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Clinical Review Article

# Leadership characteristics and depressive symptoms in health workers: a systematic review

## Características da liderança e sintomas depressivos em trabalhadores da saúde: uma revisão sistemática

## *Características de liderazgo y síntomas depresivos en trabajadores de la salud: una revisión sistemática*

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## Abstract

**Introduction:** Leadership characteristics can affect the mental health of healthcare workers and have consequences for organizations and the quality of care. **Objective:** To systematically review the association between leadership characteristics and depressive symptoms in healthcare workers. **Methods:** This is a systematic review, with a search for national and international studies carried out in the MEDLINE, LILACS and SciELO, databases, published from 1999 to December 2022 in English, Spanish or Portuguese. **Results:** 1951 titles were found and eight studies were selected. Some of the leadership characteristics associated with depressive symptoms were: lack of supervisor support, lack of recognition, lack of autonomy, lack of *feedback*, and lack of worker appreciation. **Conclusion:** The results provide relevant information for managers and health professionals. Providing effective *feedback*, promoting autonomy, recognizing and valuing work and supporting healthcare workers must constitute healthcare leadership, impacting the mental health of healthcare workers.

**Keywords:** Leadership; Health personnel; Depression.

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## Resumo

**Introdução:** As características da liderança podem afetar a saúde mental dos trabalhadores da saúde e ter consequências para as organizações e para a qualidade do cuidado. **Objetivo:** Revisar sistematicamente a associação entre as características da liderança e os sintomas depressivos em trabalhadores da saúde. **Métodos:** Trata-se de uma revisão sistemática, sendo a busca de estudos nacionais e internacionais realizada nas bases MEDLINE, LILACS e SciELO, publicados de 1999 até dezembro de 2022, em inglês, espanhol e português. **Resultados:** Foram encontrados 1951 títulos e selecionados oito estudos. As características da liderança associadas aos sintomas depressivos foram: falta de apoio do supervisor, falta de reconhecimento, falta de autonomia, falta de *feedback* e falta de valorização do trabalhador. **Conclusão:** Os resultados trazem informações relevantes para os gestores e para os profissionais da saúde. Realizar *feedbacks* efetivos, promover a autonomia, reconhecer e valorizar o trabalho e dar suporte ao trabalhador da saúde devem constituir a liderança em saúde, impactando a saúde mental dos trabalhadores da saúde.


**Palavras-chave:** Liderança; Trabalhadores de saúde; Depressão.


## Resumen

**Introducción:** Las características del liderazgo pueden afectar la salud mental de los trabajadores de la salud y tener consecuencias para las organizaciones y la calidad de la atención. **Objetivo:** Revisar sistemáticamente la asociación entre características de liderazgo y síntomas depresivos en trabajadores de la salud. **Métodos:** Se trata de una revisión sistemática, con búsqueda de estudios nacionales e internacionales realizada en las bases de datos MEDLINE, LILACS y SciELO, publicadas desde 1999 hasta diciembre de 2022 en inglés, español o portugués. **Resultados:** Se encontraron 1951 títulos y se seleccionaron ocho estudios. Entre las características de liderazgo asociadas con los síntomas depresivos se encuentran: falta de apoyo del supervisor, falta de reconocimiento, falta de autonomía, falta de retroalimentación y falta de apreciación de los trabajadores. **Conclusión:** Los resultados proporcionan información relevante para gestores y profesionales de la salud. Proporcionar retroalimentación efectiva, promover la autonomía, reconocer y valorar el trabajo y apoyar a los trabajadores de la salud deben constituir un liderazgo en el cuidado de la salud, lo que repercute en la salud mental de los trabajadores de la salud.


**Palabras clave:** Liderazgo; Personal de salud; Depresión.

# INTRODUCTION

The high prevalence of depression among healthcare professionals raises great concern for healthcare managers, as it has repercussions for workers, the quality of care, and healthcare institutions.[1] In Brazil, the prevalence of depressive symptoms among healthcare professionals has been observed to range from 25.0% to 30.5%, constituting a public health issue.[2-4] Among workers in the hospital environment, the prevalence of depression ranged from 19.2% to 28.4%.[5-7] In the context of Primary Health Care (PHC), a prevalence of 54.7% and 58% was found[8,9]

These data raise great concern for healthcare managers and workers, as depression among healthcare professionals is associated with serious consequences, such as absenteeism, suicidal ideation,[10,11] dysfunction at work, defined as the inability to perform job duties due to stress,[11] impairments in social, family, and occupational interactions,[5] high levels of stress and burnout[(6)], low work quality,[12] sleep disturbances, and reduced quality and safety of patient care, including medication errors, for example.[13]

