

# Proposal for management of absenteeism among hospital nurses: a systematic review

Proposta de gestão do absenteísmo da enfermagem hospitalar: uma revisão sistemática

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## Keywords

Health policy; Hospital; Management; Absenteeism

## Descritores

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## Abstract

**Objective:** To search the literature for information on interdependent factors influencing absenteeism of hospital nurses using a multicausal perspective analysis and to identify possible management and control actions.

**Methods:** This systematic review included publications from 2013 to 2017. We used keywords from databases available at the portal of Coordination for the Improvement of Higher Education Personnel (CAPES). EndNote® software was used to manage data, and we followed the PRISMA (Preferred Reporting Items For Systematic Reviews and Meta-Analyses (PRISMA) method.

**Results:** A total of 269 articles were retrieved, and 39 of them met our inclusion criteria. Studies that attributed absenteeism to a number of non-specific reasons accounted for 23.08% of the sample. The organization in work environment was defined as the reason in 20.51% of reports, musculoskeletal disease was the main reasons in 7.69%, and mental and behavioral disorders made up 10.26% of pointed causes. The Burnout syndrome was attributed as the reason for absenteeism in 7.69% of reports; satisfaction in work and psychological aspects accounted for 5.13% each in the studies, and relationship with other members of the nursing team, bullying and resilience, work environment, fatigue and conflicts with patients each were the reason in 2.56% of the studies analyzed in our systematic review.

**Conclusion:** Absenteeism must be treated from a multiple, holistic, epidemiologic and prospective perspectives by adoption of organizational, physical and cognitive variables that are compatible with multicausal analyses.

## Resumo

**Objetivo:** Investigar na literatura o conhecimento disponível sobre a interdependência dos agentes desencadeantes do absenteísmo da enfermagem hospitalar para inferir, a partir de uma perspectiva multicausal, possíveis ações de gestão e controle.

**Métodos:** Revisão sistemática compreendendo o recorte temporal de 2013 à 2017, utilizando descritores operacionalizados em bases de dados indexadas do portal da Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES). A busca seguiu a metodologia *Statement Preferred Reporting Items For Systematic Reviews And Meta-Analyses* (PRISMA) auxiliada pelo software EndNote®.

**Resultados:** Finalizado o processo de depuração dos 269 artigos recuperados, 39 atenderam aos critérios de inclusão estabelecidos e, deles, 23,08% atribuiu a origem do absenteísmo a causas diversas não específicas. A organização do trabalho foi identificada como causa em 20,51% do material analisado, os adoecimentos musculoesqueléticos 15,38% e, os transtornos mentais e comportamentais totalizaram 10,26%. A síndrome de *Burnout*, 7,69% dos artigos, a satisfação no trabalho e os aspectos psicossociais 5,13% cada, relacionamento com demais membros das equipes, assédio e resiliência, ambiente laboral, fadiga e conflitos com o paciente, cada um, com 2,56% dos artigos analisados na revisão sistemática.

**Conclusão:** Pelos resultados obtidos, concluiu-se que o absenteísmo deve ser tratado a partir de uma perspectiva múltipla, holística, epidemiológica e prospectiva através de variáveis organizacionais, físicas e cognitivas compatíveis com as análises multicausais.



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Conflicts of interest: none to report.

## Introduction

Sickness and disabling work accidents are complex phenomenon with multiple causes. Incapacity for work, one of the causes of absenteeism, is defined as the impossibility of developing function, activity or any task because of a disease or accident in the National Institute of Social Security's resolution DC/INSS no. 10 from December 12, 1999. In the health area, absenteeism is historically higher than in other areas, such as industry and manufacturing. Among hospital employees, nursing professionals are more exposed to risk of accidents and occupational diseases that lead to work leave, with a direct impact on patient care.<sup>(1-3)</sup> Worldwide, scarcity and absenteeism of nursing professionals interfere in planning and dimensioning of working teams in hospitals.<sup>(2,3)</sup> In this dynamic and unpredictable environment, which poses a risk of worsening pre-existing clinical status or of causing sickness and working accidents, participation of nurses is needed 24 hours a day.<sup>(4)</sup> In addition, risk agents for the health of nursing professionals can be found in organizational, interpersonal or individual dimensions. Such agents can cause hypertension, diabetes, orthopedic and neurologic diseases, burnout syndrome, working stress, and job dissatisfaction.<sup>(5,6)</sup> The study "Absenteeism in the Industry" published in *The Lancet* on January 30, 1943, and Harrison and Martocchio's 1998 study investigated different dimensions and variables either individually or associated with possible reasons of absenteeism, but these studies did not reach any strong conclusions.

