

Burnout syndrome in physiotherapists at a high complexity hospital in the city of Recife, State of Pernambuco - Brazil

Síndrome de Burnout em fisioterapeutas de um hospital público de alta complexidade da cidade do Recife, Pernambuco

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ABSTRACT

As they are exposed to inadequate working conditions, physiotherapists may acquire Burnout Syndrome (BS), a body response to chronic stress which is associated to the work environment. **Objective:** The objective is to investigate the occurrence of BS among physiotherapists at a state hospital and correlate the disease with demographic and labor variables. **Methods:** This study was conducted at the Paulo Guerra Governor Restoration Hospital, in 2015. This study included physiotherapists who were actively working at the hospital, and those with a history of depression or other emotional disorders were excluded. The self-applicable Maslach Burnout Inventory was used. Descriptive statistics was then used to characterize the sample and establish the frequency of BS; multiple regression analysis was used to establish relations between BS and the demographic and labor variables. **Results:** 48 physiotherapists were included in this study. Most of these professionals were working in ICUs (56.3%, N = 27). The presence of BS was identified in 54.2% of the participants (N = 26). Correlations were found between the number of daily physical therapy sessions and emotional exhaustion ($r = 0.41$), and with personal accomplishment ($r = -0.30$), as well as between age and depersonalization ($r = 0.11$). **Conclusion:** BS was observed in over half the physiotherapists. Positive correlations were observed between the number of cases dealt with daily and emotional exhaustion, whereas negative correlation between age with depersonalization and the number of daily physical therapy sessions with personal accomplishment were found.

Keywords: Occupational Health, Burnout, Professional, Physical Therapists

RESUMO

Por serem expostos às inadequadas condições de trabalho, os Fisioterapeutas podem desenvolver a síndrome de Burnout (SB), que é uma resposta ao estresse crônico associado ao ambiente ocupacional. **Objetivo:** Investigar a frequência da SB em Fisioterapeutas de um hospital público, verificando associações com variáveis demográficas e laborais. **Métodos:** Este estudo foi desenvolvido no Hospital da Restauração Governador Paulo Guerra, em 2015. Foram incluídos Fisioterapeutas atuantes no hospital e excluídos aqueles com história de depressão ou outros transtornos emocionais. O questionário autoaplicável Maslach Burnout Inventory foi utilizado para investigar a SB. Estatística descritiva foi utilizada para caracterizar a amostra e determinar a frequência da SB, a regressão multivariada foi utilizada para verificar relações entre a SB e as variáveis demográficas e laborais ($p < 0,05$). **Resultados:** Participaram deste estudo 48 fisioterapeutas. A maioria atuava nas unidades de terapia intensiva (56,3% (N = 27)). A presença da SB foi identificada em 54,2% (N = 26) dos participantes. Foram observadas correlações entre o número de atendimentos diários e a exaustão emocional ($r = 0,41$) e com a realização pessoal ($r = -0,30$), e da idade com a despersonalização ($r = -0,11$). **Conclusão:** A SB foi verificada em mais da metade dos Fisioterapeutas. Correlações positivas foram observadas entre o número de atendimentos diários e a exaustão emocional e correlação negativa entre a idade com despersonalização e número de atendimentos diários com a realização pessoal.

Palavras-chave: Saúde do Trabalhador, Esgotamento Profissional, Fisioterapeutas

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INTRODUCTION

Burnout syndrome (BS) or professional exhaustion syndrome is described as a response to the chronification of stress experienced in the work environment, as a result of negative feelings and behaviors that generate losses in professional, personal, family and social relationships.^{1,2} The SB is understood as a public health problem in several countries, including Brazil.³ Data from the Brazilian Ministry of Social Security indicated 592 grantees due to SB (classified as CID Z73.0) between 2010 and 2014.⁴

Maslach and Jackson⁵ described the BS within three dimensions: Emotional Exhaustion (EE), Depersonalization (DP) and Professional / Personal Achievement (PA).⁶ EE is characterized by the lack or deficit of vigor associated with the feeling that all emotional and physical resources have ended. DP is considered as the loss of emotional sensitivity associated with ruthless and negative reactions towards those for whom one provides services. Finally, PA is characterized by a negative self-assessment by the professional regarding their performance in work and personal environments.⁵

