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ORIGINAL ARTICLE

SICKENING PROCESS IN THE NURSE'S WORK IN MOBILE PRE-HOSPITAL CARE

PROCESSO ADOECEDOR NO TRABALHO DO ENFERMEIRO EM CUIDADO PRÉ-HOSPITALAR MÓVEL

PROCESO ADOLECEDOR EN EL TRABAJO DEL ENFERMERO EN ATENCIÓN PRE-HOSPITALARIA MÓVIL

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ABSTRACT

Objective: to discuss the nursing work process in pre-hospital care and determine the prevalence of burnout and its subcategories in nurses working in mobile pre-hospital care. ***Method***: this is a population, descriptive, exploratory, and quantitative study with 38 nurses. A structured questionnaire along with the Maslach Burnout Inventory was used in September 2010. In the data analysis, techniques of descriptive and inferential statistics (Student t test and F test (ANOVA)) were used. The check of the equality hypothesis was carried out through Levene's F test and the check of normality was performed through Shapiro-Wilk test. ***Results***: out of the 38 respondents, 75% were aged up to 39 years, 97% were women, 57% had children, 52% had an income between 6 and 9 minimum wages, 34% do not practice physical activity, and 76% have burnout. ***Conclusion***: the dynamics of the mobile emergency care service leads to a sickening work activity, being necessary the planning of strategies that decrease the factors of getting ill. ***Descriptors***: burnout professional; nursing; work; prevalence; psychological stress.

RESUMO

Objetivo: discutir o processo de trabalho de enfermagem em atendimento pré-hospitalar e determinar a prevalência de burnout e de suas subclasses em enfermeiros atuantes em cuidado pré-hospitalar móvel. ***Método***: trata-se de estudo populacional, descritivo, exploratório e quantitativo com 38 enfermeiros. Utilizou-se questionário estruturado acrescido do Maslach Burnout Inventory em setembro de 2010. Na análise dos dados foram utilizadas técnicas de estatística descritiva e inferencial (teste t-Student e teste F (ANOVA)). A verificação da hipótese de igualdade foi realizada pelo teste F de Levene e a de normalidade foi realizada pelo teste de Shapiro-Wilk. ***Resultados***: dos 38 pesquisados, 75% tinham idade de até 39 anos, 97% eram mulheres, 57% tinham filhos, 52% possuíam renda entre 6 e 9 salários-mínimos, 34% não praticam atividade física e 76% têm síndrome de burnout. ***Conclusão***: a dinâmica do serviço de atendimento de urgência móvel resulta em uma atividade laboral adoecedora, sendo necessário o planejamento de estratégias que minimizem os fatores de adoecimento. ***Descritores***: esgotamento profissional; enfermagem; trabalho; prevalência; estresse psicológico.

RESUMEN

Objetivo: discutir el proceso de trabajo de enfermería en atendimiento pre-hospitalario y determinar la prevalencia de burnout y de sus subcategorías en enfermeros que actúan en atención pre-hospitalaria móvil. ***Método***: esto es un estudio poblacional, descriptivo, exploratorio y cuantitativo, con 38 enfermeros. Se utilizó un cuestionario estructurado junto del Maslach Burnout Inventory en septiembre de 2010. En el análisis de datos fueron utilizadas técnicas de estadística descriptiva e inferencial (prueba t-Student y prueba F (ANOVA). La verificación de la hipótesis de igualdad fue realizada por medio de la prueba de F de Levene y la de normalidad fue realizada por medio de la prueba de Shapiro-Wilk. ***Resultados***: de los 38 encuestados, 75% tenían hasta 39 años, 97% eran mujeres, 57% tenían hijos, 52% tenían renta entre 6 y 9 salarios mínimos, 34% no practican actividad física y 76% tienen síndrome del burnout. Conclusión: la dinámica del servicio de atendimiento de urgencia móvil resulta en una actividad laboral adolecedora, siendo necesario el planeamiento de estrategias que minimicen los factores de adolecimiento. ***Descriptores***: agotamiento profesional; enfermería; trabajo; prevalencia; estrés psicológico.

