Burnout syndrome and associated factors in intensive care nurses: a cross-sectional study
Síndrome de burnout e fatores associados em enfermeiros de terapia intensiva: um estudo transversal
Síndrome de burnout y factores asociados en enfermeras de cuidados intensivos: un estudio transversal

Asláni Tainã de Souza Veloso¹
Douglas de Souza e Silva²
Valdenir Almeida da Silva³
Sélton Diniz dos Santos⁴
Fernanda Matheus Estrela⁵
Ana Claudia Fonseca de Souza¹

¹ Nurse. Specialist in Intensive Care - Roberto Santos General Hospital - HGRS. Bahia. Brazil.
² Nurse. Master in Health Sciences. Professor at the State University of Bahia. Brazil. douglassesgbi@hotmail.com
³ Doctor in Nursing. Professor at the School of Nursing, Federal University of Bahia, Brazil.
⁴ Nurse. Master in Public Health. Professor at the School of Nursing, Federal University of Bahia, Brazil.
⁵ Nurse. PhD in Nursing - Federal University of Bahia - UFBA.

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ABSTRACT:
Introduction: Burnout Syndrome (BS) emerges in the context of precarious working conditions, and manifests itself through a set of signs and symptoms that affect the worker's psychology due to exposure to stressors in the work environment.
Objective: to analyze the prevalence and factors associated with Burnout Syndrome (BS) in intensive care nurses.
Method: cross-sectional and analytical study, carried out with 94 nurses in intensive care units of a public hospital in the state of Bahia. The Maslach Burnout Inventory (MBI) and a questionnaire containing sociodemographic, cultural and occupational issues were used.
Results: 62.8% showed high emotional exhaustion; 64.9% high depersonalization and 77.7% high reduction in professional achievement. The factors associated with BS were: age up to 38 years (PR: 2.38; 95% CI: 1.44-3.94), not having a partner (PR: 1.97; 95% CI: 1.17-3.32), job dissatisfaction (PR: 1.78; 95% CI: 1.15 -2.75), having back pain (PR: 3.33; 95% CI: 1.72 -6.42), anxiety (PR: 2.33; 95% CI: 1.22-4.46) and sleep pattern up to 5 hours (PR: 1.67; 95% CI: 1.08-2.59). It was found that having children is a protective index (PR: 0.55; 95% CI: 0.33-0.90).
Conclusion: there is a considered high percentage of nurses with a diagnosis suggestive of the syndrome (43.6%), as well as the existence of associated factors. It is essential that the institution offers
a healthy work environment, in which prevention is the best way for these professionals not to become targets of the syndrome.

**Key words:** Burnout professional; psychological exhaustion; nurses; intensive care units.

**RESUMO:**
Introdução: A Síndrome de Burnout (SB) emerge no contexto das condições laborais precárias, e se manifesta por meio de um conjunto de sinais e sintomas que afetam o psicológico do trabalhador devido à exposição a estressores no ambiente de trabalho.

Objetivo: Analisar a prevalência e fatores a Síndrome de Burnout em enfermeiros de terapia intensiva.

Método: Estudo transversal e analítico, realizado com 94 enfermeiros assistenciais de unidades de terapia intensiva de um hospital público do estado da Bahia, Brasil. Utilizou-se o Maslach Burnout Inventory (MBI) e um questionário contendo questões sociodemográficas, culturais e ocupacionais.

Resultados: 62,8% apresentaram alta exaustão emocional; 64,9%, alta despersonalização; e 77,7%, alta redução da realização profissional. Os fatores associados à SB foram: idade até 38 anos (RP: 2,38; IC 95%: 1,44-3,94), não ter companheiro (RP: 1,97; IC 95%: 1,17-3,32), insatisfação com o trabalho (RP: 1,78; IC 95%: 1,15 -2,75), apresentar dores dorsais (RP: 3,33; IC 95%: 1,72 -6,42), ansiedade (RP: 2,33; IC 95%: 1,22-4,46) e padrão de sono até 05 horas (RP: 1,67; IC 95%: 1,08-2,59). Verificou-se que ter filhos é um índice protetor (RP: 0,55; IC 95%: 0,33-0,90).

Conclusão: Existe um percentual considerado elevado de enfermeiros com diagnóstico sugestivo da síndrome (43,6%), assim como a existência de fatores associados. É imprescindível que a instituição ofereça um ambiente de trabalho sadio, no qual, a prevenção é a melhor maneira para que os profissionais não se tornem alvos da síndrome.

