

Burnout syndrome in nurses in an Intensive Care Unit

Síndrome de burnout em enfermeiros atuantes em uma Unidade de Terapia Intensiva

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ABSTRACT

Objective: To identify if nurses working in cardiac and general Intensive Care Units are subject to burnout, correlating it with demographic and occupational information. **Methods:** This is a descriptive exploratory, cross-sectional, prospective and correlational study utilizing quantitative resources. The sample was composed of 34 nurses who answered the Maslach and Jackson inventory (MBI-HSS), which consists of 22 questions plus a questionnaire on demographic and occupational data. The study was carried out at a large private hospital in the city of São Paulo, Brazil. **Results:** Of 34 nurses, nine had high emotional exhaustion, nine high depersonalization, ten had a high score of reduced professional accomplishment (decreased personal fulfillment at work). Most nurses presented alterations in more than one dimension regarding burnout. **Conclusions:** The majority of nurses presented burnout and there was a positive correlation between burnout and the variables: sex, advanced professional degrees, time working in nursing, workload and working at more than one hospital.

Keywords: Burnout, professional; Nursing, team; Intensive care units; Stress

RESUMO

Objetivo: Identificar se os enfermeiros que atuam na área de terapia intensiva cardiológica e geral apresentavam *burnout* e correlacionar dados demográficos e ocupacionais com o *burnout*. **Métodos:** Esse é um estudo descritivo-exploratório, transversal, prospectivo e correlacional que utilizou os recursos da abordagem quantitativa. A amostra foi composta por 34 enfermeiros que responderam o inventário de Maslach e Jackson (MBI-HSS) contendo 22 questões, além de um questionário com dados demográficos e ocupacionais. O estudo foi realizado em um hospital particular, de grande porte, localizado em São Paulo. **Resultados:** Dos 34 enfermeiros, nove apresentaram elevado nível de desgaste emocional, nove alto nível de despersonalização e dez apresentaram alto nível de incompetência

profissional, sendo que esses enfermeiros apresentaram alterações em mais de uma dimensão do *burnout*. **Conclusões:** Grande parte da amostra apresentou *burnout*, e houve correlação positiva entre ela e as seguintes variáveis: sexo, especialização na área, tempo de trabalho na área, carga horária, e trabalhar em mais de uma instituição.

Descritores: Esgotamento profissional; Equipe de enfermagem; Unidades de terapia intensiva; Estresse

INTRODUCTION

There have been many changes in the job market regarding technologies, new management styles and changes in jobs are increasing importance of the sector services in the economic scenario. Increasingly, workers deal with complex and diverse activities and responsibilities that demand more quality, more skills and new competences to perform tasks⁽¹⁾. Thus, the assessment of professional stress levels is progressively more important⁽²⁾.

Amidst the evolution of research on stress, new studies on burnout syndrome have been conducted. It is a syndrome in which workers lose contact with their job and everything seems to be senseless and any effort or activity, meaningless⁽³⁾.

The concept was first developed in the 1970's and described by Herbert J. Freudenberger, psychologist, and Cristina Maslach, social psychologist. Freudenberger coined the term in 1974⁽³⁻⁴⁾.

According to Maslach and Jackson⁽⁵⁾, burnout is “a syndrome characterized by three basic dimensions”. The first one is emotional exhaustion when frequent and intense contact with suffering people is emotionally draining. The staff member feels tired, without

Study carried out at Hospital Israelita Albert Einstein – HIAE, São Paulo (SP), Brazil.

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Received on Aug 21, 2008 – Accepted on Jan 29, 2009

stamina and tolerance and easily becomes nervous or irritated at the workplace. The second dimension is depersonalization with dehumanized attitudes. Progressively, the professionals become distant, cold, and indifferent to the client's needs losing any empathy with people needing their help. Clients are not treated as human beings, but as objects. The third and last dimension is professional accomplishment. As time goes by workers feel disappointed and frustrated for not fulfilling their life plans, dreams, and ambitions. Their self-esteem plunges and depression can ensue⁽⁵⁾.

