



(REVIEW ARTICLE)



Occupational burnout syndrome in physical therapists before and during covid 19: A systematic review

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Abstract

Introduction: The emergence of COVID-19, a viral pandemic, has significantly affected people at , many levels of their lives and especially their psychological state, an important factor in the emergence of Occupational Burnout Syndrome. Burnout syndrome in healthcare professionals is a global issue that affects both their health and performance and therefore the effective exercise of their function.

Purpose: The purpose of this research is to analyze the occurrence rate of Occupational Burnout Syndrome (OBS) in physical therapists before and during the onset of COVID-19 and their comparison.

Method: The international databases PubMed and Google scholar were searched in the English language with keywords “burnout syndrome AND physiotherapist AND COVID-19”. The article search was performed from October 2022 to December 2022. 11 open access journal research articles published from 2017 to 2022 were selected. The data collected were presented in the form of texts and tables using of Excel.

Results: Eleven clinical studies were included in this review that applied a total of 1750 physical therapists. Of this sample, 861 were physical therapists in clinical studies conducted before COVID-19, while the remaining 889 were physical therapists in clinical studies that took into account the existence of COVID-19. It was observed that the rate of change in occurrence of SEE was 31.18%, with the SEE rate being increased in the second sample mentioned above.

Conclusions: No other systematic review comparing specific data between physical therapists has been observed. However, since the clinical studies used for the period after the onset of COVID-19 are numerically fewer compared to those before the outbreak, and because only freely accessible articles were used, we cannot rely exclusively on the results of specific review.

Keywords: Burnout; Physical Therapists; Physical Therapy; COVID-19

1. Introduction

On December 31, 2019, the World Health Organization (WHO) was informed of the occurrence of pneumonia of unknown etiology in Wuhan, China. (Hasöksüz et al., 2020)

On January 30, 2020, the WHO announced that this type of pneumonia was a severe acute respiratory syndrome, the Corona virus 2 (SARS-COV-2), which on February 11, 2020 was declared a pandemic and named the Corona Virus Disease-2019 (Coronavirus Disease-2019=COVID-19). (Wang et al. , 2020) With its escalation pandemic, healthcare workers, especially those working in emergency and with patients suffering from COVID-19, faced high levels of stress,

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heavy workload, fatigue, lack of sleep, constant exposure to pain, patient death, i.e. debilitating factors that predispose to the occurrence of Occupational Burnout Syndrome. (Sharifi et al., 2020)

<<Occupational burnout syndrome according to one of the first more extensive characterizations by Maslach and Jackson, is the result of chronic stress (in the workplace) that has not been successfully treated. A later definition based on the MBI questionnaire (Maslach Burnout Inventory = Maslach Burnout Inventory questionnaire) states that defining elements of the syndrome are fatigue, depersonalization and reduced satisfaction with performance.>> (Weber et al., 2000). According to research, the probability of its occurrence burnout syndrome is increased in the health professions, especially in the field of physical therapy. It is considered that it occurs at least once during the career of the physical therapist, to him or to his colleague, which has a negative impact on the effective performance of his work. (Rogan et al., 2019) The existence of the syndrome and the degree of its possible occurrence is calculated with Maslach Burnout Inventory (MBI) questionnaire, as well as its variants, and is divided into three domains: emotional exhaustion, depersonalization, and personal fulfillment.

Statistical data collected from a survey of US workers in January 2020 before the certification of the existence of COVID and in February 2021 (figure 1) showed that the percentage of people who had feelings burnout was higher in February 2021. (John Elflein, 2021). Carod-Artal & Vázquez-Cabrera, (2013) argued that the rate of burnout worldwide ranges from 2.4% to 72%. Among thirty-seven European countries, 38% (N=14) could recognize SES as an occupational disease, while only one of them included it among them. (Canu et al., 2019)

The purpose of this research is to compare the percentage of physiotherapists who experienced Burnout Syndrome (OBS) in a specific period of time before the outbreak of COVID-19 (2017-2019), with the percentage of those who experienced Burnout Syndrome since the onset of the virus and then (2020-2022).

