Burnout syndrome in nurses of prehospital rescue team

A síndrome de Burnout em enfermeiros da equipe de resgate pré-hospitalar

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ABSTRACT

Objective: To verify the presence and evaluate the levels of burnout syndrome in nurses of the prehospital rescue team. **Methods:** A cross-sectional study with a sample of 17 nurses from the prehospital rescue team, by application of the Maslach burnout Inventory and a questionnaire prepared by the authors. **Results:** In the group studied, 76% of the nurses of the prehospital rescue team were female. Ages varied from 30 to 49 years old. As to time already in the profession, 59% reported having worked from five to ten years in prehospital rescue. As to Maslach burnout Inventory subscale means, in the group analyzed of 17 prehospital rescue team nurses, low/moderate level (31.53) of reduced professional accomplishment, low/moderate level (18.41) of emotional exhaustion, and low/moderate level (8.88) of depersonalization were observed. As to dimensions of burnout levels, it was noted that 76.47% of the nurses displayed a low/moderate level of emotional exhaustion, depersonalization, and reduced professional accomplishment. **Conclusions:** It was demonstrated that this sample showed no evidence of burnout syndrome, since its presence is proven only when there are high scores of emotional exhaustion, depersonalization, and reduced professional accomplishment.

Keywords: Burnout, professional/nursing; Stress, psychological/nursing; Occupational diseases/nursing

RESUMO

Objetivo: Verificar a presença e avaliar os níveis da síndrome de *burnout* em enfermeiros da equipe de resgate pré-hospitalar. **Métodos:** Estudo transversal em uma amostra de 17 enfermeiros da equipe de resgate pré-hospitalar, sendo aplicado o Inventário de *burnout* de Maslach e um questionário elaborado pelas autoras. **Resultados:** No grupo estudado, 76% dos enfermeiros da equipe de resgate pré-hospitalar eram do sexo feminino. A idade variou entre 30 a 49 anos. Quanto ao tempo de atuação na profissão, 59% referiram trabalhar de cinco a dez anos no resgate pré-hospitalar. No grupo estudado de 17 enfermeiros da equipe de resgate pré-hospitalar, verificou-se quanto às médias das subescalas do Inventário de *burnout* de Maslach, uma média baixa/moderada (31,53) em reduzida realização profissional, média baixa/moderada (18,41) em exaustão emocional e média baixa/moderada (8,88) em despersonalização. Quanto aos níveis de *burnout* em dimensões, verificou-se que 76,47% dos enfermeiros apresentaram baixo/moderado nível de exaustão emocional, despersonalização e reduzida realização profissional. **Conclusões:** Demonstrou-se que nesta amostra não há presença da síndrome de *burnout*, pois somente é indicativa quando ocorrem altas pontuações em exaustão emocional, despersonalização e em reduzida realização profissional.

Descritores: Estafa profissional/enfermagem; Estresse psicológico/enfermagem; Doenças profissionais/enfermagem

INTRODUCTION

Currently, burnout is considered a significant problem in the working world and has been the theme of several research projects in Brazil and other countries. These studies are directed towards the impact of work interfering in the physical and mental health of the worker.

The term "burnout" was first used by the physician, Herbert Freundenberger, in a psychology magazine in 1974. Maslach and Pines, however, social psychologists, were the first to divulge the term in 1977, at the Annual Congress of the American Association of Psychologists[1].

Most authors affirm that burnout is a syndrome characteristic of the work environment and that it is a process that occurs due to the chronification of occupational stress, bringing with it negative consequences at the individual, professional, family, and social levels[2].

The word burnout, which can be interpreted as "being consumed in flames", refers to a specific type of occupational stress, characterized by a deep feeling of frustration and exhaustion regarding the activities performed at work[3].

Burnout is an internal subjective experience that generates negative feelings and attitudes in the individual concerning his/her work, such as dissatisfaction, wearing out, and loss of commitment, interfering in his/her professional performance and leading to undesirable consequences for the client and the organization (absenteeism, job abandonment, and low productivity)[4].

