ABSTRACT | Nursing workers are subjected to unhealthy working conditions that can lead to sickness absenteeism. Based on an integrative literature review, the present study aimed to identify the main reasons that lead nursing workers in Brazil to sickness absenteeism, according to articles available at the Virtual Health Library, published from 2006 to 2017. A total of 23 publications that met the study objectives were selected, and the main reasons for sickness absenteeism identified were diseases of the musculoskeletal system and connective tissue, followed by mental and behavioral disorders. Other factors identified also include factors that influence health status, diseases of the sensory organs, and diseases of the respiratory system, among others. Studies on worker health among nursing staff are important to understand the relationship between work and illness and to contribute to the improvement of working conditions and health of this professional category.

Keywords | absenteeism; nursing staff; worker health.

RESUMO | Os trabalhadores de enfermagem submetem-se a condições de trabalho que podem levar ao adoecimento e determinar a ausência no trabalho. Por meio de revisão integrativa da literatura, buscou-se identificar os principais motivos que levam trabalhadores de enfermagem no Brasil ao absenteísmo-doença, em artigos disponíveis na Biblioteca Virtual de Saúde publicados de 2006 a 2017. Foram selecionados 23 artigos que atendiam aos objetivos do estudo, e os principais motivos de absenteísmo-doença identificados foram doenças do sistema osteomuscular e tecido conjuntivo, fatores que influenciam o estado de saúde, doenças dos órgãos dos sentidos, transtornos mentais e comportamentais e doenças do sistema respiratório. Estudos sobre a saúde do trabalhador na área da enfermagem são importantes para compreender a relação entre trabalho e adoecimento e contribuir na melhoria das condições de trabalho e saúde dessa categoria profissional.

Palavras-chave | absenteísmo; recursos humanos de enfermagem; saúde do trabalhador.
INTRODUCTION

Work is essential in people’s lives; however, depending on its organization and the conditions of the work environment, it can also lead to psychological suffering, alienation, and impairment of physical and mental health. These can lead to sickness absenteeism, defined by the International Labor Organization (ILO)\(^1\) as “non-attendance to work attributable to an incapacity, except for that derived from pregnancy or imprisonment.”

Absenteeism is classified as voluntary when it is caused by private reasons, not justified by illness, and without legal support. Sickness absenteeism, on the other hand, includes all absences due to illness or medical procedure, except those resulting from work. Absenteeism due to occupational diseases refers to absences due to work accidents or occupational diseases, while legal absenteeism is represented by absences supported by law, including pregnancy, blood donation, and military service, among others. Finally, mandatory absenteeism is an involuntary absence from work, such as in the case of an employer-imposed suspension, arrest, or another factor that prevents the worker from arriving at the workplace.\(^2\)

According to Dejours,\(^3\) absenteeism is an escape for workers who, faced with dissatisfaction at work, use it as an alternative when they reach the limit. It is a means, a “solution” that they find to resist or escape, a possible way to deal with the situation. Therefore, absenteeism can be an indicator of worker dissatisfaction with working conditions and the work environment.

Nursing workers belong to a professional category that needs special attention, because they are exposed to a series of stressors in their daily work, which, throughout their careers, affect their health and may result in problems in the care provided and reduce the motivation to perform tasks and remain in the profession. Polyvalence, for example, which is the need to perform different activities by the same worker, results in increased physical, psychological, and emotional workloads, which can trigger illness and absenteeism among these workers.\(^4\)

Identifying the main reasons for sickness absenteeism among nursing workers can provide information about their health situation, as well as their working conditions and satisfaction with the organization and the work itself. Therefore, the analysis of the reasons for sickness absenteeism in the nursing service is relevant to contribute to the knowledge of this reality in order to improve the working conditions and health of this professional category.

METHODS

This is an integrative literature review, which is the process of searching, analyzing, and describing a body of knowledge in bibliographic material seeking to answer a specific question. Thus, a synthesis of the scientific knowledge already produced on the investigated topic was proposed, with methodological rigor, which allows the combination of data from empirical and theoretical literature that can be directed to the definition of concepts, identification of gaps in the areas of studies, review of theories, and methodological analysis of studies on a given topic.\(^5\)

The development of an integrative review must be clear and follow systematized reasoning. Therefore, this review followed 6 established steps: (1) identification of the topic and definition of the guiding question; (2) database search following defined sampling criteria; (3) data collection using an instrument; (4) evaluation of the studies included in the integrative review; (5) discussion of the results; and (6) presentation of the review/ knowledge synthesis.\(^6\) The guiding question was: what are the main reasons that lead nursing workers to sickness absenteeism in Brazil?