The etiology of BS is unknown, but studies show that work overload, lack of motivation, unfair rewards, inadequate interpersonal work relationships and conflicts between the professional and the occupational environment are triggers for BS.^{7,8} Studies have shown that BS is present in professionals of different health-related areas, due to specific characteristics of this type of work.⁹

Among these professionals, the physiotherapist is exposed to excessive work hours, low salary, lack of professional recognition, inadequate working conditions, physical and chemical risks, as well as the tense condition resulting from the continuous interpersonal relationship with their patients.¹⁰

All these conditions worsen when in the hospital environment, in which the contact with pain, suffering and death is constant.⁸ According to the study of Al-Ismam and Al-Sobayel,⁸ the development of BS in physiotherapists does not only affect the professional, once it harms the physiotherapeutic techniques as well as the relationship with the patients and their families.

Based on this information, it is relevant to conduct BS studies in Brazilian physiotherapists in order to identify the causes and characteristics of the disease

development in this population, to build the basis for adopting suitable public policies, to the early prevention and the better care for those currently affected by BS.

OBJECTIVE

Overlooking this premise, the objective of this study was to characterize the presence of BS in Physiotherapists of a high complexity public hospital and to verify possible correlations of this syndrome with demographic and labor variables.

METHODS

This observational study was conducted in the Hospital da Restauração Governador Paulo Guerra (HR), Pernambuco, Brazil, from July 2015 to September 2015, and was approved by the Institutional Independent Ethics Comitee of the with the registration number CAEE: 36301314.8.0000.5198.

Physiotherapists working at the referred hospital were included. Those who were under treatment for depression and those with history of psychological disorders prior to their contract with the hospital were excluded to avoid bias of previous psychological issues, since BS is exclusively related to occupational activities.

Firstly, the physiotherapists were recruited directly at their workplace and informed about the objectives and procedures of the research, and those who agreed to participate signed the Informed Consent Form. Then, they were given two self-reported evaluations, the sociodemographic and occupational questionnaire, and the Maslach Burnout Inventory (MBI), for which, 7 days was given, so that they could fill them.

The sociodemographic and occupational questionnaire was built for characterizing the participants, and information regarding name, date of interview, age, sex, number of children, marital status, length of hospital service, number of patients attended per shift, among other relevant questions were collected to be tested on correlation with BS.

The MBI was established by Maslach and Jackson⁵ and it is the most common questionnaire for characterizing BS.^{11,12} It was translated and validated into Portuguese by Benevides-Pereira¹² and it is composed of 22 items that assess the three dimensions that represent BS: EE, composed of 9 items (questions 1, 2, 3, 6, 8, 13, 14, 16, and 20); DP,

composed of 9 items (questions 5, 10, 11, 15, and 22); and PA, which is composed of 8 items (questions 4, 7, 9, 12, 17, 18, 19, and 21).¹³

In the original scale, the score ranges from 0 to 65 in each item. However, along the transcultural adaptation for Brazil, the scores were modified so that they varied within a 1 – 5 Likert scale: 1 for “never”, 2 for “rarely”, 3 for “sometimes”, 4 for “usually”, and 5 for “always”.¹⁴

Each subscale, or dimension, was classified separately, according to the following criteria: for EE, low level for scores below 19, moderate level for scores between 19 and 26, and high level for scores above 27; for DP, low level for scores equal or below 6, moderate level for scores between 6 and 9, and high level for scores equal or above 10; for PA, low level for scores equal or above 40, moderate level for scores between 34 and 39, and high level for scores equal or below 33.¹⁵⁻¹⁹ The presence of BS was determined, as standardized, when for high levels of EE or DP, or for low levels of PA (inverse subscale).^{17,20,21}

The descriptive statistics were used to characterize the sample and to determine the frequency of BS, whereas multiple regression analysis was used to verify relationships between BS and demographic or work variables. Statistical significance was considered when $p \leq 0.05$. Emotional Exhaustion, Depersonalization and Professional Achievement were the dependent variables, and the explanatory variables were age, monthly income, length of hospital experience, number of daily physical therapy sessions and number of hours worked per week.

An individual analysis was performed for each dependent variable, using the input ENTER method, which means that all explanatory variables were introduced together to predict the dependent variable analyzed. In addition, the Shapiro Wilk test was used to verify the dependent variables normality, which is indicated for samples under 50 subjects. To carry out analysis described above, the statistical package SPSS for Windows (version 20.0) was used.