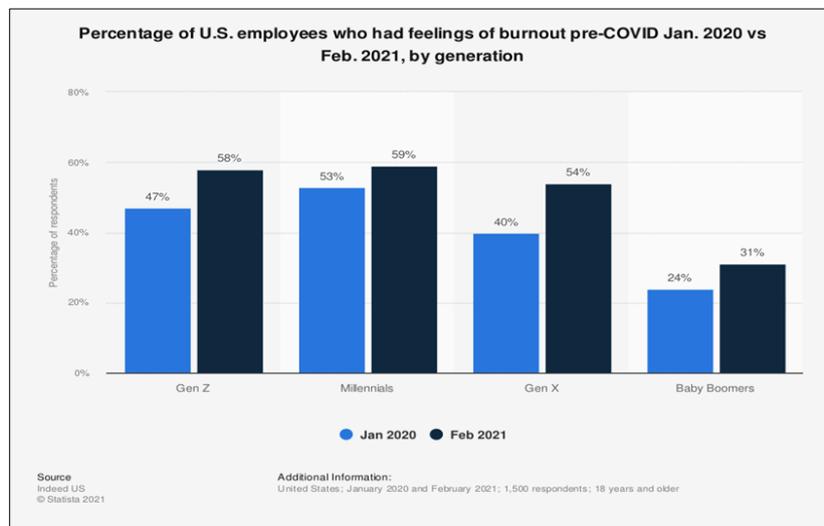


Figure 1 Percentage of US workers who felt burnout before COVID-19 Jan 2020 vs Feb 2021, by generation. (John Elflein, 2021)

1.1. Data Collection Method

For this specific systematic review, a search was conducted in the Google Scholar and Pub-Med search databases, during the period October 2022- December 2022. The search for articles was carried out using selected and different combinations (Boolean operators) in the English terminology with the keywords burnout syndrome AND physiotherapist AND COVID-19. Filters for open access clinical studies published from 2017 to 2022 were applied to select the articles used.

1.2. Article Selection Criteria

The selection criteria for the articles selected for the review focused on clinical studies conducted between January 2017 and December 2022. The articles searched had to specifically refer to Burnout Syndrome and its occurrence in physical therapists. Articles that did not have free access were rejected. In addition, articles that did not support the search criteria in their title and abstract were rejected.

1.3. Participants

The population on which the systematic review was focused was exclusively physiotherapists working before and after the onset of COVID-19, in the period 2017-2022.

1.4. Method of Evaluation and Synthesis of Studies

In order to evaluate the articles that were used, a full text check was carried out. The analysis of the systematic review was performed following the recommendations of PRISMA (Preferred Reporting Items for Systematic Reviews and Meta Analyses) (Figure 1). In addition, the data of the review are presented in Table 1, created using the Excel program, and concern the authors of the selected studies, their title, their method and their findings.