Work-related factors associated with a higher risk of developing depressive symptoms include workload, interpersonal conflict, low autonomy, workplace violence,[14] low social support, and high psychological demand.[5,15,16] Besides these factors, leadership characteristics have been pointed out as modifiable factors that are associated with mental suffering at work.[17] Leaderships that do not provide feedback, do not offer support to workers, and promote little participation in decision-making have been associated with a higher risk of depressive symptoms. On the other hand, leadership styles based on worker support, regular feedback, work recognition, encouragement of improvement, and participatory

management create a positive work environment, with a lower chance of healthcare professionals developing depression.[15,17-20]

This study aims to systematically review the associations between leadership characteristics and depressive symptoms in healthcare workers. Systematizing this information may contribute to the development of strategies to improve the ongoing education of healthcare leaders, managers, and supervisors, thus mitigating the mental suffering of healthcare workers and, consequently, reducing the repercussions of depression among healthcare workers for the populations they care for and for the organizations.

## METHODS

The study was designed as a systematic review, with a research protocol registered in the PROSPERO database – International Prospective Register of Systematic Reviews, under the identification code CRD42023393889, and structured based on the recommendations of PRISMA – Preferred Reporting Items for Systematic Reviews.[21]

For the development of search strategies related to the research question and the study's objectives mentioned above, the PECO strategy[22] was used, as follows: P (population): Healthcare workers, E (exposure): leadership characteristics with feedback/support, C (comparison): leadership characteristics without feedback/support, O (outcome): depressive symptoms.

The literature review was conducted through searches in the following databases: Medical Literature Analysis and Retrieval System Online (MEDLINE), Latin American and Caribbean Literature in Health Sciences (LILACS via BIREME), and Scientific Electronic Library Online (SciELO). Additional sources were also searched by examining the reference lists of the identified sources.

Initially, a screening was performed by reading the titles and abstracts of the articles. The PRISMA protocol[21] was followed for the identification, selection, eligibility, and inclusion of studies (Flowchart 1). In the next phase, a full-text reading of the selected studies was conducted, and simultaneously, a structured instrument was completed in Microsoft Excel 2010 to collect data from each article, aiming to systematize the relevant information. The instrument included details such as title, authors, year, country, type of study, leadership aspects investigated, mental health outcomes, and related results. The search results were extracted and exported to the Rayyan QCR program[23], and the analysis of the studies was carried out by two evaluators.

The review included primary, empirical, and theoretical articles, published in full, original, and freely accessible, both national and international, that evidenced the relationship between depression and leadership. To further explore studies on the topic of this review, all articles published from 1999 to December 2022 were included. Research conducted in other productive sectors and outside the healthcare context was excluded.

Based on the research question, the necessary study variables were identified to select the descriptors and operationalize the search. These descriptors were systematically extracted from the controlled vocabularies Descritores em Ciências da Saúde (DeCS) and Medical Subject Headings (MESH). The information was cross-referenced using the Boolean operators OR and AND. The generated search strategy was: [(Leadership) AND ((Depression) OR (Depressive Symptoms)) AND (Healthcare Workers)], and this strategy was replicated with English descriptors (MESH) in the corresponding databases.

## RESULTS

From the analysis of the 1,951 studies identified in the databases, 74 were excluded as they were duplicate articles. After reading the titles and abstracts, 1,814 were excluded for not answering the study's research question, leaving 63 manuscripts for full-text reading. Of these, only 8 evaluated the relationships between leadership characteristics and depressive symptoms in healthcare workers. The flow followed to select the articles is described in Figure 1.

