



ADMINISTRACIÓN – GESTIÓN - CALIDAD

Profile accidents involving nurses in the Intensive Care environment

Perfil de acidentes de trabalho envolvendo profissionais de enfermagem no ambiente da Terapia Intensiva

Perfil de accidentes de trabajo que involucran a profesionales de enfermería en el ámbito de Cuidados Intensivos

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Keywords: Occupational Risks; Accidents, Occupational; Nursing

Palavras-chave: Riscos ocupacionais; Acidentes de trabalho; Enfermagem.

Palabras clave: Riesgos Laborales; Accidentes de trabajo; Enfermería

ABSTRACT

Descriptive, transversal study with a quantitative approach, aimed at identifying sociodemographic characteristics and profile of work accidents among 45 nurses of ICU. The data revealed a predominance of females (80%) in the age range 29-39 years (51.1%), average 34.6 years (± 8.1), 64.4% of workers were married, 66.7% were nursing technicians and exercised its functions in night shift (48.9%). The profile of the accidents showed that the injured body part with the fingers were more frequently (35.6%), the recapping of the needle trigger (48.8%). It is concluded that nurses were exposed to occupational hazards, and the profile of accidents related to handling perforating and cutting materials. These findings reinforce the need and offer subsidies for training programs for nursing staff to be deployed.

RESUMO

Estudo descritivo, transversal com abordagem quantitativa, que teve por objetivo identificar as características sociodemográficas e o perfil dos acidentes de trabalho entre os 45 profissionais de enfermagem de uma Unidade de Terapia Intensiva. Os dados revelaram predominância do sexo feminino (80%), compreendidos na faixa etária de 29 a 39 anos (51,1%), média de 34,6 anos ($\pm 8,1$), 64,4% dos trabalhadores eram casados, 66,7% eram técnicos de enfermagem e exerciam as suas funções em turno noturno (48,9%). O perfil dos acidentes revelou que a região corporal lesionada com

mais frequência foram os dedos (35,6%), sendo o reencape de agulhas o fator desencadeante (48,8%). Conclui-se que os profissionais de enfermagem estavam expostos a riscos ocupacionais, sendo o perfil dos acidentes relacionados a manipulação de materiais perfurantes e cortantes. Esses achados reforçam a necessidade e oferecem subsídios para que sejam implementados programas de capacitação voltados à equipe de enfermagem.

RESUMEN

Estudio descriptivo, transversal, con abordaje cuantitativo, cuyo objetivo era identificar las características sociodemográficas y el perfil de los accidentes de trabajo entre los 45 enfermeros de una Unidad de Cuidados Intensivos. Los datos revelaron un predominio del sexo femenino (80%) en el rango de edad de 29-39 años (51,1%), promedio 34,6 años (\pm 8,1), el 64,4% de los trabajadores estaban casados, 66.7% eran técnicos de enfermería y ejercían sus funciones en el turno de noche (48,9%). El perfil de los accidentes mostró que la parte lesionada del cuerpo con mayor frecuencia eran los dedos (35,6%), siendo el encapuchado de la aguja el factor desencadenante (48,8%). Se concluye que los enfermeros estuvieron expuestos a riesgos laborales, siendo el perfil de los accidentes relacionados con el manejo de materiales perforantes y cortantes. Estos resultados refuerzan la necesidad y ofrecen subvenciones para que se implanten programas de formación dirigidos al personal de enfermería

INTRODUCTION

During patient care, the nursing staff is exposed to several occupational risks caused by chemical, physical, mechanical, biological, ergonomic and psychosocial factors that can cause occupational diseases and occupational accidents. The number of nursing workers, particularly those working in hospitals, stays with the patient 24 hours. Thus, it is up to these professionals to perform “care” from the perspective of “doing”, which exposes them to several risks such as accidents, injuries and even diseases due to work.⁽¹⁾

Based on the disease promotion and prevention of population health, many institutions adopt standard precautions as protection measures for workers, however, exposure and infection continue to occur very often.⁽²⁾ This reinforces the need for reflections on the cause of accidents so that the protection measures are used properly and minimize accidents, since the use of protective barriers is still often neglected.⁽²⁻³⁾

In Brazil, the law on prevention of occupational accidents was regulated by Decree Number 3214 of 08 June 1978 approving the Regulatory Norms (RN) and Ordinance Number 25 of 15 October 2001 changing RN dealing with Personal Protective Equipment (PPE), named RN6. It is noteworthy that PPE are all devices or products for individual use by the worker, in order to protect and minimize susceptible risks, contributing to the safety and health at work.⁽³⁾

Although considerable progress has been observed on the understanding of occupational risk and the Human Immunodeficiency Virus (HIV), health workers, and especially nursing staff have resisted the use of personal protective equipment, underestimating the risk to infect and notification of occupational accidents.⁽⁴⁾

As a result, health care workers are often exposed to biological risks related to contact with microorganisms. Among the most exposure infections, there are the ones transmitted by blood and body fluids (hepatitis B, hepatitis C and HIV), and the transmitted by the air, such as: Tuberculosis, varicella-zoster virus and measles.⁽⁵⁾

