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INTEGRATIVE LITERATURE REVIEW

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STRESS, QUALITY OF WORKING LIFE AND COPING IN INTENSIVE NURSING IN THE PANDEMIC CONTEXT: INTEGRATIVE REVIEW

Estresse, qualidade de vida laboral e coping da enfermagem intensiva no contexto pandêmico: revisão integrativa
Estrés, calidad de vida laboral y afrontamiento intensivo en el contexto de pandemia: revisión integradora

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ABSTRACT

Objectives: to analyze, in the light of the literature, the quality of working life of Intensive Care Unit nurses, with emphasis on stressors and coping strategies during COVID-19. **Method:** integrative review carried out in October 2022, in LILACS, MEDLINE and SCIELO databases. **Results:** A total of 820 studies were located, and when inclusion and exclusion and reading criteria were applied, a sample of seven studies was obtained, from which the following categories emerged: stressors arising from the work environment; impacts of stress factors on the quality of working life; and coping strategies to overcome stressful situations. **Final Considerations:** it is necessary to invest in the support of intensive care nursing, implementing structural and organizational measures in the work environment that consider their biopsychosocial state, in order to safeguard their resilience both in the context of COVID-19 and in future pandemics.

DESCRIPTORS: Occupational stress; Quality of life; Psychological adaptation; Nursing.

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RESUMO

Objetivo: analisar, à luz da literatura, a qualidade de vida laboral do enfermeiro de Unidade de Terapia Intensiva, com ênfase nos estressores e estratégias de enfrentamento durante a COVID-19. **Método:** revisão integrativa realizada no mês de outubro de 2022, nas bases de dados LILACS, MEDLINE e SCIELO. **Resultados:** Foram localizados 820 estudos, e quando aplicados os critérios de inclusão e exclusão e leitura, obteve-se uma amostra de sete estudos, dos quais emergiram as seguintes categorias: fatores estressores oriundos do ambiente laboral; impactos dos fatores de estresse na qualidade de vida laboral; e estratégias de enfrentamento para superar as situações estressantes. **Conclusão:** se faz necessário investir no apoio da enfermagem de terapia intensiva, implementando medidas estruturais e organizacionais no ambiente laboral que considerem seu estado biopsicossocial, a fim de resguardar sua resiliência tanto no contexto da COVID-19 quanto em futuras pandemias.

DESCRITORES: Estresse ocupacional; Qualidade de vida; Adaptação psicológica; Enfermagem.

RESUMEN

Objetivos: analizar la calidad de vida laboral de enfermeros de Unidad de Cuidados Intensivos, con énfasis en los estresores y estrategias de enfrentamiento durante la COVID-19. **Método:** revisión integradora realizada en octubre de 2022, en las bases de datos LILACS, MEDLINE y SCIELO. **Resultados:** Se localizaron un total de 820 estudios, y al aplicar criterios de inclusión, exclusión y lectura, se obtuvo una muestra de siete estudios, de la cual surgieron las siguientes categorías: estresores provenientes del ambiente laboral; impactos de los factores de estrés en la calidad de vida laboral; y estrategias de afrontamiento para superar situaciones estresantes. **Consideraciones finales:** es necesario invertir en el apoyo a la enfermería de cuidados intensivos, implementando medidas estructurales y organizativas en el ambiente de trabajo que consideren su estado biopsicossocial, con el fin de salvaguardar su resiliencia tanto en el contexto de la COVID-19 como en futuras pandemias.

PALABRAS CLAVE: Estrés laboral; Calidad de vida; Adaptación psicológica; Enfermería.

INTRODUCTION

The Intensive Care Unit (ICU) is a unique sector of the hospital environment, in which specialized and high-level technological assistance is provided to critically ill and unstable patients.¹ Thus, patients who will benefit from admission to the ICU are those who, for any clinical and/or surgical decompensation, will require constant observation by a multiprofessional team composed of physicians, nurses, nursing technicians, physical therapists and dentists with expertise in intensive care.² However, these particular attributes corroborate to the professionals' wear and tear and biopsychosocial suffering, as well as conflicts within and outside the work sector.³

During the pandemic caused by the new coronavirus 2019 disease (COVID-19), especially in its worst moments, the ICU was the place where many patients and families placed their hopes for recovery, overloading public and private health services.⁴ Thus, health professionals worked uninterruptedly in the ICU, whose scenario presented situations of unremitting psychological stress due to increased work overload, greater technical and scientific commitment, constant search for quality of care, limited resources, long working shifts, lack of knowledge of the scenario, among many other demands.⁵ Thus, a greater predisposition of these professionals to develop psychological problems is evident, ranging from dissatisfaction at work to severe depression.⁶⁻⁷