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INTRODUCTION

The dynamism of sociocultural and economic relations, as well as the endless search for scientific advancement and technological development has been some of the main characteristics of the globalization age. This dynamics has brought improvements and benefits to the modern world, along with significant changes in the commercial and interpersonal labor relations.

The expansion of the capitalist system led the individuals, most of them, to be constantly seeking for, through labor, the fulfillment of their dreams of wealth, material prosperity, and personal success. However, the requirements from the labor market, amid competition and the increase of quality and productivity, among many other products from globalization, cause psychosomatic diseases, disorders, a compromised general well being, stress, and labor diseases.

The pleasure and satisfaction coming from work also contribute to the individual's self-fulfillment
and her/his well being, through the challenging perspectives of personal progress and development.[1] The rewarding work, carried out with tenacity, demands energy, ability of concentration and reasoning, and it results in physical and/or mental fatigue, reflecting in the worker's quality of life.[2]

The work activities that do not make sense for the worker cause feelings of lack of dignity, unusefulness, and lack of qualification, which lead to tiredness, amorphy, and giving up. Along with tiredness, feelings of fatigue, unsatisfaction, frustration, anguish, fear, anxiety, and aggressiveness are present.[3] In the last years, the worker's level of physical and emotional exhaustion has reached high rates. Researches have shown that the global perceptions of the work environment are important predictors of professional burnout.[4]

The nursing profession has been considered, frequently, in literature[5] a particularly stressing job, characterized by the continuous physical and emotional demands that the professionals receive from their patients. Nursing was classified by the *Health Education Authority* as the fourth most stressing profession, in the public sector, which has been trying to affirm itself professionally to obtain a higher social recognition.

The nurse's professional activities are characterized by the high personal investment and they are marked by a closer contact with other individuals, besides the coping with stressing situations almost all the working time.

This is a job that, because of its particular characteristics, obliges itself to assume the responsibility of making decisions during mostly critical situations. Amongst this characteristics one can find lack of professionals, work overload, shift work, the relation with problematic patients and relatives, direct contact with disease, pain and death, besides poor professional recognition, autonomy, and authority to make decisions at work, as well as the multiple problems related to the organizational disarray.

Historically, the nurse bears the professional burden of sacerdotalism, something which generates important personal conflicts that, combined to conflicts from work interpersonal relations, contribute to a sickly work environment. These issues cause a chronic labor stress[6], leading this profession to present a higher incidence of the professional burnout syndrome.

Amongst so many physical, psychic, emotional, and behavioral consequences brought by this sickening relation of work and productivity, the burnout syndrome emerges as an emotional response to the situations of chronic stress. These situations occur because of the intense work relations with other people or they are due to professionals who have great expectations with regard to their professional development, those who dedicate themselves to the profession without receiving the expected reward.[7] Burnout is characterized by three symptomatic dimensions: emotional exhaustion, identified as an emotional breakdown; depersonalization, observed as an emotional and professional insensitivity; and low professional fulfillment, verified as a personal and professional inadequacy, besides the lack of competence and satisfaction demonstration.[5]

One of its most relevant consequences is the absenteeism of these professionals. These characteristics aggravate when the work is based on a strong impact from the assistance complexity and a high demand of visits per day, as experienced in urgency and emergency services.

The stress levels in mobile emergency units have not been clarified, yet, because they can include in the same situation other urgencies, in which the disease itself is faced. It is added

to the worsening need for completing the procedure quickly, so this relation creates an event that brings risk to life.

The work process in urgencies and emergencies brings the daily and endless possibility of having as the working object a severely sick person, who needs immediate care and are at risk of death. These labor characteristics turn the assistance provided in pre-hospital care units into a still more unhealthy activity and they justify this study.

The indication of the existence of this new disease affecting the nursing professionals, the burnout, surely reaches new horizons and brings new perspectives for the possibilities of understanding and transforming the nursing work process, in an attempt to rescue the affective dimensions contained in the daily practice of those who take care.

