

Burnout Syndrome: the Reality of ICU Physiotherapists

Síndrome de Burnout: realidade dos fisioterapeutas intensivistas?

El síndrome de Burnout: ¿estará presente entre los fisioterapeutas de cuidados intensivos?

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ABSTRACT | The objective of this study was to evaluate the profile and prevalence of Burnout syndrome in physical therapists of public hospitals with intensive care units (ICU) in Recife, comparing them between adult, pediatric and neonatal units. A cross-sectional descriptive study was carried out in five public hospitals with intensive care units in the city of Recife. A sociodemographic questionnaire, a questionnaire for stressors and the Maslach Burnout Inventory (MIB) were used to assess the prevalence of the syndrome. The results indicated a percentage of Burnout of 48.72% for adult ICU professionals and 47.06% for pediatric and neonatal ICUs, considering a serious level in only one dimension. High scores were found in the Emotional Exhaustion indicators, with 56.42% in the adult ICU and 64.71% in the pediatric and neonatal ICUs. For Depersonalization 12.82% in adult ICU and 29.41% in other ICUs. As for Professional Realization, values of 17.65% in pediatric and neonatal ICUs and 33.33% in adults. The prevalence of Burnout syndrome was high among the evaluated physiotherapists. Given this, it is observed the need to develop preventive measures and intervention models, so that this effect is minimized.

Keywords | Psychological Stress; Physiotherapists; Intensive Care Units.

RESUMO | O objetivo deste trabalho foi avaliar o perfil e a prevalência da síndrome de *Burnout* em fisioterapeutas intensivistas das redes públicas da cidade do Recife, comparando-os entre unidades adultas, pediátricas e neonatais. Realizou-se um estudo descritivo de corte

transversal em cinco hospitais públicos portadores de Unidade de Terapia Intensiva, por meio de um questionário sociodemográfico para fatores estressantes e do *Maslach Burnout Inventory* (MIB) para avaliar a prevalência da síndrome. Os resultados indicaram um percentual de 48,72% de *Burnout* para profissionais de UTI de cuidado adulto e 47,06% para unidades pediátricas e neonatais, considerando-se nível grave em apenas uma dimensão. Foram encontrados escores elevados nos indicadores de exaustão emocional, com 56,42% em UTI adulto e 64,71% em unidades pediátricas e neonatais. O indicador despersonalização apresentou 12,82% em UTI adulto e 29,41% nas demais. Já realização profissional obteve valores de 17,65% em UTI pediátricas e neonatais e de 33,33% em cuidado adulto. A prevalência da síndrome de *Burnout* se mostrou elevada entre os fisioterapeutas avaliados. Diante disso, observa-se a necessidade do desenvolvimento de medidas preventivas e modelos de intervenção para que tal efeito seja minimizado.

Descritores | Estresse Psicológico; Fisioterapeutas; Unidades de Terapia Intensiva.

RESUMEN | En este trabajo se propone evaluar el perfil y la prevalencia del síndrome de *Burnout* entre los fisioterapeutas de cuidados intensivos en las redes públicas en Recife (Brasil), comparándolos entre las unidades pediátricas, neonatales y de adultos. Se trata de un estudio descriptivo de cohorte transversal, del cual participaron cinco hospitales públicos con Unidades de Cuidados Intensivos, por medio de un cuestionario sociodemográfico para factores de estrés

A research study conducted in public hospitals with Intensive Care Units (ICUs) – Recife (PE), Brazil.

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y del *Maslach Burnout Inventory* (MIB) para evaluar la prevalencia del síndrome. Los resultados desvelan un porcentaje del 48,72 % de *Burnout* a profesionales de UCI de atención a adultos, y un 47,06 % en unidades pediátricas y neonatales, con nivel grave sólo en una dimensión. Se encontraron puntuaciones más altas en los indicadores de agotamiento emocional, con un 56,42 % en UCI de adultos, y un 64,71 % en unidades pediátricas y neonatales. El indicador despersonalización presentó un 12,82 % en UCI de

adultos, y un 29,41 % en las demás. Ya la satisfacción profesional obtuvo valor de un 17,65 % en UCI pediátricas y neonatales, y un 33,33 % en la atención a adultos. La prevalencia del síndrome de *Burnout* fue elevada entre los fisioterapeutas evaluados. Lo que demuestra la necesidad de desarrollar medidas preventivas y modelos de intervención para minimizar este efecto.