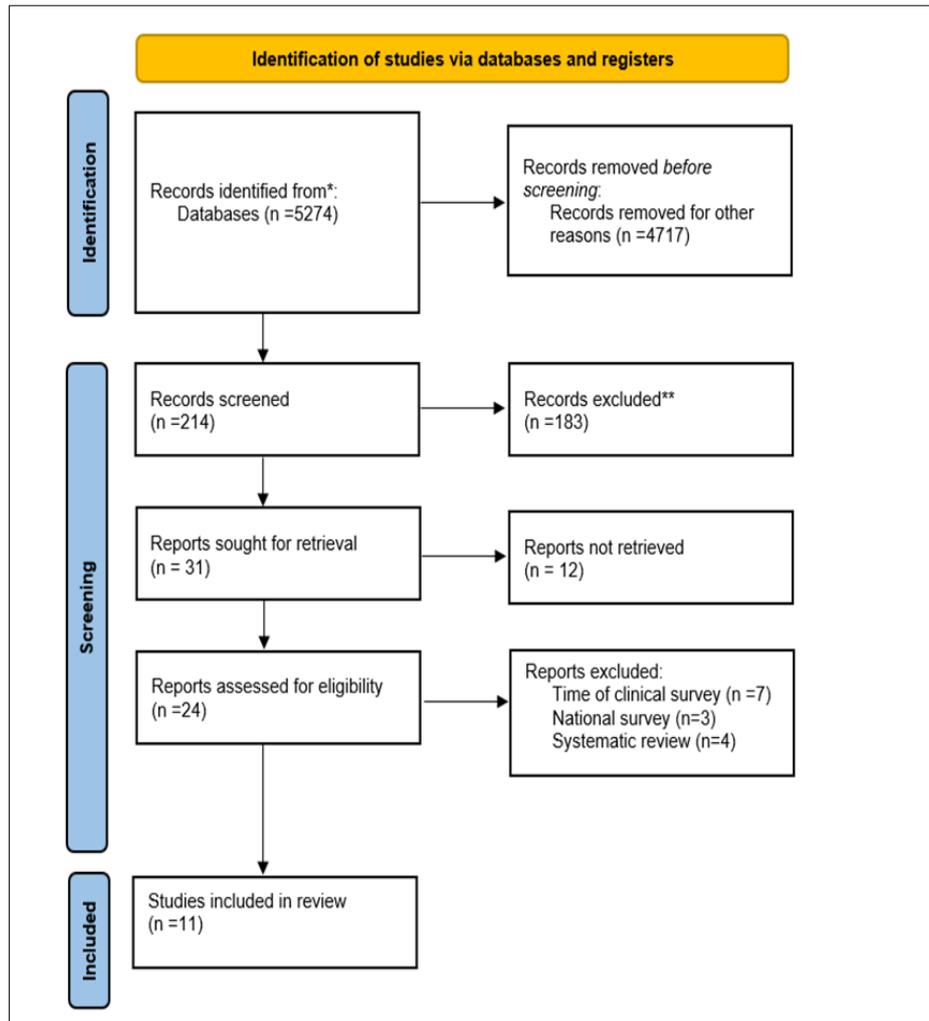


Figure 2 Preferred Reporting Items for Systematic Reviews and Meta Analyses (PRISMA) flow diagram of the study.

2. Results

In the search results, the titles, abstracts and keywords of the articles were evaluated in the first stage, and then the content of the entire text was evaluated. From all the sources presented, 11 clinical studies were selected and used that met the research criteria. The total sample was 1750 physical therapists. Of this total, 861 were physical therapists in clinical studies that took place before the onset of COVID-19 and the remaining 889, physical therapists in clinical studies conducted during the period of COVID-19. The characteristics of the sources included in this review are presented below (Table 2) and then analyzed.