This subject is part of the World Health Organization's (WHO) agenda of concerns, and proof of this is the definition of health by the entity, which describes it as a complete state of physical, mental and social well-being, and not merely the absence of disease or infirmity.⁸ And regarding nursing professionals, especially intensivists that have experienced situations that generate stress in overcrowded ICU's

for COVID-19,⁹ it is necessary to know their levels of occupational stress, their quality of work life and how they dealt with the high biopsychosocial pressure load.

In view of this, the International Labor Organization (ILO) highlights the risks correlated between psychosocial conditions and stress with work activity, emerging risks that are associated with the new characteristics of work,¹⁰ which, at present, have been exacerbated by COVID-19, being old acquaintances of nursing professionals. Thus, to overcome stressful situations and maintain physical and mental integrity, some professionals use coping strategies, known as coping, subdivided into intentional, cognitive, and behavioral.¹⁰⁻¹¹

Therefore, understanding that the intensivist nurse needs to be motivated to plan, develop and evaluate his care for the critically ill patient, it is also essential to understand the factors that can directly interfere with this motivation. Therefore, this study aims to analyze, in the light of literature, the quality of ICU nurses' work life, with emphasis on stressors and coping strategies during the COVID-19.

METHODS

This is an Integrative Literature Review (ILR), which aims to gather, evaluate, and synthesize the results of studies already published on a specific theme or subject.¹² To conduct it, we used the guidelines established by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) and the six-step review model, namely: (1) guiding question; (2) literature search or sampling; (3) data collection; (4) critical analysis of included studies; (5) interpretation/discussion of results; and (6) presentation of the review/synthesis of results.¹²⁻¹³

To develop the guiding question, the PICO¹⁴ strategy was used in Phase 1, formulating the following guiding question: what occupational stressors (C) and coping strategies (I) impacted the quality of work life (W) of intensivivist nurses (LP) during the pandemic of COVID-19?

In Phase 2, study inclusion and exclusion criteria were established. The corpus of analysis for this ILR was the articles indexed in the databases described below, published from January 2020 to September 2022, available in full online for reading, in Portuguese, English and Spanish, and that answered the guiding question. Articles in which it was not possible to identify a relation with the theme by reading the title and abstract, secondary studies, case reports, gray literature, reflections, and editorials were excluded. The articles found in more than one database were considered only once.

Data collection was carried out in October 2022, in the Latin American and Caribbean Literature on Health Sciences (LILACS), Medical Literature Analysis and Retrieval System Online (MEDLINE) via the PUBMED portal, Scientific Electronic Library On-Line (SciELO) databases, which were selected because they allow indexing a significant number of national and international articles.

In the search/sampling by the databases, the crossings were performed in the form of association using the Boolean operators AND and OR and the Health Sciences Descriptors (DeCS) and their correspondents in Medical Subject Headings (MeSH): "Coronavirus/ Coronavirus Infections", "Nursing/Nursong", "Occupational Stress/ Occupation Stress", "Quality of Life/Quality of Life", "Psychological Adaptation/Adaptation Psychological" and "Worker Health/ Occupational Health".

In Phase 3, after reading the titles and abstracts of the studies, their compatibility with the objective of this RIL, as well as the application of the inclusion and exclusion criteria, the information to be extracted from the articles was selected, namely: title, authors/year, country, objective, results regarding occupational stress, quality of life, and coping strategies. To identify the level of evidence, the following hierarchical categorization was adopted: (I) - evidence from systematic review or meta-analysis; (II) - evidence from randomized and controlled clinical trial; (III) - evidence from non-randomized controlled clinical trial; (IV) - evidence from case control or case study; (V) - evidence from systematic review of qualitative or descriptive studies; (VI) - evidence from descriptive or qualitative studies; (VII) - evidence from expert opinions or consensus.¹⁵