Palabras clave | Estrés Psicológico; Fisioterapeutas; Unidades de Cuidados Intensivos.

INTRODUÇÃO

The current market has demanded professionals with profiles adaptable to various performances. However, such demands can generate impacts on workers' health, such as physical and psychological imbalances. These, in turn, promote increase in stress levels and decrease in task performance, which may affect quality of work. Health professionals in general epitomize individuals often exposed to high physical and mental stress at work¹.

Psychological stress develops when external demands on individuals exceed their abilities. In excess, it has deleterious effects, leading to the sensation of overload and may result in insomnia, fatigue, irritability, anxiety and depression^{2,3}.

Work in intensive care units (ICUs) is especially stressful due to the high patient morbidity. In addition, there is also limited time and resources to attend to patients in some cases².

Other factors such as tiredness, constant alertness, dealing with family members with the right skills, excessive workload, unpredictability, and ethical dilemmas are also some subjective sources of stress in the ICU⁴.

Physiotherapy is a specialty in which stress factors triggered by the dynamism in the care of patients in a serious condition are present. Living with suffering and death may generate a feeling of powerlessness in these professionals¹.

Chronic stress in the routine of health workers, different from common stress, causes emotional and/or physical problems in the workplace. The physical and mental strain caused in this environment is what leads them to the Burnout syndrome⁵⁻⁷.

Burnout syndrome is a disorder characterized by emotional exhaustion (EE), depersonalization (DP) and reduced personal accomplishment (PA), which may occur with professionals working mainly in care functions, which

require great investment in interpersonal relationships and are marked by care and dedication⁸.

Changes in the quality of care provided due to the occurrence of the syndrome can have adverse consequences for the individuals cared for. In this sense, this study aimed to outline the profile and find the prevalence of Burnout syndrome in physiotherapists working in adult, pediatric and neonatal care units of public networks.

METHODOLOGY

Study design

This is a descriptive cross-sectional study.

Population, place and period of data collection

The study was carried out in intensive care units of five public hospitals in the city of Recife. Data collection was carried out from March to June 2014.

The sample consisted of physiotherapists working in adult and pediatric/neonatal ICUs. Physiotherapists working in the analyzed units who were not on leave of any kind and who agreed to participate in the survey and to answer the questionnaire were considered fit to participate in the study.

Instruments and procedures for data collection

All participants signed a Free and Informed Consent Term (FICT), which was distributed among professionals along with the 71 questionnaires. Participants were clarified about the aims of the research, and a date was set for researchers to collect the questionnaires duly answered.

Sociodemographic questionnaire

This questionnaire was developed by the authors, with descriptive variables such as age, sex, presence of children, marital status, length of work, being a specialist or not, weekly workload, and monthly income.

List of stressors

A list with 12 items of possible stressors was also given to the professionals: excessive noise, complications in care, administrative problems, dealing with suffering and death, dealing with simultaneous issues, number of patients attended, accelerated pace of activities, lack of material resources, team commitment, relationship with team, caring for terminally-ill patients, and insufficient pay⁹. Physiotherapists were instructed to select which items they considered stressful.

Maslach Burnout Inventory

The Maslach Burnout Inventory (MIB) consists of 22 statements that encompass three fundamental aspects of the syndrome, divided into 3 seven-point scales (ranging from 0 to 6): 9 to measure emotional exhaustion, 5 to measure the degree of depersonalization, and 8 to assess personal accomplishment. This instrument was translated and validated for use in Brazil by Liana Lautert in 1995¹⁰.