Palavras-chave: Esgotamento profissional; esgotamento psicológico; enfermeiros; unidades de terapia intensiva.

**RESUMEN:**
Introducción: El Síndrome de Burnout (SB) surge en el contexto de condiciones laborales precarias, y se manifiesta a través de un conjunto de signos y síntomas que afectan la psicología del trabajador debido a la exposición a factores estresantes en el ambiente laboral.

Objetivo: Analizar la prevalencia y los factores asociados al Síndrome de Burnout (SB) en enfermeras de cuidados intensivos.

Método: Estudio transversal y analítico, realizado con 94 enfermeras asistenciales en unidades de cuidados intensivos de un hospital público en el estado de Bahía. Se utilizó el Inventario de Burnout de Maslach (MBI) y un cuestionario que contenía aspectos sociodemográficos, culturales y ocupacionales.

Resultados: El 62,8% mostró alto agotamiento emocional; 64,9% alta despersonalización y 77,7% alta reducción de la realización profesional. Los factores asociados al SB fueron: edad hasta 38 años (RP: 2,38; IC 95%: 1,44-3,94), no tener pareja (RP: 1,97; IC 95%: 1,17-3,32), insatisfacción laboral (RP: 1,78; IC 95%: 1,15 -2,75), tener dolor de espalda (RP: 3,33; IC 95%: 1,72 -6,42), ansiedad (RP: 2,33; IC 95%: 1,22-4,46) y patrón de sueño hasta 5 horas (RP: 1,67; IC 95%: 1,08-2,59). Se encontró que tener hijos es un índice protector (RP: 0,55; IC 95%: 0,33-0,90).

Conclusión: Se considera alto el porcentaje de enfermeros con diagnóstico sugestivo del síndrome (43,6%), así como la existencia de factores asociados. Es fundamental que la institución ofrezca un ambiente de trabajo sano, en el que la prevención sea la mejor vía para que estos profesionales no se conviertan en blancos del síndrome.

Palabras clave: Agotamiento profesional; agotamiento psicológico; enfermeras; unidades de cuidados intensivos.

**INTRODUCTION**

In present days, work is a method of survival on behalf of economic development and which provides personal wellbeing. However, when carried out automatically, with excessive workload and under stressful conditions, it can lead to future physical and mental exhaustion (1).

The Burnout Syndrome (BS), also known as the Occupational Burnout Syndrome (OBS), emerges in the context of precarious labor conditions, and manifests through a
set if signs and symptoms that affect the psychological state of the worker due to the exposure to stressors in the work environment. BS includes three categories of symptoms: Emotional Exhaustion (EE), Depersonalization (DP), and Reduced Professional Accomplishment (PA) (2).

EE is characterized by a lack of motivation, irritability, a feeling of physical and emotional fatigue, a sense of dread due to work overload and high pressure; DP is characterized by emotional indifference of the professional, and may change the personality through changes in behavior; low PA is characterized by loss of satisfaction on work related activities, in other words, doesn't feel any pleasure in carrying out the activities (3).

Under this perspective, the etiology of the word Burnout is the result of two English words, burn and out, which denotes exterior (4). Accordingly, burnout arises when coping strategies used by professionals are not effective, thus affecting the mental health of the worker (5).

Nurses working in Intensive Care Units (ICU) deal daily with the lives of critically ill patients and the imminence of death. This work environment can cause exhaustion, stress, fatigue, because there is a pressure in the care of these patients, overlapped by managerial demands. In addition to the issues mentioned, structural problems, low financial return, excessive workload, lack of professional appreciation, ineffectiveness in communication and low training, can favor the appearance of the first sign of BS, emotional exhaustion, which progresses if not treated (6,7).

A study carried out with emergency nurses in a medium-sized public hospital, located in the southwest region of Bahia, Brazil, found inherent characteristics of BS. In such study 85.2% and 96.3% presented a high level of EE and PD, respectively, and 92.6% a low level for PA, which is a factor of concern (8).

Literature points out the difficulty in accounting for costs arising from OBS in health professionals and workers of other areas. However, it is estimated that around 200 million are spent annually worldwide, due to expenses with Social Security, workload reduction, absences and substitution of these professionals (9).

The onset of the Covid-19 pandemic led to challenges for the health professionals due to the enhancement of the workload, precariousness of working conditions, contributing towards a situation of chaos, due to the risk of contamination and to the distancing from family members. This pandemic context exacerbated psychological distress and physical exhaustion, favoring the onset of BS. It is important to highlight that intensive care nurses are among the professionals most affected by BS, and the numbers are ever increasing over the years. The Covid-19 pandemic has triggered a warning signal for occupational burnout (10).