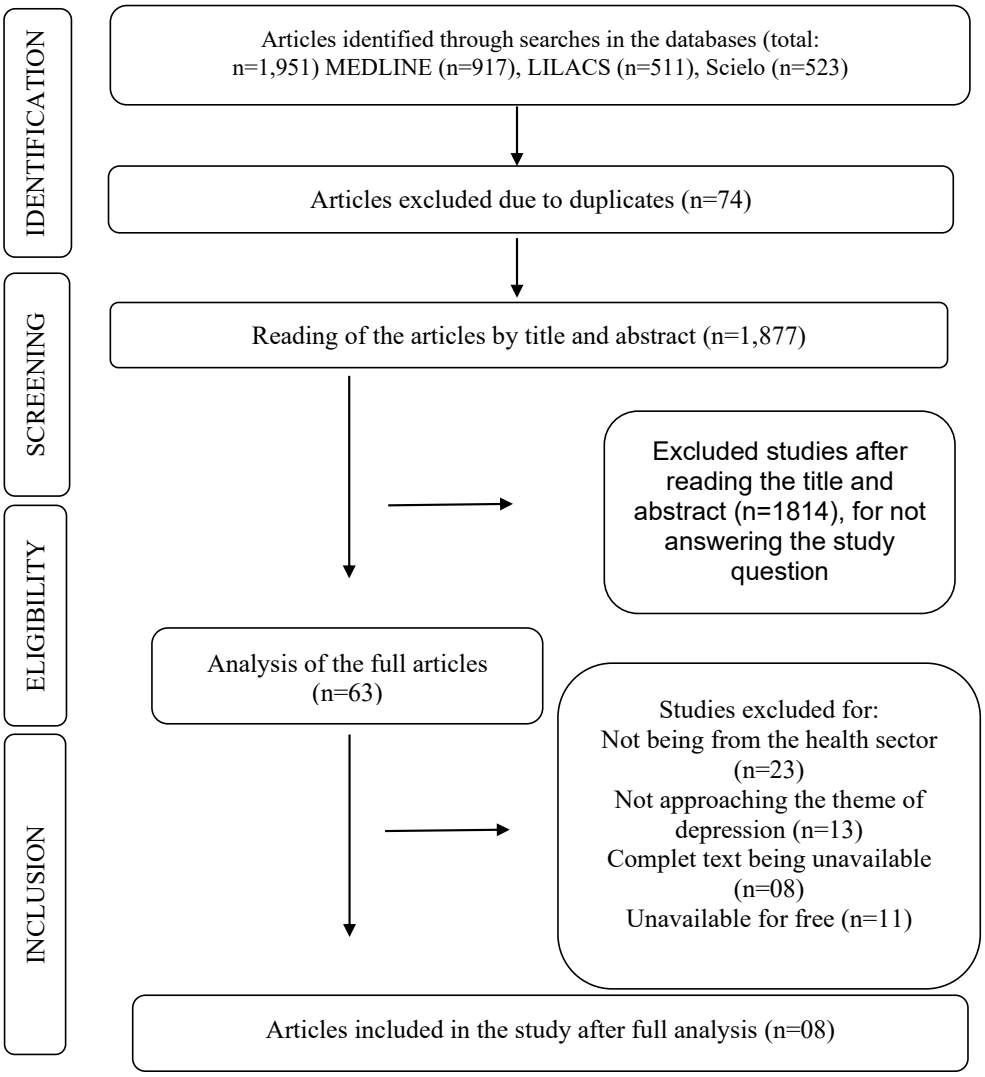


**Figura 1.** Flowchart – Steps for study selection – Prisma.[21] Jundiaí, São Paulo, 2022.

Table 1 characterizes the publications according to title, authors, year, country, type of study, leadership aspect investigated, mental health outcomes, and related results of the studies included in the review.

Among the countries of the identified articles, the following stood out: Brazil, with four studies (50%); Canada, with two studies (25%); and Denmark and the United States, with one study (12.5%) each.

