



REVISIONES

Occupational diseases of workers cleaning service in hospital environment: educational proposal to minimize exposure

Doenças ocupacionais dos trabalhadores de limpeza em ambiente hospitalar: proposta educativa para minimizar a exposição

Enfermedades profesionales de los trabajadores de limpieza en los hospitales: propuesta educativa para minimizar la exposición

Souza, Raulene de Souza **Cortez, Elaine Antunes ***do Carmo, Thalita Gomes *Santana, Rosimere Ferreira**

*Nurse. Graduation degree; work nursing; Federal Fluminense University - UFF. Niterói. **PhD in Nursing; Assistant Professor; Federal Fluminense University (UFF); *** Master in Nursing (UFF). Assistant Professor; Rio de Janeiro Federal University (UFRJ) – Campus Macaé, do Núcleo Clínica Médica-Cirúrgica. Macaé, E-mail: thalitado@gmail.com ****PhD, RN Assistant Professor, EEAAC/UFF, Niteroi-RJ, Brazil.

Keywords: Occupational Diseases; Hospital cleaning service; working environment; Worker

Palavras chave: Doenças ocupacionais; Serviço hospitalar de limpeza; Ambiente de trabalho; Trabalhador

Palabras clave: Enfermedades profesionales; Servicio de limpieza del Hospital; medio ambiente trabajar; Trabajador

ABSTRACT

Objectives: To identify the occupational disease among hospital cleaning workers; describe the causal factors of occupational diseases in this group of workers; and offer educational activities to minimize exposure to occupational diseases in this group .

Methods: This is a literature integrative review of the last five years held in databases Lilacs, BDEnf and Medline. Eight articles were selected and after reading and analyzing emerged three categories: (1) Occupational diseases, (2) causal factors of occupational diseases, (3) educational measures to minimize exposure.

Results: Worker cleaning service in their work activities are exposed to all occupational risks. Occupational diseases identified these workers are diverse, but stands out: musculoskeletal disorders and dermatitis. The educational measures must focus on training / continuing education.

Conclusion: We conclude that continuing education can be an alternative to minimize the various

occupational hazards that these workers are exposed, since activities with a focus on training are not very effective

RESUMO

Objetivos: Identificar as doenças ocupacionais entre os trabalhadores de limpeza hospitalar; descrever os fatores causais das doenças ocupacionais neste grupo de trabalhadores; e propor atividades educativas para minimizar a exposição às doenças ocupacionais neste grupo.

Métodos: Trata-se de uma revisão integrativa de literatura dos últimos 5 anos realizada nas bases de dados Lilacs, Bdenf e Medline. Resultados: Oito artigos foram selecionados e após leitura e análise surgiram 3 categorias: (1) Doenças ocupacionais, (2) Fatores causais das doenças ocupacionais, (3) Medidas educativas para minimizar a exposição.

Resultados: O trabalhador do serviço de limpeza na sua atividade laboral está exposto a todos os riscos ocupacionais. As doenças ocupacionais identificadas desses trabalhadores são diversas, mas, destaca-se: distúrbios osteomusculares e dermatites. As medidas educativas tem o foco no treinamento/educação continuada.

Conclusão: Conclui-se que, a educação permanente pode ser uma alternativa para minimizar os diversos riscos ocupacionais que estes trabalhadores estão expostos, já que as atividades com foco no treinamento não estão sendo muito eficazes.

RESUMEN

Objetivos: Identificar la enfermedad profesional de los trabajadores de limpieza del hospital; describir los factores causales de las enfermedades profesionales en este grupo de trabajadores, y ofrecer actividades educativas para minimizar la exposición a las enfermedades profesionales en este grupo.

Métodos: Se trata de una revisión integral de la literatura de los últimos cinco años realizada en las bases de datos Lilacs, Medline y BDEnf. Se seleccionaron Ocho artículos y después de la lectura y el análisis surgieron tres categorías: (1) las enfermedades profesionales, (2) los factores causales de las enfermedades profesionales, (3) Medidas educativas para minimizar la exposición

Resultados: Los trabajadores del Servicio de limpieza en sus actividades de trabajo están expuestos a todos los riesgos laborales. Las enfermedades profesionales identificadas en estos trabajadores son diversas, pero llaman la atención: los trastornos musculoesqueléticos y dermatitis. Las medidas educativas deben centrarse en la formación / educación continua.

