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Physical exhaustion of nursing professionals in the COVID-19 combat

ABSTRACT | Objective: To investigate the factors associated with the physical exhaustion of nursing professionals in the fight against COVID-19. Method: This is an integrative review. The search for articles was carried out; with delimitation in the last 5 years; in Portuguese, English and Spanish; available in full. On the following data platforms: BDNF; LILACS; MEDLINE/VHL; PUBMED; Science Direct and SciELO. Results: The data were organized and presented in figures and tables. Of the 76 studies found, 2 were available from BDNF; 2 at LILACS; 3 at MEDLINE/VHL; 5 at PUBMED; 61 at Science Direct and 3 at SciELO; however, after reading, only those that met the inclusion and exclusion criteria described in the methodology remained, 8 studies. Conclusion: The elaborated review provided the identification of factors associated with the physical and psychological exhaustion of nursing professionals to combat COVID-19; and often related to symptoms of depression, anxiety, insomnia and distress.

Keywords: Burnout, Professional; Nurse practitioners; Coronavirus Infections.

RESUMEN | Objetivo: Investigar los factores asociados al agotamiento físico de los profesionales de enfermería en la lucha contra el COVID-19. Método: Esta es una revisión integradora. Se realizó la búsqueda de artículos; con delimitación en los últimos 5 años; en portugués, inglés y español; disponible en su totalidad. En las siguientes plataformas de datos: BDNF; LILACS; MEDLINE/VHL; PUBMED; Science Direct y SciELO. Resultados: Los datos fueron organizados y presentados en figuras y tablas. De los 76 estudios encontrados, 2 estaban disponibles en BDNF; 2 en LILACS; 3 en MEDLINE/VHL; 5 en PUBMED; 61 en Science Direct y 3 en SciELO; sin embargo, después de la lectura, solo quedaron aquellos que cumplieron con los criterios de inclusión y exclusión descritos en la metodología, 8 estudios. Conclusión: La revisión elaborada proporcionó la identificación de factores asociados al agotamiento físico y psicológico de los profesionales de enfermería para combatir el COVID-19; ya menudo se relaciona con síntomas de depresión, ansiedad, insomnio y angustia.

Palabras claves: Agotamiento Profesional; Profesionales de Enfermería; Infecciones por Coronavirus.

RESUMO | Objetivo: Averiguar os fatores associados ao esgotamento físico dos profissionais de enfermagem no combate da COVID-19. Método: Trata-se de uma revisão integrativa. Realizou-se a busca por artigos; com delimitação nos últimos 5 anos; nos idiomas português, inglês e espanhol; disponíveis na íntegra. Nas seguintes plataformas de dados: BDNF; LILACS; MEDLINE/BVS; PUBMED; Science Direct e na SciELO. Resultados: Os dados foram organizados e apresentados em figuras e tabelas. Dos 76 estudos encontrados, 2 estava disponível na BDNF; 2 na LILACS; 3 na MEDLINE/BVS; 5 na PUBMED; 61 na Science Direct e 3 na SciELO; contudo, após a leitura permaneceram apenas os que atendiam aos critérios para inclusão e exclusão descritos na metodologia, 8 estudos. Conclusão: A revisão elaborada proporcionou a identificação dos fatores associados ao esgotamento físico e psicológico dos profissionais de enfermagem ao combate da COVID-19; e frequentemente relacionados a sintomas de depressão, ansiedade, insônia e angústia.

Palavras-chaves: Esgotamento Profissional; Profissionais de Enfermagem; Infecções por Coronavirus.

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INTRODUCTION

Due to heavy workloads, health professionals have been the subject of studies, nurses experience great occupational stress, reducing their quality of life, with the COVID-19 pandemic, professional exhaustion is a major concern for public health, as it is necessary health teams to meet the demands since there was an explosion of cases of the disease.¹

Simultaneously with the pandemic, the World Health Organization (WHO) declared the year 2020 the "Year of Nursing", proposing a worldwide campaign called Nursing Now, in partnership with the International

Council of Nursing (ICN) and professional bodies from different countries. Its objective was to enhance the role of Nursing in achieving the health goals agreed upon by the UN member countries, and also to elevate the status of Nursing, given its importance for the design and implementation of health policies.² Showing even more the value of the nursing professional during times of pandemic.

The triggering factors of depression among nursing professionals may be associated with the work process, such as the shift, the relationship between professional-patient, professional-family and professional-professional, work overload, strain, social support, conflict of interest and the coping strategies developed.³ Therefore, this study aims to investigate the factors associated with the physical exhaustion of nursing professionals in the fight against COVID-19.