Table 1 Data of the systematic review

Authors	Title	Method	Findings
Owczarek et al. 2017	Burnout syndrome among physiotherapists	Research to analyze Occupational Burnout Syndrome among physical therapists, its association with demographic factors and other conditions	42.19% (N=89) of the sample showed high levels of the syndrome, of which the highest were presented by women.
Bruschini et al. 2018	Burnout and work-related stress in Italian rehabilitation professionals: A comparison of physiotherapists, speech therapists and occupational therapists	Research to find the level of Burnout Syndrome among these three types of health professionals	15.7% (N=33) of them presented the syndrome and that the subscales control, support from management, relationship, role, change, of the HSE, were associated with its occurrence.
Santos et al. 2018	Síndrome de Burnout em fisioterapeutas de um hospital público de alta complexidade da cidade do Recife, Pernambuco.	Research to examine the occurrence of Occupational Burnout Syndrome and its correlation with demographic and work variables	54.2% (N=26) of the participants showed Occupational Burnout Syndrome and correlations were shown between the number of daily physical therapy sessions, mental exhaustion and personal fulfillment, as well as age with depersonalization.
Camelier et al. 2018	Frequência da Síndrome de Burnout em uma amostra de fisioterapeutas intensivistas	Research to calculate the incidence rate of Occupational Burnout Syndrome	31.1% of the sample (N=14) presented the Occupational Burnout Syndrome. Specifically, 20% (N=9) of the physical therapists showed high levels of emotional exhaustion, 2.2% (N=1) a high level of depersonalization and 13.3% (N=6) low levels of professional integration.
Seixas et al. 2019	The Prevalence of Burnout in Portuguese Physiotherapists	Survey to estimate the prevalence of Occupational Burnout Syndrome and its association with demographic and occupational variables in physical therapists working in 12 private clinics in the northern region of Portugal.	12.67% (N=9) was the rate of Professional Burnout and has a direct relationship with the demographic and work variables.
Cunha et al. 2018	Burnout Syndrome: the Reality of ICU Physiotherapists.	Survey to assess the profile and prevalence of Burnout Syndrome among public hospital physical therapists working in the intensive care unit (ICU) compared to those working in pediatric and neonatal units.	47.89% (N=34) of the sample showed the syndrome, where 48.72% (N=18) of them were physical therapists working at the M.E.Th. and 47.06% (N=16) in the pediatric and neonatal units.
Bejer et al. 2019	Burnout syndrome in physiotherapists working in the Podkarpackie province in Poland	Research to find the prevalence of Burnout Syndrome and determinants contributing to its occurrence	36.65% (N=32) occurrence of the syndrome, with a particularly low sense of personal fulfillment and that its correlation with gender, education, workplace, professional activity,

			experience and financial status was significant.
Corrado et al. 2020	Burnout syndrome among Italian physiotherapists: a cross-sectional study	Research to study the incidence and severity of Burnout Syndrome in Italian physical therapists, the association with specific individual and social factors and the analysis of measures prevention of its occurrence.	45.5% (N=54) of the sample suffered or displayed a high level of possible occurrence of Occupational Burnout Syndrome. Male and younger physiotherapists were more likely to develop increased levels of depersonalisation, compared to females and their more experienced colleagues
Carmona-Barrientos et al. 2020	Occupational stress and burnout among physiotherapists: a cross-sectional survey in Cadiz (Spain)	Research to calculate the level of Professional Burnout as well as professional stress	average burnout was set at 48.09% (N=130) and it was found that levels of occupational stress are significantly correlated with levels of emotional burnout and depersonalization of Burnout Syndrome.
Pniak et al. 2021	Occupational burnout among active physiotherapists working in clinical hospitals during the COVID-19 pandemic in south-eastern Poland	Research to assess the risk of occupational burnout syndrome in physical therapists working in clinics during the COVID-19 pandemic	an average of 56.22% (N=60) of the sample showed high rates of Occupational Burnout Syndrome, especially among physical therapists who had been working in the profession for more than 20 years.
Jácome et al. 2021	Burnout in Portuguese physiotherapists during COVID-19 pandemic	Research to report parameters that may contribute to the occurrence of Occupational Burnout Syndrome and its presentation rates during COVID-19	36.33% (N=186) of the sample experienced Burnout Syndrome during COVID-19 and in particular 40% (N=74) of them associated it with personal and work burnout, while 25% (N=47) with the patients.

3. Literature review

The clinical study by Owczarek et al., (2017) was conducted in Poland with a sample of 212 individuals and aimed to analyze Burnout Syndrome among physical therapists and its correlation with demographic factors and other conditions. The study used a questionnaire created by Owczarek and Olezyk on people aged 20 to 56 with up to 30 years of work experience. The results of the research showed that 42.19% (N=89) of the sample showed high levels of the syndrome, of which the highest were presented by women.

On the other hand, in the clinical study by Cunha et al., (2018) conducted in Recife, Brazil, 71 physical therapists took part. The aim of the research was to assess the profile and prevalence of Burnout Syndrome among public hospital physical therapists working in the intensive care unit (ICU) compared to those working in pediatric and neonatal units. The study was carried out using a socio-demographic questionnaire, stressors questionnaire as well as the Maslach Burnout Inventory (MBI) questionnaire. The results showed that a total of 47.89% (N=34) of the sample showed the syndrome, where 48.72% (N=18) of them were physical therapists working at the Medical School. and 47.06% (N=16) in the pediatric and neonatal units.