Gil-Monte⁽⁶⁾, underlining the statement of França and Rodrigues⁽²⁾ on burnout consequences, described that the personal cost can include feelings of lonesomeness, alienation, anxiety, and impotence; apathy, aggressiveness, and cynicism; isolation, mood disorders and frequent irritability; cardiovascular symptoms, such as tachycardia, hypertension and palpitations; or respiratory symptoms, such as asthma or tachypnea; immune disorders such as higher risk of infections; muscular symptoms, such as back or neck pain. The consequences for the employing institution include decreased of quality of care, high absenteeism, reduced interest and effort in performing professional activities, more interpersonal conflicts with peers, or even a tendency to abandon the job⁽⁶⁾.

The burnout syndrome has been considered a highly relevant problem that is studied in many countries. The interest in understanding burnout has broadened the range of studies: initially, only caregivers were studied but now other professionals are being assessed including healthcare students⁽⁷⁾.

Considering that nurses are increasingly required to have more technical and scientific skills in a capitalist system that offers low wages and overload, one observe psychic alterations in the work environment, leading employees to emotional exhaustion, losing interest in the people they should help, and low professional and personal performance, since they consider their work is worthless. Moreover, at institutional level, they believe they cannot change the situation and it is not possible to improve their personal lives⁽⁸⁻¹¹⁾.

OBJECTIVE

The objective of this study was to identify if nurses working at the Cardiac and General Intensive Care Units presented burnout and to correlate it with demographic and occupational data.

METHODS

This is a descriptive, exploratory, cross-sectional, prospective and correlational study using the

quantitative approach. It was carried out in a Cardiac and General Intensive Care Unit at a large private general hospital in the city of São Paulo, Brazil. The sample of the study was composed of nurses working as intensivists in these units.

The inclusion criteria were willingness to participate in this study, to fill in and sign the informed consent, to be staff member for at least one year in the unit studied. Two instruments were used for data collection. One of these instruments was created by the authors. The first part includes demographic data, such as sex, age, marital status, and children. The second part includes professional features, such as degrees, work shift, time of professional experience, time of experience at the institution, weekly load, number of patients seen daily, and other jobs. The second instrument is the Maslach Burnout Inventory – MBI, version HSS – Human Services Survey, developed by Maslach and Jackson to assess the three dimensions of burnout⁽⁵⁾.

The MBI-HSS was translated into Brazilian Portuguese by Liana Lautert, in 1997⁽¹²⁾. In her study she assessed burnout scores regarding personal feelings and staff member attitudes towards patients and healthcare peers.

The MBI-HSS consists of 22 questions: nine are related to emotional exhaustion; five, to depersonalization and eight items refer to low personal accomplishment. The frequency scale ranges from zero (0) to four (4), zero (0) meaning “never”, (1) “some times per year”, (2) “some times per month”, (3) “some times per week” and (4) “every day”⁽¹²⁾.

Since there is no consensus in the literature on how to interpret the MBI-HSS, both Ramires et al.⁽¹³⁾ and Grunfeld et al.⁽¹⁴⁾ criteria were used. The former authors define burnout when the three dimensions are present in high levels; the latter, accept only one dimension to make diagnoses of the syndrome. Data were collected during the second semester of 2007, after approval by the Research Ethics Committee of the hospital. After filling in and signing the consent form, nurses answered both questionnaires – sample characterization tool and MBI-HSS inventory.

The instruments were handed to nurses working in all shifts and were filled in and collected during working hours, thus allowing greater reliability and a higher respondent number. The correlation between demographic and occupational variables was established using the χ^2 test or Fischer's test for quantitative variables and mean difference test for quantitative variables.

RESULTS

The sample was mainly composed of women (85%) aged between 31 and 37 years (47%), most (50%)

were married, specialists in their field (80%), working at the Intensive Care Unit for six to ten years (41.2%), working at this hospital for one to five years (47%) and for 36 hours/week (70%).