Conclusión: Se concluye que la educación continua puede ser una alternativa para minimizar los diversos riesgos laborales a que estos trabajadores están expuestos, ya que las actividades con un enfoque en la capacitación no son muy eficaces.

INTRODUCTION

The work appeared with the first man. The bibliography provides references on harmful factors to the worker since the Middle Ages, however, the relationship between work activities and the disease remained largely ignored until 250 years ago⁽¹⁾.

In Brazil, only in the 40 problems caused by work began to be studied. Consolidation of Labor Laws (CLT), the emergence of the world health organization (WHO), and the creation of the FGTS (Guarantee Fund for length of service), INAMPS (Social Security Institute), today INSS (National Institute for Insurance social) the international Labour Organization (ILO) and the FUNDACENTRO were milestones in the achievement and maintenance of workers' health⁽²⁾.

Despite mounting modifications to the work, through new technologies, changes in

work organization and the emergence of new professions, it appears that some issues continue to challenge everyone, such as suffering, illness, accidents related to work. These issues, and have consequences for the people themselves, result in damage to the institutions and society.

It is emphasized that occupational or occupational disease is a disease that the employee acquires due to exposure to factors that can be chemical, physical and biological, and harm the worker's body continuously or frequently, and for a long time in its Desktop⁽³⁾.

When working conditions beyond the tolerable limits of the organism, the probability of causing disease in work is significant. In this context, there are many workers, but this study will focus on workers cleaning service working in the hospital area. These workers to develop their activities are exposed to numerous risks such as: physical (excessive temperature, humidity, physical stress), chemical (product contact cleaning and disinfection, chemotherapeutics disposal) ergonomic (excessive physical exertion, repeatability of movements, poor posture, incorrect job), cognitive ergonomics (social devaluation of work, loss of motivation), biological (contact with cutting and piercing material during transport to disposal of the box), which favor the development of certain diseases: RSI/MSDs, dermatitis contact, low back pain, infectious diseases⁽⁴⁾.

The work rate imposed on this class of workers has created conditions for the development of numerous occupational diseases highlighting among them the manifestation of repetitive strain injuries (RSI) or musculoskeletal work-related disorders (MSDs) directly linked to execution repetitive and uncomfortable activity, the RSI / MSDs are a fertile field in the cleaning sector, given that this activity is characterized by a dynamic and intensive labor demand, requiring repetitive motion and awkward manual for the worker. Given the above, it justified the need for more studies on the hygiene of workers and hospital cleaning, a class often forgotten in the hospital environment and interacting directly or indirectly with the patient and with health professionals.

To elucidate the causal factors that cause these risks, it is possible to explore the problem in an integrated manner in an attempt to plan and adopt important educational measures to prevent and minimize their occurrence with these workers. Thus, it is intended to contribute to prevention of occupational diseases in these workers, and thus contribute to maintaining the health of those workers.

To this end, this article aims to: 1) Identify the occupational disease among hospital cleaning workers; 2) Describe the causative factors of occupational diseases in this group of workers; and 3) propose educational activities to minimize exposure to occupational diseases among these workers.

METHODOLOGY

This is an integrative review carried out on the following bases: LILACS (Latin American and Caribbean Literature on Science and Health), Medline (Online System Search and Medical Literature Analysis) and BDENF (Nursing Database), held in from August to December 2013.

It is noteworthy that the Integrative review is a method of broader revision, as it allows to include theoretical and empirical literature and studies with different methodological

approaches (quantitative and qualitative). This method has the main purpose to gather and synthesize the studies on a particular subject, building a conclusion from the results shown in each study, but to investigate the same or similar problems⁽⁵⁾.

The integrative review is divided into six stages, the first to identify the subject and elaboration of guiding question: How to propose educational measures to workers cleaning service in the hospital environment, focusing on the causal factors of occupational diseases?

The second step was the establishment of the inclusion criteria, which were studies published in the last five years; Portuguese texts, scientific articles that conceptualise the causal factors of occupational diseases in workers cleaning service in a hospital environment and measures to minimize exposure. And exclusion criteria: scientific papers that do not meet the question of the study.