RESULTS

Out of the 51 physiotherapists, 48 (94.1%), most of them from the Intensive Care Unit (ICU), signed the Informed Consent Form and responded the questionnaires. We observed that most of them also worked in other institutions and that their monthly

income was higher than their category minimum wage (about R\$ 1,200.00). Also, most of them had temporary contract with the hospital. The table 1 shows their demographic characteristic.

The BMI results show that 54.2% (26) are positive for BS, whereas the partial scores for the domains were 23.56 (6.25 ± SD) for EE; 8.10 (2.49 ± SD) for DP and 31.70 (4.33 ± SD) for PA. Most of the participants had moderate

levels of EE and DP, and high levels of PA, whereas the most affected subscale (high levels) was EE, as shown in figure 1.

BS was more prevalent in physiotherapists with temporary contracts (72%, N = 18 versus 34.78, N = 8), without regular vacation (75%, N = 12 versus 43.75%, N = 14), and those who concomitantly worked in another institution (96.2%, N = 40 versus 3.8%, N = 1). Regarding those who worked in ICU, we observed a higher prevalence of BS (62.96%, N = 17) when compared to those who worked in inpatient facilities (53.8%, N = 7), or outpatient facilities (25%, N = 2). Among men and women, the prevalence was similar (54.5%, N = 6, and 54.1%, N = 20 respectively) as well as among those who practiced physical activity and those who did not (54.54%, N = 18, and 53.3%, N = 8 respectively).

Regarding the regression analysis, after confirming the normality of the dependent variables, we observed that the explanatory variables had moderate correlation with the dependent variables ($r = 0.48$), as combined they were responsible for 23% of EE variance (adjusted $r^2 = 0.23$). Moderate positive correlation was found between the EE scores and the number of daily physiotherapy sessions ($\beta = 0.40$ and 95%CI = 0,07 – 0,73).

Also, moderate correlation between the explanatory variables and the DP was found ($r = 0.51$) as they were responsible for 26% of DP variance (adjusted $r^2 = 0.26$). Moreover, negative weak correlations were found between DP and the explanatory variables ($\beta = -0.11$ and 95%CI = -0.20 – -0.02).

Lastly, we found moderate correlations between PA and the explanatory variables ($r = 0.51$), with the explanatory variables responsible for 26% of the PA variance (adjusted $r^2 = 0.26$). Again, however weak, negative correlation was found between these variables ($\beta = -0.29$ and 95%CI = -0.51 – -0.06). All these results are presented in table 2.

DISCUSSION

The results of this study have evidenced that more than half of the physiotherapists who were included presented BS, and that Emotional Exhaustion dimension (EE) bore the most relevant scores. The BS frequency identified in previous studies involving physiotherapists was lower than that found in the present study.^{7,8,21,22}

However, differences were observed regarding the type of instrument and the evaluation criteria used to identify BS. In one

Table 1. Characteristics of the 48 professionals included

| Characteristics | |
|---|---------------------|
| Presence of BS | |
| Yes, N (%) | 26 (54.2) |
| No, N (%) | 22 (45.8) |
| Age (mean years of age ± SD) | 39.90 (12.40) |
| Sex, N (%) | |
| Male | 11 (22.9) |
| Female | 37 (77.1) |
| Marital status, N (%) | |
| Married | 17 (35.4) |
| Divorced | 6 (12.5) |
| Single | 19 (39.6) |
| Widow / widower | 2 (4.2) |
| Others | 4 (8.4) |
| Number of children, N (%) | |
| 0 | 22 (45.8) |
| 1 | 22 (45.8) |
| 2 | 12 (25) |
| 3 | 4 (8.3) |
| Work sector, N (%) | |
| Outpatient facility | 5 (16.7) |
| Inpatient facility | 13 (27.1) |
| Intensive Care Unit (ICU) | 27 (56.3) |
| Employment relationship, N (%) | |
| Permanent contract | 23 (47.9) |
| Temporary contract | 25 (52.1) |
| Another concomitant contract, N (%) | |
| Yes | 42 (87.5) |
| No | 6 (12.5) |
| Practice physical activities, N (%) | |
| Yes | 33 (69.7) |
| No | 15 (31.3) |
| Go on vacations regularly, N (%) | |
| Yes | 32 (66.7) |
| No | 16 (33.3) |
| Ongoing psychotherapy | |
| Yes, N (%) | 4 (8.3) |
| No, N (%) | 44 (91.7) |
| Monthly wage (mean R\$ ± SD) | 4,543.75 (1,430.98) |
| Years working in the hospital (mean ± SD) | 10.17 (9.97) |
| Weekly workload in the hospital (mean hours ± SD) | 32.88 (14.22) |
| Total weekly workload (mean hours ± SD) | 62.96 (27.51) |
| Daily physiotherapy sessions | 12.83 (5.45) |

BS, burnout syndrome; SD, standard deviation.

