Promotion of the quality of life of workers in a higher education institution: a scope review

Isaura Sousa, Márcia Teles, Tatyanne Rodrigues, Fernando Lopes Silva-Júnior, Ana Maria Ribeiro, Fernanda Avelino
Universidade Federal do Piauí
Brazil

Abstract

The present study aimed to map the evidence to provide an overview of actions implemented/executed and scales used in public higher education institutions to promote worker health. A scoping review based on the PCC (Population, Concept, and Context) mnemonic was conducted in PubMed, CINAHL, Scopus and Virtual Health Library (VHL). Population included workers from a higher education institution, the concept referred to studies focusing on the assessment of quality of life and health promotion actions and the context to higher education institutions. Electronic searches were held on December 2019. A qualitative synthesis of the data extracted from included studies (i.e. author, year, study design, sample, country, aims, action implemented/performed, thematic focus, evaluation) was performed. Electronic searches retrieved 3,330 articles that were screened by tittles and abstracts. Of these, 34 studies were fully appraised, of which four reported that actions implemented/executed related to sedentariness, posture and stress. The studies show 49 scales were identified to measuring at least one quality of life item. Through this scoping review the available evidence to provide an overview of actions implemented/executed and scales used in public higher education institutions to promote worker health. Future studies should consider more rigorous designs and objective measures to measure the quality of life of these professionals, and develop target interventions based on factors associated with the work. It is also necessary to evaluate whether the strategies work.

Keywords: Health Promotion; Occupational Groups; Occupational Health; Quality of life; Universities; Vocational rehabilitation

1. Introduction

Quality of life, although there is no consensual definition about its true meaning, for the World Health Organization (WHO) it is the individual's perception of their insertion in life, related to the culture and values in which they live, involving objectives, expectations, standards and concerns.[1] It represents the degree of satisfaction found in family, loving, social and environmental life and existential aesthetics, which reflect knowledge, experiences and values that are reported to him in different times, spaces and different stories.[2]

The quality of life at work is a factor that involves living conditions in the work environment, such as well-being, health guarantee, physical security, monthly, social and ability to perform tasks and good use of personal energy.[3]

Developing instruments for assessment of quality of life psychometrically valid is a difficult activity, becoming a challenge for researchers.[4] However, the issue of quality of life has increased in recent years, not only in conducting research, but also in the translation and validation of instruments.[5]

Worker health is directly linked to employee performance and productivity[6], therefore, the institutions responsible for the worker must encourage the development of actions that enable organizations to fully achieve their missions.[7]

By improving working conditions, institutions will be promoting physical and mental health, both individual and organizational.[3,6] The focus of studies on workers' quality of life is on musculoskeletal disorders, psychological and behavioral disorders, as well as interventions for older employees and economic assessments.[6]

Programs for quality of life at work and general quality of life are the main strategies that the institution must develop in order to achieve professional satisfaction and improve the quality of the service offered by the worker. The preventive culture is fundamental, which should be the responsibility of both, the worker and the employee.[7]

In this context, the technical-scientific advancement allows the emergence of actions and technologies to assist to assist in the promotion of workers' health, which must be the result of processes implemented based on daily experiences directed to the methodical development of knowledge and knowledge to be used for the purpose specific practice. Therefore, it is understood that the use of these strategies enhances health promotion directed at the worker.

In view of this scenario, a scope review was carried out, guided by the methodology proposed by the Joanna Briggs Institute (JBI)[8], with the aim of map the available evidence to provide an overview of the actions implemented/ performed, as well as the health assessment instruments used in public higher education institutions to promote worker health.

This review aims to answer the following questions: What actions are implemented/ performed to promote the quality of life of workers in the higher education institution? What instruments for assessing health and quality of life are available for workers in a high education institution?

2. Methods

It is a scope review, which intends to map the available evidence broadly on some topic, which can be conducted to identify the main concepts or evidence related to an established research area, and to understand the definitions / conceptual limits.[9]

The scope review framework was developed from the Joanna Briggs Institute (JBI) approach to conducting this type of review[10], which described the following stages: definition and alignment of the objective (s) and question (s); development and alignment of inclusion criteria with the objective (s) and question (s); description of the planned approach to research, selection, extraction and creation of evidence; search for

evidence; extraction of evidence; trace of evidence; summary of the evidence in relation to the objective (s) and question (s); consultation with information scientists, librarians and/ or experts.

