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Sociodemographic profile of notification of occupational accidents with biological material

Perfil sociodemográfico de notificación de accidentes laborales con material biológico

Perfil sociodemográfico de notificação de acidentes de trabalho com material biológico

ABSTRACT

Objective: To describe the sociodemographic profile of those injured with biological material in the municipality of Araruama. Methods: This is a documentary research, of a descriptive nature and quantitative approach. The Municipal Worker's Health Program is delimited as the study scenario, a sector that receives all notifications of accidents with biological material, and is then launched in the Information System for Notifiable Diseases and investigated. Results: It was found that there were 319 notifications in the time period, most of them (76%) accidents occurred with women, with nursing being the group most affected, specifically nursing technicians. By self declaration it was determined that most of the injured were white. Conclusion: There is still a long way to go in relation to safety in the workplace and care for the injured, where the unique value of life and the protection of workers' rights must be emphasized, emphasizing nursing, due to its importance and quantity in health units.

DESCRIPTORS: Nursing; Notification of Accidents at Work; Occupational Exposure; Risk by Biological Agents; Health Information Systems.

RESUMEN

Objetivo: Describir el perfil sociodemográfico de los heridos con material biológico en el municipio de Araruama. Métodos: Se trata de una investigación documental, de carácter descriptivo y enfoque cuantitativo. Se delimita como escenario de estudio el Programa de Salud del Trabajador Municipal, sector que recibe todas las notificaciones de accidentes con material biológico, y luego se lanza en el Sistema de Información de Enfermedades Notificables e investiga. Resultados: Se encontró que hubo 319 notificaciones en el período de tiempo, la mayoría de ellos (76%) accidentes ocurrieron con mujeres, siendo la enfermería el grupo más afectado, específicamente los técnicos de enfermería. Por autodeclaración se determinó que la mayoría de los heridos eran blancos. Conclusión: Aún queda un largo camino por recorrer en materia de seguridad en los ambientes laborales y atención al lesionado, donde se debe enfatizar el valor único de la vida y la protección de los derechos de los trabajadores, destacando la enfermería, por su importancia y cantidad en Unidades de salud.

DESCRIPTORES: Enfermería; Notificación de accidentes laborales; Exposición ocupacional; Riesgo por agentes biológicos; Sistemas de información sanitaria.

RESUMO

Objetivo: Descrever o perfil sociodemográfico dos acidentados com material biológico no município de Araruama. Métodos: Trata-se de uma pesquisa documental, de cunho descritivo e abordagem quantitativa. Delimita-se como cenário do estudo o Programa de Saúde do Trabalhador Municipal, setor que recebe todas as notificações de acidente com material biológico, sendo então lançadas no Sistema de Informação de Agravos de Notificação e investigadas. Resultados: Constatou-se que houve no período do corte temporal 319 notificações, em sua maioria (76%) os acidentes ocorreram com mulheres, sendo a enfermagem o grupo mais acometido, especificamente os técnicos de enfermagem. Por auto declaração determinou-se que a maior parte dos acidentados era da raça branca. Considerações Finais: Um longo caminho ainda deve ser trilhado em relação à segurança nos ambientes de trabalho e atendimento dos acidentados, onde deve-se ressaltar o valor único da vida e resguardar os direitos dos trabalhadores, enfatizando a enfermagem, por sua importância e quantitativo nas unidades de saúde.

DESCRITORES: Enfermagem; Notificação de Acidentes de Trabalho; Exposição Ocupacional; Risco por Agentes Biológicos; Sistemas de Informação em Saúde.

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INTRODUCTION

The work shows itself as a form of self-affirmation of the subject, inserting him in a social context, a means of providing his support and obtaining personal fulfillment. The way man and work interact has undergone profound changes. Globalization and new technologies have contributed to this multifaceted form, presented by professionals, in the constant search for improvement and to meet market needs. [1] Such technologies facilitate the worker's life, however, they attribute to him an overlap in his usual assignments, when having to adapt himself to adapt them to his work process.

