

## Burnout Syndrome in Intensive Physiotherapists Acting Against Covid-19

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## Abstract

**Introduction:** Burnout Syndrome (BS) is characterized by emotional exhaustion, reduced personal fulfillment at work and professional depersonalization. The incidence of psychological disorders has increased rapidly during the pandemic and affected many physical therapists who worked on the front lines against COVID-19. **Objective:** To verify the presence of SB in physical therapists who worked in the fight against COVID-19. **Methodology:** This is a study with a quantitative approach, descriptive character and cross-sectional. The sample consisted of 67 physical therapists who had worked in intensive care units (ICU) in Brazil against COVID-19. Statistical analysis was performed using the Statistical Package for the Social Sciences (SPSS) software, version 25®. A sociodemographic questionnaire, Maslach Burnout Inventory (MBI) was used to identify the syndrome, and the International Physical Activity Questionnaire (IPAQ) perceived stress scale to measure the level of physical activity. **Results:** Sixty-seven individuals with a mean age of 31 years participated in the study, being 32 men and 35 women. There was a high rate of individuals who felt emotional exhaustion, around 67.2%. In addition to noting that 94% of people entered the depersonalization phase. Of the sample, 28.4% report not practicing any physical activity, while 50.7% claim to practice sporadically and 20.9% claim to exercise daily. Already 29.9% say they are feeling nervous and stressed almost always and 20.9% say they almost never feel capable of solving difficult problems in life. An association was identified between the depersonalization domain of the MBI and alcohol consumption. **Conclusion:** Only 7, determined that most physiotherapists have demonstrated related symptoms, in which depersonalization and emotional exhaustion were more evident, a fact that my characterize the presence of the syndrome.

**Keywords:** physiotherapist, burnout, coronavirus

## I. INTRODUCTION

According to studies, work is one of the main causes of daily stress, isso mainly affects health, education and police professionals. Professionals often lack self-esteem, become unmotivated, and feel incapable and insufficient. Exaggerated occupational stress can cause mental breakdown, i.e. burnout syndrome.<sup>1</sup>

The burnout syndrome (BS) is characterized by great physical and emotional exhaustion that can lead to physical, emotional and mental fatigue, as well as an existential crisis, due to being emotionally overloaded, feeling incompetent and exhausted from having contact with other people. Individuals with this syndrome feel apathetic and indifferent, then depersonalization and cynicism occur, in addition to presenting a discouraged and detached attitude towards their work, even wanting to quit.<sup>2</sup>

The prevalence of BS has been growing, often related to competitive, critical, and demanding work environments, such as intensive care units (ICUs), which are considered a stressful place for patients, family members, and industry professionals. It is important to emphasize that health professionals work directly with fragile patients in situations involving emergencies and even deaths, to think of a hostile occupational environment.<sup>3</sup>

Physiotherapists are exposed to this excessive tension with frequent emergency conditions, countless risk situations and great demand for not admitting mistakes.<sup>4</sup> But many times the professional does not receive adequate financial return and social recognition, so the physiotherapist tries to be super productive and becomes vulnerable, exhausting himself, suffering psychologically and generating mental illness.<sup>5</sup>

In March 2020, the World Health Organization (WHO) announced that the corona virus reached the level of a pandemic, after 1 year and a half, Brazil already recorded about 21 million cases and 585 thousand deaths from the COVID-19 virus. Health services in Brazil, with the main public system (SUS) overcrowded due to the increase in occurrences of the disease.<sup>6</sup> However, the repercussions from the virus were not restricted to the limited impact on patients treated by the disease, but also affected health workers unfavorably, especially in relation to the health mental. Thus, the main effects of psychological concern among health professionals

include long working hours, sleep disorder, debilitating fatigue, risk of contracting infections and putting your family exposed to a life-threatening condition. In that context, miscellaneous health professionals reported a diagnosis of burnout syndrome. However, it is notorious to highlight an important precaution, given the size at which mental worries and stress can be restricted to the period of exhibition to the virus, despite this professional fatigue has results of extensive duration.<sup>7</sup>