**Table 1.** Characterization of the selected studies. Jundiaí, São Paulo – 2022.

| Article | Title | Author and year | Country | Type of Study | Investigated leadership aspects | Mental health outcomes | Result |
|---|---|---|---|---|---|---|---|
| A1 | *Symptoms of depression and intervening factors among nurses of emergency hospital services*[11] | Oliveira FP, Mazzaia, MC, Marcolan JF. (2014) | Brazil | Cross-sectional | Low support and lack of recognition from the leadership | Depressive symptoms | Of the nurses, 91.3% presented depressive symptoms |
| A2 | *Work-Related Depression in Primary Care Teams in Brazil*[15] | Silva ATC, Lopes CS, Susser E, Menezes PR. (2016) | Brazil | Cross-sectional | Lack of feedback from the supervisor regarding performance, low social supportl | Depressive symptoms | Community health workers had a higher prevalence of depression (18%) than other primary care workers |
| A3 | *Work psychosocial aspects and psychological distress among nurses*[24] | Araújo TM, Aquino E, Menezes G, Santos CO, Aguiar L. (2003) | Brazil | Cross-sectional | High demands, devaluation, and low support | Depressive symptoms | The present study confirmed the positive association between high-demand work and depressive symptom disorders in nurses |
| A4 | *Psychological impact of the COVID-19 pandemic on frontline healthcare workers during the pandemic outbreak in New York City*[25] | Feingold JH, Peccoralo L, Chan CC, *et al*. (2021) | United States | Cross-sectional | Lack of leadership support during the COVID-19 pandemic | Depressive symptoms | A total of 3,360 out of 6,026 healthcare workers completed the survey, and 26.6% showed depressive symptoms |
| A5 | *Managerial Quality and Risk of Depressive Disorders Among Danish Eldercare Workers*[26] | Rugulies R, Jakobsen LM, Madsen IEH, *et al*. (2018) | Denmark | Cohort | Low managerial quality and problematic relationships | Depressive symptoms | Elderly caregivers who reported exposure to low managerial quality had a 3.1 times higher risk of depressive disorders compared to those working in workplaces with high managerial quality |
| A6 | *The mental health impact of the COVID-19 pandemic on Canadian critical care nurses*[27] | Crowe S, Fuchsia HÁ, Vanderspank, B. (2022) | Canada | Cross-sectional | Lack of recognition and support, disrespect at all levels of leadership, poor management | Depressive symptoms | Leadership experiences led 70% of nurses to report depressive symptoms. |
| A7 | *Factors associated with stress, anxiety and depression in nursing professionals in the hospital contexto*[28] | Assis BB, Azevedo C, Moura CC, *et al*. (2022) | Brazil | Cross-sectional | Lack of autonomy, lack of recognition, job satisfaction | Depressive symptoms | The prevalence of depression among nursing professionals was 47.02% |
| A8 | *Occupational mental health: a study of work-related depression among nurses in the Caribbean*[29] | Baba VV, Galperin BL, Lituchy TR (1999) | Canada | Cross-sectional | Lack of support, role overload | Depressive symptoms | Higher score indicates higher levels of depression among nurses |

Regarding the publication date, the year 2021 stood out with two studies (25%), and the other years — 2021, 2018, 2016, 2014, 2003, and 1999 — each had one study (12.5%).

Regarding the study design, seven studies (87.5%) were classified as cross-sectional, and one article was a cohort study (12.5%). Among the population, five studies (62.5%) evaluated nursing professionals; one evaluated healthcare professionals in general, including medical assistants, hospital chaplains, social workers, nutritionists, nursing staff, and doctors (12.5%); one evaluated community health agents (12.5%); and one evaluated elderly caregivers (12.5%).

Among the studies found, seven (87.5%) were conducted in the hospital setting, and only one (12.5%) was in the primary healthcare area.

In the study on work-related depression in primary care, it was observed that community health agents were more likely to present depressive symptoms (adjusted odds ratio (AOR) = 1.96; 95% CI = 1.07–3.60) compared to doctors, nurses, and nursing assistants. This was associated with low social support (AOR = 3.01; 95% CI = 2.20, 4.12) and not receiving feedback from the supervisor (AOR = 1.40; 95% CI = 1.13, 1.73).[15]

In Oliveira's research, 91.3% of the hospital-based nurses who participated in the study exhibited symptoms of depression, with work overload, devaluation, and lack of recognition by the supervisor being associated with a higher likelihood of depression.[11] In this regard, Araujo et al. also showed a statistically significant association between the psychological demands of work among nursing workers in the hospital setting, low social support (73.3%), and professional devaluation (59.7%).[24]

In another study conducted in New York, it was observed that 26.6% of healthcare professionals exhibited depression (OR = 3.83). It is worth noting that this sample was collected during the COVID-19 pandemic in 2020, where depression was related to new stressors arising from the pandemic context (OR = 2.10). The study also analyzed greater support from hospital leadership, which was associated with a lower risk of depression (OR = 0.72).[25]

The study conducted with elderly caregivers in Denmark showed that low managerial quality predicted the onset of depressive disorders (OR = 1.85, 95% CI = 1.25 to 2.76). Low managerial quality, that is, the lack of feedback and support from the supervisor, was associated with a higher risk of experiencing depressive symptoms (OR = 3.10, 95% CI = 1.71 to 5.62).[26]

In Canada, hospital unit nurses during the COVID-19 pandemic reported a 70% depression rate and described feeling underestimated by leadership. They reported not being recognized, lacking support, and being disrespected by various levels of leadership.[27]

The prevalence of depression among hospital nursing professionals in the study by Assis et al. was 47.02%. Social support, lack of autonomy at work, hostile relationships with colleagues, lack of recognition, and work overload were associated with depression.[28]

In the Caribbean, factors associated with depression in hospital nursing professionals were studied. Depression showed significant correlations with work overload. Work pressures, such as conflicts of interest and overload, contributed to the imbalance, and unresolved stress led to the deterioration of mental health, manifested by depressive symptoms.[29]

Other data about the selected studies are in Table 1.