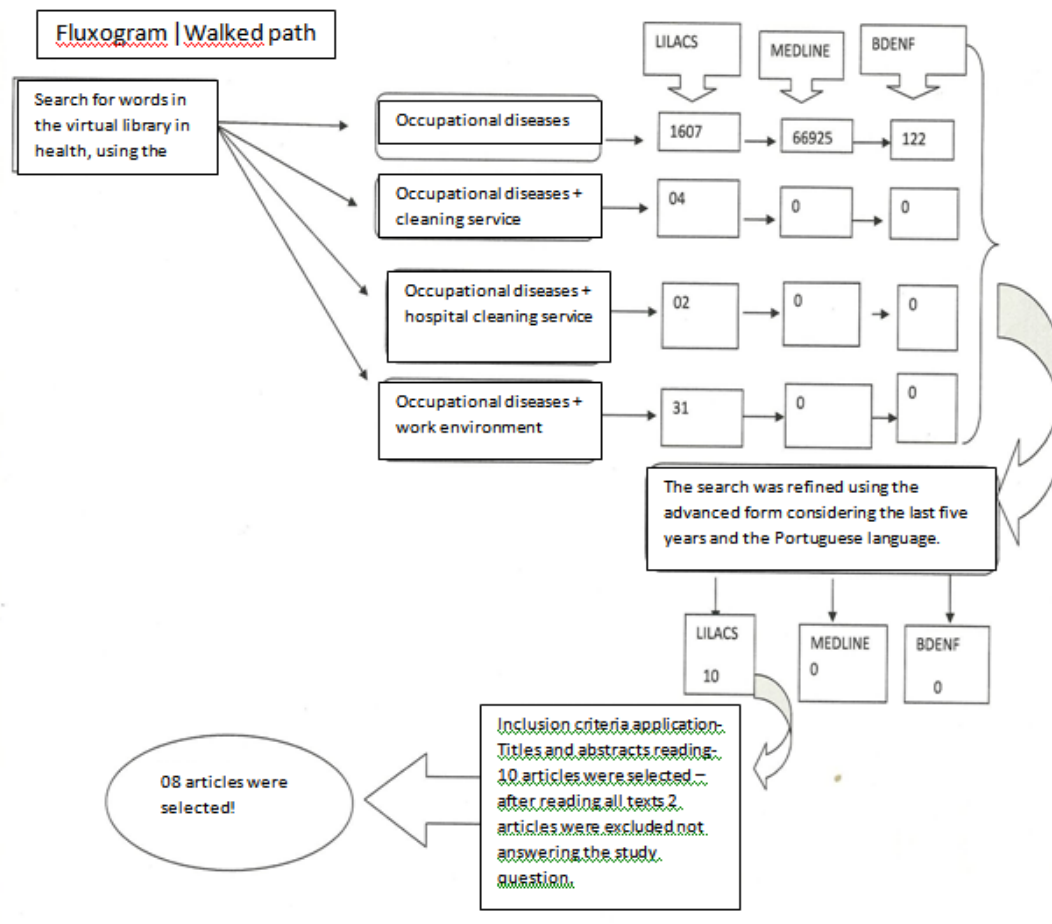
Also in this step was carried out the sample search in reading and establishment of descriptors to be used, which in this research were: cleaning workers, hospital, occupational diseases. It is noteworthy that for the search used the PICO strategy, but this research as it had no comparison used the PIO, where the P - (patient/problem), I - (intervention), O - (output/outcome) . The PICO strategy is an acronym for Patient, Intervention, Comparison and Outcomes (outcome). Within the EBP (Evidence-Based Practice) these four components are the key elements of the research question and the construction of the question for bibliographic search of evidence⁽⁶⁾. In this research was used for P - hospital cleaning service - Desktop - Occupational Diseases, for I - Causal factors, prevention, and O - agents of risk: physical, chemical, biological, ergonomic.

It is noteworthy that the level of evidence is that which is of course, finding a truth that is no doubt. Scientific evidence is evidence that a certain knowledge is true or false⁽⁷⁾. In this survey is used a grade according to the McMaster University (Ontario, Canada) and the University of York (UK)⁽⁸⁾, which originated the EBP (Evidence-Based Practice, which provides methods and processes for the identification of evidence).

The third step is the selection of scientific papers according to their embasadores concept, objective methodology, and the definition of the information to be extracted from selected scientific articles and categorizing them. The path to search and selection of material in this integrative review will be presented in Flowchart 1.

As a fourth step, we conducted the evaluation of the studies included in the integrative review and critical analysis, correlating them.