The shortage of personal protective equipment (PPE) is positively aggregated to the incidence of burnout. Likewise, in a study carried out in Australia in 2020, it was highlighted that frontline workers meet little frightened in relation to other colleagues, respective to greater freedom availability of tests and EPIS at the workplace. The scarcity in the respective place of the structure of the work environment and of manpower to assist actions affects hospitals and professionals working long and tiring workdays, with these remaining cases also adding to the exhaustion of professionals.<sup>8</sup>

During the pandemic, many physiotherapists were relocated to ICUs, due to the high demand, these professionals were at the forefront of advanced respiratory care, but as this infection had never occurred before, it brought a new challenge for workers and researchers in the area. Treatment protocols have been made based on the experience that other countries also had when facing this spread of the SARS-CoV-2 virus. The worsening of the disease is characterized with hypoxemia resulting from different processes that affect ventilation and perfusion.<sup>3</sup>

In this way, it is important to highlight the incidence of mental suffering and evolution to burnout in health professionals, emphasizing their greater intensity in the time of the pandemic, considering that in this way it is possible to develop the discussion and the creation of prevention measures and aid psychological health workers, mitigating the effects caused to these individuals and resulting in higher quality of service provided by these people.<sup>7</sup> Thus, the present study aimed to verify the prevalence of Burnout Syndrome in physiotherapists who acted in the face of COVID-19.

## II. METHODS

This is a study with a quantitative, retrospective, descriptive and cross-sectional approach. Carried out with 67 physiotherapists who worked in the adult ICU during the COVID 19 pandemic and Actramon the front line the year 2020 and 2021 at the regional level, the data collection period was from August to October 2022. He was approved by the Ethics and Research Committee of the Educative Association of Brazil (SOEBRAS), with substantiated opinion number n°5,555,364, and all interviewees signed the Free and Informed Consent Form Online (TCLE-Online).

### **Eligibility criteria**

As inclusion criteria stand out: Physical therapists who worked in the ICU during the COVID 19 pandemic and Actramon the front line the year 2020 and 2021 of both sexes, who agreed to participate in the research and who had access to the internet. Those who had already been diagnosed with BS before the year 2020 and individuals who did not respond to the entire questionnaire were excluded.

### **Study protocol**

For data collection, the “snowball” method was used in this sense, the researchers involved in the study sent the invitation to participate in the research together with the form link to people on their social networks (Facebook, Instagram and WhatsApp) and, they were asked to send the referred link successively to other physiotherapists. Statistical analysis was performed using the SPSS software, version 25®. The significance level established for all analyzes was 5%. Categorical variables were described through their simple and relative frequencies. Data normality was verified using the Kolmogorov-Smirnov test. To assess the association between Burnout syndrome and level of physical activity, alcohol intake and feelings of exhaustion and emotional exhaustion, the chi-square test was used.

### **Collection instruments**

#### **Sociodemographic questionnaire**

A questionnaire prepared by the researchers was used, containing dichotomous and multiple-choice questions about sociodemographic data (name, age, gender, ethnicity, profession, education, average salary and whether you practice physical activity).

#### **Maslach Burnout Inventory (MBI)**

Considered the main tool created to assess the burnout syndrome. It was prepared by Christina Maslach and Susan Jackson in 1978, validated by MR Tamayo, and is currently widely used to check how people feel in the workplace. It is worth remembering that it is easy to apply and very fast. The concept of BS was characterized from the MBI questionnaire, as the most accepted diagnosis today is when it results from the Maslach questionnaire. The contemporary models contain 22 closed questions related to the frequency with which professionals experience certain conditions in the work environment. It presents a Likert-type scale, with an ordinal scale ranging from 1 to 7, being: 1= Never, 2= A few times a year, 3= Once a month, 4= A few times a month, 5= Once a week, 6= A few times a week, 7= Every day.<sup>8</sup>

#### **ANDperceived stress scale**

Developed by Cohen in 1983, translated and validated in Brazil in 2007 and later in 2010 with both 14 and 10 questions. The instrument evaluates the perception of stress, it is composed of 14 questions that ask about your feelings and thoughts. In each case, the subject will be asked to indicate how much often have been feeling a certain way. The best approach is to answer each question reasonably quickly. Questions with answer options using a Likert scale ranging from 0 (never) to 4 (very often) in which individuals can perceive and evaluate stressful situations in their lives.<sup>9</sup>

