131 - PREVALENCE OF MUSCULOSKELETAL DISORDERS IN NURSES

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INTRODUCTION

Nursing activities are based on a body of scientific knowledge and manual skills. However, nurses' working conditions seem chaotic, because being in this field means working too much, not being acknowledged and earning too little (SILVA; LOUREIRO; PERES, 2008).

In addition to that, nurses have been affected by musculoskeletal injuries, including back pain, caused by several interrelated factors. Surveys conducted in several countries exhibit higher prevalence of 80% incidence of work-related musculoskeletal disorders (WMSDs), and Brazilian studies show prevalence ranging from 43% to 93%, as a result from inadequate ergonomic conditions (MAGNAGO et al., 2007).

The main risk factors related for WMSDs are: work organization, environmental aspects, possible overloads of body parts caused by repetitive work, moving and transferring patients, lack of training for use of equipment, improper lifting techniques and practices, inadequate postures, frequent bending and twisting movements of the spine and physical effort (DAMASCENO et al, 2011; FONSECA; SERRANHEIRA, 2006).

Therefore, the handling of patients has been considered as the most important risk factor in the etiology of WMSDs among nurses due the wearying positions adopted during care. Thus, the association between these disorders and the nursing practices indicates that attention should be given not only the activities related to handling and transferring patients, but also to other work activities that require repetitive movements with especial attention in the procedures performed by nurses (FONSECA; SERRANHEIRA, 2006).

Based on the information about how work can bring health risks to men while adapting to new technological standards, organizational shifts, new values and management practices, and other changes; and considering the rising number of WMSDs in several areas with a growing increase among nursing professionals, we started to question: what is the prevalence of musculoskeletal disorders among nurses? To which WMSDs are they most susceptible due to their activities? What is being done to prevent them?

Therefore, the objective of this paper was to determine the prevalence of work related musculoskeletal disorders on group of nurses, as well as to identify determinant factors for WMSDs and to investigate the clinical manifestations related to the painful symptoms.

METHOD

An exploratory research with quantitative approach was performed with nurses in a public hospital located in Paraíba. The samples comprised 40 randomly chosen professionals (30% of the target population), from different sectors including emergency care, surgical services, intensive care unit and medical clinic, that agreed to participate by signing a Consent Form for Participation in a Research Study. Nurses with over three years of professional experience, who were on duty at the time when the questionnaire was applied and who agreed to participate were included in the survey. We did not include nurses who work in other hospital sectors than the ones mentioned earlier or worked in another function (i.e.: nurses working as nurse technicians).

The data collecting instrument employed was a questionnaire containing multiple-choice questions that matched the objectives of the study. It is noteworthy that the data collection, that took place in February 2013, was performed after being approved by the Ethics in Research Review Board from the Faculdades Integradas de Patos, register code number 130/2012. The results were analyzed by means of descriptive statistics.

RESULTS AND DISCUSSION

According to the data collected, most of the participants were young adults whose ages ranged from 25 to 34 years, which represents 75% (n=30) of the samples, where the youngest was 25 years old and the oldest was 50. The expressive number of young nurses is a reflex of the fact that high school students are entering the university earlier and earlier.

In addition, there was a majority of women (87,5%; n=35). This amount is coherent with the countrywide picture where there is a predominance of women in the profession. According to Lopes and Leal (2005), reporting to socioeconomic aspects, they mention the nursing career as a service originated by religious institutions. It co-exists with children, ill and elderly domestic care, associated with a motherly/female figure that has been a heeler and bearer of empiric knowledge about healthcare practices, passed on from woman to woman.

According to Leite et al. (2007), it is necessary to consider that any research upon gender, work and health, daily situations should be holistically evaluated, considering the interactions between domestic housework and regularly paying work – this last one being a key aspect in comprehending the differentiated impact in the working conditions between men and women, considering the triple work shift imposed to women.

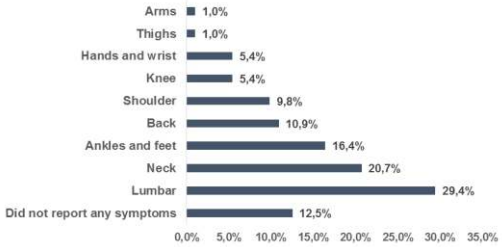
Regarding marital status, there was a prevalence of married people 52,5% (n=21). This information adds another risk factor as these married professionals have to do domestic housework which can be as weary as the effort they put on at workplace depriving them from proper rest. According to Alves and Godoy (2009), in a study conducted about absenteeism in the nursing area, they found out that, in relation to marital status, out of 143 absent workers 67,1% (n=96) were married. When approaching illness-related absenteeism to marital status, the authors affirm that married workers have a higher index of nonattendance due to domestic responsibilities.