In the fifth step the interpretation and discussion of results was carried out, highlighting the work that brought more clearly and concisely the conceptual differences between the dimensions of the causal factors of occupational diseases that were surveyed.



And as sixth and final stage, was presented the review and synthesis of knowledge produced about the causal factors of occupational diseases and educational measures to prevent them.

Thus emerged three themes, they are: (1) Occupational diseases; (2) Causal factors of occupational diseases; and (3) educational measures to minimize exposure.

RESULTS:

The following is the summary table 1 of the eight (8) References in this integrative review. It is noteworthy that in this context the references are organized according: magazine were published, year of publication, the database where it was found, the title, the type of study, the level of evidence (NE) and the main results research to answer this integrative review.

Synoptic Table I

Magazine	year	Base	Título	Study type	N E	Main results
Science and public health magazine (9)	2008	Lilacs	Condition of tendon above-Spinal and removal Laboral	Qualitative Descriptive Field research	3	The study reports the common problems due to occupational mechanical overload that affects the supraspinatus tendon causing occupational diseases such as tendinitis and others. The study draws attention to the need to investigate the specificity of causes and effects, related to certain type of activity and shoulder occurrence, with a high rate of absence due to tendon disease, characterized as an important epidemiological problem.
Science and public health magazine (10)	2009	Lilacs	The collectors Urban waste in city of Dourados (mg) And your perception About risks Biological in the process of Job .	Qualitative Descriptive Field research	3	The study of the urban waste pickers noted that during the working process. They are exposed to physical, chemical, mechanical, ergonomic, and the principal is the biological. This is caused by cutting and piercing materials such as needles and glass discarded incorrectly in household waste. These risks cause diseases such as acute or chronic infections, parasitic infections, fractures, ringworm. It identified the urgent need to provide information to the garbage collectors and the public. Workers need to receive instructions on how to minimize or prevent occupational hazards. Already the population needs to be instructed on how to store and discard the solid waste properly to preserve the environment, their own health and the health of workers of the garbage collection.
Nursing Magazine (11)	2009	Lilacs	occupational exposure with Material potentially Contaminatd between support profesionas	Qualitative Descriptive Field research	3	The study raised the frequency of occupational accidents involving potentially contaminated biological materials. The results show that from 2004 to 2009, 12.4% were professional cleaning service, which was the 3rd most registered group, deriving from its medical waste collection work process, and administrative activities, when such materials are discarded in inappropriate location. Percutaneous exposures occurred by recapping needles. To strengthen integrated practices to provide safe and healthy environment, three pillars of assistance shall be fortalecidas: o information system to support the institutional policy, the continuing education of professionals

						who generate cutting and piercing residue causing accidents in cleaning professionals, the safe insertion technology with safety device.
Public Health Magazine (12)	2009	Lilacs	occupational hazards in hospital context: Challenge for Occupational Health	Qualitative Descriptive Field research	3	The study aimed to analyze the social representations of general health workers (covering workers cleaning service) about the occupational hazards. The results revealed discontent with unhealthy and unsafe working conditions in hospitals.
USP Nursing School Magazine (13)	2009	Lilacs / bdenf	Quality of life and symptoms in workers from musculoskeletal health and hospital cleaning	Qualitative Descriptive Field research	3	The study was to identify aspect of quality of life and musculoskeletal symptoms in hospital housekeeping workers. The results showed that half of the workers indicated the shoulders as segment most affected by musculoskeletal symptoms, and many impeding the realization of work tasks. Observed significant differences for cleaning workers with nursing them. Nursing is overcome in the lumbar and dorsal regions.
Science and public health magazine (14)	2010	Lilacs	Hepatitis B: Assessment and serologic response to vaccine in cleaning staff at the hospital school	Qualitative Descriptive Field research	3	The study evaluated the active population of cleaning staff who received full course of vaccination against hepatitis B to measure the levels of antibodies against HBsAg (anti-HBs) and evaluate its relationship with the general epidemiological conditions, personal and professional life and the risk of infection by the hepatitis b virus. Accidents with needle stick materials represent almost half of cases of occupational exposure, most of them caused by improper disposal of cutting and piercing. Those who are more accidental cleaning workers. The most effective measure to combat HBV infection is the active immunization of susceptible individuals with use of vaccines available, highly efficient and safe. Reports the importance of vaccination to prevent diseases acquired during work activities. Experience in immunization campaign was valid. Lectures promote health education with specific guidance turned to the studied target population.
Science and public health	2011	Lilacs	Nursing and health care for the	Qualitative Descriptive		The study reports the importance of vaccination to prevent diseases that can lead to death of workers caused by biological agents acquired