Work is a fundamental aspect of human life. From the point of view of individuals, work conditions a way of life; people's profession defines them and is an intrinsic part of their personality. In relation to relationships, the work performed places people in a social hierarchy of values and predetermines a whole series of expectations. Furthermore, work and remuneration are full of conscious and unconscious meanings. [2]

In the work of healthcare professionals and nurses, meanings are intertwined with constant exposure to viruses, bacteria and risks arising from the performance of their work functions.

With regard to worker health, this area of public health had its nomenclature recognized in Brazil after the Health Reform, with the changes that occurred in the 1980s and 1990s. The promulgation of the 1988 Federal Constitution and the Organic Health Law consider that health is no longer intended for specific labor classes and has become a "fundamental right". It was later consolidated as a health policy and in a specific area of the Ministry of Health. [3]

The present study addresses more specifically the notification of accidents at work with exposure to biological material; taking into account that nursing is configured as a numerical working group in hospital institutions.

Currently, efforts to keep the nursing worker healthy are essential, based on the peculiarity of the work and the risks that it is exposed in its work activity. Studies show the importance of developing and implementing preventive measures for the hospital work environment, considered as a place where this social actor is exposed to viruses, bacteria and other micro-organisms in the performance of their work activities, thus configuring the possibility of biological exposure that the worker presents. [4]

According to estimates by other international bodies, 3 million sharps exhibitions with biological material take place annually, among 35 million professionals around the world. [4,5]

The subject who exercises work in the health context needs to have safeguarded his right to adequate and safe working conditions, minimizing the risks of occupational exposure to biological agents and valuing the duties of health institutions in this relationship, a fact that is provided for in Regulatory Standard No. 32. [5]

The relevance of this study is based on the right that the nursing worker has to exercise his work with healthy measures of protection and minimization of risks, having knowledge of the possibilities and diseases that can be affected in his work process. Given this aspect, the guiding question of the research is delimited: What is the sociodemographic profile of accidents with biological material in the municipality of Araruama?

Given the above, the objective was to describe the sociodemographic profile of those injured with biological material in the municipality of Araruama.

METHODS

This is a descriptive study, with a quantitative approach, from documentary research. The quantitative approach obtains descriptive data through a statistical method. This analysis is more objective and more accurate, based on the frequency of appearance of certain elements in the message. [6]

The study scenario is the Municipal Worker Health Program of Araruama, a sector that receives all notifications of accidents with biological material, where they will then be launched at SINAN and investigated. Physically, it is located in the Collective Health Center, a municipal office that is responsible for coordinating public health programs, where environmental, sanitary and epidemiological surveillance is located. All programs supply their data in the respective information systems, in the case of the Occupational Health Program, all notifications of work accidents, work-related illnesses and intoxications are launched at SINAN, together with some other compulsory notification problems.

In the study, the sample contemplated that all records of accidents by biological material from the period from January 1st, 2010 to September 1st, 2015, were analyzed, which totaled 333 forms of notification of accidents with biological material.

319 notification forms were considered for analysis after applying the exclusion criterion. The justification for the analysis of all the forms of this time cut was due to the fact that nursing is constantly exposed to risks in the development of their work, adding to the professional's exposure to various environmental stressors, of biological, physical, chemical nature or linked to work organization. [7]

The inclusion criteria for the documents were: to be notified of the work injury with biological material, to be within the time limit, to be from units in the municipality of Araruama. Exclusion criteria were notifications without filling in the Occupation item.

Data collection took place through a survey of secondary data on accidents involving biological materials, carried out in the files existing in the collective health sector, where all the notification forms of notifiable diseases are kept. Subsequently, a search was performed in the SINAN system, with the number of each notification in the files, to check if they were properly posted in the system. With regard to the instrument used for data collection, it is a compulsory notification form, with the International Diseases Code number Z20.9, which are found in all health units that are supported by NR 32.

The collected data were analyzed using descriptive statistics that allows the researcher to summarize and describe quantitative data, with the distributions by frequency ordered through the value obtained in the data collection.

This study is an excerpt from the research "Software development for monitoring the health of nursing workers in the municipality of Araruama", approved by the Research Ethics Committee of the Faculty of Medicine of Universidade Federal Fluminense (CEP/FM/UFF) under the opinion No. 911.973, with approval number 35037914.3.0000.5243.