A question arises from these experiences: what is the prevalence of the burnout syndrome and associated factors in intensive care nurses? Thus, the purpose is to analyze the prevalence of the BS and associated factors, as well as characterizing the sociodemographic, work, lifestyle and health profile of intensive care nurses in a public hospital of the state of Bahia, Brazil.
METHOD

A cross-sectional study with an analytical approach. The research was carried out with nurses working in five adult ICUs of a public hospital located in the city of Salvador, Bahia, Brazil. A survey of the number of clinical nurses working in the five ICUs, totaling 103 professionals. All nursing professionals working in patient care, with a minimum working experience of six months and who did not work only in management and administrative activities. Those on vacation (4 professionals), or on medical leave of absence (2 professionals) were excluded and there were 3 refusals. After the application of the eligibility criteria, the final sample was composed of 94 nursing professionals working in direct care to patients in the ICU.

Data collection was performed in the months of June to August, 2021 through a structured questionnaire containing questions focused on sociodemographic, work, lifestyle and health data. The Maslach Burnout Inventory-Human Services Survey (MBI-HSS)\(^\text{11}\) was used to investigate the BS, a version adapted and validated to the Portuguese of Brazil\(^\text{12}\), comprising 22 questions that explore the three dimensions: Emotional Exhaustion (9 items), Depersonalization (5 items) and Reduced Professional Accomplishment (8 items). Each dimension is assessed using the Likert Scale, with scores from 1 to 5. The score is obtained with the following cutoff points: Emotional Exhaustion high (≥27 points), average (19 to 26 points) and low (<19 points); Depersonalization: high (≥10 points), average (6 to 9 points) and low (< 6 points) and Reduced Professional Accomplishment: high (≤33 points), average (34 to 39 points) and low (≥40 points). BS was dichotomized according to the criterion of Ramirez et al., when considering the existence of high Emotional Exhaustion, Depersonalization and Reduced Professional Accomplishment\(^\text{13}\).

Cronbach's alpha coefficient was used to evaluate the internal reliability of the instrument, obtaining values > 0.7, characterized as reliable and with good internal consistency. The reliability coefficient in EE was of 0.80, SD of 0.78 and PA of 0.82.

A descriptive and bivariate analysis was performed. Descriptive statistics were used to characterize the general sample through the absolute and relative frequencies in the categorical variables. The continuous variable age was also evaluated by the mean and standard deviation. Subsequently, a bivariate analysis was conducted in order to identify the factors associated with BS. The Prevalence Ratios (PR) and respective Confidence Intervals (CI) of 95% were calculated. Pearson's chi-square test or Fisher's exact test were used to analyze statistical significance, considering a p-value of <0.05. The software Statistical Package for the Social Science – SPSS version 22.0 was used in the analyses.

The variables analyzed in the association with BS were: gender, age, race/color, children, marital status, income, period of time since graduation, specialization, time working in the institution, other labor relationship, type of labor relationship, job satisfaction, practice of physical activity, use of psychotropic drugs, headache, back pain, anxiety, arterial hypertension, diabetes and sleep pattern.

The present study was approved by a Research Ethics Committee, under number 4.726.010/2021. The Declaration of Helsinki of the World Medical Association and Resolution 466/2012 of Brazil were fully respected.
RESULTS

A total of 94 intensive care nurses were interviewed, corresponding to 91.3% of the target public. The sociodemographic characteristics of the participants are presented under Table 1. Out of the workers, 78.7% are of the female gender. The majority were of over 38 years (55.3%). Regarding race/color 86.1% were self-declared black. Of the intensive care nurses in the study, 51.1% have children. As to marital status, 52.1% do not have a partner. Regarding monthly income, 80.9% reported income greater than 03 minimum wages.

Regarding formation, 70.2% have a period of formation of over 05 years. As to specializations, 95.7% have *lato sensu*. Working in the institution, 72.3% have a period of up to 03 years working in the institution.

In relation to the professional having other labor relationships, 80.9% work in other institutions. As for the labor relationship, 94.7% of the nurses work in the hospital as outsourced workers. Regarding the degree of satisfaction with the work, 83.0% declared themselves satisfied.

With reference to the practice of physical activities, 54.3% do not practice. Regarding the use of psychotropic drugs, 66.0% do not use any psychoactive substances. In relation to frequent headaches, 55.3% confirmed that they fit into this group. Concerning frequent backache, 55.3% confirmed it.

