndrome. Cronbach's Alpha Coefficient was used to analyze the instruments' internal consistency.

In order to meet the Brazilian National Health Council's guidelines and standards⁽¹⁵⁾ as established for studies involving human subjects, the participants voluntarily consented to participate in the study by signing two copies of free and informed consent forms (one for the participant and another for the researcher), after being informed of the study's objectives.

This study is part of the project Stress, Coping, Burnout, Depressive Symptoms and Hardiness in Medical and Multidisciplinary Residents, approved by the Ethics Research Committee at the University (protocol No. 23081.020160/2010-06).

RESULTS

The sociodemographic profile of the Multidisciplinary Residents shows a predominance of single (81.08%), women (83.78%) without children (94.6 %), between 25 and 29 years old (51.35%), living with their families (51.35%).

The internal consistency analysis of the items composing the MBI-HSS subscales presented a Cronbach's alpha of 0.82 for Emotional Exhaustion and 0.635 for Depersonalization. Since the Cronbach's alpha for the subscale Professional Realization was 0.248, items 9 and 21 were included, which increased the coefficient to 0.606. According to the authors⁽¹⁶⁾, these values are sufficient to attest to the instrument's satisfactory internal reliability. The subscales' averages are presented in Table 1.

Table 1 – Distribution of Multidisciplinary Residents according to the averages obtained on the Maslach Burnout Inventory - RS, Brazil 2012

Subscales	Average	SD*	Min.	Max.
Emotional Exhaustion	2.55	0,71	14	39
Depersonalization	2.72	0,80	8	20
Professional Realization	3.42	0,73	14	33

*SD: Standard Deviation

The average obtained for the subscale Professional Realization was 3.42 (± 0.76), which shows low professional satisfaction. The distribution of the population according to the classification by MBI subscale is presented in Table 2.

Table 2 – Distribution of Multidisciplinary Residents according to the classification by the subscales of the Maslach Burnout Inventory - RS, Brazil 2012

Subscales	High		Low		Total
	N	%	N	%	
Emotional Exhaustion	14	37.84	23	62.16	37
Depersonalization	16	43.24	21	56.76	37
Professional Realization	19	51.35	18	48.65	37

A total of 27% of the participants presented an indication they were experiencing burnout syndrome after the domains were associated.

DISCUSSION

Burnout syndrome has been defined as a psychosocial phenomenon that emerges as a chronic response to interpersonal stressors that take place in the work environment⁽¹³⁾. In addition to the common stressors observed in practice, the residents also experience situations in Multidisciplinary Residencies that can be seen as stressful, such as writing academic papers and final papers, taking tests and theoretical classes, etc.

In this context, we observe that the average population scores on the Professional Realization subscale were 3.42 (SD = 0.73), 2.72 (SD= 0.80) for Depersonalization, and 2.60 (SD = 0.71) for Emotional Exhaustion. A study conducted with medical residents in a federal university reported an average of 28.6 for Emotional Exhaustion, 10.4 for Depersonalization, and 36.0 for Professional Realization⁽¹⁷⁾. A study⁽¹⁸⁾ investigating burnout syndrome in 105 psychologists reported the following averages: 18.57 for Emotional Exhaustion, 5.24 for Depersonalization and 38.10 for Professional Realization. We note that the highest averages are concentrated in the Professional Realization domain, also called Professional Incompetence or Reduced Professional Realization by some authors^(12,17-18). Hence, we observe that perceptions of low efficiency and productivity at work prevail among the professionals included in the studies. The state that better translates this domain is when the professionals start questioning their choices and doubt their aptitude for their profession. The individual no longer becomes involved with the work and starts feeling personally and professionally inadequate. This behavior affects one's ability to perform well at work and to relate with people, harming productivity⁽¹⁹⁾.

A total of 27% of the Multidisciplinary Residents presented an indication of experiencing burnout syndrome. The incidence of burnout among medical residents was 20.8%⁽¹⁷⁾. A study⁽¹⁴⁾ investigating burnout syndrome among nursing residents in the four periods of the program reported one resident (6.3%) in the fourth period of the program showed alterations on the three subscales, indicating the presence of burnout syndrome

It is known that burnout is mainly related to organizational factors and occurs when a professional has to deal with frustrations and work overload and has to expend extra effort to deal with challenges. Hence, one compensates for psychological suffering with extra effort⁽²⁰⁾.

Additionally, poor working conditions, low salaries, heavy workload, and an unfavorable workplace favor the emergence of burnout among health workers, interfering in the therapeutic relationship between professionals and patients⁽²¹⁾.

In this context, a study with nursing residents reported that these professionals provide direct care to more than one patient per shift while not being totally familiarized with the job and not having all the tools required to assume a greater patient load; for this reason they feel overwhelmed⁽¹⁴⁾. Additionally, there are frequent complaints of nurses concerning lack of autonomy, work overload, and consequent demotivation of the staff. Patients wait increasingly longer to be cared for, there are difficulties due to scarce economic resources, the law does not favor access to all, the limited system of promotion and valorization of personnel in the health field, a tendency to medicalize human experience, and lack of professionals, among other issues⁽¹³⁾.