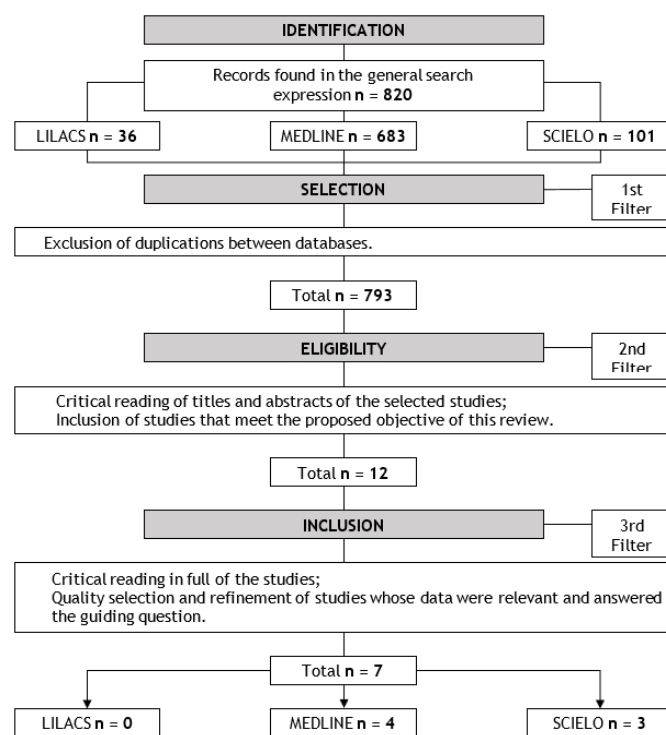
In Phase 4, the articles were explored and analyzed as to their material and results, adopting the principles of thematic content analysis, which were grouped into three categories: stressors that impact work activity; impacts of stressors on quality of work life; coping strategies to overcome stressful situations. Finally, in Phases 5 and 6, from the organization of the articles in the webQDA[®] software, the results were interpreted, the discussion of the findings in light of the literature, and the presentation of the review with the synthesis of knowledge.

Since this is a study that uses secondary data from the public domain, this modality does not require the approval of the Research Ethics Committee (REC), a fact supported by Resolution 466/12 of the National Health Council (CNS).¹⁶

RESULTS

Based on the crossing and selection process, 820 studies were identified in the listed databases, 27 duplicate studies were excluded, keeping only one version of each. After a critical reading of the titles and abstracts, 793 studies were discarded for not meeting the proposed objective of this review. Then, 12 studies were read in their entirety, and five studies were excluded for not answering the guiding question. The application of the filters allowed the refinement that resulted in the final selection of seven studies, based on the relevance and quality of the data for this review. Figure 1 shows the flowchart of the search, as recommended by the PRISMA method.

Figure 1 – Detailed flowchart of the systematic selection of studies included in the review. Boa Vista, RR, Brazil, 2022



Source: Prepared by the authors.

From the analysis of the years of publication of the studies, it was found that there were four in 2021, two in 2022 and one in 2020, from national and international journals, with the largest number of studies conducted in Brazil (A2, A3, A4). As for the design, all are original studies, six of them using a quantitative approach (A1, A2, A3, A5, A6, A9) and one using a qualitative approach (A4). Regarding the level of evidence, all are classified as level VI (Table 1).

Table 2 presents the main stressors related to category 1 - "Stressors that impacted work activity".

Table 3 presents the main impacts of work stress related to category 2 - "Impact of stress on quality of work life".

Table 1 – Characterization of the articles selected from the LILACS, MEDLINE and SCIELO databases. Boa Vista, RR, Brazil, 2022

Code	Author(s)/ Year/ Country/ Journal	Title	Goal	Level of Evidence
A1	Abuatiq e Borhardt/ 2021/ United States of America / JONA17	The impact of COVID-19: nurses occupational stress and strategies to manage it	To explore nurses' perceptions of occupational stress and how they manage it during the COVID-19 pandemic	VI
A2	Appel et al./ 2021/ Brazil/ Rev Gaúcha Enferm18	Prevalence and factors associated with anxiety, depression and stress in a COVID-19 nursing team	To investigate the levels of anxiety, depression and stress and their associated factors, among nursing professionals who make up the team working in the COVID19 unit of a University Hospital in the South-Brazilian region.	VI
A3	Calari et al./ 2022/ Brazil/ Rev Bras Enferm19	Quality of life of nurse practitioners during the COVID-19 pandemic	To evaluate the quality of life of nursing professionals during the pandemic of COVID-19 and analyze the factors related	VI
A4	Conz et al./ 2021/ Brazil/ Rev Esc Enferm USP20	Experiences of intensive care unit nurses with COVID-19 patients	To understand the experience of nurses working in the Intensive Care Unit with patients infected by COVID-19	VI
A5	Franco e Levi/ 2020/ Equador/ Invest Educ Enferm21	Feelings, stress, and adaptation strategies of nurses against COVID-19 in Guayaquil	To explore nurses' feelings, stressors, and adaptation strategies during the COVID-19 pandemic in Guayaquil, Ecuador.	VI
A6	Hwang/ 2022/ South Korea / Int J Environ Res Public Health22	Factors affecting the quality of work life of nurses at tertiary general hospitals in the context of the COVID-19 pandemic	To identify the factors that affect the quality of life at work in nurses working in tertiary general hospitals	VI
A7	Şanlıtürk/ 2021/ Turkey / Intensive Crit Care Nurs23	Perceived and sources of occupational stress in intensive care nurses during the COVID-19 pandemic	To determine the level of occupational stress in intensive care nurses during the pandemic of COVID-19 and perceived stress factors	VI