On the subject of employment relationship, it was detected a predominance of service providers (52,5%; n=21), which are professionals without a certified working contract, which leads to wage depreciation in this group in comparison with professionals who have tenure, work overload, imposition to minimal work conditions and several other demands which may increase the incidence of WMSDs. Dissatisfaction and discontentment were also observed in almost every subject of this group (90,5%; n=19). According to Elias and Navarro (2006), the changes in the working world from the last decade up to the present have affected people's health individually and collectively. Labor intensification is a distinctive trait of capitalism's current phase. The lack of confidence caused by the fear of being unemployed make people subject themselves to unsafe contracts and

regimes, with low salaries and risking their own lives in hazardous and risky environments.

It was also learned that the longer the time working in the nursing field, the greater the musculoskeletal disorders acquired. Thus, it was noted that 9,8% (n=9) those who work in the field for over 10 years, reported suffering from symptoms like lumbago, pain in the cervical region and in the lower limbs. According to Magnago et al. (2007), the work site and the adverse physical, mechanical and psychiatric conditions is considered one of the key risk factors for development of musculoskeletal alterations, as the continuous and prolonged exposition to the risk factors in the workplace have favored the rising of occupational diseases.

Chart 1 – Main areas affected the symptoms of WMSDs



There was prevalence of painful symptoms in 87,5% (n=35) on the interviewed people. The most common ones were lumbago (29,4%; n=27), neck pain (20,7%; n=19), pain in the ankles and feet (16,4%; n=15), backache (10,9%; n=10), shoulder pain (9,8%;n=9), knee pain (5,4%; n=5), pain in the hands and wrist (5,4%; n=5), pain in the thighs (1%; n=1) and arms (1%;n=1). In a similar study, Ribeiro et al. (2012) identified prevalence of WMSDs in 83,4% of the subjects. If we consider the body parts in a separate manner, the percentages were: lumbar (53,9%), legs (51,9%), neck (36,4%), high back (35,7%) and shoulders (33,8%). Analyzing the areas as a group, it was observed that 65,6% of the individuals reported WMSDs in the lower limbs (thighs, knees, legs, ankle or feet), 57,1% reported WMSDs in the neck, shoulder or upper back, and 32,8% in upper distal extremities (elbow, forearm, wrist, hands and fingers).

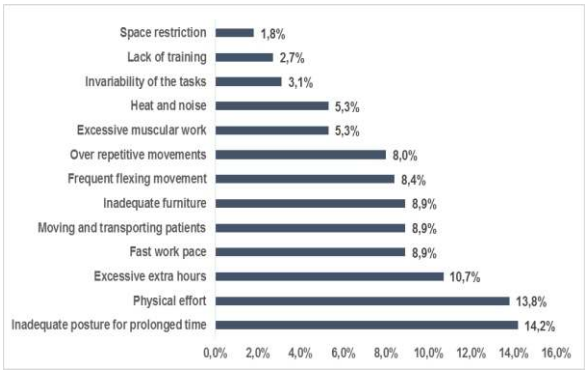
The Brazilian Ministry of Health affirms that although the spine is always pointed out as being a highly affected body part among nursing professionals, this paper shows different findings by identifying other body parts such as neck, shoulder and upper back as being the most affected area (57,1%, when compared to the 53,9% index reported to the lumbar region). This combined analysis of the neck, shoulder and upper back may be employed as they act as a single functional unity, due to the difficulty in identifying specific exposition factors and symptoms for each area separately (BRASIL, 2010).

Still, 47,5% (n=19) of the professionals affirmed they had already had some work related health problem, such as bursitis, back pain, edema on the lower limbs (LL), varicose veins, pain in the lower limbs, herniated disc, sciatic pain, insomnia, alopecia, stress, tiredness, primary tuberculosis, repetitive strain injury (RSI), torticollis, scoliosis and tendinitis. Conversely, 52,5% (n=21) reported having no work-associated disorder.

According to the data collected, it is noted that a great number of nursing professionals associate some health problems to the activities they perform. The lack of activities that promote well-being among them is observed in all sectors they work.