#### **International Physical Activity Questionnaire(IPAQ)**

ANDa questionnaire which identifies the level of physical activity of the individual and which makes it possible to determine the weekly period used in physical exercises of moderate and vigorous intensity, in several circumstances day to day, such as: work, transport, tasks domestic and leisure, in addition to the period spent on passive tasks performed in a sitting position. The short version of the IPAQ is organized by seven open questions and its information makes it possible to assume the time spent, in the week, in different perspectives of physical activity (walking and physical efforts of moderate and vigorous intensity) and physical inactivity (sitting position).<sup>10</sup>

### **III. Results**

67 individuals participated in the study, 32 men and 35 women aged between 22 and 50 years with an average age of 31 years, where about 47.8% receive between 1 thousand and 3 thousand reais of salary per month and only 4, 5% receive more than 10 thousand reais per month. On average, 41% of the people interviewed live in their own home and another 41% live in a rented house, in addition, 59.7% of the professionals answered that they have at least one vehicle, however 25.4% reported not having their own vehicle. With regard to the supply of protective equipment at work, Personal Protective Equipment (PPE) 49.3% report being adequate, while 46.3% report a sporadic lack and 4.5% claim inadequate supply. When addressing lifestyle, 58.2% report having a good diet, while 13.4% claim not to have it and 28.4% consider eating well sometimes. Still, 28.4% reported not drinking alcohol, 68.7% sporadic drinking and 3.0% drinking alcohol every day. With regard to smoking, 80.6% of the sample did not smoke, while 11.9% smoked sporadically and 7.5% smoked daily.

Regarding the practice of physical activity, 28.4% reported not practicing any physical activity, while 50.7% stated that they practiced sporadically and 20.9% stated that they exercise daily. The IPAQ Questionnaire

instrument was used to measure this level of physical activity, in which it was verified that 62.7% of people were very active and 10.4% were sedentary (Table 1).

**Table 1** Level of physical activity according to the IPAQ

	Frequency	Percentage (%)
Very active	42	62.7%
Active	9	13.5%
Irregularly active	9	13.4%
Sedentary	7	10.4%
<b>Total</b>	<b>67</b>	<b>100.0%</b>

To assess stress, the Perceived Stress scale was used, noting that 26.9% said they almost always felt sad about something that had happened unexpectedly. Of the total respondents, 23.9% almost always feel unable to control the important things in their lives. Already 29.9% feel nervous and stressed almost always and 20.9% reported almost never feeling able to solve life's difficult problems. Still on the instrument, 23.9% answered feeling that things almost never happen according to their will, 23.9% almost never manage to control the irritations in their life and 26.9% highlighted that they almost always feel irritated by that things that happen are out of your control. Already 32.8% of the total reported that they almost always find themselves thinking about the things they need to do and 20.

When assessing the presence of BS, 7.5% of the sample reports having been diagnosed with the syndrome by a physician, considering the use of the MBI questionnaire, a high rate of individuals who feel emotional exhaustion was verified, 67.2% and 94% entered the depersonalization phase (Table 2).

**Table 2** analysis of mbi domains

Variables	n	%
<b>Emotional exhaustion</b>		
Low	2	3.0%
Moderate	20	29.9%
High	45	67.2%
<b>Depersonalization</b>		
Moderate	4	6.0%
High	63	94.0%
<b>Personal achievement</b>		
Low	4	6.0%
Moderate	21	31.3%
High	42	62.7%

When a correlation was made between the MBI domains and the level of physical activity, no significant association was identified, but when there was a correlation between the MBI domain depersonalization and alcohol intake, a positive association was found ( $p=0.02$ ).

#### IV. Discussion

In the present study, the number of female subjects was greater, 52.2% and 47.8% of men. The average age was 31 years, as in a survey<sup>11</sup> that investigated BS in physiotherapy professionals in public hospitals in the

city of Recife-PE, where the number of respondents were women corresponding to 74.4% with an average age aged 35 years and another survey<sup>12</sup> that carried out a study on BS in intensive care physiotherapists in the city of Vitória da Conquista-BA found 56% females with a mean age of 33 years.