Burnout syndrome manifests in specific symptoms and may be characterized by three factors: emotional exhaustion (EE), depersonalization (DE), and feelings of reduced professional accomplishment (RPA)[5].

EE refers to both physical and mental overtiredness, when the individual has no more energy. DE shows that the individual is suffering changes in his/her personality, reflected in a distant/cold and impersonal professionalism with the clients. RPA, on the other hand, evidences the person's dissatisfaction with his/her activities, feeling unmotivated, with low self-esteem, producing low professional efficiency, and many times generating a desire to abandon the job[5].

Since it is occupational stress, research points out that professionals carrying out functions that require very intense interpersonal relations, such as professions that involve helping and/or giving assistance to others [recipients], such as physicians, nurses, firefighters, and others, are the ones most susceptible to acquiring burnout syndrome. The multiplying impact that a high level of stress can cause is remarkable, not only for the individual, but also for those who receive his/her services[5-6].

Within this perspective, to work in the prehospital rescue team is also considered a professional activity subject to developing burnout syndrome, since these professionals constantly deal with a heavy emotional load, such as being face-to-face with death or facing grueling scenes of suffering at work and in contact with other occupational stressors capable of generating physical and emotional exhaustion[7-8].

It is, therefore, important to identify and analyze the burnout syndrome in nurses of the prehospital rescue team with the intention of deepening the knowledge of the occupational risks of this professional activity, and of proposing forms of prevention.

OBJECTIVE

To verify the presence and assess the levels of burnout syndrome in nurses of the prehospital rescue team.

METHODS

This research is characterized as a descriptive quantitative and exploratory approach study carried out with nurses of the prehospital rescue team in the municipality of São Paulo.

The descriptive quantitative or exploratory approach of the study is characterized by the search for information about the subject under investigation. The researcher that conducts the study observes, counts, explores data, describes, and classifies the subject, group, or institution in order to evidence a profile[9-10].

Study design

A cross-sectional study was conducted from July to August 2008, with nurses of the prehospital rescue team by the application of the assessment instrument, "Maslach burnout syndrome inventory" (MBI) and a questionnaire drawn up by the authors with data of social-demographic characteristics.

The cross-sectional study characteristically collects data with one or more groups of subjects over a set period of time[10].

Population and sample

From a total of 28 nurses, the sample of this present study was composed of 17 nurses from the prehospital rescue team of the municipality of São Paulo, from the four Firefighter districts: Cambuci, Butantã, Casa Verde, and Itaquera.

Inclusion criteria for the sample were: to be available and consent in participating of the study by filling in and signing the informed consent form.

Field of study

The research was carried out at the facilities of the four Firefighter districts, located in the municipality of São Paulo.

Instrument

As an assessment instrument of the study, the MBI, prepared by Cristina Maslach, was used. Robayo-Tamayo adapted the MBI for the Portuguese language (Appendix A)[5].

The MBI is a questionnaire to be completed by means of a five-point frequency scale that varies from one (never) to five (always). It has three subscales: EE, DE, and RPA. The EE consists of nine items and refers to both physical and mental exhaustion, with the feeling of having reached one's limits of possibilities. DE possesses five items and consists of attitude changes of the individual when coming into contact with those who receive his/her services, as he/she begins to display a cold and impersonal contact with suffering. And finally, RPA

has eight items measuring perception of the influence of the others, well-being with his/her work, as well as the relationship of the nurses from the prehospital rescue team with their problems; evidencing a feeling of dissatisfaction[5].

Thus, whenever there are high scores in EE and DE associated with low values in RPA, there is a subject presenting burnout syndrome[5].

Another questionnaire, characterizing the social-demographic profile of the sample, was also used; it was prepared by the authors and comprised of six open- and closed-ended questions.

Procedures

Data collection
Data were collected after approval by the Scientific Committee of Faculdade de Enfermagem do Hospital Israelita Albert Einstein (HIAE) and by the Ethics in Research Committee of HIAE.