The data survey was conducted in the Virtual Health Library (VHL) in full scientific articles available, with the descriptors “absenteeism” and “nursing”, which are part of the Descriptors in Health Sciences (DeCS). As filters, “full text available” and study region “Brazil” were applied to articles between the years 2006 and 2017. Publications such as theses, dissertations, monographs, literature review
articles, and those that did not address the reasons for absenteeism or addressed the theme theoretically or managerially were excluded. A total of 23 articles were selected out of the 169 results found, which, after reading the full titles, abstracts, and texts, met the objectives of this study. The mean of the types of illness was prepared from the 15 quantitative studies that included only nursing workers, excluding those in which there was no separation of health professional categories or in which it was not possible to quantify them.

RESULTS

After applying the inclusion and exclusion criteria, the final sample consisted of 23 articles. Table 1 shows the selected articles according to authors, title/year of publication, journal, and location of study. Table 2 shows the characterization of the studies according to type of research and reasons for sickness absenteeism.

Among the 23 articles analyzed, there was a significant increase in publications in the years 2009 and 2015, with 4 articles each; followed by 2006, with 3 articles; 2011, 2012, 2014, 2016, and 2017, with 2 articles each; and 2010 and 2013, with one article. In the distribution of articles according to the research location, there was a higher concentration in the Southeast region, with 56% of the total, followed by the South, with 17%, Midwest, with 8%, Northeast, with 4%, and 3 did not inform the location (13%).

A total of 14 journals that published these articles were identified. The Brazilian Journal of Nursing (REBEn) was responsible for 4 (17.39%) publications on the theme; and the Science, Care and Health Journal (publication from the Nursing Department of the Universidade Estadual de Maringá) and the UERJ Nursing Journal (publication from the Nursing School of the Universidade do Estado do Rio de Janeiro) with 3 publications each (13%). The most used types of studies were descriptive and quantitative studies. One of the central aspects of the field of worker health is to have workers as active participants and knowledgeable subjects of their work environment and process, but only 2 studies (3 and 9) interviewed workers, which suggests an absence of the workers' perspective.

Regarding the reasons for sickness absenteeism, 92% of the articles cited musculoskeletal system diseases, 64% reported mental and behavioral disorders/psychological disorders, 48% of the studies cited respiratory system diseases, 40% cited connective tissue diseases, 32% infectious and parasitic diseases, 28%, genitourinary and reproductive system diseases, and 28% complications of pregnancy, childbirth, and the puerperium. Also, 24% mentioned circulatory system, digestive system, and factors that influence health status. Eye and adnexal diseases, injuries and poisoning, and external causes were cited in 20% of the articles; unclassified symptoms, signs, and abnormal findings were cited in 16%, and endocrine, metabolic, and nutritional diseases also in 16%. Nervous system, neoplasms, hematopoietic and autoimmune diseases were cited in 12%; diseases of sensory organs and absence due to surgical procedure in 8%; care demand, skin and subcutaneous tissue, malformations, deformities, chromosomal abnormalities, blood diseases, and diseases of the veins, lymphatic vessels and lymph nodes were cited in 4% of the studies.

Table 3 presents the meta-analysis of the relative frequency of diseases that lead to absenteeism in Brazil, calculated from the quantitative studies that presented the percentages of the frequency of illnesses. It was found that the 6 most common causes were diseases of the musculoskeletal system and connective tissue, factors influencing health status, problems relating to the sensory organs, mental and behavioral disorders, and respiratory system diseases. For this analysis, we excluded articles that included in their samples other categories of health professionals besides nursing staff,7,9,25,26,29 articles that did not quantitatively address the illness that led to absenteeism,27 or those that did not mention the diseases, using only the number of days lost.13,17
Table 1. Characterization of the studies according to authors, title/year of publication, journal, and location of study