RESULTS

319 work accident notification forms with exposure to biological material from 2010 to 2015 were analyzed. During the years 2011, 2012 and 2014 the average of accidents corresponded to approximately 22%, 22% and 20% respectively, presenting the higher frequency spikes.

The data collected in the notifications and in the National System of Notifiable Diseases, related to the municipality of Araruama, expose the number of accidents that were reported, however, it is not possible, however, to specify the amount of underreporting. It is observed that the month of November 2011 has a peak of 18 notifications, followed by October 2014 with 13 cases. There was no constancy in relation to the same months in different years, which characterizes a peak in notifications. There were isolated months with a significant increase and decrease in other periods of the year. Such a quantity would certainly be of greater significance, were it not for underreporting.

Regarding the distribution of sex in cases of notification, as shown in Table 1, the high rate of accidents in the female population is shown. What can show that the largest health workforce in this locality is women, or even more, women are more concerned with carrying out tests and notifications when they are affected by an accident during their work process.

The average number of women affected by accidents involving biological material in which there was notification varies between 62% and 80%, with an average of 74% of female social actors who suffered biological accidents every year.

Regarding the frequency distribution by age of the injured professional, there was a predominance in the age group of 40 to 50 years old (35%), followed by the range between 18 and 38 years old, with a frequency of 28%. The age between 29 and 39 years was responsible for 25% of the notifications, followed by people over 51 years with 12%.

According to the occupation, there is a great significance and relevance in the number of nursing technicians who suffered an accident due to biological material, emerging as the occupation that most suffered such occupational injury with an n = 175 (54,86%). The nurses presented 19 cases and a notification from the work nurse. Nursing as the largest workforce in hospitals and health institutions, whose essence in their profession is to provide direct care to the client, sometimes becomes more susceptible to some types of exposure. Nursing assistants presented an n=03, clinical doctors and their notifications express an n=20, with 6,3% of representativeness, compared to surgeons and coroners, with an n of one notification each.

DISCUSSION

The work accident with biological material is characterized as the contact of viruses, bacteria and pathogens through blood and contaminated secretions through labor activity, it is also emphasized that they are linked to the transmission of viral pathogens such as Hepatitis B, C and HIV. [8]

Table 1. Distribution of the frequency of notifications according to sex.

Ano da Notificação	Masculino		Feminino		Total	%
	N	%	N	%		
2010	8	20	33	80	41	100
2011	15	21	55	79	70	100
2012	19	27	52	73	71	100
2013	12	23	40	77	52	100
2014	21	33	43	67	64	100
2015	8	38	13	62	21	100
Total	83	26	236	74	319	100

Source: prepared by the author.

Table 2. Distribution of attendance by situation in the labor market according to occupation.

INVESTIGAÇÃO DE ACIDENTE COM MATERIAL BIOLÓGICO
Frequência por Situação no Mercado de Trabalho segundo a Ocupação