The quality of the studies was assessed using the tool developed by the Joanna Briggs Institute (JBI) – Checklist For Analytical Cross Sectional Studies.[30] It consists of eight questions, in a free translation to Portuguese, with the purpose of classifying studies as: "Low" quality, when the study received up to three "Yes" responses for the evaluated items; "Moderate" quality, when the study received five or six "Yes" responses; and "High" quality, when the study received seven or more "Yes" responses. In the end, 6

studies were considered to be of moderate quality, 1 of high quality, and 1 of low quality. Table 2 details the evaluated items and the final quality classification of each study selected for this review.

**Table 2.** Evaluation of the quality of the study according to the criteria of the Checklist For Analytical Cross Sectional Studies – JBI, 2017

| Criterion | A1 | A2 | A3 | A4 | A5 | A6 | A7 | A8 |
|---|---|---|---|---|---|---|---|---|
| **1. Have the inclusion criteria for the sample been clearly defined?** | Yes | Yes | Yes | No | Yes | Yes | Yes | Yes |
| **2. Have the study subjects and the environment been described in detail?** | Yes | Yes | No | No | Yes | Yes | Yes | Yes |
| **3. Was the exposure measured in a valid and reliable way?** | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| **4. Were objective and standardized criteria used to measure the condition?** | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| **5. Were confounding factors identified?** | No | No | Yes | No | No | No | No | No |
| **6. Were strategies established to address confounding factors?** | NA | NA | Yes | NA | NA | NA | NA | NA |
| **7. Were the outcomes measured in a valid and reliable way?** | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| **8. Was appropriate statistical analysis used?** | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| **Study Quality** | Moderate | Moderate | High | Low | Moderate | Moderate | Moderate | Moderate |

*NA: not applicable.

## DISCUSSION

The associations between leadership characteristics and depressive symptoms were observed in all the studies. In four of them, the lack of supervisor support predominated; in three, the lack of recognition; in two, work overload; and in only one study, devaluation, lack of feedback, and low managerial quality, which is also referred to as leadership quality or supervision quality, and refers to different aspects of a manager's behavior toward their employees (such as, for example, development opportunities, conflict resolution, and employee well-being).

These data show that there is an association between depressive symptoms in healthcare workers and leadership characteristics, particularly the lack of support, lack of regular feedback from supervisors, and lack of autonomy. The studies described that the prevalence of depressive symptoms is higher in women, in nursing professionals, and in primary healthcare. Leadership characteristics played a key role

in promoting work contexts that protect the mental health of healthcare workers, as they influence the behavior and attitudes of all team members.

When leaders do not recognize their employees and fail to ensure proper working conditions, the development of depressive symptoms among subordinates is observed, negatively affecting their performance, health, and well-being. This is linked to the ERI model, in which the worker strives to perform their duties but does not receive recognition from supervisors.[24,31]

People-centered leadership contributes to improved productivity and outcomes in the workplace, as well as a reduction in depressive factors. It was observed that the most common characteristics of how managers exercise their leadership negatively include: lack of feedback, managerial skills, managerial quality, support, lack of recognition, and devaluation, which aligns with Karasek's demand-control model.[32] When there is low psychological demand and low autonomy (passive work), or when there is high psychological demand but low autonomy to perform tasks (high strain), there is a greater risk to the worker's mental health, including depressive symptoms.[17,24]

In this regard, leadership theories have been implemented to enhance the high level of motivation among employees through relationships based on trust, inspiration, and motivation, with attention to their subordinates (transformational leadership). Additionally, there is an emphasis on involving subordinates in organizational decisions, which contributes to increased engagement and job satisfaction, characterizing authentic leadership. Finally, there is situational leadership, which involves careful observation of the group members' behavior, allowing for the implementation of appropriate actions to achieve objectives.[33-36]

On the other hand, task-focused leadership styles are primarily management by exception, such as laissez-faire, transactional leadership, dissonant leadership, and instrumental leadership. These styles contribute negatively, for example, to job dissatisfaction, low self-esteem, loss of interest, irritability, loss of vitality, moodiness, and health-damaging behaviors, culminating in physical and mental exhaustion and burnout. Furthermore, they lead to much more serious psychological disorders than is commonly imagined, representing one of the biggest challenges faced in the studies reviewed and in current times.[24,31]