| Authors                    | Article title (year)                                                                 | Journal                                      | Study location                                                                 |
|----------------------------|-------------------------------------------------------------------------------------|----------------------------------------------|-------------------------------------------------------------------------------|
| Alves et al.7              | Reasons for medical leaves in an urgent-emergency hospital (2006)                    | Brazilian Journal of Nursing (REBEn)         | Hospital de Belo Horizonte, state of Minas Gerais                             |
| Silva et al.8              | Working conditions versus sickness absenteeism in nursing workers (2008)             | Science, Care and Health                     | University hospital in a city in the state of Paraná                         |
| Godoy et al.9              | Sickness absenteeism in a network of hospitals in Minas Gerais (2006)                | Online Brazilian Journal of Nursing (OBJIN)   | Public hospital network of the state of Minas Gerais                          |
| Costa et al.10             | Sickness absenteeism among nursing staff members in a school hospital (2009)         | Brazilian Journal of Nursing (REBEn)         | Public Hospital in Montes Claros, state of Minas Gerais                      |
| Abreu and Simões11         | Sickness absenteeism among the nursing staff in a school hospital (2009)             | Science, Care and Health                     | Hospital de Clínicas da Universidade Federal do Triângulo Mineiro, state of Minas Gerais |
| Sancinetti et al.12        | Sickness absenteeism in the nursing staff: relationship with bed occupancy rate (2009) | Revista da Escola de Enfermagem da USP (REEUSP) | Hospital Universitário da Universidade de São Paulo, state of São Paulo       |
| Giono et al.13             | Work accidents, occupational risks, and absenteeism among hospital nursing workers (2009) | UERJ Nursing Journal                         | Workers’ Health Reference Center (CEREST) in the city of Ribeirão Preto, state of São Paulo |
| Carvalho et al.14          | Reasons for sick leave of nursing workers (2010)                                     | Science, Care and Health                     | Occupational Health and Safety Department of a university hospital in the state of Rio de Janeiro |
| Ferreira et al.15          | Absenteeism of nursing workers in a university hospital in the state of Pernambuco (2011) | Rev Rene (Online)                            | Coordination of the nursing services of a public healthcare institution in the city of Recife, state of Pernambuco |
| Magalhães et al.16         | Absenteeism among nursing workers in the hospital setting (2011)                     | UERJ Nursing Journal                         | University Hospital São Francisco de Assis, state of Rio de Janeiro           |
| Ferreira et al.17          | Multifactorial approach to sickness absenteeism in nursing workers (2012)            | Revista de Saúde Pública (RSP)               | 3 public hospitals in the state of Rio de Janeiro                            |
| Fakh et al.18              | Absenteeism among the nursing staff of the emergency department of a university hospital (2012) | Acta Paulista de Enfermagem                  | Emergency room of a university hospital in the state of São Paulo             |
| Mininel et al.19           | Workload, burnout and sickness absenteeism among nursing staff (2013)                | Revista Latino-Americana de Enfermagem (RLAE) | University hospital in the Midwest region of the country                     |
| Dissen et al.20            | Characterization of sickness absenteeism in nursing workers of a hemodialysis service (2014) | Journal of Nursing UFPE online               | Hemodialysis service (region not mentioned)                                 |
| Formenton et al.21         | Sickness absenteeism in the nursing staff of a health insurance provider (2014)       | UERJ Nursing Journal                         | Health insurance provider in the countryside of the state of São Paulo        |
| Calil et al.22             | Human resources management in nursing: a study of the interface age-absenteeism (2015) | REME - Nursing Journal of Minas Gerais       | Large School Hospital, located in the countryside of the state of São Paulo  |