The study aims at determining the prevalence of professionals with burnout and verifying whether there are differences among the categories of each variable: age group, children, income level, practice of physical activity, work timetable, number of patients assisted per day, and training at work.

Considering that burnout is a current theme, a relevant one for nursing, combined to heavy timetables, low wages, and many other labor characteristics leading to the possibility of professional errors and probable iatrogeneses, it becomes relevant to answer the guiding question of this research: "What is the prevalence of the burnout syndrome and its subcategories in nurses working in the mobile pre-hospital urgency?".

METHOD

This is a population study with epidemiological relevance, since it assesses all nurses working in the pre-hospital service in the main cities of the state of Alagoas, Brazil. It is a descriptive and exploratory study with a quantitative approach approved by the Research Ethics Committee of Universidade Estadual de Ciencias da Saude de Alagoas, under the Opinion 1414-10. The study's population consisted of 42 nurses working in the Mobile Assistance Service of the cities of Maceio and Arapiraca – Alagoas, Brazil. Out of these, 4 were excluded: those with less than 6 months of experience in pre-hospital assistance and the ones with a double workday in urgency and emergency services.

For the data collection, the free and informed consent term was applied and a structured questionnaire was used, a self-applicable one, which registers the sociodemographic data, along with 22 questions from the instrument *Maslach Burnout Inventory – MBI*, validated in Brazil[7], which identifies the symptomatic dimensions of burnout. The questions 1 to 9 are related to the level of emotional exhaustion, the questions 10 to 17 are related to professional fulfillment, and the questions 18 to 22 are related to depersonalization.

The scoring of items adopts the Likert scale, which varies from 0 (never) to 6 (every day). The diagnosis for the burnout syndrome is determined by a high level of emotional exhaustion and depersonalization and a low level of professional fulfillment. The data collection was carried out in September 2010 and it was held through direct contact in the work place of the participants, always at the beginning of work activities, so that the results were not influenced by stressing conditions inherent to the job.

In the data analysis, techniques of descriptive and inferential statistics were used. The descriptive statistics techniques involved the obtention of absolute distributions, percentages, and the statistical measures: average, mean, standard deviation, variation coefficient, minimum value, and maximum value. The inferential statistics techniques involved the Student t test, with equal or unequal variances, and the F test (ANOVA) for one factor.

One highlights that the check of the equality of variances hypothesis was carried out through Levene's F Test. The check of the data normality hypothesis in each category of the variables was carried out through Shapiro-Wilk test. The margin of error used for the decision of statistical tests was a 5% one. The calculation of the sample size was not performed because this is a population study. The software used for the typing of data and the obtention of statistical calculations was the *SPSS* (*Statistical Package for the Social Sciences*), version 15.

The values obtained were compared to the reference values from Nucleo de Estudos Avançados sobre Sindrome de Burnout (NEPASB), presented in Table 1.

Table 1: MBI scale developed by NEPASB

Dimensions	Cutting Points		
	LOW	MIDDLE	HIGH
Emotional exhaustion	0-15	16-25	26-54
Depersonalization	0-2	3-08	9-30
Professional fulfillment	0-33	34-42	43-48

RESULTS

The population consisted of 42 nurses: 2 went on pregnancy
leave, 1 was on vacation, and 1 refused to participate in the study. We interviewed 38 nurses. Tables 2 to 4 display the percentage values of the individual characteristics of the research subjects.

Analyzing the sociodemographic data, it was observed that the participants age varied between 23 and 57 years, with an average of 36.36 years, according to Table 2. It was verified that, regarding gender, 97.4% are women. Out of these, 57.6% have children, as 52.9% have a monthly income between 6 and 9 minimum wages, something which reflects a reasonable condition of social and economic life of most participants. However, it was revealed that, with regard to the practice of physical exercises, 34.2% are not practicing them. Considering the remaining ones, 75% practice physical exercises regularly or occasionally. In a comparison using statistical methods, there was no statistically significant difference according to the F test (ANOVA).