In the research by Bejer et al., (2019), carried out in Poland, the sample consisted of 86 physical therapists. The aim of this particular study was to find the prevalence of Burnout Syndrome and determining factors that contribute to its occurrence such as gender, age, education, workplace, professional activity, experience and financial status. The MBI questionnaire was used to measure the syndrome. From the results of the study an average of 36.65% (N=32) occurrence of the syndrome was observed, with a particularly low sense of personal fulfillment, and that its correlation with gender, education, workplace, professional activity, experience and economic status was significant.

In addition, the clinical study by Bruschini et al., (2018) was conducted in Italy and its sample consisted of 391 health professionals who were physiotherapists, speech therapists and occupational therapists. From this sample, 210 were

physical therapists. Its purpose research was to find the level of Burnout Syndrome among these three types of health professionals, using the Italian version of the MBI questionnaire and the HSE (Health and Safety Executive) management standard index tool. The results concerning physical therapists showed that 15.7% (N=33) of them presented a high risk of the syndrome and that the subscales of the HSE: control, support from management, relationship, role and change, were associated with its occurrence.

The clinical study by Santos et al., (2018) was carried out at the Governor Paolo Guerra Rehabilitation Hospital and involved 48 physical therapists, most of whom (56.3%, N=27) worked in the ICU. The purpose of this specific research was to examine the occurrence of Occupational Burnout Syndrome and its correlation with demographic and work variables. Physiotherapists with a history of psychological problems were excluded from the study, while those who participated were given 2 questionnaires, the socio-demographic & professional and the MBI questionnaire. The results of the research showed that 54.2% (N=26) of the participants showed Occupational Burnout Syndrome and there were correlations between the number of daily physical therapy sessions, mental exhaustion and personal fulfillment, as well as age and depersonalization.

Regarding the research of Camelier et al., (2018) a sample of 45 intensivists physical therapists, in Salvador (Bahia, Brazil), was included, with the aim of calculating the incidence rate of Occupational Burnout Syndrome. In the study, the MBI questionnaire was used to assess the syndrome and its dimensions, as well as the Symptom Inventory form to assess the frequency of occurrence of certain symptoms in the daily life of the participants. The conclusion of the research was that 31.1% (N=14) of the sample presented Occupational Burnout Syndrome. Specifically, 20% (N=9) of the physical therapists showed high levels of emotional exhaustion, 2.2% (N=1) a high level of depersonalization and 13.3% (N=6) low levels of professional integration.

In addition, in the clinical study by Seixas et al., (2019) 71 physiotherapists participated, of which 88.7% (N= 63) were women and 11.3% (N= 8) were men. In this research, the prevalence of Burnout Syndrome and its association with demographic and occupational variables were studied in physical therapists working in 12 private clinics in the northern region of Portugal. For data collection, a specially designed questionnaire was used regarding gender, age, work experience, daily working hours and number of patients undertaken by the participants. In addition, the Shirom-Melamed tool for measuring Occupational Burnout was used, which focuses on the assessment of exhaustion, i.e. the depletion of energy resources, regardless of the professional context. The results of the research showed that the rate of Professional Burnout was 12.67% (N=9) and has a direct relationship with the demographic and work variables.

Also, in the clinical study by Corrado et al., (2019) 118 full-time Italian physical therapists who had a degree in physiotherapy or an equivalent certificate took part. The purpose of this research was to study the incidence and severity of Burnout Syndrome in Italian physical therapists, its correlation with specific individual and social factors, as well as the analysis of measures to prevent its occurrence. The MBI questionnaire was used in the research. The results showed that 45.5%(N=54) of the sample suffered from or showed a high level of possible occurrence of Burnout Syndrome. Male and younger physical therapists were more predisposed to develop increased levels of depersonalization, compared to females and their more experienced colleagues, respectively.