Continued on next page
### Table 1. Continued

| Authors          | Article title (year)                                                                                     | Journal                                                                 | Study location                                                                 |
|------------------|----------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| Mantovani et al.23 | Sickness absenteeism among nursing professionals (2015)                                                 | REME - Nursing Journal of Minas Gerais                                    | Large university hospital in southern Brazil                                    |
| Marques et al.24  | Sickness absenteeism in the nursing staff of a university hospital (2015)                               | Brazilian Journal of Nursing (REBEn)                                      | University hospital, located in the city of Goiânia, state of Goiás.           |
| Lucca and Rodrigues25 | Absenteeism of nursing professionals in a university hospital in the state of São Paulo, Brazil (2015) | Brazilian Journal of Occupational Medicine (RBTM)                         | Hospital das Clínicas da Universidade Estadual de Campinas, state of São Paulo |
| Santana et al.26  | Absenteeism due to mental disorders in health workers in a hospital in southern Brazil (2016)          | Revista Gaúcha de Enfermagem (RGE)                                       | Hospital do Trabalhador, located in the city of Curitiba, state of Paraná       |
| Quadros et al.27  | Analysis of managerial and care indicators after adequacy of nursing staffing (2016)                  | Brazilian Journal of Nursing (REBEn)                                      | University Hospital in Southern Brazil                                         |
| Galindo et al.28  | Reasons for absenteeism in an outpatient nursing team (2017)                                           | Journal of Nursing UFPE online                                            | Outpatient clinic of a large school hospital (region not mentioned)             |
| Brey et al.29     | Absenteeism among health care workers in a public hospital in southern Brazil (2017)                   | Revista de Enfermagem do Centro Oeste Mineiro (RECOM)                     | Public hospital located in the southern region of Brazil                      |

### Table 2. Characterization of the studies according to type of research and reasons for sickness absenteeism

| Research type and data source                                                                                   | Reasons for absenteeism                                                                                                                                                                                                 |
|-----------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Descriptive, data from medical records, related to the medical care delivered to workers who sought out the division of worker’s health care.7 | Musculoskeletal and connective tissue system; factors influencing health status and contact with health services, respiratory tract diseases, injuries, poisoning, and some other consequences of external causes, some infectious and parasitic diseases, diseases of the circulatory system, mental and metabolic disorders, diseases of the genitourinary system. |
| Quantitative, with data from the workers’ records in the institution’s HR department.8                          | Respiratory tract diseases; genitourinary system; problems relating to the sensory organs; digestive system; musculoskeletal system; female reproductive system.                                                               |
| Observational descriptive data collected directly in monthly spreadsheets from the Occupational Safety and Health Service (SSST)9 | Diseases of the musculoskeletal system and connective tissue, factors influencing health status and contact with health services, mental and metabolic disorders.                                                              |
| Descriptive, documental, with data from certificates and medical leaves from the files located in the HR sector of the hospital10 | Diseases of the musculoskeletal and connective system; diseases of the respiratory system; diseases of the circulatory system; factors that induced the search for non-specialized health service.                                        |
### Table 2. Continued

| Research type and data source | Reasons for absenteeism |
|------------------------------|-------------------------|
| Descriptive-exploratory, survey of the number of absences from work among the nursing professionals of the institution, in monthly reports | Musculoskeletal system and connective tissue; factors influencing health status and contact with health services; diseases of the respiratory system; diseases of the digestive system. |
| Descriptive, quantitative, data from instrument competed monthly when ant worker was absent due to illness | Musculoskeletal system and connective tissue; mental and behavioral disorders; injuries, poisoning and other consequences of external causes; health service contacts, symptoms, signs, abnormal findings of clinical and laboratory examinations; external causes of morbidity and mortality; diseases of the respiratory system; diseases of the digestive system; neoplasms. |
| A quantitative descriptive study, using the work accident reports (CATs), from the Workers’ Health reference Center (CEREST) | Fractured fingers after trapping hand in drawer; car/motorcycle accident while leaving work; twisted foot while getting out of car; fall from own height; backache after turning patient over and carrying patient on stretcher; hand hit and cut on running fan; foot hit and cut while tidying delivery room; body/wrist twist after helping client; IV stand and infusion pump fall on foot; hand injury while removing bed rails; alcohol splash in eye. |
| Quantitative, exploratory, descriptive and documental research, data from nursing workers’ records | Factors influencing health status and contact with health services; diseases of the musculoskeletal and connective tissue system; mental and behavioral disorders. |
| Descriptive, exploratory quantitative, data from records of unscheduled absences | Musculoskeletal system; eye diseases and surgeries. |
| Descriptive quantitative, with data from workers’ medical records | Musculoskeletal system diseases; factors influencing health status; mental and behavioral diseases; sensory organs diseases; respiratory system diseases; circulatory system diseases; complications of pregnancy, childbirth and the perinatal period; nervous system diseases; symptoms, manifestations and ill-defined conditions; diseases of the genitourinary and reproductive system; nutritional and metabolic endocrine diseases; digestive system diseases; external causes of morbidity and mortality; injuries and poisonings; infectious and parasitic diseases; malignant and benign neoplastic diseases; blood diseases. |
| Cross-sectional study which interviewed 1,509 nursing professionals using a multidimensional questionnaire | Musculoskeletal disorders; self-perception of health; minor mental disorders. |
| Observational, prospective, quantitative data from documents such as monthly off-duty schedules and medical certificates | Diseases of the musculoskeletal system and connective tissue; mental and behavioral disorders; respiratory system diseases; pregnancy, childbirth, and puerperium; infectious and parasitic diseases; diseases of the eye and adnexa; genitourinary system diseases, injuries, poisoning, and other consequences of external causes; nervous system diseases; digestive system diseases. |
| Descriptive, cross-sectional, quantitative data from the professionals’ medical records | Diseases of the musculoskeletal and connective tissue system; mental and behavioral disorders; respiratory tract problems; trauma from external causes; circulatory problems and diseases of pregnancy, childbirth, and puerperum. |
| Quantitative, descriptive, documental data from medical certificates referring to sickness absenteeism in nursing workers/records | Musculoskeletal system, with back pain predominating, followed by upper limb pain and lower limb disorders; dental treatments and ophthalmologic procedures; mental disorders; headaches, bone fractures, intestinal pathologies (irritable bowel syndrome), and pre-term labor; anesthetic procedures; urinary tract conditions; respiratory tract conditions; allergies; anemia; minor surgeries, and medical consultations. |