Table 2. Distribution of participants according to the variables under study*

Variables	n	%
Age group		
Up to 39	27	75.0
40 or over	9	25.0
Total(1)	36	100.0
(1) This information is not available with regard to two participants.		
Sex		
Male	1	2.6
Female	37	97.4
Total	38	100.0
Children		
Yes	22	57.9
No	16	42.1
Total	38	100.0
Income (In Minimum Wages)		
Up to 5	6	16.7
6 to 9	19	52.8
10 or over	11	30.6
Total(1)	36	100.0
(1) This information is not available with regard to two participants.		
Physical Activity		
Regularly	13	34.2
Occasionally	12	31.6
Does not practice	13	34.2
Total	38	100.0
(1) This information is not available with regard to two participants.		

* Collection carried out on September 2010.

As observed in Table 3, in the sample under study, 68.4% had 37 or more months of experience in urgency; 78.9% had a 41 hour or over weekly work timetable; 51.4% of the participants assisted up to 10 patients per day. It was identified that, with regard to training sessions, 34.2% answered to have received some training; exactly half of the interviewed individuals said to have never missed a work day, 41.7% said to have missed a work day occasionally, and the remaining 8.3% missed a work day in a frequent basis.

Table 3. Distribution of participants according to individual characteristics*

Variable	n	%
Time of professional experience		
Up to 36 months	12	31.6
39 months or over	26	68.4
Total	38	100.0
Work timetable		
Up to 40 horas	8	21.1
41 or over	30	78.9
Total	38	100.0
Patients attended per day		
Up to 10	18	51.4
9 or over	17	48.6
Total(1)	35	100.0
Training during work		
Yes	13	34.2
Occasionally	14	36.8
No	11	28.9
Total	38	100.0
Frequency of work absence		
Never	18	50.0
Occasionally	15	41.7
4x a month	3	8.3
Total(2)	36	100.0

(1): This information is not available with regard to three participants. (2): This information is not available with regard to two participants.* Collection carried out on September 2010.

Table 4 shows that most professionals were classified as having a high emotional exhaustion (88.9%), a high depersonalization (100%), and a low professional fulfillment (97.4%), besides the averages for each subcategory of the burnout syndrome. Through this result, it is possible to verify that the variability expressed by the variation coefficient is not a high one, since this measure is, at most, 33.08% for professional fulfillment.

Table 4. Assessment of the symptomatic dimensions of burnout*

Variable	n	Average	%
Emotional exhaustion	30.18		
Middle	8		21.1
High	30		88.9
Total	38		100.0
Depersonalization	15.87		
High	38		100.0
Total	38		100.0
Professional fulfillment	18.71		
Low	37		97.4
Middle	1		2.6
Total	38		100.0

*Collection carried out on September 2010.

Out of the 38 participants, 76.3% presented the burnout syndrome and 23.7% did not develop it.

DISCUSSION

The burnout and its relations to the emotional breakdown have been discussed since the 1970s. In Brazil, the studies started in the late 1990s[8] with 39,000 teachers. From then until the current days, the discussion process with regard to the burnout syndrome has grown in the scientific community, revealing new knowledges to the direction of practices and strategies that minimize the worker's suffering.

Nursing, not far from this, follows up the evolution of the reflections on burnout and incorporates maneuvers promoting the nursing team's health, especially the health of those who perform more stressing and complex activities, such as urgency, intensive care, and other ones.

Although the researches are extending the concept of burnout towards some jobs[9], they have showed that its presence is more significant in employees who practice professions that provide assistance, as well as those involving a high level of interpersonal contact, compromising the employee her/himself.

The nursing profession has been considered, frequently, in literature, as a particularly stressing job, characterized by continuous physical and emotional demands that the professionals receive from their patients, besides the poor recognition among their clients, something suggesting the high levels of depersonalization.