A descriptive analysis of the occurrence of symptoms in the three domains was performed according to MIB criteria: EE (high level: ≥ 27 , moderate: ≥ 17 and ≤ 26 , low: ≤ 16), DP (high level: ≥ 13 ; moderate: ≥ 7 and ≤ 12 ; low: ≤ 6) and PA, which has reversed score (high level: ≤ 31 , moderate: ≥ 32 and ≤ 38 , low: ≥ 39 points).

Because there is no consensus in the literature for the interpretation of this questionnaire, the results were described using the criteria of Ramirez et al.¹¹ and Grunfeld et al.¹². The former defined Burnout by the presence of three dimensions in critical level, while Grunfeld et al. take the presence of at least one domain in critical level as sufficient for diagnosis of the syndrome^{11,12}.

Statistical analysis

Statistical analysis was performed using SPSS software version 20.0, with a significance level of 95% ($p < 0.05$). Descriptive statistics was performed by mean and standard deviation for continuous quantitative variables, and percentage for qualitative variables. The

chi-square test was used to compare the adult, pediatric and neonatal care ICUs across the different types of diagnosis of the syndrome.

Ethical considerations

The study was approved by the ethics and research committee of the Federal University of Pernambuco, under protocol No. 563272.

RESULTS

From a total of 56 physiotherapists who answered the questionnaires, 39 worked in an adult care ICU and 17 in pediatric and neonatal units. Seventeen professionals were excluded from the study for not accepting to participate or for missing the deadline of returning the questionnaire.

Among professionals in adult care ICUs, the mean age was 35.9 ± 7.95 years, 74.4% female and 59% married. Among professionals of pediatric and neonatal ICUs the findings were similar except for marital status, as 58.8% self-reported as single. The other data are displayed in Table 1.

The reported length of work in physiotherapy was 14.08 ± 8.78 years, with 10.84 ± 7.57 years in intensive care in the group working with adults. Differences were observed as compared to the other group, with a mean of 7.36 ± 6.85 years, of which 6.56 ± 6.28 years in intensive care.

In the pediatric/neonatal ICUs, both weekly workload and on-call hours were higher than in adult care ICU: 65.47 ± 29.36 vs. 58 ± 18.30 hours of weekly workload and 55.53 ± 29.95 vs. 45.95 ± 19.56 hours on duty. Stratified values can be observed in Table 1.

Table 1. Sample characteristics.

Variables	Adult ICU N (%)	Pediatric/neonatal ICU N (%)
Sex		
Male	29 (74.4)	13 (76.5)
Female	10 (25.6)	4 (23.5)
Age (years)		
<29	8 (20.5)	9 (52.9)
30-39	21 (53.8)	4 (23.5)
>40	10 (25.6)	4 (23.5)
Marital status		
Single	10 (25.6)	10 (58.8)
Married	23 (59.0)	6 (35.3)
Divorced	4 (10.3)	1 (5.9)
Common-law marriage	2 (5.1)	0

(continues)

Table 1. Continuation

Variables	Adult ICU N (%)	Pediatric/neonatal ICU N (%)
Children		
Yes	19 (49.7)	7 (41.2)
No	20 (51.3)	10 (58.8)
Work length as physiotherapist		
<1 year	0	1 (5.9)
1-10 years	17 (43.6)	11 (64.7)
>10 years	22 (56.4)	5 (29.4)
Work length as ICU physiotherapist		
<1 year	0	1 (5.9)
1-10 years	23 (59.0)	11 (64.7)
>10 years	16 (41.0)	5 (29.4)
Specialist		
Yes	27 (69.2)	10 (58.8)
No	12 (30.8)	7 (41.2)
Weekly workload		
<30 hours	5 (12.8)	4 (23.5)
30-60 hours	24 (61.5)	7 (41.2)
>60 hours	10 (25.6)	6 (35.3)
Weekly ICU workload		
<30 hours	16 (41.0)	6 (35.3)
30-60 hours	17 (43.6)	5 (29.4)
>60 hours	6 (15.4)	6 (35.3)
Other activity		
Yes	9 (23.1)	4 (23.5)
No	30 (76.9)	13 (76.5)
Patients attended/day		
5-10	15 (38.5)	8 (47.1)
10-15	11 (28.2)	3 (17.6)
15-20	9 (23.1)	5 (29.4)
>20	4 (10.3)	1 (5.9)
Monthly income (reais)		
1000-3000	7 (17.9)	5 (29.4)
>3000-5000	20 (51.3)	10 (58.8)
>5000-7000	8 (20.5)	2 (11.8)
>7000-9000	2 (5.1)	0
>9000	2 (5.1)	0