Continued on next page
Absenteeism among nursing workers

| Research type and data source                                                                 | Reasons for absenteeism                                                                                                                                                                                                 |
|--------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Quantitative descriptive research, data from the human resources sector of the institution, to which all health certificates are forwarded. | Diseases of the respiratory system; diseases of the musculoskeletal system and connective tissue; infectious and parasitic diseases; unclassified signs, symptoms, and abnormal findings; diseases of the genitourinary system resulting from pregnancy, childbirth, and puerperium; diseases of the eye and adnexa; external causes; 6.4% of the absences did not present the corresponding ICD, and 17.5% revealed various causes. |
| Descriptive-exploratory, used data from the HR department, the Workers’ Assistance Center (CEAT), and the hospital management system | Mental and behavioral disorders and musculoskeletal system diseases, infectious and parasitic diseases.                                                                                                                                                                      |
| Retrospective cohort, data from computerized management information system (CMIS)            | Respiratory diseases among nurses, and musculoskeletal and connective tissue diseases among nursing technicians and assistants; the number of certificates with the ICD “factors influencing health status and contact with health services” was also significant; the most prevalent certificates in all categories of the nursing team were external ones without ICD, preventing the analysis of the type of illness. |
| Descriptive and cross-sectional, used database of the occupational health service            | Musculoskeletal system and connective tissue diseases (back pain, repetitive strain injury [RSI]); and mental and behavioral disorders (depression, bipolar disorder, and stress). |
| Quantitative cross-sectional research, with data from the managerial reports of the database of the Nursing Worker Health Monitoring System (Simoste) | Depressive episodes; anxiety disorders; reaction to stress.                                                                                                                                                                |
| Descriptive, data from the records of the HR Management, Management Information System, and Occupational Medicine Service of the institution | Neurotic disorders related to stress and somatoform disorders; intestinal infectious diseases and other virus diseases; diseases of the veins, lymphatic vessels and lymph nodes; assistance provided to the mother for reasons related to the fetus, amniotic cavity and possible birth-related problems; symptoms and signs concerning cognition, perception, emotional state, and behavior; contact with health services for specific procedures and care; dorsopathies, conjunctival disorders; acute airway infections/flu, and pneumonia. |
| Exploratory quantitative, closed-ended questionnaire applied to 30 nursing professionals    | Musculoskeletal disorders; psychiatric disorders; cardiovascular disorders; parasitic infectious diseases; surgical procedures.                                                                                                                                              |
| Quantitative descriptive research with data from the Nursing Worker Health Monitoring System (Simoste) | Convalescence; musculoskeletal system diseases; digestive system diseases; genitourinary system diseases; respiratory system diseases; circulatory system diseases; diseases of the eyes and adnexa; nervous system diseases; skin and subcutaneous tissue diseases; pregnancy, childbirth and puerperium; diseases of the ear and mastoid apophysis; consequences from external causes, trauma, mental and behavioral disorders; exposure to communicable diseases, infectious and parasitic diseases. |