The elaboration of the research question was based on the "PCC" strategy, in which "P" refers to the study population (workers from a higher education institution); "C" to the studied concept (studies focusing on the assessment of quality of life and health promotion actions); "C" to the context that is inserted (all higher education institutions).[9]

The search strategy and the study preparation process was based on the scope review methodology proposed by JBI[8], which describes three steps: 1. Initial research limited to PubMed/ MEDLINE, CINAHL, Scopus and Virtual Health Library (VHL) to identify articles on the subject, followed by the analysis of the words contained in the titles and abstracts and, the index terms used to describe the articles; 2. Second search using all keywords and indexing terms identified in the included databases; 3. Analysis of the references of all articles and reports found in the research to identify additional studies. The search for unpublished studies included: Google scholar, and banks of dissertations and various doctoral thesis.

The descriptors and keywords used in the search strategies, with the Boolean connectors AND and OR were: "Workers", "Quality of life", "Health Promotion", "Occupational Health", "Universities", "Faculties", adapted for each research source. They are available to be checked if it is necessary.

Studies written in some language were considered for inclusion in this scope review, regardless of the year of publication. To guarantee the broad search, the access was through the periodical portal of the Coordination for the Improvement of Higher Education Personnel (CIHEP), in an area with *Internet Protocol* (IP) recognized at the Federal University of Piauí.

The data were extracted from the documents included in the scope review by two independent reviewers, using a standardized data extraction tool, adapted from the tool proposed by the Joanna Briggs Institute[8]. The extracted data included details on: population, concept, context, methods and results of significance for the scope analysis question.

In cases of doubt about the relevance of a study based on the abstract, the full version of the text was analyzed. The reviewers independently examined the full text of the articles to see if they met the inclusion criteria. Disagreements between reviewers were resolved through discussion or by a third reviewer.

The data extraction tool draft was modified and revised as needed during the data extraction process for each included study. When the results of the same study were reported in more than one article, only one was included. The entire study selection process, as well as the last search took place during the period from September to December of 2019.

There was no need for submission to the research ethics committee, as it does not involve human beings. As this is a scope review, it is not necessary to assess the methodological quality of the included studies.

This study followed the standards for excellence in quality improvement reports - Standards for Quality Improvement Reporting Excellence 2.0 (SQUIRE 2.0)[11], and was guided according to the scope review items checklist - Preferred Reporting Items for Systematic Reviews and Meta-Analyzes extensions for Scoping Reviews (PRISMA-ScR) Checklist. PRISMA-ScR consists of a roadmap to guide the writing of the scope review report, consisting of 22 items divided into the mandatory chapters of the review report: Title, Summary, Introduction, Method, Results, Discussion and Funding.[12]

3. Results and discussion

The search in the databases raised a total of 3,343 studies. After deleting the 13 duplicate citations, the titles of 3,330 documents were read to verify compliance with the inclusion criteria. Of these, 41 studies were selected for reading the abstracts and, subsequently, 34 were read in full. All 40 texts read in full met the inclusion criteria and met the objectives. The search strategy is represented in Figure 1.

