



**ERGONOMIC WORKING CONDITIONS FOR WORKERS IN NURSING: AN
INTEGRATIVE REVIEW OF THE LITERATURE**
**CONDIÇÕES ERGONÔMICAS LABORAIS PARA OS TRABALHADORES DE ENFERMAGEM:
REVISÃO INTEGRATIVA DA LITERATURA**
**LAS CONDICIONES DE TRABAJO ERGONÓMICO PARA TRABAJADORES EN ENFERMERÍA: UNA
REVISIÓN INTEGRAL DE LA LITERATURA**

Anna Alice Altoé¹, Cristina Lavoyer Escudeiro², Zenith Rosa Silvino³

ABSTRACT

Objective: to present literature review of the evidence related to ergonomic working conditions of nurses. **Method:** descriptive and exploratory study of the integrative literature review type, in which the following steps were covered: criteria for inclusion and exclusion of articles, defining the information to be extracted from articles, analysis, discussion and presentation of results. To guide the search articles, was made following questioning < < what says the literature regarding the ergonomic and work conditions for nursing? > > nursing descriptors were used, working conditions and ergonomics to select scientific productions in the databases Lilacs, Medline and Scielo in Portuguese, English and Spanish languages in 1992 to 2012. **Results:** 30 articles were selected. **Conclusion:** the evidence in articles are essential for nurses of Labour Act on prevention of diseases related to ergonomics with health workers of nursing. **Descriptors:** Nursing; Working conditions; Ergonomics.

RESUMO

Objetivo: apresentar revisão da literatura sobre as evidências relacionadas às condições ergonômicas de trabalho da enfermagem. **Método:** estudo descritivo e exploratório, do tipo revisão integrativa da literatura, em que as seguintes etapas foram percorridas: critérios de inclusão e exclusão de artigos, definição das informações a serem extraídas dos artigos, análise, discussão e apresentação dos resultados. Para guiar a busca dos artigos, foi feito o seguinte questionamento << O que diz a literatura a respeito das condições ergonômicas e de trabalho para a enfermagem? >> Foram usados os descritores *enfermagem*, *condições de trabalho* e *ergonomia* para selecionar produções científicas nas bases de dados Lilacs, Medline e Scielo nos idiomas português, inglês e espanhol no período de 1992 a 2012. **Resultados:** 30 artigos foram selecionados. **Conclusão:** as evidências nos artigos são fundamentais para que os enfermeiros do trabalho atuem na prevenção de agravos à saúde relacionados à ergonomia com trabalhadores de enfermagem. **Descritores:** Enfermagem; Condições de Trabalho; Ergonomia.

RESUMEN

Objetivo: presentar una revisión bibliográfica sobre la evidencia relacionada con condiciones ergonómicas de trabajo de las enfermeras. **Método:** estudio descriptivo y exploratorio del tipo de revisión de literatura integrativa, en el que se cubrieron los siguientes pasos: criterios de inclusión y exclusión de los artículos, definición de la información se extrae de los artículos, análisis, discusión y presentación de resultados. Para guiar la búsqueda de artículos, fue hecho interrogatorio siguiente << lo que dice la literatura relativa a las condiciones ergonómicas y de trabajos de enfermería? >> enfermería descriptors fueron utilizados, condiciones de trabajo y ergonomía para seleccionar las producciones científicas en las bases de datos Lilacs, Medline y Scielo en los idiomas portugués, inglés y español en 1992 a 2012. **Resultados:** se seleccionaron 30 artículos. **Conclusión:** la evidencia en los artículos son esenciales para las enfermeras de la ley del trabajo en la prevención de enfermedades relacionadas con la ergonomía con los trabajadores de salud de enfermería. **Descritores:** Enfermería; Condiciones de Trabajo; Ergonomía.