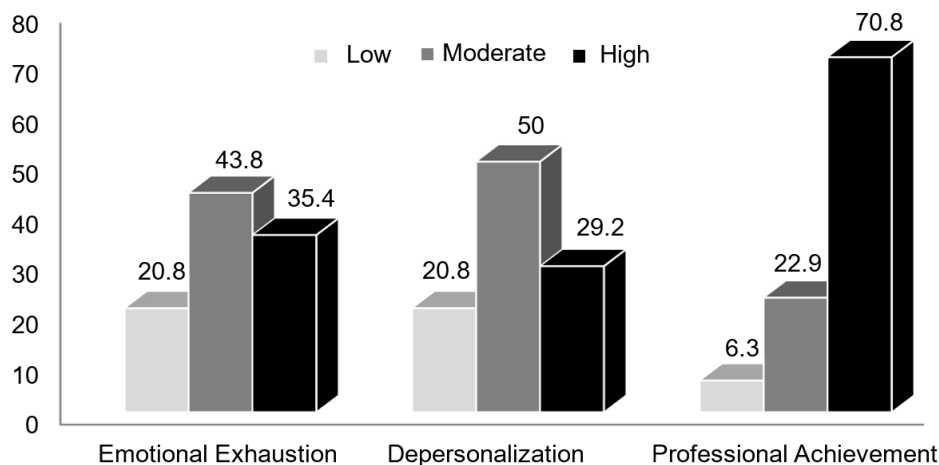


Figure 1. Percentual of the subscales scores: Emotional Exhaustion, Depersonalization, and Professional Achievement of the Maslach Burnout Inventory (MBI). Hospital da Restauração Governador Paulo Guerra (HR), Pernambuco, Brazil, 2015.

of these studies a frequency of 7.5% was observed with the Maslach Burnout Inventory - General (MBIGS), which is composed of 16 questions of three subscales, Exhaustion, Cynicism and Professional Efficacy.⁸ Similarly, in a study carried out in Brazil with 1040 physiotherapists with the Cuestionario para la Evaluación del Síndrome de Quemarse por el Trabajo (CESQT), no cases of BS were found.²²

The use of different questionnaires implies different criteria for the identification of BS, which hinders the comparison of these results with those found in the present study.^{8,22} Oppositely, studies with MBI found lower prevalence of BS than those observed in our study.^{7,21} In one of these studies, the frequency of BS was 10.87% in a sample of 46 physiotherapists, however the syndrome was characterized when there were high scores in EE and DP and low in PA.⁷ In the present

study, the criterion was used to identify BS, as applied in other studies that enrolled health professionals, including physiotherapists.^{17,20,21}

Finally, in a study conducted in Cyprus, a frequency of 21.1% was identified in a sample of 172 physiotherapists. In this study, the same diagnostic criteria of our present study were used, however the socioeconomic conditions that exist in European countries are different from those observed in Brazil, which may have influenced the frequencies.²¹

The mean values of the scores obtained in the three MBI dimensions vary between different countries (Saudi Arabia, Spain and Japan). In addition, the means obtained in these studies evidenced moderate levels of EE and DP, and high levels of PA, what agrees with the findings of the present study.^{7,8,23} Exception was verified in the study carried out in Cyprus, where low levels of EE and DP,

whereas PA was rated as high level, but the sample included physiotherapists from public and private hospitals.²¹

In the present study, we observed higher frequencies of BS in physiotherapists who had temporary contracts, other employment relationships, who did not go on vacations regularly, and among those who worked in the ICUs. Inadequate working conditions can lead to dissatisfaction, insecurity and lack of motivation related to the work environment. In addition, ICU environments expose the professional to more intense physical and chemical risks when compared to other hospital environments, what is combined with the role of assisting cases of greater complexity.^{8,22}