The questionnaires were applied after authorization by the Nursing supervisor of the Rescue and Emergency Care Group.

The nurses from the prehospital rescue team were instructed and invited to sign the informed consent form, progressing to the next step that was to answer the MIB (Appendix A) and furnish social-demographic data.

The researchers agreed to use the data obtained exclusively for this study as per ethical and legal precepts of resolution 196/1996.

Data analysis
The social-demographic data were manually tabulated. The results were analyzed using descriptive statistics of the data (mean, standard deviation, median, and percentages) by means of Excel®, version 2000 software, an application of Microsoft Windows XP Home Edition c2005 Office 10, and presented in tables. Levels were analyzed by the sum of scores relative to the dimensions of burnout for the population studied. Since the burnout reflected high levels in its dimensions, it was necessary to classify the score of each dimension as a low/moderate or high level. For this, we chose to use the 75th percentile, the same used in the MBI validation study for Brazil, by Lautert. It is highlighted that for the dimension "RPA", the 25th percentile was used, since it has a reverse score[11].

RESULTS

A total of 28 of questionnaires were distributed to the nurses of the prehospital rescue team, and 17 of them were answered and returned.

Social-demographic characteristics

In the group of 17 nurses studied, 76% were female. Ages varied from 30 to 49 years (mean: 37 years, standard deviation: four years, and median: 38 years). As to marital state, there was an equal rate of married and single professionals (35% each). Fifty-three percent of the sample studied reported not having any children.

Most of the nurses, 59%, reported having worked in the profession for five to ten years. As to location of birth, 47% of the nurses were born in the city of São Paulo (Capital). The entire sample of this study is composed of Brazilians (Table 1).

Table 1. Distribution of sociodemographic characteristics of the prehospital rescue team nurses

Variable	n	%
Sex		
Female	13	76
Male	4	24
Age		
30 - 39 years	11	65
40 - 49 years	6	35
Marital status		
Single	6	35
Married	6	35
Separated/Divorced	5	30
Children		
Yes	8	47
No	9	53
Number of children		
One	1	6
Two	7	41
None	9	53
Time working in the profession		
1 - 5 years	2	12
5 - 10 years	10	59
> 10 years	5	29
Origin		
São Paulo (capital)	8	47
São Paulo (country town)	6	35
Others	3	18
Nationality		
Brazilian	17	100
TOTAL	17	100

Burnout syndrome in nurses of the prehospital rescue team

Presence or absence of the burnout syndrome as to MBI means
In the group of 17 nurses studied, a mean of 31.53 points was noted on the subscale of RPA, 18.41 points on the subscale of EE, and 8.88 points on the subscale of DE, corresponding to the low/moderate levels of these dimensions (Table 2).

Table 2. Means of MBI sub-scales

MBI sub-scales	Mean in points	Standard deviation
Reduced professional accomplishment	31.53	2.96
Emotional exhaustion	18.41	3.59
Depersonalization	8.88	3.16

MBI: Maslach burnout inventory.

Burnout syndrome as to MBI levels

In the studied group of 17 nurses it was noted that most of the sample (76.47%) displayed a low/moderate level of EE, DE, and RPA (Table 3).

Table 3. Distribution per MBI levels

Burnout syndrome levels	EE (%)	DE (%)	RPA (%)
High	23.53	23.53	23.53
Low/moderate	76.47	76.47	76.47

EE: emotional exhaustion; DE: depersonalization; RPA: reduced professional accomplishment; MBI: Maslach burnout Inventory.

Assessment of burnout syndrome levels in nurses of the prehospital rescue team according to the dimensions

Score distribution of nurses from the prehospital rescue team in terms of EE

In the studied group 76.47% of the nurses of the prehospital rescue team had scores of up to 20 in EE. The score of 20 was used as cut-off point for the EE dimension in the present study. Based on this cut-off score, 76.47% of the nurses of the prehospital rescue team with scores between 13 and 20 displayed low/moderate levels of DE, and 23.53% of the nurses with scores between 21 and 26 showed high levels in this dimension (Table 4).