In addition, when questioned about knowing other professional colleges who developed WMSDs, (52,5%; n=21) declared knowing other fellow nurses who acquired some disorders including herniated disc, tendinitis, chondromalacia, sciatic pain, scoliosis and bursitis. According to Barbosa et al. (2011), the WMSDs are not caused by any given repetitive injury. The causes transcend the physical symptoms – they involve matters like organization, interpersonal difficulties and ergonomic factors.

Chart 2 – Distribution of the samples regarding the main determining factors that lead to WMSDs in nursing activities



As seen on chart 2, inadequate posture for a prolonged time was indicated by the nurses as one of the major WMSDs development factors as a result from their nursing practices, followed by physical effort and excessively long working hours. After analyzing the nurses routine, it is easy to identify several situations to which they are exposed, including the physical effort to assist patients with compromised mobility as well as the excessively long shift imposed by the sector.

According to the Brazilian Ministry of Health, the postures that may cause musculoskeletal diseases have three characteristics which can take place simultaneously: extreme postures that overstrain the reach of the joints, forearm pronation posture, the force of gravity imposing increase of load on muscles and tissues, postures that affect the musculoskeletal geometry which could cause stress the tendons, muscles and other tissues and/or decrease in tissue tolerance (BRASIL, 2012b).

Moreira and Mendes (2009) state that among the job's standard practices, 58.14% of the nurses from their study referred to the handling of invalid patients; 44,19% mentioned the handling of materials, equipment and instruments; and 41,86% mentioned the transportation of patients as activities that demanded physical effort. Also, the use of wrecked materials without any maintenance and unstandardized in their dimensions (height of the stretchers unleveled with the height of the beds, toilet chairs that are too wide for the bathroom doors) demanding greater efforts from the nursing professionals and causing them to

maintain inadequate postures, thus rendering the development of musculoskeletal dysfunctions.

Teixeira (2007) emphasizes that excessive working hours and the work itself are considered an alarming issue as they are significant cause of anxiety, psychic suffering, occupational stress, exhaustion and professional dissatisfaction – which leads to deterioration in the quality of nursing care services. It was also confirmed that the belief that critical care nurses endure greater professional stress if compared to nurses from other sectors is not real. Nurses from open sectors reported high stress level resultant from the troubled relationship with other sectors and with the department of supervision, the care measures provided to patients, the management of activities in the unit, and the unfavorable working conditions to carry out their duties.

According to Souza et al. (2012) the main WMSDs-related risk factors are the increase in the working time, excessive extra hours, fast paced work, lack of human resources, inadequate furniture, insufficient illumination, excessive strength demanded to perform some tasks, repetitive movements and inadequate postures while performing their duties.

Ergonomic factors, such as repetition of movements, maintenance of inadequate postures for a prolonged time, physical effort, organizational and psychosocial factors, and other factors – when associated with intensity, duration and frequency, may contribute to the emergence of RSI and WMSDs (BRASIL, 2012a).

CONCLUSION

From this study, it was possible to observe the high prevalence of painful symptoms among nursing professionals, with manifestation of pain in almost all body parts. Thus, the main causing factor was the inadequate posture for prolonged periods.

According to the findings, we realized that knowing the aspects that determine the appearance of WMSDs is fundamental for healthcare professionals, as only after knowing them is that preventive measure could be taken as well as understanding why they might feel pain despite having no apparent lesions. A systemic multi-professional approach to labor-related health problems may minimize or prevent the development of WMSDs. Work-related health problems on nurses exist and deserve more attention in the hospital sphere and health area as a whole. Therefore, we recommend the incorporation of preventive measures through the Hospital Occupational Health Services program into the daily routine of those professionals, by offering them readjustments in the their wages and working conditions, with modification in their functions, sectors and schedules to help them to cope better with the internal and external stimuli.

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PREVALENCE OF MUSCULOSKELETAL DISORDERS IN NURSES

ABSTRACT

Objective: to investigate the prevalence of Musculoskeletal disorders in a group of nurses. Method: an exploratory study with a quantitative approach conducted with 40 nurses (30% of the target population) who work at a public hospital in Paraíba where a survey was applied and analyzed through statistic methods. Results: there was predominance of female young adults, married, who work as service providers without tenure. The prevalence of painful symptoms reached 87,5% and the main symptoms were: were lumbago (29,4%,) neck pain (20,7%), pain in the ankles and feet (16,4%), backache (10,9%), shoulder

pain (9,8%), knee pain (5,4%), pain in the hands and wrist (5,4%), pain in the thighs and arms (2%). Inadequate posture for prolonged periods was indicated as the main factor that causes the lesions, followed by excessive physical effort and working time. Conclusion: the results attained by this paper make us review the work conditions and reconsider feasible strategies to transform the current scenario of constant cases where professionals suffer from work related disorders from their duties as nurses.