ICD = International Classification of Diseases
Table 3. Meta-analysis of the relative frequency of illnesses leading to sick leave in Brazil according to the reviewed literature (2006-2017)

| Reviewed articles | 8   | 10  | 11  | 12  | 14  | 15  | 16  | 18  | 19  | 20  | 21  | 22  | 23  | 24  | 28  | Total | Mean |
|-------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|------|
| **N (samples)**   | 199 | 143 | 383 | 336 | 349 | 70  | 97  | 572 | 141 | 202 | 652 | 299 | 435 | 30  | 4.270| 284.66 |
| **Most common diseases (%)** |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Musculoskeletal and connective tissue | 8.8 | 24.0 | 18.86 | 41.5 | 28.27 | 23.22 | 55.3 | 14.5 | 20.7 | 13.5 | 12.2 | 161 | 341 | 197 | 525 | 383.25 | 25.55 |
| Factors that influence health status | -   | 8.5 | 12.28 | -   | 30.65 | 38.46 | -   | 4.6  | -   | -   | -   | 2.9 | 37.7 | 7.37 | -   | 142.46 | 17.8  |
| Sensory organs | 11.2 | -   | -   | -   | -   | -   | 200 | -   | -   | -   | -   | -   | -   | -   | -   | 31.2 | 15.6  |
| Mental disorders | -   | 4.7 | 4.89 | -   | 28.4 | 17.26 | 677 | 23.0 | 135 | 153 | 21 | -   | 4.3 | -   | 18.04 | 26.0 | 153.31 | 11.79 |
| Respiratory | 16.6 | 14.3 | 10.48 | 2.0 | -   | 5.48 | 18.4 | 11.2 | 139 | 7.4 | 9.9 | 306 | 6.35 | -   | -   | 153.31 | 11.79 |
| Injuries and poisoning/external causes | -   | 1.9 | 7.09 | 9.0 | -   | -   | 76  | 4.9 | 111 | 14 | 5.2 | 8.2 | 36.7 | 8.39 | -   | 101.48 | 9.22  |
| Symptoms, Signs and undiagnosed abnormal findings | -   | -   | -   | 8.18 | -   | -   | 9.2 | 2.5 | -   | -   | 11.0 | -   | -   | 3.81 | -   | 38.09 | 6.34  |
| Pregnancy, childbirth and puerperium | -   | 78  | 2.59 | -   | 25.8 | 15.3 | 71  | 49  | 17  | 81  | 56  | -   | 4.07 | -   | -   | 59.74 | 5.97  |
| Genitourinary and reproductive system | 19.5 | 6.5 | 4.19 | 0.5 | -   | 2.23 | 76  | 51  | 21  | 0.7 | -   | -   | 4.7 | -   | -   | 62.42 | 5.67  |
| Circulatory | -   | 8.5 | 3.79 | 12  | -   | 193 | 15.3 | 10  | 49  | -   | -   | -   | 10  | -   | 502  | 13.0 | 556.4 | 55.6  |
| Digestive system | 10.3 | 5.8 | 9.38 | 2.2 | -   | 6.1 | 3.0 | 2.8 | 14 | -   | -   | -   | 90  | -   | -   | 464  | 5462 | 5.46  |
| Infectious/parasitic | -   | 4.7 | 5.39 | 16  | -   | -   | 5.7 | -   | -   | -   | -   | -   | 110 | -   | -   | 248  | 4.3   | 3517 | 50.2 |
| Eyes and adnexa | -   | 2.7 | 7.78 | 17  | -   | 806 | -   | 5.7 | 21 | 2.8 | 5.8 | 73  | -   | -   | -   | 368  | 47.62 | 4.76  |
| Undertaking surgeries | -   | -   | -   | 7.74 | -   | -   | -   | -   | 0.7 | -   | -   | -   | -   | -   | -   | 41.0 | 125.4 | 4.18  |
| Nervous system | -   | 2.8 | 0.89 | 0.4 | -   | 143 | 15.3 | 31  | 0.7 | -   | -   | 18  | -   | -   | -   | 191  | 28.24 | 313  |
| Skin and subcutaneous tissue | -   | 5.7 | 15 | 0.6 | -   | 129 | -   | 16  | 14 | -   | -   | -   | 16  | -   | -   | 172  | 15.41 | 192  |
| Endocrine, metabolic and nutritional neoplasms | -   | 0.9 | 0.2 | 0.1 | -   | 61  | 18  | -   | -   | -   | 0.7 | -   | 0.95 | -   | -   | 1015 | 14.5  |
| Convalescence | -   | 0.2 | 2.0 | 0.32 | 15  | -   | -   | -   | 0.7 | -   | -   | -   | 3.3  | -   | -   | 802  | 133   |
| Diseases of the ear and mastoid apophysis | -   | 0.9 | 0.1 | -   | -   | -   | 0.5 | 0.7 | -   | -   | 0.5 | 11  | -   | 1.21 | -   | -   | 45.1 | 0.75  |
| Malformations, chromosomal abnormalities, deformities | -   | -   | -   | 15  | -   | -   | -   | -   | -   | -   | -   | 0.1 | -   | -   | 0.51 | 2.11 | 0.7 |
| Disorders of the blood, vascular disorders, and diseases of lymphatic vessels | -   | -   | 0.4 | -   | -   | -   | -   | -   | -   | -   | -   | -   | 0.7 | -   | -   | 0.38 | 1.48  | 0.49 |