magazine (15)	1		worker: immunization In Action Experience at Fiocruz / Manguinhos	Field research	3	during the performance of work activities. As a result of this work applies 12,904 doses of various vaccines in a population of activity of workers and diverse age range. Experience in immunization campaign was valid. The lectures promoted health education with specific guidance aimed at the target audience of this research.
Nursing Magazine in São Paulo (16)	2 0 1 3	Lilacs	Meaning of workload under the cleaning From Operating Optical	Qualitative Descriptive Field research	3	The aim of the study was to analyze the meaning of the workload for cleaning operations of the emergency unit and identify strategies for protection of this charge. It was observed that the workloads significant workers are physiological in nature, mainly related to back pain, psychic nature related to living environment enveloped the suffering and unexpected situations, psychological in nature due to no appreciation of the work by other professionals active in the work environment, the question of interpersonal relationships, teamwork and also loads of biological contamination. The results indicated that the collective strategy needs to be adopted to extend the information that cleaning workers have regarding the workload, it is necessary to value the work of these people allowing it greater participation in teamwork.

According to the table, classify the articles submitted in accordance with the matters brought by each author, which emerged three main themes for discussion: (1) Occupational diseases, (2) Causal factors of occupational diseases, (3) educational measures to minimize occupational diseases. Article 1 talks about occupational diseases, causes and educational measures, Articles 2, 5, 6 address on occupational diseases. Already Articles 4 and 8 are about causal factors, Article 3 of causal factors and educational measures. Finally, Articles 6, 7, 8 are educational measures to minimize occupational diseases.

DISCUSSION

Occupational diseases

The reported occupational diseases in articles in this category were: musculoskeletal disorders RSI/MSDs (tendinitis, burcites, rotator cuff disorders, back pain); dermatitis, rhinitis, hepatitis B and C, parasitic diseases, eating disorders and sleep, depression, neurosis, allergic and toxic reactions, HIV, acute or chronic infections and fungal infections. In order to start the discussion of this category, such as musculoskeletal disorders were the most appeared, it brings the concept that these are characterized by painful symptoms affecting tendons, muscles, nerves, ligaments and other structures responsible for movements of the upper limbs back, shoulders neck and lower limbs⁽¹⁷⁾.

Musculoskeletal disorders carry a serious public health problem and one of the most serious in the field of occupational health, taking it to different degrees of disability, generating an increase in absenteeism and temporary or permanent absences from work and producing significant cost treatment and compensation⁽¹⁷⁾ Lumbago - is a disease that affects ligaments, muscles and/or injuries of the intervertebral discs, it is characterized by the presence of pain symptoms in intensity committed to carrying out labor activities⁽¹⁷⁾.

Causal factors of occupational diseases

Through the analysis of articles it was possible to identify and define the issues related to risk and causal factors of the diseases they are exposed to the cleaning workers in hospital. The risks: physical (noise, heat, humidity and cold); chemical: (contact cleaners, chemotherapeutics disposal); mechanical (falls); ergonomic (repetitive strain, poor posture inadequate equipment); biological: (Contact with secretions and body fluids during cleaning, contamination with cutting and piercing material); cognitive ergonomics: (social devaluation of work, loss of motivation). Causal factors: insufficient number of workers, work overload, occupational exposure, inappropriate physical conditions, lack of professional training, neglect or misuse of PPE. In order to start the discussion of this category it is emphasized that occupational health or occupational health refers to the promotion and preservation of the worker's physical integrity in the exercise of its function, highlighting through the approach of prevention, screening and diagnosis early of injuries to health related to work, beyond the finding of cases of occupational disease or irreversible damage to workers' health⁽¹⁸⁾.

The identification of risk factors has as main objectives to recognize and assess the risks indicating ways of management, seeking to monitor and, if possible, reduce the incidence of accidents of which are exposed to cleaning workers during the development of their work activities.

In this view we highlight the factors that lead workers to occupational risks that stem from unhealthy work activities can cause adverse health professional⁽¹⁹⁾.