Because absenteeism originates in the institutional and work context, is due to psychological and physiological reactions, and also stems from individual and group suffering, our study sought to investigate reports in the literature about interdependency and its trigger agents to establish, using a multicausal perspective, possible interventions and control actions.<sup>(7)</sup>

## Methods

The focused question for this systematic review was "What is origin of factors contributing to absenteeism, and how are they interrelated with

management of absenteeism? This review, which was done in phases, included the establishment of a problem, data collection, assessment, analysis and interpretation, and presentation of results. This format allowed us to summarize the current knowledge about the specific topic by using set of documents that reported scientific evidence.<sup>(8-17)</sup> We used the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) method<sup>(10)</sup> (Figure 1).

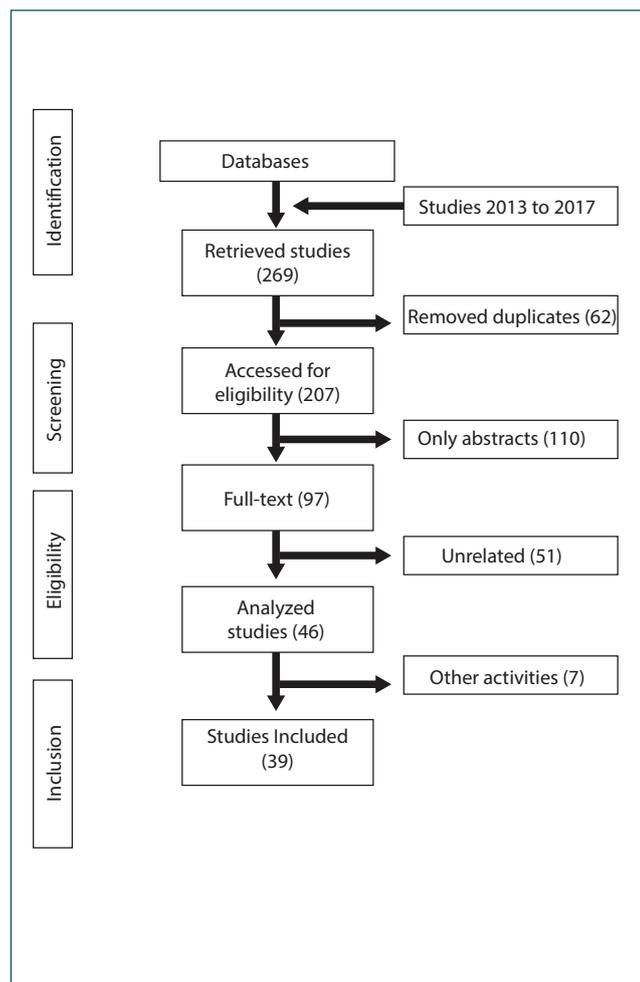
The keywords were defined from the Cumulative Index to Nursing and Allied Health Literature (CINAHL/EBSCO), Health Sciences Descriptors (DeCS/Bireme) and National Center for Biotechnology Information (NCBI/PubMed). Truncation symbols (\*, \$ or ?) or proximity and an ordering index (W/n, NEAR/n or [MeshTerm]) used with keywords allowed us to broad the search. Searching strategies applied were as follows:

- (nurs\* NEAR/2 absen\*) OR (hospital nurs\*NEAR/2 absen\* causes);
- (nurs\* absent\*) OR (hospital nurs\* absent\*);
- (((((nurse[MeSH Terms]) AND absenteeism)) OR (((nurse[MeSH Terms]) AND absence)) AND (((hospital[MeSH Terms]) OR nurse)) AND absenteeism);
- (nurs\* W/2 absen\*) OR (hospital nurs\* W/2 absen\* causes).