In relation to anxiety, 63.8% of the nurses consider themselves anxious. Regarding Arterial Hypertension, 87.2% mentioned that they did not have this diagnosis. As to Diabetes Mellitus, 95.7% stated not to be diabetic. With relation to sleep pattern, 72.3% sleep 06 hours or more per night and 27.7% sleep up to 05 hours per night (Table 1).

**Table 1.** Sociodemographic, economic, labor and health characteristics of Intensive Care nurses. Salvador, Bahia, Brazil, 2021, (N=94).

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>74</td>
<td>78.7</td>
</tr>
<tr>
<td>Male</td>
<td>20</td>
<td>21.3</td>
</tr>
<tr>
<td><strong>Age (average 38.7 years – DP± 7.6)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Over 38 years</td>
<td>52</td>
<td>55.3</td>
</tr>
<tr>
<td>Up to 38 years</td>
<td>42</td>
<td>44.7</td>
</tr>
<tr>
<td><strong>Race/color</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>81</td>
<td>86.1</td>
</tr>
<tr>
<td>Not black</td>
<td>13</td>
<td>13.9</td>
</tr>
<tr>
<td><strong>Children</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>With children</td>
<td>48</td>
<td>51.1</td>
</tr>
<tr>
<td>Without children</td>
<td>46</td>
<td>48.9</td>
</tr>
<tr>
<td><strong>Civil status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Without partner</td>
<td>49</td>
<td>52.1</td>
</tr>
<tr>
<td>With partner</td>
<td>45</td>
<td>47.9</td>
</tr>
<tr>
<td><strong>Income</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Over 3 minimum wages</td>
<td>76</td>
<td>80.9</td>
</tr>
<tr>
<td>Up to 3 minimum wages</td>
<td>18</td>
<td>19.1</td>
</tr>
<tr>
<td><strong>Formation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Over 5 years</td>
<td>66</td>
<td>70.2</td>
</tr>
</tbody>
</table>
Up to 5 years 28 29.8

**Specialization**
- *Lato sensu* 90 95.7
- *Stricto sensu* 4 4.3

**Period working at the Institution**
- Up to 3 years 68 72.3
- Over 3 years 26 27.7

**Other labor relationships**
- Yes 76 80.9
- No 18 19.1

**Labor relationship**
- Outsourced 89 94.7
- Statutory 5 5.3

**Work satisfaction**
- Satisfied 78 83.0
- Unsatisfied 16 17.0

**Physical activities***
- No 51 54.3
- Yes 43 45.7

**Use of psychotropics**
- No 62 66.0
- Yes 32 34.0

**Frequent headaches**
- Yes 52 55.3
- No 42 44.7

**Frequent backaches**
- Yes 52 55.3
- No 42 44.7

**Anxiety**
- Yes 60 63.8
- No 34 36.2

**Arterial hypertension**
- No 82 87.2
- Yes 12 12.8

**Diabetes**
- No 90 95.7
- Yes 4 4.3

**Sleep pattern**
- 6 or more hours/night 68 72.3
- Up to 5 hours/night 26 27.7

*Prevailing minimum wage for 2021 (R$ 1,100.00)  ** Self-referred data.

When distributing the levels of each BMI dimension among the ICU nurses, it can be observed that 62.8% presented a high level of emotional exhaustion, 7.7% a moderate level and 9.6% a low level. In relation to depersonalization, 64.9% scored a high level, 27.7% a moderate level and 7.4% a low level. Regarding reduced professional accomplishment, 77.7% scored a high level, 19.1% moderate level and 3.2% low level (Table 2).
Table 2. Distribution of the Maslach Burnout Inventory (MBI) results among Intensive Care Nurses. Salvador, Bahia, Brazil, 2021, (N=94).

<table>
<thead>
<tr>
<th>DIMENSIONS</th>
<th>LEVELS N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low</td>
</tr>
<tr>
<td>Emotional Exhaustion (EE)</td>
<td>9 (9.6)</td>
</tr>
<tr>
<td>Depersonalization (DP)</td>
<td>7 (7.4)</td>
</tr>
<tr>
<td>Reduced Professional Accomplishment (PA)</td>
<td>3 (3.2)</td>
</tr>
</tbody>
</table>

In relation to the BS among intensive care nurses, it was identified that 43.6% presented suggestive signs for the diagnosis of this syndrome, in accordance with the Ramirez et al. criterion, considering the high existence of EE, DP and PA (13).