Source: Prepared by the authors.

Regarding category 3 - "Coping strategies to overcome stressful situations", the following strategies stand out: positive reframing, active coping, and religion (A1, A2, A4, A5), improving skills and searching for knowledge (A4, A5), employee assistance program (A1), use of sleeping medication (A3), remote interaction of family members with patients (A4), following strictly individual protective measures, teamwork, and keeping separate clothes for the street and for work (A5).

DISCUSSION

In the WHO analysis in partnership with the International Council of Nurses (ICN), from January 2020 to May 2021, at least 180,000 health professionals died as a result of COVID-19.²⁴ In Brazil, according to the Federal Council of Nursing (COFEN), 64. 627 cases and 872 deaths from the disease as of October 22, 2022.²⁵ Thus, as cases of the disease and hospitalizations increase again in the Americas, an urgent increase in investments to develop and retain the nursing workforce is needed.²⁶

The global nursing workforce is 27.9 million, the largest occupational group in the health sector, accounting for approximately 59% of the health professions.²⁷ In the last two years of the COVID-19 pandemic, nursing workers experienced high levels of exposure to the disease virus, compounded by the lack of protection and fundamental support to perform their work activities

Table 2 – Articles related to category 1 (Stressors that impact the work environment). Boa Vista, RR, Brazil, 2022

Code	Stressors that impact on work activity
A1	Continuous use of face mask; unpredictable staffing and scheduling; insufficient number of staff; feeling of helplessness in face of the critical condition of the patient with COVID-19.
A2	Work shift; length of service in the profession; length of service in the unit that worked before the opening of the COVID-19 unit; employment contract; and job dissatisfaction.
A3	Professional practice; high weekly workload; more than one job; and an increase in the number of patients and nursing care.
A4	High demand for care; continuous use of personal protective equipment; patient severity; uncertainty about care; experiencing the illness of colleagues; adaptation to new protocols; and social distance.
A5	Patient severity; institutional devaluation and recognition; lack of personal protective equipment; and observing anxious, frightened, and infected colleagues.
A6	Role conflict with physicians, patients, and caregivers; high workload; intense turnover; and low pay.
A7	High work hours; heavy workload; high number of patients per nurse; failure in patient care; inadequate pay; rotating work shifts; insecurity in intensive care; and inability to go home.

Source: Prepared by the authors.

in a safe and healthy environment, frequent gaps in the health workforce leading the response to the pandemic worldwide.²⁴

From the analysis of the studies that corresponded to the scope of this review, it was possible to observe that nurses who work on the front line are facing a higher risk of stress, which directly affects patient care and the biopsychosocial well-being of the professional.¹⁷⁻²³ Since stress is a circumstantial incentive that impacts people, inducing physical and mental stress reactions when efforts are ineffective, it can be experienced in a positive or negative way,²⁸ and when associated with work-related issues, it is called occupational stress.¹⁰

While positive stress, considered normal stress, can motivate individuals to perform well in the task, bravely face the challenge and obtain a sense of accomplishment, negative stress emerges from the prolongation of the positive stress, and can be acute, if people experience it for a short period of time without adverse effects on their performance, or chronic, if the negative pressure persists for a long time with damage to physical and mental health.²⁸ On the other hand, occupational stress can cause not only physical and mental problems, but also impact the organization and functionality of the workplace, such as burnout, high turnover, and low productivity.²⁹