ICU - Intensive Care Unit

As for stressors, a high percentage was obtained for excessive noise, dealing with suffering and death, lack of material resources and insufficient pay. The other data can be seen in Table 2.

In association of domains, according to the criteria of Grunfeld et al.¹², more than 47% of physiotherapists in the adult, pediatric and neonatal units showed signs of Burnout syndrome, while according to the criteria of Ramirez et al.¹¹, this index would be 2.6% and 11.8% for adult and pediatric/neonatal care ICU, respectively.

In relation to the isolated results obtained in MIB dimensions, the mean scores were moderate to high in the EE subscale, thus exhibiting a high degree of impairment in this domain (Table 3). Table 4 shows the other subscale distributions.

Table 2. Occupational stressors in Intensive Care Unit

Variables	Adult ICU N (%)	Pediatric/neonatal ICU N (%)
Excessive noise	38 (97.43)	17 (100)
Complications in care	27 (69.23)	11 (64.70)
Administrative problems	22 (56.41)	13 (76.47)
Dealing with suffering and death	28 (71.79)	14 (82.35)
Dealing with simultaneous issues	25 (64.10)	13 (76.47)
Number of patients attended	29 (74.35)	12 (70.58)
Accelerated pace of activities	25 (64.10)	17 (100)
Lack of material resources	34 (87.17)	12 (70.58)
Team commitment	26 (66.66)	13 (76.47)
Relationship with team	17 (43.58)	13 (76.47)
Caring for terminal patient	17 (43.58)	8 (47.05)
Insufficient pay	39 (100)	17 (100)

ICU - Intensive Care Unit

Table 3. Occurrence of Burnout syndrome in its three dimensions

Criteria	Adult ICU N (%)	Pediatric/neonatal ICU N (%)	p
Emotional exhaustion			
High	22 (56.42)	11 (64.71)	0.56
Moderate	13 (33.33)	5 (29.41)	0.77
Low	4 (10.25)	1 (5.88)	0.59
Depersonalization			
High	5 (12.82)	5 (29.41)	0.61
Moderate	10 (25.64)	5 (29.41)	0.92
Low	24 (61.53)	7 (41.18)	0.15
Personal accomplishment			
High	15 (38.47)	6 (35.29)	0.82
Moderate	11 (28.20)	8 (47.06)	0.07
Low	13 (33.33)	3 (17.65)	0.09
High level in Burnout dimensions			
In one dimension	19 (48.72)	8 (47.06)	0.160
In three dimensions	1 (2.56)	2 (11.76)	0.327

ICU - Intensive Care Unit

Table 4. Mean and standard deviation by the Maslach Burnout Inventory dimensions

Variables	Adult ICU (Mean ± SD)	Pediatric/neonatal ICU (Mean ± SD)
Emotional exhaustion	26,23±11,18	31,35±8,94
Depersonalization	6,38±5,18	8,47±7,00
Personal accomplishment	31,13±8,16	32,94±6,70

ICU – Intensive Care Unit; SD – standard deviation.