Upon analysis of the factors associated to the occurrence of the BS in intensive care nurses, it was possible to identify some variables which contribute towards these professionals falling ill, such as: age up to 38 years (PR: 2.38; CI 95%: 1.44-3.94); without partner (PR: 1.97; CI 95%: 1.17-3.32); dissatisfaction at work (PR: 1.78; CI 95%: 1.15-2.75); backache (PR: 3.33; CI 95%: 1.72 -6.42); professionals with anxiety (PR: 2.33; CI 95%: 1.22-4.46); sleep pattern with up to 05 hours per night (PR: 1.67; CI 95%: 1.08-2.59). As a protective factor against BS it was assessed that professionals that have children, have a lower probability of having BS (PR: 0.55; CI 95%: 0.33-0.90). (Table 3).

Table 3. Factors associated to the occurrence of the Burnout Syndrome in Intensive Care nurses. Salvador, Bahia, Brazil, 2021, (N=94).

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>N(%)</th>
<th>P(%)a</th>
<th>PRb (CI 95%)c</th>
<th>p-value d</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>20 (21.3)</td>
<td>32 (78)</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>74 (78.7)</td>
<td>9 (22)</td>
<td>0.96 (0.55 -1.66)</td>
<td>0.88</td>
</tr>
<tr>
<td>Age (average 38.7 years – DP± 7.6)</td>
<td></td>
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</tr>
<tr>
<td>Over 38 years</td>
<td>52 (55.3)</td>
<td>14 (34.1)</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>Up to 38 years</td>
<td>42 (44.7)</td>
<td>27 (65.9)</td>
<td>2.38 (1.44-3.94)</td>
<td>0.00</td>
</tr>
<tr>
<td>Race/color</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Black</td>
<td>13 (13.9)</td>
<td>7 (17.1)</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>Not black</td>
<td>81 (86.1)</td>
<td>34 (82.9)</td>
<td>0.77 (0.44-1.37)</td>
<td>0.42</td>
</tr>
<tr>
<td>Children</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>With children</td>
<td>46 (48.9)</td>
<td>26 (63.4)</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>Without children</td>
<td>48 (51.1)</td>
<td>15 (36.6)</td>
<td>0.55 (0.33-0.90)</td>
<td>0.01</td>
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<td>Civil status</td>
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<tr>
<td>Without partner</td>
<td>45 (47.9)</td>
<td>13 (31.7)</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>With partner</td>
<td>49 (52.1)</td>
<td>28 (31.7)</td>
<td>1.97 (1.17-3.32)</td>
<td>0.00</td>
</tr>
<tr>
<td>Income*</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Over 3 minimum wages</td>
<td>76 (80.9)</td>
<td>35 (85.4)</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>Up to 3 minimum wages</td>
<td>18 (19.1)</td>
<td>6 (14.6)</td>
<td>0.72 (0.36-1.45)</td>
<td>0.32</td>
</tr>
<tr>
<td>Formation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Over 5 years</td>
<td>66 (70.2)</td>
<td>26 (63.4)</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>Up to 5 years</td>
<td>28 (29.8)</td>
<td>15 (36.6)</td>
<td>1.36 (0.86 – 2.14)</td>
<td>0.20</td>
</tr>
</tbody>
</table>
DISCUSSION

BS is caused as the professional is exposed to various work pressures, death of patients, relationship with families, in addition to a high workload [14]. Studying the mental health of intensive care nurses is fundamental, in order to research what is contributing to this illness, with the purpose of preparing strategies for coping with the problem.

Regarding MBI, high percentages were verified for each category, whereby 62.8% indicated a high EE, 64.9% high DP and 77.7% high PA. Studies confirm these findings, such as a survey conducted with nurses that found a high percentage for the 03 dimensions of MBI. This data is similar to the result of another study conducted with intensive care nurses, which presented high EE (41%), but low DP and PA [15,16].
According to the distribution of evidence of BS, an index of 43.6% of nurses was verified, which can be considered as relatively high since it concerns the mental health of professionals. Another epidemiological study performed with nurses in China on burnout, a prevalence of 54% was assessed, a result similar to the present study (17).

The study reinforces the affection of the syndrome by younger workers. Professionals of ages up to 38 years were associated with BS (PR: 2.38; CI: 1.44 – 3.94), that is, being a worker in this age group is a risk factor for burnout. According to a research that evaluated BS in health professionals, there is a higher prevalence in young professionals, due to the insecurity caused by a lack of scientific basis and experience that are acquired over the years of experience, contributing to the feeling of fear, doubts and emotional exhaustion (18). Other authors add that excess demands also justifies BS in this age group (15).