Relative frequencies (%) of diseases developed from the reviewed articles whose quantitative-based methodology identified the frequencies of diseases that were reasons for absenteeism in the samples 8, 10, 11, 12, 14, 15, 16, 18, 19, 20, 21, 22, 23, 24, and 28.

*In article 18, the monthly average of nursing workers working in an adult emergency room of a university hospital, developed by the authors (96.8), was rounded up to 97.
DISCUSSION

Studies point out the relationship between absenteeism and worker health, identifying work overload, inadequate working conditions, worker weariness, inadequate workforce sizing, medical and work leave, work accidents and occupational diseases, working hours, psychological disorders, and job dissatisfaction as the reasons that lead to absenteeism. Therefore, it is possible to relate the high rates of absenteeism, ultimately, to the work process itself, since professionals exposed to poor working conditions are more susceptible to developing diseases and, consequently, to being absent from work.

Work overload is one of the main determinants of illness and absenteeism, and the undersizing of the nursing workforce is an important determinant of overload and its consequences. Resolution nº 543 of 2017, of the Brazilian Federal Council of Nursing (CFE), establishes that the nursing workforce sizing should be based on characteristics related to the health service, the nursing service, and the patient. It depends on the degree of dependence of patients on the nursing staff, measured by means of a patient classification system and, therefore, is determined from the health needs of the patients under the care of this professional category.

Among the working conditions identified as “determinants” of illness and consequently of absenteeism, the team’s communication process also stands out. The nurses highlight that the absence or lack of communication can result in an unfavorable environment within the team, demotivating these professionals, as well as the absence of a career and salary plan, the type of employment relationship and the inadequacy of physical structure, materials and equipment, which some interviewees claim to influence 100% in the work environment.

A study proposed to evaluate an intervention on the number of personnel in relation to the care and management indicators. An increase of 4 (40%) professionals in the number of nurses and 6 (16%) professionals in the number of nursing technicians resulted in 12% reduction in the percentage of sick leaves, 21.8% in the total bank of excess hours and 92% in overtime paid. Regarding the prevalence of care indicators, there was a 75% reduction in pressure ulcers, a 10.5% reduction in falls, and a 50% reduction in indwelling urinary catheter infections, showing an improvement in care and management indicators after the increase in personnel.

Brazil is among the countries that have experienced epidemics of repetitive strain injuries and work-related musculoskeletal disorders (RSI/WMSDs) and continues to have significant problems, questioning the underreporting of cases. They are characterized by the occurrence of several symptoms, associated or not, of insidious onset, usually in the upper limbs, such as pain, paresthesia, heaviness, and fatigue. This high prevalence has been explained by the changes in the work environment, which has been characterized by the establishment of goals and productivity, increased market competitiveness, high demand for repetitive movements, absence or impossibility of spontaneous breaks, the need to remain in certain positions for a long time, attention to avoid mistakes and submission to the monitoring of each step of the procedures, besides furniture, equipment and instruments that do not provide comfort, without accounting for the workers and their physical and psychosocial limits.