The result of occupational exposure to pathogens transmitted by blood is not only related to infection. Every year thousands of health workers are affected by

psychological trauma that persists during the months of waiting for the results of serological tests. Among other consequences, there is the impact on sexual life and health, due to the side effects of prophylactic drugs and the risk of losing their job.⁽⁶⁾ Accidents caused by the puncture of needles were 80% to 90% of transmissions of infectious diseases among health care workers. Since the chance of transmission of infection via contaminated needle, from one to three for Hepatitis B, one in thirty for Hepatitis C and one to three hundred for HIV.⁽⁷⁾

Thus, it is appropriate to carry out this study for the need to know the profile of work accidents among nursing professionals in the intensive care unit. It is expected that the results of this study may encourage the adoption of preventive measures and support the implementation of those existing in the unit.

The profession of nursing has frequent occurrence of accidents related to several factors, such as fatigue due to excessive workload; night hours; unsanitary conditions; stress; overloads; and the lack of knowledge about the subject, which provides the risks of the profession. It is believed that the nursing workers should be concerned with the implementation of practices that provide safe conditions for the performance of their work activities, we suggested to perform this research, which the results will contribute to dissemination of knowledge produced on that issue.⁽⁸⁾

Based on the need to know the nurses and factors related to accidents in the workplace, the question is: What is the characteristic of nursing professionals and accidents related to labor activity in the ICU of a university hospital in the northeastern of Brazil?

The objective is to identify the socio-demographic characteristics and the profile of occupational accidents among nursing professionals in the ICU.

METHOD

It is a descriptive, cross-sectional study with a quantitative approach. The research was conducted in the intensive care unit of a university hospital in the northeastern of Brazil. The population consisted of 50 nursing professionals at the Intensive Care Unit and the sample of those who met the following inclusion criteria: nursing professionals of both genders distributed in the ICU scale in the morning, afternoon and night shifts, in the period of data collection. The 02 admitted one month before the study period and 03 who were absent due to vacation, leave and absence was excluded.

The instrument that supported the data collection was composed of twenty-one questions with two parts. The first part was related to socio-demographic characterization data and the second was related to the occurrence of accidents during work activities.

Data were collected from March to July 2013, by researchers during service hours in a private room after the project was approved by the Ethics Committee of the University Hospital Research Onofre Lopes of the Federal University of Rio Grande do Norte (UFRN), under number 519/11, CAAE: 0003.0.294.000.11, thus honoring the ethical and legal principles governing scientific research in human beings recommended in the National Health Council Resolution 466/12.⁽⁹⁾

Data were recorded in Microsoft Excel spreadsheets XP program, and analyzed using descriptive statistics. The presentation in absolute numbers and percentages are given in tables and discussed based on the literature.

RESULTS

The study included 45 nursing professionals, including nurses, technicians and assistants in nursing. Regardless of the professional category of respondents, socio-demographic variables and the related directly to work were investigated as the most injured body region and trigger from the accident.

At this moment, social aspects were listed such as gender, age, marital status, and professional category, arranged on the table -I, below:

Table I - Distribution of professionals, according to age, gender, marital status, professional category and work shift - Natal / RN, 2013. (n=45)

Variables	Categories	n	%
Age	18 – 28	06	13,3
	29 – 39	23	51,1
	> 40	16	35,6
Gender	Male	09	20,0
	Female	36	80,0
Marital Status	Single	09	20,0
	Married	29	64,4
	Separated	01	2,3
Category	Divorced	06	13,3
	Nursing Assistant	08	17,8
	Nursing technician	30	66,7
Shift	Nurse	07	15,5
	Morning	13	28,9
	Afternoon	10	22,2
	Night	22	48,9

Source: Direct Research, Natal, Rio Grande do Norte, 2013.

Among the ICU team of nursing professionals was observed that the most common age group was between 29 and 39 years old (51.1%), ranged from 18 to 50, with an average of 34.6 years old (\pm 8.1). In gender, 80.0% were female and 20% male; 64.4% of workers were married and 20.0% single.

Regarding the category, the professionals who performed the nursing technical function were 30 (66.7%), followed by assistant nurses (17.8%) and nurses (15.5%). With regard to working hours, most exercised their functions in the night shift (48.9%). There were 45 respondents, in which 27 (60.0%) said they had suffered some kind of accident related to professional activity, while 18 (40.0%) did not. There was the intersection of occurrence of accident with the work shift and the results revealed that the majority of accidents (24.4%) occurred in the night shift, followed by 22.2% in the morning. In Table II, occupational accident victims were arranged in the area of the body part affected.

Table II - Distribution of nurses' victims of accident, according to injured body region - Natal / RN, 2013. (n=45)

Body region of injury	N	%
Eyes	03	6,6
Hands	06	13,4
Fingers	16	35,6
Feet	02	4,4
Did not suffered any accident	18	40,0

Source: Direct Research, Natal, Rio Grande do Norte, 2013.