METHOD

It is an integrative review developed with the following steps: (1) elaboration of the guiding question and objective of the study; (2) definition of inclusion and exclusion criteria for scientific productions; (3) search for scientific studies in databases and virtual libraries; (4) analysis and categorization of the productions found; (5) results and discussion of findings.⁴

To raise the guiding question, the PICO strategy was used, a methodology that helps in the construction of a research question and search for evidence for a non-clinical research, where P = Population/Patient; I = Interest; and Co = Context (P: Nursing Professionals; I: Physical exhaustion in the fight against COVID-19; Co: Better working conditions). Thus, the following guiding question of the research was defined: "What are the factors related to the physical exhaustion of nurses in the fight against COVID-19?".



The triggering factors of depression among nursing professionals may be associated with the work process, such as the shift, the relationship between professional-patient, professional-family and professional-professional, work overload, strain, social support, conflict of interest and the coping strategies developed.



For selection of articles, the following inclusion criteria were used: original article, with a qualitative approach, available in full, published in the last 5 years in Portuguese, English or Spanish, that met the objective of the study. Gray literature, as well as repeated publications of studies in more than one database and articles that did not answer the study's guiding question were excluded. The temporal delimitation in the last 5 years is justified because of the period of the COVID-19 pandemic, that is, just over 1 year.

Data collection took place during the month of March and April 2021 in the following Databases: Nursing Database (BDENF); Latin American and Caribbean Literature on Health Sciences (LILACS); Medical Literature Analysis and Retrieval System Online via Health Virtual Library (MEDLINE/BVS), PubMed, Science Direct and Scientific Electronic Library Online (SciELO).

We searched for articles indexed from the Health Sciences Descriptors (DeCS): "Esgotamento Profissional", "Profissionais de Enfermagem", "Infecções por Coronavirus". The respective terms from the Medical Subject Headings (MeSH) were used: "Burnout, Professional", "Nurse Practitioners", "Coronavirus Infections". The operationalization and the search strategy were based on the combination with the Boolean operator AND and OR, carrying out the search jointly and individually so that possible differences could be corrected (Chart 1).

The selection of studies was based on Preferred Reporting Items for Systematic Review and Meta-Analysis (PRISMA) 5, in order to assist in the development of articles. At first, duplicate studies were eliminated by reading titles and abstracts. Of these pre-selected ones, a full reading was carried out, in order to verify which

ones meet the guiding question and the inclusion/exclusion criteria. The final sample was then constructed with studies relevant to the pre-established criteria (Figure 1).

After reading the selected articles, the studies were categorized, classifying the knowledge produced in levels of evidence according to Melnyk BM and Fineout-Overholt E 6: level I, evidence is related to systematic review or meta-analysis of randomized controlled clinical trials or from clinical guidelines based on systematic reviews of randomized controlled clinical trials; at level II, evidence derived from at least one well-designed ran-

domized controlled clinical trial; at level III, evidence from well-designed clinical trials without randomization; at level IV, evidence from well-designed cohort and case-control studies; at level V, evidence from a systematic review of descriptive and qualitative studies; at level VI, evidence derived from a single descriptive or qualitative study; and at level VII, evidence derived from the opinion of authorities and/or report from expert committees.

The summary of information in the corpus was obtained through an instrument: identification of the original article; article authorship; year of publication; parents; methodological

characteristics of the study; and study sample. Data were analyzed with the R Interface software pour les Analyses Multidimensionnelles de Textes et de Questionnaires (IRAMUTEQ), version 7.0, which enabled the analysis of the Descending Hierarchical Classification (CHD).

Objetivando uma melhor compreensão e visualização dos principais achados organizaram-se os dados apresentando-os em figuras e tabelas, expostos de forma descritiva.

RESULTS

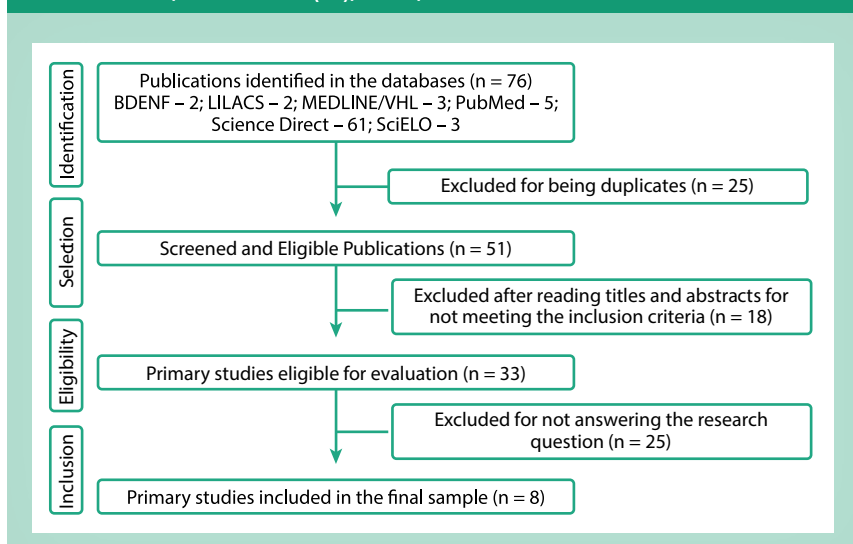
The studies surveyed are arranged

Chart 1 - Database search strategy. Recife, Pernambuco (PE), Brazil, 2021.