DISCUSSION

This work assessed the profile and prevalence of Burnout syndrome in physiotherapists working in ICUs. We found a large percentage of professionals with signs of the syndrome, showing its possible presence in this category. The results of MIB dimensions showed a moderate to high mean in the EE subscale. There was also a higher percentage of stressors related to excessive noise, dealing with suffering and death, lack of material resources and insufficient pay.

The prevalence of Burnout in adult-care ICU physiotherapists was 48.72% and in pediatric and neonatal units 47.06%, if one considers a critical level in only one dimension. These percentages were lower than those reported in a study conducted with ICU physicians, in which a high score in at least one dimension occurred in 63.8% of adult ICU physicians and in 56.6% of pediatric and neonatal ICU physicians¹³. Another study found that Burnout is common in pediatric intensivists, though the prevalence in this population was lower than the one reported here¹⁴.

Similar to this study, González-Sánchez et al.¹⁵ assessed Burnout in physiotherapists in a region of Spain and found moderate scores in the three MIB dimensions. We found, however, that the most affected dimension in the physiotherapists evaluated was EE, with rates of 56.42% in adult care ICU and 64.71% in pediatric/neonatal units. Tucunduva et al.¹⁶ found a similar index, with 55.8% for exhaustion among Brazilian cancerologists.

Burnout can first begin in this dimension, followed by DP and a sense of low personal accomplishment at work¹⁶. In a survey conducted among intensive care physicians, this index was 47.5% among the interviewees⁹. When exhausted, professionals have a reduction of their internal resources to face situations experienced at work, as well as decreased energy to perform work activities¹⁷.

Considered as a specific element of the Burnout syndrome, DP in the studied population was low for adult ICU professionals, and one could say that this phenomenon is not occurring in this sample. In pediatric and neonatal ICU physiotherapists, PD was observed in 58.82%, in moderate or high levels. In a sample of 173 school psychologists, however, only 10% reported DP reactions¹⁸. This item is characterized by cold and negative attitudes, which can lead to a derogatory approach towards staff and patients⁹.

The prevalence of Burnout associated with EE and DP can be related to work overload under various types of demands, as well as an imbalance between professional and interpersonal preparation. There may be no adequate psychosocial preparation among intensivists. In this way, quality work may be insufficient in face of the emotional demands of ICU environments^{13,19,20}.

As for RP domain results, more than 50% of the sample presented an intermediate to low score. This translates a lower level of job satisfaction. Feelings of dissatisfaction are present and may be linked to pay, high working hours, and unfavorable work environment. It is noteworthy that some authors consider this domain as the last reaction to stress generated by job demands⁸.

Severity of illnesses and conflicts with co-workers or patients are reported as risk factors for Burnout^{21,22}. In this study, physiotherapists reported excessive noise in the ICU and insufficient pay as one of the main factors. In research conducted with residents of internal medicine, frequent 24-hour shifts and inadequate leisure time were considered as the main stressors associated with high Burnout²³.

In this syndrome, both individual characteristics and work requirements are determining factors of the displayed symptoms, interfering with job performance and quality of care to patients²¹. All of these have consequences in the worker's life, such as depression and difficulties in family and social relations, as well as damage to the institution through absenteeism²⁴.

Limitations of the study

The Brazilian literature about the Burnout syndrome among physiotherapists is still incipient, making it difficult to make comparisons with other national studies. This research has a descriptive design, with survey of frequency and a small sample, a fact that may have influenced the results. Thus, more elaborate study designs

are needed so that greater associations can be made between sociodemographic variables and the syndrome.

CONCLUSION

This study evidenced a high prevalence of Burnout in adult and pediatric/ neonatal ICU physiotherapists, with MIB of 48.72% and 47.06%, respectively, considering the critical level in only one dimension. The evaluated stressors pointed to insufficient pay and excessive noise as main factors inducing Burnout.

The description of these factors allows judgment on how public policies or interventions can and should be applied to this group of professionals, preserving their health and ensuring the quality of patient care. In analyzing the internal and external validity of this study, one must consider the sociodemographic particularities of the population to which professionals belong.

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