In light of this, what to think about such work-related issues? What causes them to manifest? Was there or was there not an aggravation because of COVID-19? These questions permeate the findings of this review. In this sense, with the rapid spread of SARS-CoV-2, patient hospitalization increased sharply, and consequently, nurses' workload also intensified.³⁰⁻³² Studies have begun to highlight that a high level of stress in the work environment can give rise to fear, anxiety, depression, sleep disorders, and burnout.^{29,33}

The work-related issues, aggravated by COVID-19, and giving rise to the psychological dysfunctions evidenced here, have seriously affected the emotions, work performance, and well-being of nurses who play a necessary role in the treatment and care of infected patients,³⁰ especially those in intensive care.⁽¹⁷⁻²³⁾ This has led to accelerated recruitment, redistribution of existing professionals and relocation to intensive care areas, which has also triggered concerns about the risks and challenges of caring for patients with COVID-19, uncertainty of coping strategies, feelings of isolation and loneliness.³⁴⁻³⁵

Despite the labor difficulties and negative results experienced, another finding emerged from this study, the strategies to face them. Facing stressful and adverse situations is common to everyone, and it can bring positive or negative consequences depending on how it is faced. Thus, coping strategies are associated with physical and psychological changes, in addition to having the capacity to influence physiological and behavioral changes.³⁶

Knowing and analyzing the nurses' strategies is fundamental to understand how this process influenced their actions, and how stressful situations affected them. The concept of coping may change depending on the theoretical line. For the psychoanalyst strand it is a gradual phenomenon and associated with the de-

Table 3 – Articles related to category 2 (Impacts of stress factors on quality of work life). Boa Vista, RR, Brazil, 2022

Code	Impacts of stress factors on quality of work life
A1	Fear, anxiety, depression, sleep disturbance, and exhaustion.
A2	Moderate and severe levels of anxiety, depression and stress.
A3	Increased tension and stress in on-duty staff, sleep disturbance and exhaustion.
A4	Physical and mental exhaustion, fear of contamination, increased anxiety levels, burnout, and plans to leave the profession.
A5	Anxiety, fear of caring for patients, insecurity about professional and family protection, and fear of becoming infected.
A6	High levels of job stress, anxiety, fatigue, and burnout.
A7	Moderate and severe levels of stress; burnout; and fear of becoming infected and infecting family members.

Source: Prepared by the authors.

fense mechanism and personality. In the cognitive perspective it is understood as the interaction of man with the environment. In the developmental perspective, it is a regulatory action of one's own behavior and its relationship with the environment, cognition, and personal qualities.³⁷

The concept of coping that can be adopted in this review is the theoretical model proposed by Folkman and Lazarus, from a cognitive and behavioral perspective focused on the problem or emotion, since the strategies most used by intensive care nurses were related to the positive reappraisal factor,^{17-18,20-21} but one study highlighted the self-control factor from the use of medication,¹⁹ both focused on emotion. In positive reappraisal strategies, the actions maximize positive changes based on the stressful situation, tending to see the problem as temporary and with a possible solution, leading the individual to adapt emotionally. In self-control strategies, the individual tries to remain rational when facing a context that can be hopeless, that is, there is no denial of reality, but an intention to reflect control to others.³⁷

Thus, it is possible to observe a tendency toward a more positive and rational coping, but which can lead to negative results when facing long-term psychological changes. Thus, early assessment and active coping with stress can contribute to minimizing adverse events. Initial steps can be actively taken and the following improvements can be made: inclusion of a psychologist in the team; familiarization of the ICU environment and procedures; verbalization of emotions; sharing of experiences with colleagues; maintenance of online communication; regular meetings; constitution of a professional mental health consultation team.³⁸

Therefore, it is recommended to address the psychological problems of ICU nurses caring for patients with COVID-19, and to act as soon as possible to relieve the psychological pressure of these nurses,³⁸ as they have an almost daily experience with stressful situations,¹⁷⁻²³ and are expected to develop on their own strategies for emotional adaptation in order to bear all difficult moments, especially in the Brazilian context.¹⁸⁻²⁰

One of the limitations of this study is the possibility that some publications were not identified in the search period. However, it is necessary to advance knowledge by highlighting scientific gaps

in knowledge that need to be identified, related to the effects of occupational stress on the quality of life of intensive care nurses.

CONCLUDING REMARKS

This RIL allowed us to identify the determinants that trigger occupational stress and its impacts on the quality of work life of nursing professionals working in the ICU, such as fear, insecurity, uncertainty, dissatisfaction, organizational and structural problems, interpersonal relationships, lack of resources and emotional support. As a consequence, it is notorious the increase of anxiety, depression, sleep disorders, burnout and burnout in professional nurses, conditions that reflect negatively both in their work activities and their personal life.