Table 4. Scores of prehospital rescue team nurses in emotional exhaustion

Scores	n	%	Accumulated %
13	1	5.88	5.88
14	2	11.77	17.65
16	3	17.65	35.3
18	4	23.53	58.82
19	2	11.77	70.59
20	1	5.88	76.47
21	1	5.88	82.35
23	1	5.88	88.24
24	1	5.88	94.12
26	1	5.88	100
Total	17	100	100

Score distribution of nurses from the prehospital rescue team in terms of DE

In the studied group 76.47% of the nurses from the prehospital rescue team had scores of up to 11 in depersonalization. The score of 11 was used as cut-

off point for the dimension "DE" in the present study. Based on this cut-off score, 76.47% of the nurses of the prehospital rescue team with scores of 5 to 11 displayed low/moderate levels of DE, and 23.53% of the nurses with scores between 12 and 15 displayed high levels in this dimension (Table 5).

Table 5. Scores of prehospital rescue team nurses in depersonalization

Scores	n	%	Accumulated %
5	4	23.53	23.53
6	2	11.77	35.29
8	1	5.88	41.18
9	2	11.77	52.94
10	3	17.65	70.59
11	1	5.88	76.47
12	2	11.76	88.24
13	1	5.88	94.12
15	1	5.88	100
Total	17	100	100

Score distribution of the nurses of the prehospital rescue team in terms of RPA

In the studied group 23.53% of the nurses of the prehospital rescue team displayed scores of up to 29 in terms of RPA. The score of 29 was used as cut-off point for the "RPA" dimension in the present study. Based on this cut-off point, it was noted that 76.47% of the nurses of the prehospital rescue team with scores of 31 to 36 displayed low/moderate levels of RPA, and 23.53% of the nurses with scores between 23 and 29 had high levels in this dimension (Table 6).

Table 6. Scores of prehospital rescue team nurses in reduced professional accomplishment

Scores	n	%	Accumulated %
23	1	5.88	5.88
29	3	17.65	23.53
31	3	17.65	41.18
32	3	17.65	58.82
33	4	23.53	82.35
34	1	5.88	88.24
35	1	5.88	94.12
36	1	5.88	100
Total	17	100	100

DISCUSSION

In the studied group of 17 nurses from the prehospital rescue team, it was noted that as to the means of the MBI subscales, there was no presence of burnout syndrome, since this is indicated only when there are high scores in EE, DE, and in RPA. These data point out that, possibly, nurses from the prehospital rescue

team have satisfaction on their job, since the burnout syndrome is associated with satisfaction factors[5,12-13].

Data from this research study show similarity with the study done by Lautert that used MBI with nurses who worked in a hospital in the city of Porto Alegre, state of Rio Grande do Sul, in which the results as to the subscale means showed a moderate level of EE, low/moderate level of DE, and a low/moderate level of RPA. The data of the present study were also similar to the results found in a study carried out at the General Hospital Sveti Duh, in the city of Zagreb, Croatia, where the burnout syndrome was assessed in an intensive care team and showed moderate levels of EE, DE, and RPA[11,14].

In the same way, in another research study conducted on burnout syndrome with oncology nurses, it was noted that as to the MBI subscale means, there was a predominance of individuals with low/moderate levels of EE, DE and RPA.

The results of this study differed from the results found in a research on the burnout syndrome performed with nurses from psychiatric and neurology units in the city of Bialystok, Poland, where the nurses displayed burnout syndrome[1,15].

In aspects relative to the EE dimension, the majority of the nurses from the prehospital rescue team showed low/moderate levels of this item, which is in accordance with the results of a Spanish study in which 56.6% of the professionals of a critical care ward showed signs of low/moderate levels of EE. These results possibly confirm that the nurses from the prehospital rescue team were not affected by EE, even in overload conditions and with an aggravating factor relative to the instability of the patient's condition in emergency situations[16-18].