The burnout inventory reliability was assessed by the alpha Cronbach coefficient. Cronbach coefficients were above 0.70 (0.930, 0.792 e 0.895) for the dimensions emotional exhaustion, depersonalization and reduced professional achievement; therefore, the indicators are reliable.

Table 1 depicts the distribution of nurses according to each burnout dimension. Some nurses had low/moderate levels of burnout in two dimensions simultaneously: emotional exhaustion and depersonalization (73.53%). On the other hand, nine nurses (26.47%) showed high scores in at least one of these two dimensions. Ten nurses (29.41%) had high scores in the item reduced professional accomplishment.

Table 1. Distribution of nurses according to emotional exhaustion, depersonalization and reduced professional accomplishment

Indicators	n	%
Low/moderate level in two burnout dimensions	25	73.53
High level of emotional exhaustion	9	26.47
High level of depersonalization	9	26.47
Low/moderate level of reduced professional accomplishment	24	70.59
High level of reduced professional accomplishment	10	29.41
Total	34	100.0

High burnout levels in at least one dimension were observed in 28 nurses. High levels of emotional exhaustion were observed in nine nurses (26.47%) and of depersonalization in nine nurses (26.47%); high levels of lack of reduced professional accomplishment were observed in ten nurses (29.41%).

Among the 29 female nurses, nine (31%) showed high emotional exhaustion and depersonalization but none of the five male nurses presented these symptoms. However, feelings of reduced professional accomplishment were present in both males and females in equal percentages (20%).

Table 2 depicts that among 11 married nurses, four (36.4%) had high levels of emotional exhaustion, three

Table 2. Association between emotional exhaustion, depersonalization, reduced professional accomplishment and marital status

Marital status	Emotional exhaustion		Depersonalization		Reduced professional accomplishment	
	High	Low	High	Low	High	Low
Single	3	14	3	14	2	15
Married	4	7	3	8	3	8
Divorced	1	3	1	3	2	2
Living together	0	1	1	0	0	1
Other	1	0	1	0	0	1

(27.3%) presented high levels of depersonalization and three (27.3%) showed reduced professional accomplishment. On the other hand, of the 17 single nurses, three presented high emotional exhaustion (17.6%), three showed depersonalization (17.6%) and two had reduced professional accomplishment (11.8%).

Table 3 demonstrates that 24 nurses don't have children. Five of them (20.8%) had high levels of emotional exhaustion, six (25%) of depersonalization and six (25%) of reduced professional accomplishment. Among those who had one child, two (40%) had a high level of emotional exhaustion, three (60%) depersonalization and one (20%) reduced professional achievement.

Table 3. Association between emotional exhaustion, depersonalization and reduced professional accomplishment and the variable number of children

Number of children	Emotional exhaustion		Depersonalization		Reduced professional accomplishment	
	High	Low	High	Low	High	Low
None	5	19	6	18	6	18
1	2	3	3	2	1	4
2	1	2	0	3	0	3
3 or more	1	1	0	2	0	2

Table 4 shows that the nurse schooling level is associated to the three burnout dimensions. It shows that specialized nurses had higher burnout levels; that is, of the 28 specialists, nine had high levels of emotional exhaustion; eight of depersonalization, and five of reduced professional accomplishment. Some specialized nurses had changes in more than one of the burnout dimensions.

Table 4. Association between emotional exhaustion, depersonalization and reduced professional accomplishment and the variable further degrees

Further degrees	Emotional exhaustion		Depersonalization		Reduced professional accomplishment	
	High	Low	High	Low	High	Low
None	0	3	1	2	1	2
Specialist	9	19	8	20	5	23
Master	0	2	0	2	0	2
PhD	0	1	0	1	1	0

Table 5 depicts the association between how long nurses have worked in the area and the three burnout dimensions. Nurses working for 6 to 15 years presented higher scores in the three burnout dimensions. Thus, of the 14 nurses working for six to ten years, four had high levels of emotional exhaustion; three of depersonalization and two of reduced professional accomplishment. Among nurses working in the units for 11 to 15 years, two presented high level of emotional exhaustion; three of depersonalization and three of reduced professional accomplishment. Some nurses had high scores in more than one dimension.