| Database | Search Terms | Results | Selected |
|----------------|--|---------|----------|
| BDEF | Esgotamento Profissional AND Profissionais de Enfermagem AND Infecções por Coronavirus | 2 | 1 |
| LILACS | Esgotamento Profissional AND Profissionais de Enfermagem AND Infecções por Coronavirus | 2 | 0 |
| MEDLINE/BVS | Esgotamento Profissional AND Profissionais de Enfermagem AND Infecções por Coronavirus | 3 | 1 |
| Science Direct | Burnout, Professional AND Nurse practitioners AND Coronavirus Infections | 61 | 4 |
| PubMed | Burnout, Professional AND Nurse practitioners AND Coronavirus Infections | 5 | 1 |
| SciELO | Burnout, Professional OR Nurse practitioners AND Coronavirus Infections | 3 | 1 |
| Total | | 76 | 8 |

Source: Survey data, 2021.

Figure 1 - Flowchart of the selection process for primary studies adapted from PRISMA. Recife, Pernambuco (PE), Brazil, 2021.



Source: Survey data, 2021.

showing their titles, authors, years of publication, levels of evidence, objectives and results. After reading the selected articles, the studies were categorized, classifying the knowledge produced on the subject, into levels of evidence, mostly level IV - evidence from well-designed cohort and case-control studies. The main findings set out in the objectives and conclusions are directly associated with nursing professionals who suffer greatly from physical and psychological exhaustion as a result of work overload to combat COVID-19 (Table 1).

DISCUSSION

It was possible to observe some factors associated with physical and

Table 1 - Synthesis of the main findings on physical exhaustion of nursing professionals in the fight against COVID-19. Recife, Pernambuco (PE), 2021.

| N | Title / Base | Authors (Year) | Level of evidence | Objective | Results |
|---|--|--|-------------------|--|---|
| 1 | Burnout and its influencing factors among frontline nurses and nurses from other wards during the outbreak of Coronavirus Disease (COVID-19) in Iran MEDLINE | Sarbooji Hoseinabadi, Tahere et al., (2020) ⁷ | IV | To assess the level of burnout during an outbreak of COVID-19 and to identify influencing factors between frontline nurses and nurses from other wards. | The level of burnout in frontline nurses was higher than other nurses, the most important influencing factor was job stress. Regarding the negative effects of burnout on physical and mental health nurses, it is suggested that a strong strategy be considered to reduce nurses' burnout to be able to successfully control ongoing and future outbreaks. |
| 2 | Labor, ethical and political dimensions of nursing staff dimensioning in view of COVID-19. BDEFN | Nishiyama, Juliana Aparecida Peixoto et al., (2020) ⁸ | I | Propose an expanded discussion about dimensions that involve the dimensioning of nursing staff, linking them to the reality of the COVID-19 pandemic. | Propose an expanded discussion about dimensions that involve the dimensioning of nursing staff, linking them to the reality of the COVID-19 pandemic. |
| 3 | Challenges of Pediatric Nursing professionals facing the COVID-19 pandemic. SciELO | Goes, Fernanda Garcia Bezerra et al., (2020) ⁹ | IV | Identify the challenges of Pediatric Nursing professionals facing the COVID-19 pandemic. | Different challenges related to the COVID-19 pandemic were reported, among them, the promotion of comprehensive and quality care in the face of concerns about protecting oneself and others, with emphasis on the feeling of fear. The lack of personal protective equipment, training, diagnostic tests and knowledge/information related to the disease, the reduced number of nursing professionals and the devaluation of the category were also signaled. |
| 4 | Lead nurses employ contemplative practices to promote the health professional's well-being and reduce anxiety. PubMed | Cunningham T, Çayır E., (2021) ¹⁰ | III | Test the effectiveness of a one-day resilience retreat on health professionals' anxiety levels, intent to engage in mindfulness practices, and self-efficacy in relation to mindfulness. | Brief resilience retreats endorsed by nursing leadership can reduce perceived anxiety and facilitate engagement in contemplative practices, which are associated with a decreased risk of burnout. |
| 5 | A phenomenological study of the experience lived by nurses in the battle for COVID-19. Science Direct | Gunawan, Joko et al., (2021) ¹¹ | IV | Explore the experience lived by nurses in combating COVID-19 in Belitung, Indonesia. | The results provided holistic perspectives that describe the nurses' feelings and the current state of phenomena in the hospital and community environment. The emotions that nurses perceive are mixed from negative to positive feelings with the change. |