Among the workers of ICU who suffered accident, the body region with the highest occurrence of accidents were the fingers (35.6%), followed by hands (13.4%), eyes (6.6%) and finally the feet (4.4%). Based on these findings, it was sought to identify the factors that led to the occurrence of the accident at work, as provided in the table - III, as follows:

Table III - Distribution of factor triggering the accident of the studied population at ICU of HUOL - Natal/RN, 2013. (n=45)

Factor triggering the accident	N	%
Mobilization of patients	1	2,2
Recapping needles	9	20,0
Inappropriate use of sharps	3	6,7
Handling of dirty material	5	11,1
Failure to perform universal precautions	2	4,5
Slippery/bad condition floor	1	2,2
Handling of biological product	1	2,2
Other	5	11,1
None	18	40,0

Source: Direct Research, Natal, Rio Grande do Norte, 2013.

It was found that the practice of recapping the needle (20.0%) was the triggering factor of most accidents when compared to others. The second factor more informed by respondents was handling dirty material (11.1%), and the third was the improper use of sharps (6.7%).

DISCUSSION

The results founds in the characterization of the sample, with regard to gender, age, marital status and professional category, are close to Cardoso and Figueiredo findings⁽¹⁰⁾. It is known that most of the nursing staff were nursing technicians and being a profession practiced mostly by women.

Gallas and Fontana⁽¹¹⁾ reinforce that technicians are the most numerous category among nurses and their activities are largely related to direct patient care. Therefore, they are more exposed to accidents, especially during the administration of injectable medications, due to its invasive nature.

The authors⁽¹²⁾ state that the most affected body region in the occurrence of these accidents are the fingers due to the manipulation of needles for puncture, medication

preparation and realization of recapping. In this context, the needles are the main cause of sharps injuries, followed by sharp materials such as blades and glass.

This aspect becomes relevant because most of the activities of nursing staff are focused on the administration of medicines and serum therapy because they are activities that involve constant manipulation of needles and scalpels. Therefore, these activities should be developed with as much attention since any negligence can lead to an occupational accident.⁽¹²⁻¹³⁾

A study by Valim and Marziale⁽¹³⁾ with health professionals, found that among the potential factors for the occurrence of sharps injury related to working conditions, insalubrity and danger were highlighted, that is, resulting from disposal of the material in overcrowded or unsuitable locations such as bags for regular trash, bed and patient bedside table, drapes and pans, wet floor in corridors, poor quality of materials and inputs, and lack of materials and safety equipment.

Another very important aspect is the behavior of the staff to repetitive tasks, frequent handling of needles, often unprotected, the recapping of needles, disconnecting the syringe needle, the duty to rush, stress, tension, and fatigue by overwork, often exacerbated by the job duplicity. Added to these aspects there is the disregard of standard precautions, ignorance of the risks of infection and the very cultural aspect of each professional.⁽¹⁴⁾

Despite the nursing staff is more involved in sharps injuries, it is known that preventive measures should be extended to all workers in the health area. The awareness of these professionals and especially the nursing staff, as to the need to dispose of sharps in appropriate location can directly influence the reduction of this type of accident.⁽¹⁴⁻¹⁵⁾

In this way, accidents can be avoided or minimized with the culture of prevention and use of standard precautions or work biosecurity, which includes working with attention, concentration and care. However, it is necessary to constantly assess adherence of staff to such measures in order to achieve improvement and standardization of actions.⁽¹⁵⁾

However, among the strategies to achieve improvement and standardization of actions, it is necessary investment in continuing education of these professionals, besides planning strategies for occupational health, with a focus on risk reduction and prevention of occupational accidents, such as supply and encouraging to use PPE, the importance of immediate accident notification and serological monitoring.⁽¹⁶⁾

With this understanding, it is noteworthy that the health institution is responsible for the applicability of biosecurity activities performed by nursing staff. Since these activities involve exposure to different occupational risks, especially for organic risks, the occurrence of these accidents represents damages to workers and institutions.⁽¹⁷⁾

FINAL CONSIDERATIONS

The professionals surveyed were mostly nursing technicians, female, married, aged between 29 and 39 years old. From them, 27 had suffered accidents related to work activity. As for the affected body region, the fingers were the most commonly mentioned by professionals, motivated by the practice of needle recapping, outlining

then, the labor nursing accidents profile within the intensive care unit in a teaching hospital.

The data obtained in this study reveal important aspects to the risks the nursing staff are exposed in handling sharps materials. Thus, offering subsidies for educational activities are planned for the nursing staff, to promote awareness of this issue and result in the reduction of occupational accidents.

In this way, it is important that into the higher risk sectors, such as intensive care units, a strong vigilance and compliance with biosafety standards, as well as the incentive for nurses to participate in educational activities, periodic health assessments and activities that contribute to reducing stress, resulting in job satisfaction and better quality of life.

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Received: July 8, 2014; Aceptado 18 of August 2014

ISSN 1695-6141

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