Perception of justice in the workplace (organizational justice) impacts the individual experience of employees and can affect the development of depressive symptoms. Organizational justice is classified into three types: distributive (perception of fair outcomes and rewards), procedural (refers to the fairness of formal organizational processes, decision-making, and how they are processed), and interactional (the quality of the interpersonal relationship between managers and employees, and the degree to which they are treated with dignity and respect). Thus, workers who perceive that they are treated fairly by leaders, receive feedback, and are included in decision-making processes tend to have higher job satisfaction, reduced overload, and fewer depressive symptoms.[37,38]

A study with healthcare professionals showed that 65% of leaders believed they had a positive impact on the mental health of workers; 50% felt comfortable discussing mental health at work; and 90% stated that companies should prioritize employee mental health by building trust, listening, promoting good interpersonal relationships, providing feedback, and offering flexibility.[39]

Corroborating the findings in the hospital setting, another study shows that 20% of nursing technicians and assistants who participated in the study had depression. Among the variables associated with a higher risk of depression are low autonomy at work and lack of supervisor support. Thus, the mental health of workers is directly linked to how organizations and managers treat and care for their employees. Therefore, providing feedback, recognition, and support are essential leadership characteristics that directly impact the mental health of healthcare workers.[40]

This is a topic that holds relevance and impact on the mental health of healthcare workers and, consequently, on the quality of healthcare systems. Regarding this, the few studies found were predominantly from the hospital sector, and it is also important to consider the mental health of healthcare workers in primary care.

For future studies, it is important to assess the effects of actions targeted at leadership characteristics in the healthcare context. These interventions may include the development of communication skills that promote regular feedback, support for workers, the promotion of greater autonomy at work, and organizational justice, focusing on the mental health of healthcare workers. These studies should be conducted, as they could significantly contribute to the development of actions and institutional policies aimed at reducing the mental suffering of healthcare workers and its repercussions for the workers, the population they serve, and the institution.

## FINAL CONSIDERATIONS

Leadership characteristics such as regular feedback, supervisor support, and greater autonomy at work were factors associated with a lower risk of depressive symptoms in healthcare professionals. Healthcare organizations, services, and managers in healthcare systems should develop and implement leadership training strategies that provide effective, periodic feedback, offer support to healthcare workers, and encourage autonomy at work. The impacts of these measures could help reduce the likelihood of depression in healthcare professionals and mitigate its consequences for the workers themselves, the patients they care for, and the institutions.

## CONFLICT OF INTERESTS

Nothing to declare.

## AUTHORS' CONTRIBUTIONS

CLC: Concept, Data Curatorship, Formal Analysis, Investigation, Methodology, Project Administration, Resources, Software, Validation, Visualization, Writing – First Draft, Writing – Review and Editing. JJMC: Formal Analysis, Visualization, Writing – First Draft, Writing – Review and Editing. ATCS: Concept, Data Curatorship, Formal Analysis, Methodology, Project Administration, Supervision, Validation, Visualization, Writing – First Draft, Writing – Review and Editing.

## REFERENCES

1. Abraham A, Chaabna K, Doraiswamy S, Bhagat S, Sheikh J, Mamtani R, et al. Depression among healthcare workers in the Eastern Mediterranean Region: a systematic review and meta-analysis. Hum Resour Health 2021;19(1):81.
2. Rotta DS, Pinto MH, Lourenção LG, Teixeira PR, Gonsalez EG, Gazetta CE. Anxiety and depression levels among multidisciplinary health residents. Rev Rene 2016;17(3):372-7. https://doi.org/10.15253/2175-6783.2016000300010
3. Sampaio LR, Oliveira LC de, Pires MFDN. Empatia, depressão, ansiedade e estresse em Profissionais de Saúde Brasileiros. CienciasPsi 2020;14(2):e-2215. https://doi.org/10.22235/cp.v14i2.2215
4. Gonsalez EG, Lourenção LG, Teixeira PR, Rotta DS, Gazetta CE, Pinto MH. Ansiedade e depressão entre profissionais de programas de aprimoramento profissional. Rev Port Enferm Saúde Ment. 2017;(18). https://doi.org/10.19131/rpesm.0192
5. Schmidt DRC, Dantas RAS, Marziale MHP. Ansiedade e depressão entre profissionais de enfermagem que atuam em blocos cirúrgicos. Rev Esc Enferm USP 2011;45(2):487-93.
6. Vargas D de, Dias APV. Depression prevalence in Intensive Care Unit nursing workers: a study at hospitals in a northwestern city of São Paulo State. Rev Latino-Am Enfermagem 2011;19(5):(9 telas). https://doi.org/10.1590/S0104-11692011000500008