Ocupação	A	B	C	D	E	F	G	H	I	J	K	Total	%
Mecânico de manutenção de automóveis	1	0	0	0	0	0	0	0	0	0	0	1	0,31
Auxiliar geral de conservação de vias	0	1	0	0	0	0	0	0	0	0	0	1	0,31
Estudante	4	1	0	1	0	0	0	2	0	0	8	16	5,01
Dona de casa	1	0	0	0	0	0	0	0	0	0	0	1	0,31
Soldado da polícia militar/guarda civil	0	0	0	0	1	0	0	0	1	0	0	2	0,62
Biólogo	0	0	1	0	0	0	0	0	0	0	0	1	0,31
Médico cirurgião geral	0	1	0	0	0	0	0	0	0	0	0	1	0,31
Médico clínico	3	5	0	0	0	2	0	3	0	0	7	20	6,3
Médico legista	0	0	0	0	1	0	0	0	0	0	0	1	0,31
Cirurgião dentista-clínico geral	1	0	1	1	0	0	0	2	0	1	0	6	1,88
Enfermeiro	5	3	1	0	3	0	0	6	0	0	1	19	5,96
Enfermeiro do trabalho	0	0	0	0	0	1	0	0	0	0	0	1	0,31
Fisioterapeuta	1	1	0	0	0	1	0	4	0	0	0	7	2,2
Psicólogo hospitalar	0	0	0	0	0	0	0	2	0	0	0	2	0,62
Técnico de enfermagem	18	28	4	1	12	17	1	46	35	1	12	175	54,86
Auxiliar de enfermagem	0	0	0	0	2	1	0	0	0	0	0	3	0,94
Técnico em higiene dental/aux. Prótese dentária	0	3	0	0	0	0	0	1	0	0	1	5	1,56
Técnico em radiologia e imagenologia	0	1	0	0	0	0	0	0	0	0	0	1	0,31
Técnico em laboratório de farmácia	1	0	0	0	0	0	0	0	0	0	0	1	0,31
Auxiliar de pessoal	0	2	0	0	0	1	0	2	1	0	0	6	1,88
Empregado doméstico nos serviços gerais	0	1	0	1	0	0	0	0	0	0	0	2	0,62
Coletor de lixo	1	22	2	0	0	0	0	0	1	0	1	27	8,48
Faxineiro	1	6	0	0	0	1	0	2	0	0	2	12	3,79
Gari	0	2	0	0	0	0	0	0	0	0	0	2	0,62
Auxiliar de laboratório de análises clínicas	1	1	0	0	0	0	0	0	1	0	0	3	0,94
Atendente de farmácia-balconista	0	1	0	0	0	0	0	0	0	0	0	1	0,31
Abatedor	2	0	0	0	0	0	0	0	0	0	0	2	0,62
Total	40	79	10	4	19	24	1	71	38	1	32	319	100

Source: prepared by the author.
Caption: A- Unknow/ Blank; B- Registered employee; C- Unregistered employee; D- Self-employed; E- Statutory public servant; F- Public employee; G- Unemployed; H- Temporary worker; I- Cooperative; J- Single Worker; K- Others.

Regarding the distribution of accidents by sex, the results found corroborate the fact that the greatest number of accidents affects female workers. [9-11] It is also noteworthy that, as in the other studies that support the research, the number of female victims of accidents exceeded 70%, which can be explained in the formative history of each profession. [12]

In the result referring to age, there is a prevalence of accident victims of 40-50 years. This number differs from research that showed prevalence in the 30-40 age group, [9] and 20-30 years old. [13-15]

The level of education showed a 47% index of forms where this item was not filled, which triggers a significant alert for the quality of filling out the notification forms. According to a survey, the group that most presented biological accidents were those of medium level. [11,13,16]

The occupations and situation in the job market exposed show a large number of injured nursing technicians and, sequentially, garbage collectors. The incidence of biological accidents with nursing technicians reached 26% in 2010. According to resear-

ches,[16] issues such as the disposal of sharps and work overload are reasons that justify these numbers. [10]

The work of nursing and health professionals requires good communication, as in this space human resources interact, acting with material resources, in a physical space that is not always appropriate, which must be managed in an appropriate manner aiming at the well-being of patients and workers. [17,18]

Some factors and work situations, in the hospital environment, predispose or accentuate the possibilities of accidents and illnesses to workers due to exposure to biological risk. In emergency units, for example, where there is greater exposure to risks, occupational exposure can increase by up to 85%. In addition, the insufficient number of workers, the overload and stressful working hours, the continuity of assistance expressed by night shifts and shifts, the physical and emotional stress, the lack of professional training and the local culture are very important factors to consider. [19]

CONCLUSION

We sought to know the profile of the injured workers, in order to have a reliable panorama for implementing strategies to improve the quality of life of the worker and safeguard the individual as a whole, avoiding or minimizing the damage of a possible health-disease process resulting from work activities.

As expected, the nursing team was the most affected by accidents with biological materials and, in most cases, women, bringing up the history of the profession. It is emphasized the existence of work overload for nursing, with the lack of time to carry out notification being one of the causes for underreporting of cases, consisting of a limitation of this study. ■

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