As a way to minimize stressors, this professional has been adopting coping strategies to better deal with such issues, but there are few studies that research their potential and their ability to build resilience, as well as the participation of hospitals and governments in this process. Therefore, there is an urgent need to give new meaning to work stressors and their impacts on the physical and mental well-being of nursing as a whole, in addition to identifying early signs and symptoms indicative of stress to avoid its worsening, because there is the possibility of negative results becoming long-lasting.

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REFERENCES

- Caram CS, Rezende LC, Montenegro LC, Amaral JM, Brito MJM. Ambiguidades no trabalho da equipe de saúde no contexto de uma Unidade de Terapia Intensiva. *Rev. SANARE* [Internet]. 2016 [acesso em 19 de setembro 2022];15(1). Disponível em: <https://sanare.emnuvens.com.br/sanare/article/view/923>.
- Aguiar LMM, Martins GS, Valduga R, Gerez AP, Carmo EC, Cunha KC, et al. Profile of adult intensive care units in Brazil: systematic review of observational studies. *Rev. Bras. Ter. Intensiva* [Internet]. 2021 [cited 2022 set 19];33(4). Available from: <https://doi.org/10.5935/0103-507X.20210088>.
- Zavalis A, Paula VG, Machado DA, Marta CB, Perez Junior EF, Santiago LC. O nível de estresse dos enfermeiros na Unidade de Terapia Intensiva. *Rev. Pesq. Cuid. Fundam.* [Internet]. 2019 [acesso em 19 de setembro 2022];11(1). Disponível em: <https://doi.org/10.9789/2175-5361.2019.v11i1.205-210>.
- Kubo HKM, Campiolo EL, Ochikubo GT, Batista G. Impacto da pandemia do Covid-19 no serviço de saúde: revisão integrativa. *Inter. Am. J. Med. Health* [Internet]. 2020 [acesso em 19 setembro de 2022];3:e202003046. Disponível em: <https://doi.org/10.31005/iajmh.v3i0.140>.
- Costa NNG, Servo MLS, Figueredo WN. COVID-19 and the occupational stress experienced by health professionals in the hospital context: integrative review. *Rev. Bras. Enferm.* [Internet]. 2022 [cited 2022 set 19];75(Suppl1):e20200859. Available from: <https://doi.org/10.1590/0034-7167-2020-0859>.
- Dantas ESO. Saúde mental dos profissionais de saúde no Brasil no contexto da pandemia por Covid-19. *Interface* [Internet]. 2021 [acesso em 19 de setembro 2022];25(suppl1):e200203. Disponível em: <https://doi.org/10.1590/Interface.200203>.
- Soares JP, Oliveira NHS, Mendes TMC, Ribeiro SS, Castro JL. Burnout-related factors in health professionals during the Covid-19 pandemic: an integrative review. *Saúde Debate* [Internet]. 2022 [cited 2022 set 19];46(esp1). Available from: <https://doi.org/10.1590/0103-11042022E1261>.
- World Health Organization (WHO). Constitution of the World Health Organization [Internet]. Geneva: World Health Organization; 1946 [cited 2022 set 19]. Available from: <https://apps.who.int/gb/bd/PDF/bd47/EN/constitution-en.pdf>.
- Miranda FMA, Santana LL, Pizzolato AC, Saquis LMM. Condições de trabalho e o impacto na saúde dos profissionais de enfermagem frente a Covid-19. *Cogitare Enferm.* [Internet]. 2020 [acesso em 19 de setembro 2022];25:e72702. Disponível em: <https://doi.org/10.5380/ce.v25i0.72702>.
- International Labour Office (ILO). Emerging risks and new patterns of prevention in a changing world of work [Internet]. Geneva: International Labour Office; 2010 [cited 2022 set 19]. Available from: https://www.ilo.org/wcmsp5/groups/public/@ed_protect/@protrav/@safework/documents/publication/wcms_123653.pdf.
- Maturana APPM, Valle TGM. Estratégias de enfrentamento e situações estressoras de profissionais no ambiente hospitalar. *Rev. Psc. Hospitalar* [Internet]. 2014 [acesso em 19 de setembro 2022];12(2). Disponível em: <http://papsic.bvsalud.org/pdf/ph/v12n2/12n2a02.pdf>.
- Souza MT, Silva MD, Carvalho R. Revisão integrativa: o que é e como fazer. *Einstein* [Internet]. 2010 [acesso em 19 de setembro 2022];8(1). Disponível em: <https://doi.org/10.1590/s1679-45082010rwl1134>.
- Galvão TF, Pansani TSA, Harrad D. Principais itens para relatar revisões sistemáticas e meta-análises: a recomendação PRISMA. *Epidemiol. Serv. Saúde* [Internet]. 2015 [acesso em 19 de setembro 2022];24(2). Disponível em: <https://doi.org/10.5123/S1679-49742015000200017>.
- Santos CMC, Pimenta CAM, Nobre MRC. A estratégia PICO para a construção da pergunta de pesquisa e busca de evidências. *Rev. Latino-Am. Enfermagem* [Internet]. 2007 [acesso em 19 de setembro 2022];15(3). Disponível em: <https://doi.org/10.1590/S0104-11692007000300023>.
- Stillwell SB, Fineout-Overholt E, Melnyk BM, Williamson KM. Evidence-based practice, step by step: searching for the evidence. *Am. J. Nursing* [Internet]. 2010 [cited 2022 set 19];110(5). Available from: <https://doi.org/10.1097/01.NAJ.0000372071.24134.7e>
- Conselho Nacional de Saúde (Brasil). Resolução nº 466, de 12 de dezembro de 2012. Aprova as diretrizes e normas regulamentadoras de pesquisas envolvendo seres humanos. *Diário Oficial da União* 13 jun 2012;Sessão 1.