7. Pham HT, Cao TV, Le NB, T-T Nguyen N, Vuong BTN, Pham LVD, et al. Depression, anxiety and stress among healthcare workers in the context of the COVID-19 pandemic: a cross-sectional study in a tertiary hospital in Northern Vietnam. Front Public Heal 2023;11:1231326. https://doi.org/10.3389/fpubh.2023.1231326
8. Costa APR da, Souto AS, Barros IA de M, Santos MCFF, Sá JRC e. Prevalência de sintomas depressivos e ansiosos em profissionais da Atenção Primária à Saúde em um município da região metropolitana do Recife, Pernambuco. An da Fac Med Olinda 2024;1(11):14-28. https://doi.org/10.56102/afmo.2024.310
9. Julio R de S, Lourenção LG, Oliveira SM de, Farias DHR, Gazetta CE. Prevalência de ansiedade e depressão em trabalhadores da Atenção Primária à Saúde. Cad Bras Ter Ocup 2022;30:e2997. https://doi.org/10.1590/2526-8910.ctoAO22712997
10. Silva ATC, Lopes CS, Susser E, Menezes PR. Work-related depression in primary care teams in Brazil. Am J Public Health. 2016;106(11):1990-7. https://doi.org/10.2105/AJPH.2016.303342
11. Oliveira FP de, Mazzaia MC, Marcolan JF. Sintomas de depressão e fatores intervenientes entre enfermeiros de serviço hospitalar de emergência. Acta Paul Enferm 2015;28(3):209-15. https://doi.org/10.1590/1982-0194201500036
12. Fond G, Fernandes S, Lucas G, Greenberg N, Boyer L. Depression in healthcare workers: Results from the nationwide AMADEUS survey. Int J Nurs Stud 2022;135:104328. https://doi.org/10.1016/j.ijnurstu.2022.104328
13. Kumar A, Bhat PS, Ryali S. Study of quality of life among health workers and psychosocial factors influencing it. Ind Psychiatry J 2018;27(1):96-102. https://doi.org/10.4103/ipj.ipj_41_18
14. da Silva ATC, Peres MFT, Lopes C de S, Schraiber LB, Susser E, Menezes PR. Violence at work and depressive symptoms in primary health care teams: a cross-sectional study in Brazil. Soc Psychiatry Psychiatr Epidemiol. 2015;50(9):1347-55. https://doi.org/10.1007/s00127-015-1039-9
15. da Silva ATC, Lopes C de S, Susser E, Menezes PR. Work-Related Depression in Primary Care Teams in Brazil. Am J Public Health 2016;106(11):1990-7. https://doi.org/10.2105/AJPH.2016.303342
16. Fernandes MA, Soares LMD, Silva JS e. Transtornos mentais associados ao trabalho em profissionais de enfermagem: uma revisão integrativa brasileira. Rev Bras Med Trab 2018;16(2):218-24.
17. Theorell T, Nyberg A, Leineweber C, Hanson LLM, Oxenstierna G, Westerlund H. Non-Listening and Self Centered Leadership – Relationships to Socioeconomic Conditions and Employee Mental Health. PLoS One 2012;7(9):e44119. https://doi.org/10.1371/journal.pone.0044119
18. Arnetz B, Blomkvist V. Leadership, mental health, and organizational efficacy in health care organizations. Psychosocial predictors of healthy organizational development based on prospective data from four different organizations. Psychother Psychosom. 2007;76(4):242-80. https://doi.org/10.1159/000101503
19. Munir F, Nielsen K, Carneiro IG. Transformational leadership and depressive symptoms: A prospective study. J Affect Disord 2010;120(1-3):235-9. https://doi.org/10.1016/j.jad.2009.03.020
20. Boamah SA, Read EA, Laschinger HKS. Factors influencing new graduate nurse burnout development, job satisfaction and patient care quality: a time-lagged study. J Adv Nurs 2017;73(5):1182-95. https://doi.org/10.1111/jan.13215
21. Moher D, Liberati A, Tetzlaff J, Altman DG; PRISMA Group. Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. PLoS Med 2009;6(7):e1000097. https://doi.org/10.1371/journal.pmed.1000097.
22. Galvão TF, Pereira MG. Revisões sistemáticas da literatura: passos para sua elaboração. Epidemiol Serv Saúde 2014;23(1):183-4. http://dx.doi.org/10.5123/S1679-49742014000100018
23. Ouzzani M, Hammady H, Fedorowicz Z, Elmagarmid A. Rayyan — a web and mobile app for systematic reviews. Syst Rev 2016;5(1):210.
24. Araújo TM, Aquino E, Menezes G, Santos CO, Aguiar L. Aspectos psicossociais do trabalho e distúrbios psíquicos entre trabalhadoras de enfermagem. Rev Saude Publica 2003;37(4):424-33. https://doi.org/10.1590/S0034-89102003000400006
25. Feingold JH, Peccoralo L, Chan CC, Kaplan CA, Kaye-Kauderer H, Charney D, et al. Psychological Impact of the COVID-19 Pandemic on Frontline Health Care Workers During the Pandemic Surge in New York City. Chronic Stress 2021;5:2470547020977891. http://doi.org/10.1177/2470547020977891
26. Rugulies R, Jakobsen LM, Madsen IEH, Borg V, Carneiro IG, Aust B. Managerial Quality and Risk of Depressive Disorders Among Danish Eldercare Workers: A Multilevel Cohort Study. J Occup Environ Med 2018;60(2):120-5. http://doi.org/10.1097/JOM.0000000000001195
27. Crowe S, Howard AF, Vanderspank B. The mental health impact of the COVID-19 pandemic on Canadian critical care nurses. Intensive Crit Care Nurs 2022;71:103241. http://doi.org/10.1016/j.iccn.2022.103241
28. Assis BB de, Azevedo C, Moura C de C, Mendes PG, Rocha LL, Roncalli AA, et al. Factors associated with stress, anxiety and depression in nursing professionals in the hospital context. Rev Bras Enferm 2022;75(suppl 3):e20210263. https://doi.org/10.1590/0034-7167-2021-0263
29. Baba VV, Galperin BL, Lituchy TR. Occupational mental health: a study of work-related depression among nurses in the Caribbean. Int J Nurs Stud 1999;36(2):163-9. https://doi.org/10.1016/s0020-7489(99)00002-4
30. Moola S, Munn Z, Tufanaru C, Aromataris E, Sears K, Sfetcu R, et al. Systematic reviews of etiology and risk . In: Aromataris E, Lockwood C, Porritt K, Pilla B, Jordan Z, editors. JBI Man Evid Synth 2020.
31. Sousa CC de, Araújo TM de, Lua I, Gomes MR, Freitas KS. Insatisfação com o trabalho, aspectos psicossociais, satisfação pessoal e saúde mental de trabalhadores e trabalhadoras da saúde. Cad Saúde Pública [Internet]. 2021;37(7):e00246320. https://doi.org/10.1590/0102-311X00246320
32. Karasek RA. Job Demands, Job Decision Latitude, and Mental Strain: Implications for Job Redesign. Adm Sci Q 1979;24(2):285-308.