The review process included selection of databases, application of the limits available in each database, electronic searching of articles, exporting of data to EndNote®, pre-analysis of retrieved articles and selection of studies on the topic of this review.

Data were collected from Emerald, Engineering Village, PubMed, Scopus, and Web of Science. First, aspects were related to broadening of content, ease of access, scientific output in engineering and health. A trial of EndNote software (version X7) was used to organize duplicity, access the title of the article, author names, title of the journal, keywords, digital object identifier (D.O.I.), and abstract.

In the search, priority was given to occurrences of terms in the title, summary, and keywords. If da-



**Figure 1.** Process of identification, analysis and selection of studies

tabases lacked these limits, we observed the occurrence of terms in the text of the publication.

During article selection, we evaluated the availability and free access to full-text articles published within the last five years: 2013 to 2017. We selected articles written in English, Portuguese and Spanish because the most recent reports on the topic were published in these languages. Types of publications excluded were letters, editorials, abstracts from proceedings, technical and scientific reports, and government publications.

Among the 269 studies retrieved, 62 duplicated have been removed, remaining 207. After exclusion, 110 studies found incomplete, presenting only the abstract had been excluded. The 97 full-text studies left had the title, the abstract, and the content analyzed by the authors independently. Any divergence has been outlined by

the inclusion criteria: studies concerning specific causes of absenteeism among hospital nurses or nursing professionals from other health services, hospital or health service nursing professionals work absence and the work organization and environment contribution to nursing absenteeism. Then, 57 studies not matching the scope had been excluded remaining a set of 40 studies. Another 13 studies were suppressed for not meeting the inclusion criteria. The final sample consists of 27 studies.

The analysis of selected articles allowed us to identify theoretical concepts, methodologic approaches and conclusions about absenteeism (Chart 1).

This study followed ethical aspects related to ideas, concepts, and definitions of studies included in this review. In adherence to publishing conventions, only significant studies were included.

## Results

Most studies used a quantitative approach; 61.53% applied questionnaires, and 12.82% were reviews. Studies using a focus group, online questionnaires, and secondary data were 5.12% each. Other approaches, such as cost-benefit analysis, interviews, stochastic programming and cognitive mapping, each contributed 2.56% of the selected material.

Most of 26 journals were from the nursing area. We included 11 articles from the *Journal of Nursing Management* (28%), 3 articles from the *International Journal of Nursing Studies* (7.6%), 2 articles each from the *Journal of Advanced Nursing* and *International Archives of Occupational and Environmental Health* (5.12%), and 1 article from the remaining journals (i.e., 2.5% of publications).

Studies with a statistical approach and data collection using questionnaires designed based on variables defined by authors and regression analysis made up 25.64% of studies, followed by those using Cronbach alpha coefficient in 23.08%, chi-squared test in 11.54% and Pearson's correlation in 7.69%. The multivariate analysis, cost-effec-

tiveness relationship and chi-squared test along with regression analysis individually made up 3.85% of studies.

As contributing factor for absenteeism, 28.21% of studies identified organization of work as origin, 23.8% of studies did not report specific causes, 15.38% reported musculoskeletal disorders, and 10.26% reported mental and behavioral disorders.

Chart 1 shows studies that used a multicausal perspective, factors that, individually or in associ-

ation, contributed to absenteeism among nursing professionals and contributed with new findings.

Burnout syndrome and job dissatisfaction were reported in 7.69% of articles; satisfaction in work and psychosocial aspects were pointed out in 5.13% each; and relationship with other team members, bullying and resilience, work environment, fatigue and conflicts with patient each were reported in 2.56% of the studies analyzed in our sample.