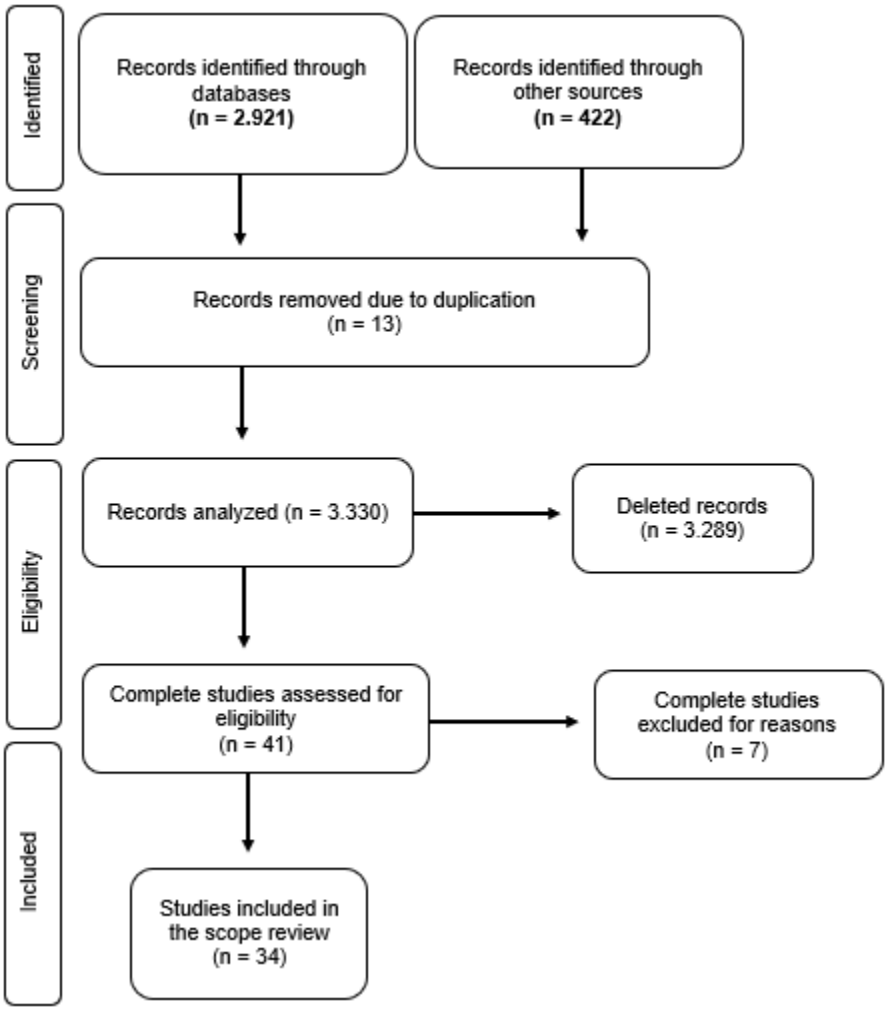

Figure 1. Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2009 Flow Diagram.

Six studies were excluded because they did not address the target population defined for this work. One study was excluded due to lack of access to the full text and the author's lack of response.

Among the studies included, four were published in nursing journals, fifteen in interdisciplinary health journals, ten in journals from other health areas (psychology, medicine, physiotherapy and nutrition), five in journals from other areas (social sciences, education, administration and economy). It stands out that, all the studies retrieved in magazines from different health areas, are the results of the search carried out in the gray literature.

Thirty-four studies were selected for analysis, twelve in Scopus, nine in Google Scholar, seven in MEDLINE by PubMed, five in the VHL and one in CINAHL. Regarding the language, twenty-three were in English, eight in Portuguese, two in Spanish, and one in Persian.

Regarding the professional category of the authors, five studies were written only by nurses, nine by professionals from more than one type of training, four only by doctors, three only by physical educators, five only by psychologists, two only by nutritionists, one only by economists. In five publications it was not possible to identify this information.

The primary studies were distributed in nine different countries: Australia (02), Brazil (11), Caribbean (01), China (01), Ecuador (01), Spain (02), United States (02), Ethiopia (01) , Finland (01), India, Iran (04), Japan (01), Nigeria (01), Poland (01), Portugal (01), United Kingdom (03). The characteristics of the included studies are detailed below, as shown in Table 1.

Table 1. Included studies, according to type od study and country, as indicated in the original articles.

Authors (year)	Study design/sample	Country of author
Adewale & Anthonia (2013)	Cross-sectional study (n=237)	Nigeria
Ataro et al (2018)	Comparative cross-sectional study (n=60)	Ethiopia
Barzoki & Sarand (2015)	Descriptive study (n=120)	Iran
Biernat (2015)	Randomized study (n=373)	Poland
Blanch (2014)	Empirical study, mixed approach (n=722)	Spain
Brown & Sargeant (2007)	Cross-sectional study (n=263)	Caribbean
Cacciari et al (2016)	Cross-sectional study (n=92)	Brazil
Cacciaria et al (2017)	Cross-sectional study, descriptive-exploratory quantitative approach (n=92)	Brazil
Ciconato et al. (2016)	Cross-sectional study, descriptive quantitative approach (n= 92)	Brazil
Dewitt et al. (2019)	Uncontrolled intervention study with a mixed approach (n=29)	United Kigdom
Dias et al. (2018)	Descriptive study (n=965)	Brazil
Edwards et al. (2009)	Uninformed (n=2136)	United Kigdom
Kinman (2008)	Cross-sectional study (n=465)	United Kigdom
Gillespie et al. (2010)	Longitudinal research study (n=?)	Australia
Godinho et al. (2016)	Cross-sectional study (n=600)	Brazil
Gomes (2013)	Quantitative (n=635)	Portugal
Häfele et al. (2018)	Observational and cross-sectional study (n=371)	Brazil
Hafiz; Chouhan (2015)	Cross-sectional study (n=40)	India
Headley et al. (2018)	Cross-sectional, descriptive-exploratory study with a quantitative approach (n=127)	United States of America