17. Abuatiq A, Borchardt C. The Impact of COVID-19: Nurses occupational stress and strategies to manage it. *JONA [Internet]*. 2021 [cited 2022 out 15];51(12). Available from: <https://doi.org/10.1097/NNA.0000000000001081>.
18. Appel AP, Carvalho ARS, Santos RP. Prevalence and factors associated with anxiety, depression and stress in a COVID-19 nursing team. *Rev. Gaúcha. Enferm. [Internet]*. 2021 [cited 2022 out 15];42(spe):e20200403. Available from: <https://doi.org/10.1590/1983-1447.2021.20200403>.
19. Caliarí JS, Santos MA, Andrechuk CRS, Campos KRC, Ceolim MF, Pereira FH. Quality of life of nurse practitioners during the COVID-19 pandemic. *Rev. Bras. Enferm. [Internet]*. 2022 [cited 2022 out 15];75(Suppl1):e20201382. Available from: <https://doi.org/10.1590/0034-7167-2020-1382>.
20. Conz CA, Braga VAS, Vasconcelos R, Machado FHRS, Jesus MCP, Merighi MAB. Experiences of intensive care unit nurses with COVID-19 patients. *Rev. Esc. Enferm. USP [Internet]*. 2021 [cited 2022 out 15];55:e20210194. Available from: <https://doi.org/10.1590/1980-220X-REEUSP-2021-0194>.
21. Franco JA, Levi PLÁ. Feelings, Stress, and Adaptation Strategies of Nurses against COVID-19 in Guayaquil. *Invest. Educ. Enferm. [Internet]*. 2020 [cited 2022 out 20];38(3):e07. Available from: <https://doi.org/10.17533/udea.iee.v38n3e07>.
22. Hwang E. Factors Affecting the Quality of Work Life of Nurses at Tertiary General Hospitals in the Context of the COVID-19 Pandemic. *Int. J. Environ. Res. Public Health [Internet]*. 2022 [cited 2022 out 20];19(8). Available from: <https://doi.org/10.3390/ijerph19084718>.
23. Şanlıtürk D. Perceived and sources of occupational stress in intensive care nurses during the COVID-19 pandemic. *Intensive Crit. Care Nurs. [Internet]*. 2021 [cited 2022 out 20];67:e103107. Available from: <https://doi.org/10.1016/j.iccn.2021.103107>.
24. International Council of Nurses (ICN). Nurses: a voice to Lead - invest in nursing and respect rights to secure global health. [Internet]. 2022 [cited 2022 out 22]. Available from: <https://www.icn.ch/node/1532>.
25. Conselho Federal de Enfermagem (COFEN). Observatório da Enfermagem: profissionais infectados com Covid-19 informado pelo serviço de saúde. [Internet]. 2022 [acesso em 22 de outubro 2022]. Disponível em: <http://observatoriodaenfermagem.cofen.gov.br/>.
26. Organização Pan-Americana da Saúde (OPAS). Mais deve ser feito para proteger força de trabalho da enfermagem à medida que casos de COVID-19 aumentam nas Américas, afirma diretora da OPAS. [Internet]. 2022 [acesso em 22 de outubro 2022]. Disponível em: <https://www.paho.org/pt/noticias/4-5-2022-mais-deve-ser-feito-para-protetger-forca-trabalho-da-enfermagem-medida-que-casos>.
27. World Health Organization (WHO). State of the world's nursing 2020: investing in education, jobs and leadership [Internet]. Geneva: World Health Organization; 2020 [cited 2022 out 22]. Available from: <https://www.who.int/publications/i/item/9789240003279>.