**Chart 1.** Studies included in the systematic review

Title	Authors	Year	Objective	Results	Journal
<i>When the management of nurse absenteeism becomes a cause of absenteeism: a study based on a comparison of two health care facilities. Journal of nursing management.</i>	Damart S, Kletz F. <sup>(9)</sup>	2016	The study aims to explore perceptions of the causes of nurse absenteeism.	There is little evidence as to how strategies adopted in order to cushion the effects of absenteeism on workload influence absenteeism itself.	Journal of Nursing Management
<i>The JOINT model of nurse absenteeism and turnover: A systematic review.</i>	Daouk-Öyry L, Anouze AL, Otaki F, et al. <sup>(10)</sup>	2014	to develop an integrative multilevel framework that optimizes the understanding of absenteeism and turnover among nurses in hospital settings.	Identified variables were analyzed using content analysis and grouped into 11 categories, and five main factors: Job, Organization, Individual, National and interpersonal.	International Journal of Nursing Studies
<i>Attitudes towards sickness absence and sickness presenteeism in health and care sectors in Norway and Denmark: a qualitative study.</i>	Krane L, Larsen EL, Nielsen CV, et al. <sup>(18)</sup>	2014	To explore attitudes towards sickness absence and sickness presenteeism among nursing home employees.	Social commitment and loyalty to residents and colleagues was important for sickness absence and sickness presenteeism. Organization of work and physical aspects of the workplace were also found to have an influence on attitudes towards sickness absence.	BMC Public Health
<i>Effect of organizational change type and frequency on long-term sickness absence in hospitals.</i>	Bernström ; Kjekshus <sup>(19)</sup>	2014	To investigate how the frequency of structural change and patient care-related change is related to employees' long term sickness absence.	A significantly higher probability exist of long-term sickness absence among employees who experienced more frequent structural changes, but not among employees who experienced more frequent patient care-related changes.	Journal of Nursing Management
<i>Sustainable employability in shiftwork: related to types of work schedule rather than age.</i>	Peters V, Engels JA, de Rijk AE, et al. <sup>(20)</sup>	2015	To investigate how nurses working in various types of work schedule differ regarding sustainable employability, and the role that age plays in these differences.	Nurses working in various types of work schedules differed regarding aspects of sustainable employability, also when operationalization of age were added.	Int Arch Occup Environ Health
<i>Effects of perceived workplace politics in hospitals on nurses' behavioural intentions in Ghana.</i>	Atinga RA, Domfeh KA, Kayi E, et al. <sup>(21)</sup>	2014	To examine the effects of perceived workplace politics in hospitals on nurses' job satisfaction, commitment, exit intention, job neglect, absenteeism and performance.	Perceived politics potentially leads to decline in job satisfaction, commitment and work performance. However, perceived workplace politics was associated with high intention to leave, negligent behaviour and absenteeism.	Journal of Nursing Management
<i>Career Plateauing: Is It Still A Matter of Concern?.</i>	Omar K, Anuar MM, Salleh AM. <sup>(22)</sup>	2014	To investigate the relationship between hierarchical plateauing and intention to leave among nurses in public hospitals.	In contrast to previous findings by several researchers, results did not show hierarchical plateauing associated with lower levels of job satisfaction, poor commitment, high absenteeism, stress, low motivation and high employee turnover.	Mediterranean Journal of Social Sciences
<i>Absenteeism amongst health workers - developing a typology to support empiric work in low-income countries and characterizing reported associations.</i>	Belita A, Mbindyo P, English M. <sup>(23)</sup>	2013	To develop a typology of definitions useful to classify forms of absenteeism.	Factors reported to influence rates of absenteeism : workplace and content, personal and organizational and cultural factors. The literature presents an inconsistent picture of the effects of specific factors within these themes perhaps related to true contextual differences or inconsistent definitions of absenteeism.	Human Resources for Health
<i>Mental health day' sickness absence amongst nurses and midwives: workplace, workforce, psychosocial and health characteristics.</i>	Lamont S, Brunero S, Perry L, et al. <sup>(24)</sup>	2017	To examine the workforce, workplace, psychosocial and health characteristics of nurses and midwives in relation to their reported use of sickness absence described as 'mental health days'.	Fifty-four percentage of nurse and midwife respondents took 'mental health days'. Those affected were significantly more likely to be at younger ages, working shifts with less time sitting at work; to report workplace abuse and plans to leave; having been admitted to hospital in previous 12 months; to be current smokers; to report mental health problems, and current psychotropic medication use.	Journal of Advanced Nursing