Table 5. Association between emotional exhaustion, depersonalization and reduced professional achievement and the variable time of employment in the area

Time of employment in the area	Emotional exhaustion		Depersonalization		Reduced professional accomplishment	
	High	Low	High	Low	High	Low
0 to 5 years	1	5	1	5	1	5
6 to 10 years	4	10	3	11	2	12
11 to 15 years	2	7	3	6	3	6
16 to 20 years	1	2	1	2	1	2
Over 20 years	1	1	1	1	0	2
Total (studied cases)	34	34	34	34	34	34

Table 6 shows length of employment at the institution correlating to the three burnout dimensions. It can be seen that nurses presenting higher scores had been working for six to ten years. Among the eight nurses working there for six to ten years, four presented high emotional exhaustion; four depersonalization and three reduced professional accomplishment. However, those working for up to five years and from 11 to 15 years presented more alterations in one of the burnout dimensions.

Table 6. Association between emotional exhaustion, depersonalization and reduced professional competence and the variable length of employment at the institution

Length of employment at the institution	Emotional exhaustion		Depersonalization		Reduced professional accomplishment	
	High	Low	High	Low	High	Low
1 to 5 years	2	13	3	12	2	13
6 to 10 years	4	8	4	8	3	9
11 to 15 years	3	3	2	4	2	4
16 to 20 years	0	1	0	1	0	1

Table 7 describes weekly workload associated to the three burnout dimensions. Nurses working 36 hours per week presented more changes in the three burnout dimensions. Among the 24 nurses working 36 hours per week, six presented high emotional exhaustion scores; five, depersonalization and four reduced professional accomplishment, when compared to those working more hours per week. Some presented high scores in more than one burnout dimension.

Table 7. Association between emotional exhaustion, depersonalization and reduced professional accomplishment and the variable weekly work load

Weekly workload	Emotional exhaustion		Depersonalization		Reduced professional accomplishment	
	High	Low	High	Low	High	Low
36 hours	6	18	5	19	4	20
40 hours	1	6	6	5	2	5
75 hours	2	1	1	1	1	2

Table 8 depicts the correlation between working at more than one hospital and the burnout dimensions. It

Table 8. Association between emotional exhaustion, depersonalization and reduced professional accomplishment and the variable working at more than one institution

Working at more than one institution	Emotional exhaustion		Depersonalization		Reduced professional accomplishment	
	High	Low	High	Low	High	Low
No	9	21	9	21	5	25
Yes	0	4	0	4	2	2

can be seen that nurses with higher burnout scores in the three dimensions were those working at only one hospital. Thus, of the 30 nurses working at only one hospital, nine had high emotional exhaustion scores; nine, depersonalization and five, reduced professional accomplishment. Some nurses presented high scores in more than one dimension.

Table 9 depicts the association between the three burnout dimensions and the number of patients seen daily by each nurse. Those caring for five to six patients a day had higher burnout scores. Among the 15 nurses caring for five patients a day, three had high emotional exhaustion scores; four, depersonalization and three, reduced professional accomplishment. Among the nine nurses caring for more patients (six), four presented high emotional exhaustion; three, depersonalization and three, reduced professional accomplishment. Some nurses had high scores in more than one dimension.

Table 9. Association between emotional exhaustion, depersonalization, reduced professional accomplishment and the number of patients cared for per day

Number of patients cared for per day	Emotional exhaustion		Depersonalization		Reduced professional accomplishment	
	High	Low	High	Low	High	Low
5	3	13	4	12	3	13
6	4	5	3	6	3	6
7	1	1	1	1	1	1
8	0	1	1	0	0	1
11	0	5	0	5	0	5
22	1	0	0	1	0	1

DISCUSSION

To determine changes in burnout, initially the scores of each dimension were assessed. The scores found in this study are similar to those found in the Brazilian validation of MBI-HSS⁽¹²⁾.