Hossein-Delshad; Sadat-Tavafian; Kazemnejad (2019)	Cross-sectional study (n=420)	Iran
Lee et al. (2009)	Descriptive and correlational cross-sectional study (n=145)	China
Mainenti et al. (2014)	Cross-sectional study (n=15)	Brazil
Montero-Marín et al. (2011)	Cross-sectional study (n=409)	Spain
MoreiraI et al. (2018)	Cross-sectional and descriptive study (n=40)	Brazil
Nespeca; Cyrillo (2010)	Cross-sectional exploratory study (n=276)	Brazil
Ortiz; Marziale (2010)	Descriptive, cross-sectional, non-experimental study with a quantitative approach (n=134)	Ecuador
Radas et al. (2013)	Randomized control study (n = 60)	Australia
Robazzi et al. (2019)	Descriptive, cross-sectional study with a quantitative approach (n=69)	Brazil
Sadeghian; Raei; Amiri (2014)	Prospective cohort study (n=182)	Iran
Scarparo; Amaro; Oliveira (2010)	Cross-sectional study with a qualitative approach (n = 130)	Brazil
Shojaei; Khazaei (2013)	Analytical study (n =?)	Iran
Tiainen; Ropponen; Louhevaara (2014)	Quasi-experimental and longitudinal field study (n = 181)	Finland
Tounaka et al. (2014)	Uninformed (n=163)	Japan
Veeranki; Mamudu; He (2013)	Descriptive cross-sectional study (n=1.414)	United States of America

Among the 34 primary studies included, only four implemented / performed any action to promote the quality of life of workers in the higher education institution: delivery of educational material at the service, development of behavior change strategies selected by the worker himself, a Erggi action model and, tool to deal with environmental stress (Table 2).

Table 2. Implemented/performed action to promote the quality of life of workers in the education institution.

Study	Aims of the study	Action implemented/ performed	Thematic focus	Evaluation
Radas et al. (2013)	To determine if the education of office workers, along with adjustable workstations, leads to a reduction in sitting behavior.	Educational material + adjustable table	Sedentary lifestyle	NO
Dewitt et al. (2019)	To identify barriers and facilitators to reduce sitting and increase standing among office workers who have received an intervention prototype	Height-adjustable seat and bookcase + orientations	Sedentary lifestyle	(+)
Tiainen; Ropponen; Louhevaara (2014)	To investigate musculoskeletal symptoms and working conditions at the university with and without contact with an Erggi action model.	Erggi action model	Posture	(+)
Kinman (2008)	To examine the relationship between specific job stressors and psychological and physical symptoms in UK university workers	Stress management from the Sense of Coherence (SOC) in the work stress process	Stress	(+)

Legend: NO = was not shown; (+) = was evaluated; (-) = was not evaluated.

The objective of this scope review was to map studies focused on promoting the quality of life of workers in higher education institutions, also addressing the means of assessing quality of life used in the studies. To achieve these objectives, 34 studies were included in this work. Although the inclusion of studies in this review did not delimit the year or publication, the included research was published after 2007 and in several international settings, which indicates that the scientific and professional community needs to analyze such activities developed and instruments used due to the possibility of promote health and reduce possible risks to quality of life.

Several of the worker's health care initiatives have among their goals, to act in areas that impact the quality of life of the worker, being able to carry out strategies for the promotion of health in the future. In this sense, four actions were implemented / implemented in higher education institutions and 49 different instruments for assessing at least one item of measurement of quality of life. In addition, 19 studies used tools and instruments that were not validated, but developed for the research.