continue

Proposal for management of absenteeism among hospital nurses: a systematic review

continuation

Title	Authors	Year	Objective	Results	Journal
<i>Factors influencing nurse absenteeism in a general hospital in Durban, South Africa.</i>	Mudaly P, Nkosi ZZ <sup>(25)</sup>	2015	To establish reasons for absenteeism amongst professional nurses, enrolled nurses and enrolled nurse auxiliaries in a general hospital in Durban, in order to recommend strategies that could decrease absenteeism.	Family matters, lack of motivation to attend work, illness, finance, favouritism, unfriendly nurse managers, long work hours, increased workload, unsatisfactory work conditions, lack of equipment, unfair promotions and selection of nurses for training, staff shortages, lack of a reward system and incoherent decision-making caused nurse absenteeism.	Journal of Nursing Management
<i>Job Restrictions for Healthcare Workers with Musculoskeletal Disorders: Consequences from the Superior's Viewpoint.</i>	Grataloup M, Massardier-Pilonchéry A, Bergeret A, et al. <sup>(26)</sup>	2016	To explore the impact of job restriction from the point of view of the employees' supervisors.	A context of personnel cuts, job restrictions had several negative consequences, such as: overwork, increased conflict, and feelings of isolation and organizational injustice.	Journal of Nursing Management
<i>Prevalence, consequences and predictors of low back pain among nurses in a tertiary care setting.</i>	Abolfotouh SM, Mahmoud K, Faraj K, et al. <sup>(27)</sup>	2015	To estimate the prevalence of low back pain (LBP) using different measures, to determine medical and professional consequences of LBP, and to determine the associated factors and significant predictors of LBP.	The findings of this study broadly confirm the high levels of back pain in nursing, with a one-year prevalence of LBP of 54.3 % for LBP of at least one day, 26.8 % for chronic LBP, 18.1 % for sick leave seeking LBP, and 34.3 % for medical treatment seeking LBP.	International Orthopaedics
<i>Work related musculoskeletal disorders in primary health care nurses</i>	Ribeiro T, <sup>(28)</sup>	2017	To describe nurses' self-reported symptoms of work related musculoskeletal disorders by nursing in tasks that may be compromised and represent risk factors for its development.	This study showed associations between the prevalence of work related musculoskeletal disorders symptoms in different body regions and some individual characteristics such as: gender, age, body mass index, presence of other pathologies and regular physical exercise.	Applied Nursing Research
<i>Relationships between burnout and role ambiguity, role conflict and employee absenteeism among health workers.</i>	Olivares-Faúndez VE, Gil-Monte PR, Mena L, et al. <sup>(29)</sup>	2014	To analyze the influence of some psychosocial risk factors in the development of burnout and to analyze the influence of this phenomenon on employee absenteeism.	The results confirmed the influence of role conflict on burnout, but the influence of burnout on employee absenteeism was not confirmed.	Terapia Psicológica
<i>Stigma towards nurses with mental illnesses: A study of nurses and nurse managers in hospitals in Japan</i>	Tei-Tominaga M, Asakura T, Asakura K. <sup>(30)</sup>	2014	To investigate nurses with mental illnesses, and the perception of mental health issues at work among nurses and nurse managers; to examine the characteristics of the related stigma among nurses and nurse managers according to sociodemographic and organizational characteristics.	Findings suggest that effective approaches are needed to decrease stigma, ensure support in the workplace, and address mental illnesses to counter nurse absenteeism.	International Journal of Mental Health Nursing
<i>Low job satisfaction does not identify nurses at risk of future sickness absence: Results from a Norwegian cohort study.</i>	Roelen CA, Magerøy N, Van Rhenen W, et al. <sup>(31)</sup>	2013	To investigate if job satisfaction scores are useful to identify working nurses at risk of future sickness absence.	Low job satisfaction was associated with higher odds of sickness absence and absences higher than 31 days.	International Journal of Nursing Studies
<i>Workplace bullying in the UK NHS: a questionnaire and interview study on prevalence, impact and barriers to reporting.</i>	Carter M, Thompson N, Crampton P, et al. <sup>(32)</sup>	2017	To examine the prevalence and impact of bullying behaviours between staff in the National Health Service (NHS) workplace, and to explore the barriers to reporting bullying.	Of 20% of staff reported having been bullied by other staff to some degree and 43% reported having witnessed bullying, no overall differences due to ethnicity, but some differences were detected on several negative behaviours. Managers were the most common source of bullying. Main barriers to reporting bullying were the perception that nothing would change, not wanting to be seen as a trouble-maker. Interviewed identified workload pressures and organizational culture as contributing factors for bullying.	BMJ Open
<i>Protecting and promoting mental health of nurses in the hospital setting: is it cost-effective from an employer's perspective.</i>	Noben C, Evers SI, Nieuwenhuijsen K, et al. <sup>(34)</sup>	2015	To analyze cost-saving of an intervention to protect nurses at risk for mental health problems and costs because of improvement of better productive.	Subtracting intervention costs from the cost offsets due to reduced absenteeism and presenteeism resulted in net-savings of 244 euros per nurse when only absenteeism is regarded, and 651 euros when presenteeism is also taken into account. This corresponds to a return-on-investment of 5 euros up to 11 euros for every euro invested.	Int J Occup Med Environ Health
<i>Effects of absenteeism feedback and goal-setting interventions on nurses - fairness perceptions, discomfort feelings and absenteeism.</i>	Gaudine A, Saks AM, Dawe D, et al. <sup>(35)</sup>	2013	To test the effects of absenteeism feedback, obstacles and interventions to establish the method of goal reduction.	There was a significant decrease in the total number of days absent but no decrease in absent episodes. Six categories of obstacles to reducing absenteeism were identified.	Journal of Nursing Management