33. Sabbah IM, Ibrahim TT, Khamis RH, Bakhour HAM, Sabbah SM, Droubi NS, et al. The association of leadership styles and nurses well-being: a cross-sectional study in healthcare settings. Pan Afr Med J 2020;36:328. https://doi.org/10.11604/pamj.2020.36.328.19720
34. Suliman M, Aljezawi M, Almansi S, Musa A, Alazam M, Ta'an WF. Effect of nurse managers' leadership styles on predicted nurse turnover. Nurs Manag (Harrow) 2020;27(5):20-5. https://doi.org/10.7748/nm.2020.e1956
35. Weberg D. Transformational leadership and staff retention: an evidence review with implications for healthcare systems. Nurs Adm Q 2010;34(3):246-58. https://doi.org/10.1097/NAQ.0b013e3181e70298
36. Conz CA, Aguiar RS de, Reis HH, Jesus MCP de, Mira VL, Merighi MAB. Atuação de enfermeiros líderes de unidade de terapia intensiva: abordagem compreensiva. Enferm Foco 2019;10(4):41-6.
37. Masagão VC, Ferreira MC. O impacto da justiça organizacional sobre o bem-estar laboral: um estudo com trabalhadores do varejo. Rev Psicol Organ Trab 2015;15(1):8-18. https://doi.org/10.17652/rpot/2015.1.327
38. Beuren IM, Santos V dos, Marques L, Resendes M. Relação entre Percepção de Justiça Organizacional e Satisfação no Trabalho. REPeC 2017;11. https://doi.org/10.17524/repec.v11i0.1721
39. Assmar EML, Ferreira MC, Oliveira US de, Souto S de O. Justiça organizacional: uma revisão crítica da literatura. Psicol Reflexão e Crítica 2005;18(3):443-53.
40. Gherardi-Donato EC da S, Cardoso L, Teixeira CAB, Pereira S de S, Reisdorfer E. Association between depression and work stress in nursing professionals with technical education level. Rev Lat Am Enfermagem 2015;23(4):733-40. https://doi.org/10.1590/0104-1169.0069.2610