We found in this study moderate correlations between the number of daily physical therapy and EE, and poor correlations with PA. These results are coherent within the physiotherapist's role in the hospital setting, what indicates that the higher the number of patients attended per day the higher the EE and the lower PA. That is, the professional tends to develop a negative self-image related to their performance in the workplace.^{8,21}

By analyzing the average number of daily visits (12.83 ± 5.45), we observed that in general the professionals provide assistance to patients slightly more than that recommended by Brazilian Resolution No. 387 of July 8th 2011, which establishes assistance parameters for different modalities of therapies commonly provided by physiotherapists. According to this resolution, the physiotherapist who works in the hospital scope, specifically in the outpatient facility, must assist between 8 to 12 patients, according to the level of functional independence, whereas those who work in inpatient facilities and ICUs must attend between 6 and 8 patients every 6 hours.²⁴

Although the average number of sessions per day was not much higher than that recommended by the legislation, there was still a correlation with two dimensions (EE and PA) that indicate the presence of BS ($r = -0.29$, $p = 0.01$). In addition, by individually analyzing the data, it is seen that some professionals, especially those who worked in ICUs, were able to attend a much higher number than the recommendation, exceeding 20 attendances per 12-hour shift.

There was also a correlation between age and DP, indicating that the older the professional, the lower the loss of empathy and the sensitivity in dealing with patients. Another study also found associations of

Table 2. Multiple linear regression between the dimensions of the MBI and the explanatory variables of 48 physiotherapist of the Hospital da Restauração Governador Paulo Guerra, Pernambuco, Brazil, 2015

| Explanatory variables | Emotional Exhaustion | Depersonalization | Professional Achievement |
|---------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| Age (years) | $\beta = -0.87$ ($p = 0.43$) | $\beta = -0.11$ ($p = 0.01$) | $\beta = 0.11$ ($p = 0.15$) |
| Monthly income (R\$) | $\beta = -0.00$ ($p = 0.24$) | $\beta = 0.00$ ($p = 0.45$) | $\beta = 0.33$ ($p = 0.15$) |
| Years of hospital experience | $\beta = -0.44$ ($p = 0.74$) | $\beta = 0.46$ ($p = 0.38$) | $\beta = 0.00$ ($p = 0.97$) |
| Daily physical therapy sessions | $\beta = 0.40$ ($p = 0.01$) | $\beta = 0.06$ ($p = 0.32$) | $\beta = -0.29$ ($p = 0.01$) |
| Hours worked per week | $\beta = 0.05$ ($p = 0.20$) | $\beta = 0.01$ ($p = 0.34$) | $\beta = -0.00$ ($p = 0.97$) |

β , beta coefficient; Statistical significance when p -value ≤ 0.05

the same nature between DP and the age of physiotherapists working in a hospital setting ($r = -0.90, p = 0.02$).²¹

The observed results become relevant since they describe BS in physiotherapists with the use of MBI, which is the most commonly used assessment in the international literature to identify the disease. Moreover, it reveals associations between the disease and demographic and labor variables that may actually influence professional performance, either EE or physical, their relationship with the patient, and their professional self-satisfaction. In addition, this type of study with physiotherapists is still scarce in Brazil.

Some physiotherapists did not agree to participate, and others were not found, but more than 90% of the professionals of the hospital were included. In addition, cross-sectional studies do not allow the establishment of cause and effect relationships, but only allow the observation of associations between the analyzed variables. However, they raise hypotheses that can be verified in later studies for determining specific prevention and treatment strategies for this population.

In this scenario, it is suggested that in future studies in other hospital services should be included, also to compare public and private sectors. In addition, we suggest that sample size should be based on statistical estimation so that it is possible to determine the BS prevalence in physiotherapists.

CONCLUSION

The BS was found in more than half of the participating physiotherapists. Professionals who worked in the ICUs, who did not have regular vacations, who had temporary contract with the hospital, and those who had professional contract with other institution had higher frequencies of Burnout syndrome. Positive correlations were observed between the number of daily

physiotherapy sessions and the Emotional Exhaustion and negative correlation between the age with Depersonalization and the number of daily physiotherapy sessions with Personal Achievement. These associations serve as the basis for future studies with representative sample size for the identification of cause and effect relationships and the prevalence of BS in physiotherapists, as well as the identification of specific prevention and treatment strategies for this group of professionals.

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