Health work demands physical efforts, especially inappropriate postures, frequent displacements, and the need to stand for a long time. In addition, the inadequate physical environment, especially the quality of temperature and lighting, overtime, and the need to develop other paid activities are part of the situation of most of these workers.

We also found that sickness absenteeism related to diseases of the musculoskeletal and connective tissue system in nursing staff are also common among outsourced workers in the sector of hospital hygiene and conservation in the city of São Paulo, where the highest cause of sickness absenteeism was related to the musculoskeletal system and connective tissue diseases, with 271 medical certificates. Mental and behavioral disorders were reported in less than 0.5% of the reasons for absence.

According to Dejours, work is essential for health preservation and can be a source of pleasure, but it can
also cause suffering and trigger illness. Individuals often experience fear related to the lack of jobs, precarious services, and the threat of unemployment, which can trigger a crisis. This feeling reinforces obedience, submission, the weakening of ethics, and the breakdown of reciprocity and solidarity in human relationships. For this author, suffering represents “a state of struggle of the individual against forces that push him toward mental illness” (p. 10), i.e. the organization of work ends up producing a conflict that interferes in the psychic functioning of people, when the organization hinders the possibilities of adaptation and the desire of individuals, leading to pathogenic suffering. 3

Studies identify workloads as responsible for the emotional and physical exhaustion of health and nursing professionals, which increases the likelihood of work accidents and health problems. Moreover, the high social and psychological pressure on these professionals, both in the work sphere and outside it, is related to psychological distress. 35 Studies that evaluated the health impairment of these professionals identified physical and psychological problems such as depression, stress, chronic pain, headaches, mental disorders, and changes in sleep pattern, among others. 36

In a public hospital in the municipality of Belém, state of Pará, in the period between January 2009 and December 2016, a total of 211 reported work accidents (RAT) were recorded among nursing professionals, and 46.92% of the accidents were caused by biological risk, while 34.12%, by mechanical risk. Perforating instruments are the most common causative agents. We also observed that 56.87% of nursing workers suffered work accidents in the upper limbs. 37

The health workforce is essential for the organization of health systems, and the denial of the real demand for nursing workers is determined by several factors, such as the underfunding of public health systems, the precariousness of the bonds, and the suppression of rights of these workers, among others that are increasingly present in the labor market.

The way work is organized and the space it occupies in daily life have prevented workers from developing other activities besides work. The work overload often ends up interfering with family relationships and the private life of nursing workers, due to the reduction of free time and the physical and mental fatigue that work activities cause in these individuals who often need to work double shifts and strenuous overtime.

The absence of the worker in the team brings countless consequences for the provision of care; therefore it is important to discuss the perception of the workers about factors that trigger the problem. Therefore, it is essential to support participative management and worker integration to raise awareness of such reality from the perspective of the workers.

**FINAL CONSIDERATIONS**

According to the publications analyzed, the diseases that led to absenteeism are predominantly musculoskeletal system diseases and mental and behavioral/psychological disorders, caused by work overload, inadequate working conditions, worker weariness and inadequate workforce sizing, i.e., elements of the work process that contribute to worker illness and, consequently, to absenteeism.

The rates of sickness absenteeism of the nursing staff can provide a systematic evaluation of working conditions, promoting a debate on the health of this worker. Moreover, they also provide evidence for supporting the improvement of working conditions, as they should promote changes in the work process to make it healthier for the worker, leading to job satisfaction, improved quality of life at work, and improved quality of care.

We suggest that similar studies be discussed among health teams and that new investigations be encouraged focusing on the workers’ perception of their health, because, more than being a management problem that leads to decreased productivity, sickness absenteeism is a problem of health and protection of the worker’s life. Thus, further studies may contribute to identify the factors that lead to work absenteeism or the turnover of nursing workers, in an attempt to avoid sickness situations.
AUTHOR CONTRIBUTIONS

LA was responsible for study conceptualization, data curation, formal analysis, investigation, methodology, resources, visualization, writing – original draft, and review & editing. MC was responsible for study conceptualization, supervision, funding acquisition, data curation, formal analysis, investigation, methodology, resources, visualization, writing – original draft, and review & editing. ACC was responsible for data curation, formal analysis, resources, and writing – review & editing. All authors have read and approved the final version submitted and take public responsibility for all aspects of the work.

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Rev Bras Med Trab. 2021;19(3):351-362

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