It was noticed that in relation to emotional exhaustion in the current study, as well as<sup>11</sup> when investigating BS in physiotherapy professionals in public hospitals in the city of Recife-PE, also using the Maslach Burnout Inventory (MIB), it was identified that 50% of the population had a level high level of exhaustion, while in the other<sup>12</sup> that carried out a study on BS in intensive care physiotherapists in the city of Vitória da Conquista-BA, with another model of questionnaire that also investigates BS, a higher percentage of individuals with low exhaustion was noticed.

The characteristics found in the current research are similar to the results obtained by a research with 160 health professionals, and it can verify high levels of emotional exhaustion and depersonalization and low professional fulfillment. These workers expressed dissatisfaction with the work environment in addition to the lack of participation in decision-making, thus causing emotional exhaustion.<sup>13</sup>

Regarding depersonalization, two studies found low rates of public depersonalization<sup>11,12</sup> however, in this current research, a considerably high rate of depersonalization was observed. With regard to personal fulfillment, both the current study and the studies<sup>11,12</sup> analyzed reached the conclusion of high rates of personal fulfillment, ranging from 62% to 76% of people who responded to have a high rate of personal fulfillment.

Of the individuals studied, only 7.5% declared having been diagnosed with the syndrome by a physician. 67.2% had a high level of emotional exhaustion, 94% perceived depersonalization and only 62% of the sample had a relatively high level of personal fulfillment.

There is the possibility of an association between the depersonalization domain of the MBI and alcohol intake, however, in another study<sup>14</sup> they noticed that in the research BS was more frequent in Physical Therapists who had temporary contracts (72% (N=18)) than among those who had an effective employment contract (34.78% (N=8)), among those who did not regularly take vacations (75% (N=12)) than among those who did (43.75% (N=14)) and among those who had another job (96.2% (N=40)) than among those who did not (3.8% (N=1)). Among the professionals working in the ICUs, a higher frequency of BS was observed (62.96% (N=17)) than among those working in the wards (53.8% (N=7)) or in the outpatient clinic (25% (N=2)).

In a study<sup>15</sup> carried out in two ICU's, it was possible to verify that most of the sample was in the initial stage of Burnout, considering that the ICU's are sectors that care for patients in serious conditions, assisted uninterruptedly, where the professional is constantly dealing with with critical life and death issues. In the current study, 20.9% say they almost never feel able to successfully solve life's difficult problems, in addition to 29.9% being almost always stressed and 23.9% almost always feeling unable to control the important things in their lives. On the other hand, in the research on work-related damage to health of physiotherapists who work in intensive care<sup>16</sup> where 76.56% of physiotherapists reported having experienced some occupational harm. And in the study<sup>17</sup> that investigates Occupational Stress in Health Professionals in the Intensive Care Unit Ambience, 29% of the participants met the criteria to classify it in the stress phase. In practice, this means that most professionals have a low perception of the demands placed on them. And in the survey where he evaluates the quality of life, mental health stress of health professionals in intensive care units concluded that this change in the perception of quality of life may be related to the fact that most of these professionals have more than one employment relationship, working longer hours than recommended, contributing to their physical and emotional exhaustion.<sup>15</sup>

In the current research, no association was identified between the MBI domains and the level of physical activity. 28.4% report not practicing any physical activity, while 50.7% claim to practice sporadically and 20.9% claim to exercise daily. However, in the study of<sup>12</sup> that carried out a study on BS in intensive care



physiotherapists, the largest share of physiotherapists practices physical activity (60%). And one researched on Burnout Syndrome in Physiotherapy Trainees and it was found that students who practice physical or leisure activity have greater Professional Efficacy, resulting in a better motivation to carry out their study and internship routine.<sup>18</sup>

## V. Conclusion

In the studied sample, there was a low prevalence of individuals diagnosed with Burnout Syndrome by a physician, but not all investigated physiotherapists had access to assistance and medical consultation with the intention of verifying the BS, in the sample the MBI questionnaire was used.

There is a scarcity in the literature on BS affecting physiotherapists in the ICU and even involving COVID-19, making it difficult to compare with other studies, being a limiting factor. There is a need for further studies to establish associations between sociodemographic variables and the syndrome itself. Acknowledgments None. Funding None. Conflicts of interest Author declares that there are no conflicts of interest.

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