In this review, the actions implemented / performed to promote the health of workers from a higher education institution in the work environment were focused on physical inactivity[13,14], posture[15], and stress.[16]

One of the studies[13], of the randomized control type, divided the sample into three groups, among which, an intervention group received educational material on ergonomic measures, such as posture and physical activity. The other intervention group besides the material, received an adjustable table for the work and, the control group did not receive any intervention. For the authors, this type of action implemented in the institutions may reduce the prolonged permanence of time in the sitting position during work. However, no reports were found after this study concluding the effectiveness of the strategy adopted at the researched university.

In an uncontrolled intervention study[14] it was possible to observe in 12 weeks the reduction of the sitting time (to 3h14min) by the workers based on the strategy implemented adapting the workplace, with a table and an adjustable bookcase. The authors recommend the intervention, as it has increased awareness of "feel less, move more", both in the workplace and elsewhere. They also mention that in the future they will implement the strategy as an online module for training personnel, thus facilitating the training of workers.

In a survey carried out by a group of specialists, a recommendation was proposed to avoid prolonged sedentary work times, where the worker remains seated. The initial guidance is that these employees perform two hours of standing activities daily, performing a light walk, and after a few weeks with the change, progress to four hours daily.[17]

The Erggi action model was implemented as an education strategy for university workers.[15] This model consists of health promotion in the workplace based on the education of volunteers from the institution, called Erggi, who had previously taken a basic course in ergonomics. The teaching addresses advice on ergonomics, such as adjusting or purchasing office furniture, and maintaining good posture. The authors stated that the strategy increased the identification of musculoskeletal symptoms and knowledge about good ergonomics, thus reducing the need for sick leave.

Other study made use of the sense of coherence (SOC) construct to assess coping with environmental stressors, which consequently favors the permanence of health, both psychological and physical. According to the authors, people with a stronger SOC see life as more understandable, meaningful and manageable, which helps to deal with stressful situations.[16]

The SOC tool, together with improvement through primary interventions can combat work stressors.[16] According to the recommendations of Antonovsky (1991)[18], personal development and participation in decision making are factors that can increase the perception of these stressors that harm health.

Although knowledge about the beneficial effects of interventions directed to promoting work capacity and preventing workers' illnesses, few programs focused on health and well-being are still observed.[19]

Regarding the assessment instruments, the selected studies used 49 different types, among which general aspects of quality of life were assessed[16,20,21,22,23,24], musculoskeletal symptoms[13,15,21,22], physical activities[13,14,16,25,26,27,28], well-being[29,30], stress[20] and, related to the place and functioning of the work.[28,29,30]

Quality of life is assessed in general and globally using two main instruments: SF 36 (Medical Outcomes Study 36- item short- form health survey)[5,31] and the Whoqol (World health organization quality of life).[5] Both were used in the selected studies and were able to assess quality of life in a broad way. Authors also recommend WRQoL as a multidimensional and one-dimensional measure to assess the quality of professional life of employees in a higher education institution.[24]

Physical activity and exercise is effective intervention in the workplace to improve body posture, providing benefits for worker health.[19] Although the increase physical activity at work is not easy, an educational offer to employers on healthy lifestyle, leisure planning and behavior change strategies will considerably improve quality of life.[26]

Studies describe the benefits of a sense of well-being at work, which is related to the valuation, performance and quality of life of the worker at the institution[29] and, allows you to work more and better.[30]

The work environment must be organized in such a way that interaction between employees and managers takes place to improve personal relationships, as it can improve work capacity and, perhaps, prevent early retirement, which has a social and economic impact in Brazil.[28] In addition, it helps people deal with stress during work.[32]

4. Conclusion

Investing in quality of life at work, with the aim of improving function and increasing benefits, was considered necessary in the studies selected for analysis. And although, the fact that only actions implemented / executed were identified in only four articles, all the remaining thirty, after results, recognized the importance and suggested strategies for promoting worker health.

Therefore, investigating the quality of life of workers and the factors that interfere, such as physical inactivity, stress, personal relationships and beliefs, is crucial for maintaining health in institutions. Greater engagement of employee in the search for health promotion of workers is recommended, taking into account the assessment carried out using validated instruments.

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