- (1) Among the factors that lead to the occurrence of occupational hazards the main ones are:
- (2) Insufficient number of staff - The professional deficit entails a heavy workload, because once there is a greater number of sectors for each employee, affect the interaction with their functions and the work environment to the extent that this environment contains excessive demand⁽²⁰⁾.
- (3) Work overload - the cleaning service is a exhausting work, especially in public institutions. The work overload can interfere with the employee's quality of life⁽²¹⁾.
- (4) Professional training Lack - many variables contribute to the occurrence of occupational hazards, lack of professional training is one of them, showing the need to create strategies aimed at these workers, aimed at preventing accidents during work activities. Hospitals could establish a permanent political education and training of workers⁽²²⁾.
- (5) Occupational exposure - before the biological, the most worrisome infections are those caused by the AIDS virus (HIV), hepatitis (B and C), the main route of occupational transmission through blood exposure via perforating-cutting accident⁽²³⁾.

- (6) Improper physical conditions - the main complaints from this group of workers are: allergic reactions, infectious diseases, fatigue, back pain and musculoskeletal disorders caused by repetitive strain, poor posture ⁽²⁴⁾.
- (7) Unwillingness by misuse of PPE - In the hospital work is risky and unhealthy, but often workers perform their tasks without proper protection, or making use of improperly IPE, leading to working conditions unfit arising from lack of resources and materials from hospitals and the lack of workers' awareness of the use of PPE ⁽²⁵⁾.

Educational measures to minimize occupational diseases.

Preventive measures found in the articles:

- Guidance to cleaning professionals through teaching hospital training measures to prevent and correct use of PPE.
- Continued training with professionals who generate waste mainly needle stick.
- Guidance on the importance of immunization against hepatitis B and C.
- Information system to support the institutional policy.
- Insertion of security technology safety device.
- Maintain proper posture in the execution of the procedures.
- Make physical activity (gymnastics).
- Continued and permanent education for the worker who works in hospitals.

In discussing this category it is important to implement measures in order to prevent, avoid or reduce damage that occupational exposure causes the professionals in focus, creating training programs and personal development, promoting education in service, introducing lectures and training in the hospital. The adoption of these measures requires changes in behavior and professional behavior, as are the obstacles to be overcome regarding the prevention of occupational hazards⁽²⁶⁾.

Thus, to prevent the disease of the worker in the hospital, according to regulatory Standard 32 (NR-32) is the employer's obligation to provide the required number of PPE to employees, also ensure quality and guidance for the correct use. In this situation, it is for nurses cleaning services know the particularities of the function performed, in order to implement preventive measures, promoting health of cleaning workers⁽²⁷⁾.

The educational measures highlighted in this review is to northern training and guided up well in continuing education. It is noteworthy that education is the most effective way to modify and create routine habits in the workplace. Already continuing education is defined as a set of educational activities for updating the individual, which is oportunize employee development as well as their effective participation in the day-to-day operations⁽²⁸⁾. However, the continuing education works in multidisciplinary way, seeks an institutionalized practice, aims at transformation techniques and social practices, the frequency is continuous, is based on the pedagogy focused on solving problems, where the result is institutional change, the active appropriation of scientific knowledge strengthens the work team⁽²⁹⁾. Continuing education aims to work with the teams and not the corporately organized workers, that is, present multidisciplinary and interdisciplinary approach⁽³⁰⁾.

Given this context, and cleaning workers workers who are not part of the health workers, often participate in educational processes isolated from context and separated from health professionals, which can be indicative of failure.

It is emphasized, finally, that all educational process is not an end in itself. It is an unfinished process, requiring feeds back it continuously by the dynamics of the health sector, and the Permanent Education can be a tool for this construction⁽³¹⁾.

CONCLUSION

Given this integrative review realizes the importance of prevention and knowledge about the risk factors for the professional who carries out its activities in the hospital, and determinations relating to the care of the proper use of the equipment will avoid health problems for these workers which they are exposed daily. Note that they are not fulfilled, not only for lack of knowledge, but accommodation and lack of commitment to their own safety.

The professional who works in the hospital environment is exposed to various occupational hazards, such as accidents, mental and emotional stress, work overload, poor physical condition, and such problems can affect worker performance endangering all those involved in process, and consequently changing the dynamics of the service, as well as compromising the quality of service.

Finally, understand how essential it is important that professionals look for ways to modify their behavior and attitudes and who are prepared to face changes in order to minimize problems to which they are exposed daily by acquiring knowledge of their rights and duties, so they can work safely and less damage to your health.