| | | | | | |
|---|--|--|----|--|---|
| 6 | Impact of the 2019 coronavirus disease pandemic on depression, anxiety, and stress levels of intensive care workers. Science Direct | Hammond, Naomi E. et al., (2020) ¹² | IV | To determine the levels of depression, anxiety and stress symptoms and factors associated with the psychological burden among critical care health professionals in the early stages of the 2019 coronavirus disease pandemic. | Between 22 and 29% of respondents reported moderate to extremely severe symptoms of depression, anxiety and stress, with women reporting higher scores than men. Although female gender seems to play a role, modifiable factors also contribute to the psychological burden and should be studied further. |
| 7 | Psychological effects of the COVID-19 outbreak in nurses working in women's and children's tertiary hospitals in Sichuan, China: a cross-sectional study. Science Direct | He, Qiuyang et al., (2021) ¹³ | IV | Examine the psychological status of nurses working in children's and tertiary women's hospitals in Sichuan, China, in order to explore the possible effect of COVID-19. | The results suggest that the COVID-19 epidemic does not necessarily affect the psychological health of nurses working in children's and women's hospitals in Sichuan. The results of this study can serve as valuable suggestions to guide the promotion of psychological well-being among target nurses. |
| 8 | The psychosocial impact on frontline nurses caring for patients with Covid-19 during the first wave of the pandemic in New York City. Science Direct | Kovner, Christine et al., (2021) ¹⁴ | IV | To investigate the personal and contextual factors associated with the psychological functioning of nurses attending Covid in the New York City area. | Understanding potential triggers and vulnerability factors can inform the development of institutional resources that help to minimize their impact, reducing the risk of psychological morbidity. |

Source: Survey data, 2021.

psychological exhaustion of nursing professionals in the articles that were part of this study, one of the most important factors was stress in the work environment; lack of sizing of the team; the lack of personal protective equipment, training, diagnostic tests and knowledge/information related to the disease, the reduced number of nursing professionals and the devaluation of the category.

A study pointed out numerous challenges related to the COVID-19 pandemic perceived by nursing professionals who provide pediatric care, highlighting the promotion of comprehensive and quality care in view of the concern with the protection of oneself and the other. feeling of fear.⁹ Corroborating this, another study found that most nursing professionals with anxiety are technicians in care positions (44,2%), work in critical sectors (55,8%), have public examinations (44,2%) and work in the health area for more than 10 years (27,9%). Thus, which sectors of professional

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activity and environmental situations can cause anxiety, with emphasis on closed sectors and with highly complex procedures, as well as the instability or worsening of the health status of patients.³

Also, there are reports from health professionals about poor working conditions, exhausting hours, lack of training for new protocols, lack of protective materials, thus making a hostile work environment and thus directly affecting the health of the team in combat to Covid-19.¹⁵

A cross-sectional study of 1.257 healthcare professionals in 34 hospitals equipped with clinics or wards for patients with COVID-19 in various regions of China found a considerable proportion of healthcare professionals with symptoms of depression, anxiety, insomnia and distress. Among the group that suffered most were women, nurses, people living in Wuhan and health professionals involved in the diagnosis, treatment or nursing care of patients with suspected or confirmed

COVID-19.¹⁶ Thus, the concern with this aspect of the population's health demanded from some countries the offer of specialized assistance in mental health.¹⁷

The analysis of the situation of the health workforce in Brazil has been carried out in several studies, which point out the main problems, both with regard to the availability and distribution of the various professional categories to meet the needs for the proper functioning of services, in the various levels of attention, as the problems related to work management, that is, the mechanisms for hiring,

qualifying and valuing the workforce in the sector.¹⁸

A limitation for the study was the sample size and the availability of scientific articles to compare the results. It is necessary to carry out more studies containing a larger sample and enabling discussion about the implications related to the impacts of COVID-19 on the health of nursing professionals working on the front line.

CONCLUSION

The elaborated review provided the identification of factors associated

with the physical and psychological exhaustion of nursing professionals in the fight against COVID-19; and often related to symptoms of depression, anxiety, insomnia and distress. However, there are few studies that give the true importance to the health of these professionals, essential in prevention, health promotion, and continuing education, even though this number has progressively increased in recent years. Therefore, this study provided the perception that, although shy, there is a growth in the number of studies that fully value the health of the professionals in question. 🐦

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