The classical stress reactions are more

strongly related to a psychological fatigue which emerges as a particular relation between a person and her/his environment. Burnout, however, involves attitudes and negative behaviors with regard to the users, clients, organization, and work.[10]

The syndrome may be defined by the term burnout, which is a combination between *burn* (injury by heat or flame) and *out* (exterior), suggesting, thus, that the person with this kind of stress consumes her/himself physically and emotionally, starting to present an aggressive and antisocial behavior. Other authors[11] understand that this exhaustive emotional state is caused by an excessive demand having a psychological and emotional nature, which originates from a discrepant perception (influenced by individual, organizational, and social aspects) of effort and consequence.[12]

A longer time of professional activity combined to a more advanced age can be associated to the professional maturity, which generates a higher control over the moments of stress and the stressing factors.[13] In the population under study, most individuals are under 40 years of age, they are working in the urgency service for less than 3 years, something which suggests the possibility of professional immaturity, considering that the lower rates of burnout were found among the population at a higher age group and with a longer work experience.

Studies[14] show that the higher rates of burnout are among the younger professionals, with less work experience, something which directly interferes in the process of coping with the predicting factors of stress and burnout. Older professionals present a more effective coping system.

Analyzing the existence of children in the sample under study, it was possible to identify the differences when comparing this research to most studies on burnout, however, there are similar aspects in some studies.[15] Professionals who have no children experience higher levels of burnout. This fact occurs because the presence of children implies performing different and renewing activities out of the work environment. As a consequence, there is a lower psychological dependence on work and a higher ability to control strains.

This study points alarming rates of burnout in the population under study. One denotes that in the performance of the nursing profession, although it requires a good mental and physical health, there is not an effective social protection for the performance of its exhausting labor activities. Emotional exhaustion, characterized by a lack of energy and combined to a feeling of emotional exhaustion, reached extremely high rates. The feeling of inadequacy and failure, generated by emotional exhaustion, can lead to giving up and loss of comittment to work.

In pre-hospital care, maybe two factors explain these rates of emotional exhaustion in nurses: work overload (78.9% have a 41 hour or over weekly work timetable), which is present as a significant predictor[16], and the need for arriving quickly in the location where the event is taking place, something which involves death risk, since it exposes the professional to the disease itself.[17]

Work overload, many times, comes from an endless search for riches and material goods, due to low wages. This reality should not be related to the population of this study, since 52.6% have an income from 6 to 9 minimum wages, and 30.6% have a 10 or over minimum wages income. It is understood that wage income has no direct relation as a predictor of the burnout syndrome.

The depersonalization observed in all interviewed individuals is characterized by a hardening or emotional insensitivity, manifested during the mobile pre-hospital assistance through an excessively brief contact with the patient, due to the rapid transference of this patient to another professional.[17]

It is also believed that the small number of patients assisted per day - most of the participants assist less than 10 patients per day - is an evolution factor with regard to such levels of this subcategory of the burnout syndrome. Some authors claim[6] that depersonalization is a coping strategy which emerges in front of the chronic feelings of low personal fulfillment at work and professional exhaustion.

The claim which reinforces the results found in this study, having the huge majority of the interviewed nurses presented a high level of emotional exhaustion and a poor professional fulfillment, is based on the lack of personal involvement at work.

The process of poor personal fulfillment at work and the high levels of emotional exhaustion are present as mediating variables among the sources of stress, the depersonalization, and the absenteeism of the nursing professionals.[16] 41.7% of the participants misses occasionally a work day.

Both women (97% of the interviewed subjects) and the professionals dedicated to

nursing experience higher rates of the burnout syndrome when there is poor professional fulfillment. They present less feelings of capacity and professional success in the work with patients, besides a lower personal satisfaction. This is so, basically, due to the remains of our society inherited from the period before the Revolution; the marginalization of women led the huge majority of work positions, such as those of nurses, to be filled by them. Nowadays, with the improved women's technical and professional levels, transition movements are going on, with the (re)affirmation of gender and a bigger participation in the labor market.[18]

The female gender is constantly related to burnout in nurses. Considering that, in many investigations, the number of female professionals is much bigger than the number of men, some of these results are not conclusive ones, as they have no statistical significance.