The majority of nurses from the prehospital rescue team had low/moderate levels in the DE dimension. These data diverged from that of a study carried out in Uberaba, state of Minas Gerais, to evaluate burnout syndrome with nurses of a general hospital in which, regarding the DE dimension, 54.17% showed a high level. With this, it can be seen that the majority of nurses from the prehospital rescue team did not demonstrate negative feelings such as emotional distance, lack of sensitivity, and indifference toward the patient[5,19].

As to the dimension of RPA, the majority of nurses from the prehospital rescue team showed low/moderate levels. These data differ from those of the study on burnout syndrome performed with professionals of a critical care hospital ward in which, for the RPA dimension, 79.5% of the professionals showed high level[16].

It was noted that there is no presence of burnout syndrome in the nurses from the prehospital rescue team, even though it is considered an occupational risk profession.

It is important to point out that no studies were identified on burnout in nurses from the prehospital rescue team, which makes it difficult to compare the results obtained. The comparison was made by means of studies in which the authors had utilized the MBI.

CONCLUSIONS

This study demonstrated that in this sample, there was no presence of burnout syndrome, even though it is considered an occupational risk profession, since this is only indicated when there are high scores of EE, DE, and in RPA.

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APPENDIX A

Maslach Burnout Inventory

Dear Sir/Madam

The present study has as academic purpose the following objectives: to verify the presence and assess the levels of burnout syndrome in nurses from the prehospital rescue team.

In the following pages you will find 22 affirmations related to feelings towards work. Please read each affirmation carefully and decide if you feel this way about your work. If you think you have never had this feeling, mark 1 (one) in the space right before the affirmation. If you have experienced this feeling, mark a number (from 2 to 5) that best describes how frequently you feel like this. An example is given below:

Frequency	1	2	3	4	5
	Never	Rarely	Sometimes	Frequently	Always

Frequency

1 – 5	Statement
____	I feel depressed at my work.

If you never feel depressed at work, place number 1 (one) right under the title "frequency". If you have feel depressed at work a few times (rarely), you could write number 2. If your feelings of depression appear sometimes, you might write number 3. If your feelings of depression appear many times (frequently), you could write **n**. If you always feel depressed at work, write number 5.

Attention!

Answer all the phrases that make up this questionnaire. Do not write your name on any part of the paper, so that your answers remain totally anonymous. The data of this research will be grouped and analyzed confidentially. We only ask that you provide us with some supplementary data at the end.

Feel free to express your opinions, remembering that your answers will be ANONYMOUS and will be CONFIDENTIALLY maintained.

There are no correct or incorrect answers; the important thing is that your answers reflect your sincere opinion.

Frequency	1	2	3	4	5
	Never	Rarely	Sometimes	Frequently	Always

Frequency

1 – 5	Statements
01. _____	I feel emotionally exhausted by my work.
02. _____	I feel exhausted at the end of a day of work.
03. _____	I feel tired when I get up in the morning and have to face another day of work.
04. _____	I can easily understand my patients' day-to-day experiences.
05. _____	I feel like I treat some of my patients as if they were objects.
06. _____	Working with people all day is really a tremendous effort.
07. _____	I treat my patients' problems adequately.
08. _____	I feel exhausted with my work.
09. _____	I feel that I am having a positive influence on the lives of other people through my work.
10. _____	I feel that I have become more sensitive with people since I began this work.
11. _____	I feel that this work is making me more emotionally mature.
12. _____	I feel full of energy.
13. _____	I feel frustrated with my work.
14. _____	I feel that I am working too much at my job.
15. _____	I really don't care about what happens to some of my patients.
16. _____	Working directly with people makes me stressed.
17. _____	I can easily create a serene working environment with my patients.
18. _____	I feel stimulated after working side by side with my patients.
19. _____	I have accomplished many important things at this job.
20. _____	At my work, I feel as though I am at the end of my rope [my limit].
21. _____	At my work, I deal with emotional problems calmly.
22. _____	I feel that patients blame me for some of their problems.