Twenty-eight nurses presented high scores in at least one burnout dimension, distributed as emotional exhaustion (9;26.47%); depersonalization (9;26.47%) and reduced professional accomplishment (10;29.41%).

Some issues concerning demographic and occupational features of the sample must be stressed. The majority of the sample was female and some studies report that women are at higher risk for burnout⁽¹⁵⁻¹⁷⁾. The authors verified that the majority of the 29 female

nurses presented high scores of emotional exhaustion and depersonalization. Male nurses had low scores of emotional exhaustion and depersonalization, but reduced professional accomplishment scores were equivalent in both genders.

Thus, the authors verified that women are more prone to stress. This may be related to additional house chores and other family related activities.

As to age, the majority of the sample was between 31 and 37 years old, i.e., quite young. Some burnout studies report youth as a risk factor due to the high expectations of professional accomplishment⁽¹⁸⁻²⁰⁾.

The authors verified that most married nurses had high burnout levels, which contradicts the literature, in which marriage is a protection against burnout⁽²¹⁻²²⁾.

Most nurses had no children but presented with high burnout scores. Nurses with children presented a small discrepancy when compared to childless nurses in the items emotional exhaustion, depersonalization and reduced professional accomplishment. This contradicts the literature, which states that subjects with children have less emotional exhaustion and show that the affective stability and parenting are stabilizing factors that help individuals to cope with conflicts⁽²¹⁻²²⁾. In this study such comparison is difficult, as the number of nurses with no children was much higher than the number of nurses with children, thus affecting results.

Regarding work years at the units, nurses working for 6 to 15 years presented more alterations in the three burnout dimensions. This corroborates the literature correlating time at work and development of the burnout syndrome. Some authors described staff members becoming sensitized and more vulnerable after working for some time. This sensitization is explained by the fact that idealistic expectations in the initial professional career are diminished and the staff member realizes that personal, professional and economic rewards are less than expected^(13,23).

As to degrees, most nurses were specialists. Specialized nurses had higher burnout scores: nine in emotional exhaustion; eight in depersonalization and five in reduced professional accomplishment.

These results contradict the literature. Maybe job-related issues are not the main causal factor of burnout, since better training (specialization) would be a protective factor against burnout. Perhaps other factors may influence in the development of the syndrome, such as excessive demands by managers and bosses regarding results and intrinsic aspects of work, or other variables that have not been analyzed in this study⁽²⁴⁾.

As to workload, it was noticed that nurses with higher changes in the three burnout dimensions were those working 36 hours/week, when compared to those with higher workloads although there were less nurses

in this group. The literature shows that double shifts, increasing workload, would lead to more emotional exhaustion⁽²⁵⁾. It was inferred that this difference is due to the number of nurses working for less and more hours, thus making comparisons difficult.

Although most nurses work in only one institution, most of them showed changes in burnout dimensions. Most of them showed some dimensional deviation.

As to the number of patients cared for, those who took care of five to six patients presented higher burnout than those taking care of a higher number of patients. One can infer that the number of institutions/hospitals and the number of patients cared could cause burnout, but other variables may be important⁽²⁶⁻²⁷⁾.

CONCLUSIONS

As to burnout identification, it could be concluded that nine nurses (26.47%) presented a high level of emotional exhaustion, nine (26.47%) presented a high level of depersonalization, and one (29.41%) had a high level of reduced professional accomplishment. Regarding burnout identification and the correlation with demographic and occupational data, we concluded that of the 29 female nurses, nine (31%) showed a high level of emotional exhaustion and depersonalization; whereas of the five male nurses, none showed a high level of emotional exhaustion and depersonalization.

Concerning reduced professional accomplishment, both sexes were equal (20% each, a high level). As to marital status, of the 11 married nurses 10 showed a high level in one of the dimensions. Of the 17 single nurses, eight had a high level in one dimension. Of the five nurses who had children, there were six alterations in dimensions. The 24 childless nurses, there were 17 alterations in burnout dimensions. On specialization, of the three nurses who had no further degree in nursing, two presented alterations.

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