On the other hand, the clinical study by Carmona-Barrientos et al., (2020) was carried out in Cádiz, Spain and involved 272 physical therapists. The specific research aimed to calculate the level of Professional Burnout as well as professional stress. The results showed that 30.51% (N=83) of physical therapists suffered from a high level of occupational stress and 21.64% (N=46) experienced high levels of emotional exhaustion. Finally, the average of burnout was set at 48.09% (N=130) and it was found that the levels of occupational stress are significantly correlated with the levels of emotional exhaustion and depersonalization of Burnout Syndrome.

Regarding the clinical study by Pniak et al., (2021), which took place between March 20 and May 3, 2020 in hospitals in south-eastern Poland, 106 physiotherapists took part. The aim of this study was to assess the risk of occupational burnout syndrome in physical therapists working in clinics during the COVID-19 pandemic. The MBI questionnaire in Polish was used for the research. The results of the study showed that on average 56.22% (N=60) of the sample showed high rates of Occupational Burnout Syndrome and especially physical therapists who worked in the profession for more than 20 years.

Finally, in the research by Jácome et al., (2021), carried out online in Portugal, 511 physical therapists who mainly worked in private practices and wards took part. The purpose of this study was to report parameters that may contribute to the occurrence of Occupational Burnout Syndrome and its presentation rates during COVID-19. The Copenhagen Burnout Inventory questionnaire was used in the research (Inventory), scales for depression, personal satisfaction, anxiety and resilience. The results of the survey showed that 36.33% (N=186) of the sample experienced

Burnout Syndrome during the COVID-19 and in particular 40% (N=74) of them associated it with personal and work burnout, while 25% (N=47) with patients.

The table below (Table 2) shows the percentage total occurrence of Burnout Syndrome, found based on the specific surveys, for the period before the onset and after the onset of COVID-19.

Table 2 Results of studies conducted before and since the onset of COVID-19

Studies before the emergence of covid-19	Year	Number of participants (v)	Percentage result
Owczarek et al.	2017	212	42.19%
Bruschini et al	2018	210	15,7%
Santos et al	2018	48	54.2%
Camelier et al	2018	45	31.1%
Seixas et al	2019	71	12.67%
Cunha et al	2018	71	47.89%
Bejer et al	2019	86	36.65%
Corrado et al	2019	118	45.5%
ΣΥΝΟΛΟ		861	35.74%
Studies after the emergence of covid-19	Year	Number of participants (v)	Percentage result
Carmona-Barrientos et al	2020	272	48.09%
Pniak et al	2021	106	56.22%
Jácome et al	2021	511	36.33%
TOTAL		889	46.88%

4. Discussion

In the present systematic review, 11 studies were found which supported the topic of its analysis. Eight of these studies concerned the occurrence of Burnout Syndrome before the knowledge of the existence of the coronavirus and three of them were carried out after its outbreak. Most used the MBI questionnaire to measure SB. In addition, many of the studies studied demographic, social, psychological, work, personal and genetic factors which are associated with it.

5. Conclusions

The data showed that the occurrence rate of Occupational Burnout Syndrome among physical therapists after the onset of COVID-19 was increased compared to the rate before its onset. In particular, the percentage change of these two results was 31.18%. This percentage was observed without including the difference of people between the two cases, which is calculated at 28 people. There are no other relevant studies or reviews that compare the presence of SB in physical therapists before the existence of COVID-19 and after its announcement in order to strengthen the results of this research. In addition, there are not enough studies analyzing the occurrence of the syndrome in physical therapists after COVID-19 to be used as study material for data comparison. Therefore, it is considered important that new researches emerge which will be able to provide more information, so that we can be led to valid data on the existence or not of an increase in the occurrence of Occupational Burnout Syndrome in physical therapists with the onset of COVID-19.

5.1. Suggestions

- To further investigate environmental and psychological factors that influence the onset and severity of the syndrome.
- Facilitate regular staff-physiotherapist conferences to discuss complex patient situations.
- Attend counseling programs for information and prevention.

- To apply self-treatment programs with relaxation techniques, breathing and therapeutic exercises on a daily basis before getting up in the morning and before going to bed at night.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

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