28. Hirschle ALT, Gondim SMG. Stress and well-being at work: a literature review. *Ciênc. Saúde Coletiva [Internet]*. 2020 [cited 2022 out 22];25(7). Available from: <https://doi.org/10.1590/1413-81232020257.27902017>.
29. Murat M, Köse S, Savaşer S. Determination of stress, depression and burnout levels of front-line nurses during the COVID-19 pandemic. *Int. J. Ment. Health Nurs. [Internet]*. 2021 [cited 2022 out 22];30(2). Available from: <https://doi.org/10.1111/inm.12818>.
30. Mo Y, Deng L, Zhang L, Lang Q, Liao C, Wang N, et al. Work stress among Chinese nurses to support Wuhan in fighting against COVID-19 epidemic. *J. Nurs. Manag. [Internet]*. 2020 [cited 2022 out 22];28(5). Available from: <https://doi.org/10.1111/jonm.13014>.
31. Li Y, Scherer N, Felix L, Kuper H. Prevalence of depression, anxiety and post-traumatic stress disorder in health care workers during the COVID-19 pandemic: a systematic review and meta-analysis. *PLoS One [Internet]*. 2021 [cited 2022 out 22];16(3):e0246454. Available from: <https://doi.org/10.1371/journal.pone.0246454>.
32. Maqbali MA, Sinani MA, Al-Lenjawi B. Prevalence of stress, depression, anxiety and sleep disturbance among nurses during the COVID-19 pandemic: a systematic review and meta-analysis. *J. Psychosom. Res. [Internet]*. 2021 [cited 2022 out 22];141:e110343. Available from: <https://doi.org/10.1016/j.jpsychores.2020.110343>.
33. Karabulut N, Gürçayır D, Aktaş YY, Kara A, Kızıloğlu B, Arslan B, et al. The effect of perceived stress on anxiety and sleep quality among healthcare professionals in intensive care units during the coronavirus pandemic. *Psychol. Health Med. [Internet]*. 2021 [cited 2022 out 22];26(1). Available from: <https://doi.org/10.1080/13548506.2020.1856897>.
34. Rattray J, McCallum L, Hull A, Ramsay P, Salisbury L, Scott T, et al. Work-related stress: the impact of COVID-19 on critical care and redeployed nurses: a mixed-methods study. *BMJ Open [Internet]*. 2021 [cited 2022 out 22];11(7):e051326. Available from: <https://doi.org/10.1136/bmjopen-2021-051326>.
35. Li H, Cui Y, Efstathiou N, Li B, Guo P. Experiences of redeployed healthcare workers in the fight against COVID-19 in China: a qualitative study. *PLoS One [Internet]*. 2022 [cited 2022 out 22];17(8):e0273429. Available from: <https://doi.org/10.1371/journal.pone.0273429>.
36. Dias EN, Pais-Ribeiro JL. O modelo de coping de Folkman e Lazarus: aspectos históricos e conceituais. *Rev. Psicol. Saúde [Internet]*. 2019 [acesso em 22 de outubro 2022];11(2). Disponível em: <http://dx.doi.org/10.20435/pssa.v11i2.642>.
37. Ramos FP, Enumo SRF, Paula KMP. Teoria motivacional do coping: uma proposta desenvolvimentista de análise do enfrentamento do estresse. *Estud. Psicol. [Internet]*. 2015 [acesso em 22 de outubro 2022];32(2). Disponível em: <https://doi.org/10.1590/0103-166X2015000200011>.
38. Shen X, Zou X, Zhong X, Yan J, Li L. Psychological stress of ICU nurses in the time of COVID-19. *Crit. Care [Internet]*. 2020 [cited 2022 out 22];24(1). Available from: <https://doi.org/10.1186/s13054-020-02926-2>.