## Discussion

A methodologic challenge in analyzing studies on absenteeism in nursing is interpretation of the data collected on work absenteeism. Comparison between studies that applied questionnaires and other similar approaches can cause distortions in results. Individual characteristics and management of organizational characteristics in health services, even from the same location, are disadvantaging factors and lead to failures and fragility of methods that not do allow extrapolation of findings.<sup>(11)</sup>

Most studies used a quantitative approach and are limited in terms of their ability to statistically analyze the phenomena of absenteeism. Still, this aspect suggests the need for more innovative proposals using well-designed methods.

Of selected studies, 20.51% confirmed previous findings concluding that nursing organization of work is the reason for absences due to disease and the cause of absenteeism.<sup>(12,13)</sup> We highlight that incorrect use of strategies to cushion effects of absenteeism might overload teams and increase the occurrence of absenteeism. A higher probability of absences was identified because of frequent structure changes compared with changes related to the patient care process. Studies that investigated aspects related to the nursing professional's age attributed the intention to abandon nursing to instability in work shifts.<sup>(14,15)</sup>

Work environment policy was associated with decline in satisfaction, commitment and performance in work as the reason for a high percentage of nurses intending to abandon the profession, showing negligent behavior and engaging in absenteeism.<sup>(16)</sup> In addition, unlike previous studies, organizational empowering, resilient behavior of professionals, and professional plateauing were not identified as reasons for low scores on scales of work satisfaction, lack of professional commitment, high absenteeism and stress indexes, low motivation and high nurse turnover.<sup>(17)</sup>

However, as multicausal etiologic phenomena in 23.8% of studies, absenteeism, an indicator of psychological and physical well-being, health at work

and the necessity that nurses work in a health system are influenced by the physical environment of work, activities to be done, personnel, and organizational and cultural aspects. Inconsistent associations of these factors as the cause of absenteeism were due to contextual differences of studies.<sup>(18)</sup>