Regarding having children, it was evidenced that it is a protective factor against BS (PR: 0.55; CI 95%: 0.33 – 0.90). Maternal or paternal bonds can encourage and be a strategy used for coping with stress (19). In relation to civil status, it was verified that professionals without partners are more likely to have BS (PR: 1.97; CI 95%: 1.17 – 3.32). Not having a partner is a risk factor for BS, and being married in a harmonious relationship is a protective factor (19).

This study identified that 26.8% of the nurses were dissatisfied with their work (PR: 1.78; CI 95%: 1.15 – 2.75). This dissatisfaction can be due to several factors, either structural, organizational or interpersonal relationship. In another study with nurses, it was analyzed that inadequate infrastructure, poor working conditions, high workload, dealing with severely ill patients, scarcity of supplies, conflicting relationship with colleagues, corroborates towards a relationship of dissatisfaction with work and consequently to have syndrome (20).

The high degree of satisfaction with work according to the present study (73.2%), may be a reflection of workers who feel threatened to report dissatisfaction with their work, even having been guaranteed anonymity in the survey, this is the result of insecurity. This insecurity causes professionals to naturalize what should be seen as dissatisfaction, that is, it modifies perception. Many workers work in a precarious way, in which the company seeks high productivity in a tireless and exploited way (21).

The individual sometimes does not think of himself as a good professional, which generates an excessive demand and as a result a negative self-evaluation. An intensive care unit is a sector of high complexity, in which professionals deal with critical patients who require time, affecting the workload and affecting the psychological state of these nurses (22). In this study, 80.5% of the interviewees frequently present backaches (PR: 3.33; CI 95%: 1.72 – 6.42), being, therefore, a factor associated with BS, since a high workload, excessive demand at work can contribute to this indicator. Another study showed that working in an unhealthy environment can cause physical symptoms as well as exacerbate pre-existing ones, such as body pain, interfering with health and contributing to BS (20).

This study verified that having anxiety is a risk factor for BS. A percentage of 80.5% of the interviewees have anxiety (PR: 2.33; CI 95%: 1.22 - 4.46). Through the study performed with nurses it was analyzed that anxiety is present in professionals who
present BS and is included in the worker who presents depersonalization, along with other symptoms\(^{(15)}\).

The results showed that 39% of nurses sleep up to 05 hours per night and that this unsatisfactory sleep pattern is a risk factor for BS (PR: 1.67; CI 95%: 1.08 – 2.59). The literature points out that among the various symptoms that nurses with BS can present, as relevant is the sleep disorder, since this can affect productivity at work and daily routine\(^{(22)}\). This irregular sleep can have repercussions on the work routine, since it is a worker who will have fatigue, be more prone to errors and also favor coming down with other illnesses.

The limitations of the study are related to its cross-sectional character, which makes it impossible to analyze the cause-and-effect relationship between the predictors in focus, since they are evaluated in a single period of time. However, it is believed that the results presented can serve as a subsidy and warning for mental health care of intensive care nurses through the implementation of preventive measures. Identifying the protective factors and the respective associated factors can corroborate towards the prevention of BS.

Despite the data having been collected during the Covid-19 pandemic, the five ICUs surveyed did not function as a reference for patients affected by the SARS-CoV-2 virus. Therefore, in the analysis of the results, the findings suggestive of BS were not considered as resulting from the assistance to these patients. However, in a global way, the possibility that the workers surveyed suffered impacts of the health emergency on their mental health is admitted, and this contributes to the limitations of this research.

**CONCLUSION**

The existence of a percentage considered high is observed of nurses with a diagnosis suggestive of the syndrome, in addition to identifying factors associated with the occurrence of BS, such as being a younger professional (age up to 38 years), not having a partner, being dissatisfied with work, having frequent backaches, anxiety and sleep pattern of up to 05 hours. On the other hand, having children was a protective factor for not developing BS.

This study encourages the preparation of future researches involving a more in-depth analysis of factors associated with BS in intensive care nurses, as well as the impact on their quality of life. It is essential that the institution offers a healthy work environment, in which the risk of work-related diseases is reduced, with the offer of psychological support. Working with prevention is the best way for these professionals not to become targets of the syndrome, since it causes losses in their work routine, affecting the institution and, above all, the patients.

**REFERENCES**


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