¹Nurse specialist in occupational nursing, Master of Professional Master's Degree program in nursing school Assistance Aurora de Afonso Costa/MPEA/EEAAC/UFF. Member of the Center for research on citizenship and management in Nursing /NECIGEN. E-mail: annaaltoe@hotmail.com; ²PhD in nursing, Professor Department of fundamentals of nursing and Nursing School Administration Aurora de Afonso Costa/EEAAC/UFF. MPEA Coordinator and of the NECIGEN. Niterói (RJ), Brazil. E-mail: zenithrosa@terra.com.br; ³PhD in nursing, Assistant Professor, Department of nursing, Doctor of nursing school Aurora de Afonso Costa/EEAAC/UFF. Vice Coordinator of nursing and graduate. A member of the NECIGEN. E-mail: cristinalescudeiro@gmail.com

INTRODUCTION

In recent decades, studies have been showing concern over the occupation of workers in their working environment and how this process can cause disease. Accordingly, in order to contribute to the improvement of the human needs in the workplace, ergonomics, the study of the relationship between man and the environment, including methods, instruments and the Organization of work.¹

The adequacy of the work environment is critical to maintaining quality of life and health of workers. Studies dealing with working conditions dating from antiquity, being the most prominent of the Hippocrates (400 B.C.) on the origin of illnesses that affected mine workers.

In Brazil, ergonomics has been gaining importance according to the requirements of the 17 Regulatory (NR 17) of the Ministry of labor and employment that provides for the furnishing of workplaces, which must be suitable to the characteristics related to nature and the requirement of the task.² the possibility of adapting the workplace through ergonomics has determined a lot of research when necessary to prevent harms the health of workers.

Most of these researches in ergonomics is geared to employees of industries and there are few publications that seek to use ergonomics in nursing care to the patient. Therefore, it is essential that the nursing professionals familiar with the working environment where they perform their functions and its main risks in order to minimize and/or prevent the harms your health.³

In hospital environments, there are many organizational and environmental changes that can be related to musculoskeletal problems; among them are technological resources, lack of equipment for moving patients, lack of human resources and inadequate.⁴

Most hospitals offer inadequate conditions of work, which exposes workers to biohazards, chemical, mechanical, physical, psychological, social, and mainly for ergonomic.⁵

From such considerations, were raised with the intention of studies that could serve as a reference for nursing students and workers with regard to ergonomic conditions in hospitals and to prevent possible damages related to this issue.

OBJECTIVE

- To present literature review of the evidence related to ergonomic working conditions of nurses.

METHOD

This is a descriptive and exploratory study of the integrative literature review type.

For the development of integrative review, the following steps were covered: criteria for inclusion and exclusion of articles, defining the information to be extracted from articles, analysis, discussion and presentation of results. To guide the search for articles, the following question: what does the literature regarding the ergonomic and work conditions for nursing?

The survey of scientific production related to ergonomics and nursing workers was held in the Virtual Health Library (VHL), in the databases: Lilacs, Medline and Scielo. The criteria for inclusion of articles were: articles published online in full in Portuguese, Spanish and English, with timeframe of 1992-2012 and that has theme related to the descriptors.

The justification of the timeframe of 20 years, by the introduction of ergonomics in hospitals from the Decade of 80.

Virtual consultation, were used the following descriptors in DeCS: working conditions, ergonomics, and nursing. The search was carried out in 4/16/2012 for access online, using the inclusion criteria, totaling 30 complete articles.

The research has respected the resolution 196/96 of the National Health Council.

RESULTS

In the database, Lilacs were found nine articles in Medline and Scielo ten eleven articles.

To carry out this search, it was used in the descriptors associated with Lilacs in threes, because individually descriptors were not the proposal of the study. With the trio, Association (working conditions and ergonomics and nursing) were found 40 articles. Among the 40 articles, only 09 met the inclusion criteria.

In the database Medline, the descriptors were associated in double (ergonomics and working conditions, nursing and nursing, ergonomics and working conditions), however, with the Association of nursing and descriptors, and working conditions, working conditions and ergonomics, ergonomics was not contemplated in the first and in the second there was the theme, dealing with other professions out of health care. Already

the ergonomics and nursing Association, allowed finding 536 articles, among which only 29 were in full, 08 were repeated at Lilacs and just 10 met the inclusion criteria.

Already in the Scielo database in the same way that in Medline, the descriptors were associated in double and when associated with nursing and working conditions appeared 126 articles, of which 11 met the inclusion criteria.

Of the 30 selected articles, 02 were published in the year 1995, in 1996 year 01, 03 in the year 1998, 2000, 03, 01 in the year 2003, in 2004, 02 03 in the year 2005, 2006 in 01, 02 in the year 2007, in 2008, 02 06 in the year 2010, 03, in 2011 and 2012 in 01.