Another possibly predictive factor for burnout is the lack of practical training and personal preparation (training sessions). The current rapid changes and the small interval to approach the innovations in a deep sense end up causing anxiety to very critical professionals. This situation is worsened when there are unrealistic expectations about oneself and with regard to the patients.[17]

This factor did not present significant representations in the population under study, since the variability expressed through the variation coefficient did not show to be high in the different variables regarding the presence or lack of training sessions. Studies investigating critical personality traces combined to training and personal preparing can better clarify the evidences of personal preparing as an actual predictor of burnout.

Out of the total number of participants in the study, 34.2% do not perform physical activity, something which characterizes the sample subjects as sedentary ones. The physical activity concerned is a moderate one, resulting in the relief of the individual's anxieties and frustrations. This datum corroborates follow up studies[19] that point to higher levels of burnout in sedentary subjects. One suggests that it becomes an adding datum that facilitates the emergence of stress and burnout.

Very high burnout levels reverberate both in the professional's personal life and in the attention provided to the patient and the institution. The burnout syndrome which is present in the nursing labor activities during mobile pre-hospital care seems to combine to many factors, among them work overload, the need to be quick in all cases of pre-hospital care, and the ever-present restrictions having an administrative nature.

Conflicts at work can be solved. When this is not so, they tend to become intensified and can affect the productivity of the parties involved, thus interfering both in the assistance to the client and in the quality improvement of the services provided by these agents.[20]

CONCLUSIONS

The organizational variables, pointed out by literature as predisposing factors for the burnout syndrome, were not scored in this study, where the discussions and analyses were restricted to the possibilities of burnout development, related to organizational factors. It became a negative aspect of the study, however, the importance of our final remarks, illustrated through its numbers and discussions, was not compromised.

Under the light of the results presented in this study and the aims pointed out, one infers that the continuous exposition to stress of nurses working in mobile pre-hospital urgency is an important and multifactor aspect.

The companies of mobile urgency care service should plan and implement measures for the early detection of cases of chronic stress and burnout, besides providing protection to the individuals affected. There is a need for the identification of attenuating ways in this sickening context, prioritizing the prevention and treatment of burnout and protecting the mental health of the nurses working in the mobile pre-hospital urgency services. The number of these units are increasing throughout Brazil without observing the regulatory norms concerning these services and without providing their professionals with an adequate training on such an unhealthy, interdisciplinary, and huge physical and emotional exhausting activity.

The appreciation of the nursing professional needs to be considered by the Public Power and effective public policies for the worker's protection need to be implemented.

The work modality carried out can be a factor leading to the burnout syndrome, in addition to personal factors and it is worsened by institutional factors. Precarious work conditions in nursing are a long-standing problem, which has already been discussed,

since previous decades, by associations connected to nursing as a professional category.

Burnout and stress are the most discussed themes in scientific researches approaching the worker's mental health. Pioneering studies on the worker's mental health aimed at identifying the usual stressing aspects in the work environment of health professionals, besides identifying what these professionals did to live together with these aspects, what specific techniques they used to overcome stress, and which effects they caused when trying to prevent themselves. Some points are relevant and need to be highlighted:

- This problem should be considered as a collective and institutional one, and not only as an individual problem of the professional affected, considering and prioritizing specific nurse's labor characteristics in the discussion and development of actions that change the direction of the nursing work process, be it in the pre-hospital care or in any other nursing action field;
- The social support in the nursing work needs to be guaranteed, in order to change the nursing wok process in the mobile pre-hospital urgency service, using as its guiding source the National Policy of Attention to Urgencies and its ministerial directives;
- The system for coping with stress and burnout predictive factors can be pointed, discussed, planned, and developed by the nurses who were affected or not, so that the transformation of the work environment be meaningful, contextualized, and integrative;
- The National Policy of Humanization from the Health Ministry, which highlights the commitment to the improvement of the work and assistance conditions, should be implemented and guaranteed, with the creation of humanization work groups, participative management, and co-managements, along with unique therapeutic projects;
- The studies on burnout and nursing should be continuous, so that the discussion on the optimization of the work process becomes real.
- The studies on stress, resilience, and depression can be compared to the burnout syndrome findings.

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