Thus, the presence of burnout among health professionals can negatively affect the quality of care delivery and the lives of workers, leading to depression and difficult family and social relationships, also affecting the organization with absenteeism and presenteeism⁽²¹⁾ - the act of attending work while sick. For these reasons, burnout syndrome is considered the syndrome of *giving up* because the affected individuals no longer invest in their work and affective relationships and apparently become incapable of becoming emotionally involved with their workplace⁽²¹⁾.

We verified that 37.84% present High Emotional Exhaustion, 43.24% High Depersonalization, and 48.65% Low Professional Realization. A total of 17.2% of the nursing residents presented changes in the Emotional Exhaustion and Depersonalization subscales and 18.8% presented alterations in the Professional Realization subscale⁽¹⁴⁾. Among medical residents: 65% of which presented High Emotional Exhaustion; 61.7% High Depersonalization, and 30% Low Professional Realization⁽¹⁷⁾.

A comparison among the scores obtained on the MBI by physicians, nursing technicians and nurses revealed that physicians presented greater Emotional Exhaustion (66.7%) and Low Professional Realization (50%), while nurses presented greater Depersonalization (42.9%)⁽²²⁾. A study⁽¹⁸⁾ investigating burnout among psychologists, provided evidence that 22.9% of the sample presented values above the average on Emotional Exhaustion, 23.8% reported high levels of Depersonalization, while 24.8% manifested dissatisfaction and feelings of inefficiency regarding the professional activities they were performing (Low Professional Realization). Studies conducted with different populations always show a portion of professionals with high emotional exhaustion, depersonalization and low professional realization.

The residency program is an exhausting professional experience and such a fact is well documented in studies^(8,14,17). Nursing residents complain about the working conditions during professional training, manifest dissatisfaction in relation to the policy of how employees are replaced during days off, vacations, sick leave, and due to a deviation from their functions, low remuneration, physical, mental and emotional exhaustion, no time for leisure, and a conflictive lack of professional identity in particular⁽¹⁴⁾.

The identification of populations with a high percentage of Depersonalization deserves attention due to two main reasons⁽¹³⁾. The first is that depersonalization is considered a specific element of burnout syndrome when compared to the other two dimensions. The second reason is that depersonalization reflects an attitude of estrangement and negative feelings toward one's job, which affects both the patients and the staff⁽¹³⁾. In relation to Professional Realization, a study⁽¹⁴⁾ of nursing residents reported that this newly graduated, young and professionally inexperienced professional sought theoretical and practical tools in the residency program. For this reason, they may initially present feelings of incompetence and devaluation, but gradually these give space to personal and professional reconstruction and competence⁽¹⁴⁾. In relation to medical residency, we note that a state of anticipatory excitement predominates at the beginning of the program, which is followed by insecurity and recurrent depression. This depressive state is then replaced by feelings of competence at the end of the first year of residency⁽⁸⁾.

There are, however, nurses who consider that virtually all activities they perform correspond to their qualification and also consider themselves professionals with the autonomy to make decisions, with freedom of action, and are satisfied with their work⁽¹³⁾. This is confirmed by nursing residents, who, when discussing professional realization, report that to avoid uncomfortable situations with the nursing staff, assume the care of more severe patients and also manage the unit⁽¹³⁾. When they advance in the program and through routine and daily experiences in each unit/specialty they experience, these feelings are minimized and replaced by greater self-confidence and technical ability⁽¹⁴⁾.

Therefore, we verify that the factors related to burnout among residents and professionals in the health field seem to be numerous. We also highlight that in addition to sociodemographic, occupational and behavioral characteristics, there is individual variability in the nature of other characteristics and susceptibility to burnout-related factors in the face of certain situations, which frequently influence and determine changes of behavior and attitudes⁽¹⁴⁾.

Stressors indicated during the educational process coupled with those arising from the profession, expose residents to stress. When appropriate strategies to minimize or eliminate such stressors are not implemented or are not available, these professionals become exposed to burnout syndrome. In this context, individuals may be negatively affected at the personal, family, institutional and social levels.

CONCLUSION

This study allowed us to measure the dimensions of burnout and relate them to the education of professionals for the Unified Health System (SUS). Hence, we conclude that the studied residents are exposed to stressors arising from their profession and its educational process, which may favor the occurrence of the syndrome among these professionals. Burnout takes place when stress becomes chronic; it is multi-causal, and may begin during the undergraduate program.

It was also possible to determine that young and nursing residents predominate, while some present an indication of burnout syndrome. It is known that people develop and revise strategies to cope with stressors based on their experiences. Thus, young individuals may possess fewer skills to overcome the exhaustion that emerges from personal and professional contexts. It is also important to consider that nursing is considered a stressful profession and is also included in the studied Multidisciplinary Residency Program.

Therefore, we highlight the need to promote educational activities and instruct individuals about stress, coping strategies and burnout syndrome to enable people to acquire knowledge about these constructs. It permits

the identification of stressors and the establishment of more effective strategies to cope with them in order to avoid burnout. We also suggest further studies to deepen knowledge about this syndrome and its occurrence during educational processes.

A limitation of this study is the number of participants. Even though the results are reliable, further data could be obtained with a greater number of participants. It was also not possible to analyze the professionals separately or the concentrations that compose multidisciplinary residencies because some professions have only one spot in that specific concentration, which would permit the identification of individual participants, thus violating confidentiality.

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