The Brazilian data sources were the majority, totaling 25 publications, and two in the State of Rio Grande do Sul, in the State of São Paulo 17, 02 in the State of Rio de Janeiro, Brasília and 01 3:0 pm in the State of Paraná. Spain had one publication, Africa had one, England had two and the United States had 01.

Regarding the formation of the authors, it was identified that 76.6% of professionals are nurses, 10% are physiotherapists, 6.6% are doctors, 3.3% are psychologists and 3.3% are administrators.

It was observed that the searches were performed in various scenarios, hospital environments, 6:0 pm 1:0 pm home care, clinical neurological and 1:0 pm 10 were bibliography.

To analyze the techniques used in the polls, it was observed that 10 have used only the bibliographic search, 09 used questionnaire, interview and observation were eight and three used form.

Vis-à-vis the articles obtained in the search was evident increase in the number of publications related to ergonomics in the last 20 years.

DISCUSSION

By means of the 30 selected articles, according to the objectives of articles, are two categories: ergonomic Working Conditions in hospitals and hospital work-related Musculoskeletal Injuries. Among these categories, seven articles related to first category and 23 articles in the second category.

- Ergonomic working conditions in hospitals

The publications direct to the importance of ergonomic conditions as a fundamental tool in preventing damages to health of workers in nursing.

In this context, working conditions must be observed for preventive changes occurring both at the administrative and structural in order to minimize the harms to the health of workers.³

It should be noted that the hospital work has been investigated due to the risks that the environment provides for the activities developed.⁶⁻⁸

In this way, the quality of care in hospitals is directly related with the physical facilities, equipment and instruments used by the professionals.⁷⁻⁹

The hospitals present physical, chemical hazards, psychosocial and ergonomic, which may harm the health of workers and should be carefully analyzed in order to characterize the conditions of work of the institution.⁸

On ergonomic conditions found in hospitals, the International Labour Organization (ILO) has made recommendations including the hygiene and safety in order to adapt the facilities of work with the pros.⁹

Even on working conditions, the authors emphasize that the difficulties encountered in working environments in South American countries is related to the political and economic difficulties faced by developing countries.⁴

Therefore, appropriate conditions of work with respect to lighting, temperature, noise, ventilation and adequate furnishings, favor the development of nursing work and contribute to a quality assistance.²⁰

♦ Work-related musculoskeletal injuries in hospital

Some organizations and research groups include nursing workers as professionals who are at increased risk to develop dorsal spine related problems.¹

Therefore, some studies are investigating the personal factors and work-related back pain among nursing workers.¹⁰ extra labor Factors such as physical activity, smoking and postural defects can interfere with development of the work of these professionals.

Following in this context, studies show that approximately 80% of the nursing workers are prone to acquire work-related musculoskeletal disorders (WMSD) due to constant exposure to inadequate conditions of work.^{12/11/13}

It is therefore evident that in recent decades there was an increase in studies discussing work-related musculoskeletal diseases due to the increase of pathologies in diverse occupations.^{7,14}

In this context, a study in a university hospital in Rio Grande do Sul with 491 nursing workers, showed that among the participants, 96.3% reported feeling pain somewhere in the body last year.¹⁸

So, with the survey, it became apparent that the tasks performed by the nursing workers in need of physical and psychic effort high and may lead to the emergence of diseases to this professionals.¹⁹

CONCLUSION

On the evidence in the articles, we believe that it is vital to look for professionals who attend to patients due to the fact that they are responsible for providing quality care and safety, however, for this to occur, the institutions need to offer favorable working environments for nursing work.

Some factors such as preventive maintenance of furniture and equipment as well as its position in the physical space and the proper sizing of staff are simple procedures that can facilitate the work of nursing in hospitals.²⁰

These changes will only be possible through ergonomic study of the unit and with the achievement of training nursing workers in order to reduce the problems caused by inadequate employment situations that cause musculoskeletal injuries and possible faults and/or clearances to work related to this factor.

It is noteworthy that harms the health of nursing workers may also be related to inappropriate habits of these professionals outside of the work environment.

Before the study, it was evidenced that the ergonomics in hospitals is still scarce, even though a huge importance to the health of workers in nursing.

It is necessary that other studies will contribute to the development of research that address ergonomics in hospitals and that these involve equipment, furniture, nursery workers and patients.

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Corresponding Address

Anna Alice Moreira Altoé
Rua Visconde do Rio Branco 767/602
CEP: 24020-006 – Niterói (RJ), Brazil