It was noted that educational activities focused on training are the most performed and there will be questioning if it is not what does not change the picture as it is proven that training focus on education does not change attitudes, behavior and the process work, but continuing education. Thus, it is suggested the implementation of continuing education in workplaces where they are this profession so that the educational process is significant and occupational diseases among them decrease.

REFERENCES

- 1) Mendes R. Patologia do trabalho. Rio de Janeiro: Atheneu, 1995.
- 2) Dias EC. Evolução e aspectos atuais da saúde do trabalhador no Brasil. Bol. Of. Sanit. Panam. 1993; 115(3):202-14.
- 3) Arruda ECSR, Ribeiro MC, Brasileiro ME. Identificação dos riscos institucionais em profissionais de enfermagem. Revista Eletrônica de Enfermagem e Nutrição [periódico na internet]. 2010 jan-jul [acesso em 2013 dez 09]; 1(1):1-16. Disponível em: http://www.ceen.com.br/revista_eletronica
- 4) Franco AR. Estudo preliminar das repercussões do processo de trabalho sobre a saúde dos trabalhadores de um hospital geral. Ribeirão Preto. [Tese de Doutorado]; Universidade de São Paulo/USP; 1981.
- 5) Pompeu DA, Rossi LA, Galvão CM. Revisão integrativa: etapa inicial do processo de validação do diagnóstico de enfermagem. Acta Paul Enferm. 2009; 22(4):434-8.
- 6) Nobre MR, Bernardo WM, Jatene FB. Evidence based clinical practice. Part 1 – well structured clinical questions. Rev Assoc Med Bras. 2003; 49(4): 445-9.

- 7) Cruz DALM; Pimenta CAM. Prática baseada em evidências, aplicada ao raciocínio diagnóstico. Rev Latino-Am Enfermagem. 2005; 13 (3):415-22.
- 8) Magarey JM. Elements of a systematic review. Int J Nurs Pract. 2001;7(6):376-82.
- 9) Almeida JS, Filho GC, Pastre CM, Lamari NM, Pastre EC. Afecções do tendão supra-espal e afastamento laboral. Ciênc Saúde Coletiva [periódico na internet]. 2008 [acesso em 2013 dez 9];13:1-6. Disponível em: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S1413-81232008000200027&lng=en&nrm=iso
- 10) Lazzari MA, Reis CB. Os coletores de lixo urbano no município de Dourados (MG) e sua percepção sobre o risco biológico em seu processo de trabalho. Ciênc Saúde Coletiva [periódico na internet]. 2011[acesso em 2013 dez 9];16(8):3437-42. Disponível em: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S1413-81232011000900011&lng=en.
- 11)Morais NO, Paniago AMM, Negri AC, Oliveira OA, Cunha RV, Oliveira SMVL. Exposição ocupacional com material potencialmente contaminado entre profissionais da área de apoio. Cogitare enferm. 2009;14(4):1-7.
- 12)Oliveira JDS, Alves MSCF, Miranda FAN. Riscos ocupacionais no contexto hospitalar: desafio para a saúde do trabalhador. Rev salud pública. 2009; 11(6):909-17.
- 13)Martarello NA, Benetti MCC. Qualidade de vida e sintomas e sintomas osteomusculares em trabalhadores de higiene e limpeza hospitalar. Rev esc enferm USP. [periódico na Internet]. 2009[acesso em 2013 dez 9];43(2):422-428. Disponível em: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0080-62342009000200023&lng=en.
- 14)Osti C, Machado JM. Hepatite B: avaliação da resposta sorológica á vacina em funcionários de limpeza hospital-escola. Ciênc saúde coletiva [periódico na internet]. 2010 [acesso em 2013 dez 9];15(Suppl 1):1343-1348. Disponível em: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S1413-81232010000700043&lng=en.
- 15)Santos PR, Noronha NH, Mattos AO, Silva D. Enfermagem e atenção á saúde do trabalhador: a experiência da ação de imunização na Fiocruz/Manguinhos. Ciênc Saúde Coletiva [periódico na internet]. 2011 [acesso em 2013 dez 9];16(2):553-65. Disponível em: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S1413-81232011000200019&lng=en&nrm=iso
- 16)Martins JT, Ribeiro RP, Bobroff MCC, Marziale MHP, Robazzi CC, Mendes A C. Significado de carga no trabalho sob a ótica de operacionais de limpeza. Acta paul enferm. 2013; 26(1): 63-70.
- 17)Souza AN, Silva AP, Oliveira TL, Brasileiro ME. A atuação do enfermeiro do trabalho na prevenção dos riscos ergonômicos no ambiente hospitalar. Revista Eletrônica de Enfermagem do Centro de Estudos de Enfermagem e Nutrição. [periódico na internet] 2011; 2(2): 1-11.Disponível em: <HTTP://www.ceen.com.br/revistaeletronica>
- 18)Leitão IMA, Fernandes AL, Ramos IC. Saúde ocupacional: analisando os riscos relacionados à equipe de enfermagem numa unidade de terapia intensiva. Cienc Cuid Saude. 2008; 7(4):476-84.
- 19)Castro AB, Souza ITC, Santos AA. Atribuições do enfermeiro do trabalho na prevenção de riscos ocupacionais. J Health Sci Inst.2010; 28(1):5-7.
- 20) Pereira CA, Miranda LCS, Passos JP. O estresse ocupacional da equipe de