In terms of sociodemographic, nursing professionals more affected by absenteeism are young professionals working in shifts, smokers, people with a history of mental disorders, those under treatment with psychotropic drugs, those who are sedentary, and alcohol users working in places with psychological support.<sup>(19)</sup> Absenteeism was also mentioned as a reason for professional favoritism, hostile work environment, longer work hours, overwork, unsatisfactory working conditions, lack of equipment and insufficient staff, lack of rewards system and incoherent decision. However, when absenteeism was motivated by health reasons, family-work interference, emotional symptoms (negatives) changes in work and salary, such reasons were identified as determining factors for self-perception of professional performance.<sup>(20)</sup>

Common musculoskeletal disorders in nursing work were the objective of 15.38% of selected studies, the third most common reason. Compromise of the lumbar region was attributed to the activity of transferring patients between beds and stretchers and other care procedures, overload due to the lack of appropriate number of staff members, and conflicts among people on the same team, thereby causing feelings of isolation and organizational injustice.<sup>(21)</sup> However, low back pain episodes as the reason for absence in work revealed incidence of 54.3% in two studies of the review among members evaluated for one year. Same staff had indexes of 26.8% of leaving work for at least one day. In addition, chronic pain episodes were reported in 18.1% of study respondents, leaving work because of medical treatment for disease was reported by 34.3% of workers interviewed.<sup>(22)</sup>

On the other hand, technical training programs related to immobilization of patients, such as strategies to prevent low back injuries, did not present scientific evidence related to their effectiveness. In addition, other musculoskeletal disorders in different parts of the body were associated with individual character-

istics, such as sex, age, body mass index, presence of other diseases and lack of regular exercise.<sup>(23)</sup>

Another contributing factors for absenteeism among nursing professionals identified in our review was the burnout syndrome,<sup>(24)</sup> which in the literature is attributed to absenteeism; this was investigated in 7.36% of studies. However, burnout was not confirmed as the reason for absenteeism but as the consequence of conflicts of roles. Psychological and mental health aspects<sup>(25)</sup> were reported by 10.26% of studies and influence of job satisfaction<sup>(26)</sup> was evaluated in 5.13% of studies; other reasons for absenteeism reported in the literature, such as bullying at work<sup>(27)</sup> and fatigue,<sup>(28)</sup> made up 2.56% of studies.

Finally, in relation to the cost-benefit about investments for preventing absenteeism identified an estimated return between €5 and €11 for each euro invested.<sup>(29)</sup> The knowledge of obstacles and interventions used to reduce them can enable significant reduction in absence days, but they are not enough to reduce the number of episodes of absenteeism.<sup>(30)</sup>

Limitations of the selected studies include exhaustive statistical models and specific approaches that are limited to one reason or set of pre-established contributing factors by the researcher. A set of elements because of its diversity does not enable proposal of efficient management if premises of study would be directed to a supposed single cause; the best solution is to replicate successful cases. Questions have arisen concerning validity or even the possibility of transference of results of interventions to support real applications.

These distortions do not permit more precise understanding of the nature, behavior, organization process, order, precedence and influence, and detailed causes and cannot reveal variables with higher prevalence or even intervention costs needed to elaborate strategies for management with the aim to neutralize occurrence of absenteeism among nurses in hospital environment.

## Conclusion

Most text fragments analyzed led us to conclude that studies identified individual factors as the reason for absenteeism. The interdependence between contrib-

uting factor for absenteeism, even when they are convergent points of other contributing elements, also represented 11% of studies. This review identified absenteeism under the influence of independent variables as the origin of macro dimensions (organization) and micro dimensions (interpersonal, individual or local), as well as employee turnover, stress, burnout, overwork, bullying, satisfaction with work and work environment. In practice, influence mechanisms (interrelations) as well as contributing factors would be appreciated by a single, ergonomic and participative approach by using as support one of the multiple criteria decisions methods based on ability to identify, operationalize and measure criteria that represent perceptions developed when transforming qualitative approach into a quantitative one.

## Collaborations

Silva Junior FF and Merino EAD contributed to conception of the project, analysis of data, drafting the manuscript, critical review of content, and approval of final version to be published.

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