KEYWORDS : Ergonomics. Nursing professional. Musculoskeletal disorders.

PRÉVALENCE DES TROUBLES MUSCULO-SQUELETTIQUES CHEZ LES INFIRMIÈRES

RÉSUMÉ

Objectif: déterminer la prévalence de ostemusculares troubles liés à une activité dans un groupe d'infirmières. Méthode: Une étude exploratoire avec une approche quantitative, réalisée avec 40 infirmières (30% de la population cible) en service d'un hôpital public dans la Paraíba à partir d'un questionnaire, l'analyse statistique. Résultats: Il y avait une prédominance des jeunes adultes, les femmes, mariées, sans emploi efficace. La prévalence des symptômes douloureux a été de 87,5% et les principales manifestations sont: maux de dos (29,4%) des douleurs au cou (20,7%), des douleurs dans les chevilles et les pieds (16,4%), dorsale (10,9%), les épaules (9,8%), les genoux (5,4%), les mains et les poignets (5,4%), les cuisses et les bras (2%). Mauvaise posture pendant de longues périodes a été désigné comme le principal facteur de l'apparition de ces lésions, suivi par l'effort physique et la charge de travail excessive. Conclusion: Les résultats présentés dans cette étude nous invite à repenser les conditions de travail et les stratégies possibles pour transformer le scénario de tomber malade par des facteurs découlant du travail en soins infirmiers.

MOTS-CLÉS: ergonomie. Travailleur en soins infirmiers. Troubles musculo-squelettiques.

LA PREVALENCIA DE LOS TRASTORNOS MUSCULOESQUELÉTICOS EN LAS ENFERMERAS

RESUMEN

Objetivo: Determinar la prevalencia de ostemusculares trastornos relacionados con las actividades laborales en un grupo de enfermeras. Método: Un estudio exploratorio con abordaje cuantitativo, realizado con 40 enfermeras (30% de la población objetivo) de guardia de un hospital público de la Paraíba partir de un cuestionario, analizó estadísticamente. Resultados: Se observó un predominio de adultos jóvenes, mujeres, con unión marital, sin el empleo eficaz. La prevalencia de síntomas de dolor fue de 87,5% y las principales manifestaciones fueron: dolor de espalda (29,4%) el dolor de cuello (20,7%), dolor en los tobillos y los pies (16.4%), dorsal (10,9%), hombros (9,8%), las rodillas (5,4%), las manos y las muñecas (5,4%), los muslos y los brazos (2%). Postura incorrecta durante períodos prolongados se indicó como el principal factor para la aparición de estas lesiones, seguido por el esfuerzo físico y la carga de trabajo excesiva. Conclusión: Los resultados presentados en este estudio nos lleva a repensar las condiciones de trabajo y las posibles estrategias para transformar la situación de enfermar por factores derivados de trabajo en enfermería.

PALABRAS CLAVE: Ergonomía. Enfermería Trabajador. Trastornos Musculoesqueléticos.

PREVALÊNCIA DE DISTÚRBIOS OSTEOMUSCULARES EM ENFERMEIROS

RESUMO

Objetivo: verificar a prevalência de distúrbios ostemusculares relacionados às atividades laborais em um grupo de enfermeiros. Método: estudo exploratório, com abordagem quantitativa, realizado com 40 enfermeiros (30% da população-alvo) plantonistas de um hospital público da Paraíba a partir da aplicação de um questionário, analisado estatisticamente. Resultados: houve predominância de adultos jovens, do sexo feminino, casados, com vínculo empregatício não efetivo. A prevalência de sintomas dolorosos foi de 87,5% e as principais manifestações foram: lombalgia (29,4%,) dor na cervical (20,7%), dor nos tornozelos e pés (16,4%), região dorsal (10,9%), ombros (9,8%), joelhos (5,4%), mãos e punhos (5,4%), coxas e braços (2%). A postura inadequada por tempo prolongado foi indicada como principal fator para o aparecimento dessas lesões, seguido pelo esforço físico e carga horária excessiva. Conclusão: os resultados apresentados neste estudo nos direcionam para um repensar nas condições de trabalho e nas possíveis estratégias para transformar o cenário do adoecer por fatores decorrentes do trabalho na Enfermagem.

PALAVRAS - CHAVE: Ergonomia. Trabalhador de Enfermagem. Distúrbios Osteomusculares.