enfermagem em setor fechado. Rev de Pesq cuidado é fundamental Online [periódico na internet]. 2009 [acesso em 2013 dez 9]; 1(2):196-202. Disponível em:

<http://www.seer.unirio.br/index.php/cuidado%20fundamental/article/viewArticle/346>

- 21) Monteiro CM, Benatti MCC, Rodrigues RCM. Acidente do trabalho e qualidade de vida relacionado à saúde: um estudo em três hospitais. Rev Latino-Am. Enfermagem. 2009; 17(1):101-7.
- 22) Barbosa MA, Figueiredo VSL, Paes MSL. Acidente de trabalho envolvendo Enfermagem profissionais de enfermagem no ambiente hospitalar: um levantamento do banco de dados. Revista de Enfermagem Integrada – Ipatinga, Unileste (MG). 2009; 2(1):176-187.
- 23) Neves HCC, Souza ACS, Medeiros M, Munari DB, Ribeiro LCM, Tipple AFV. Segurança dos trabalhadores de enfermagem e fatores determinantes para adesão aos equipamentos de proteção individual. Rev Latino-Am. Enfermagem. 2011; 19(2): 354-361.
- 24) Miranda EJP, Stancato K. Riscos à saúde de equipe de enfermagem em unidade de terapia intensiva: proposta de abordagem integral da saúde. Rev bras ter intensive. 2008; 20(1):68-76.
- 25) Giomo DB, Freitas, FCT, Alves, LA, Robazzi MLCC. Acidentes ocupacionais e absenteísmo entre os trabalhadores de enfermagem hospitalar. Rev enferm UERJ. 2009; 17(1):24-9.
- 26) Veras NK, Alexandria FED Normas em controle de infecções hospitalares, 2008. Comissão de Controle de Infecção Hospitalar – CCIH Terezina. Fundação Municipal de Saúde [Acesso em 2013 dez 9]. Disponível em: <http://pt.scribd.com/doc/7154947/Manual-de-Rotinas-Em-CCIH> .
- 27) Brasil. Lei orgânica da saúde nº 8080/90, de 19 de setembro de 1990. Brasília: Ministério da Saúde. Disponível em: http://www.planalto.gov.br/ccivil_03/leis/l8080.htm
- 28) Silva MC, Fassa AC, Valle NGJ. Dor lombar crônica em uma população adulta no sul do Brasil: prevalência e fatores associados. Cad Saúde Pública. 2004; 20:377-85.
- 29) Ceccim RB. Educação Permanente em Saúde: desafio ambicioso e necessário. Interface Comum Saúde Educ. 2005;9(16):161-8.
- 30) Cunha AC, Mauro MYC. Educação Continuada e Norma Regulamentadora 32: utopia ou realidade na enfermagem? Rev Bras Saúde ocup. 2010; 35(122):305-13.
- 31) Merty EE, Feuerwerker LCM, Ceccim RB. Educación permanente en salud: una estrategia para intervenir en la micropolítica del trabajo en salud. Sadud Colect. 2006; 2(2):147-60.

Received: January 24, 2015; Accepted: May 26, 2015

ISSN 1695-6141

© COPYRIGHT Servicio de Publicaciones - Universidad de Murcia