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Federal University of Rio de Janeiro State



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## RESEARCH

### Acidentes de trabalho no campo da prática dos acadêmicos de enfermagem

Accidents at work in the field practice of nursing students

Accidentes de trabajo en el campo de la práctica de los estudiantes de enfermeira

Suelen Veras Gomes <sup>1</sup>, Clarice Maria de Araujo Rodrigues <sup>2</sup>, Érika Almeida Alves Pereira <sup>3</sup>, Priscila de Castro Handem <sup>4</sup>, Joanir Pereira Passos <sup>5</sup>

**Objective:** To describe the conditions of risk for work-related accident in the view of nursing students and discuss the implications of the accident at work for the health of students. **Method:** Descriptive study with qualitative approach was carried out with nursing students from a federal university in the city of Rio de Janeiro. **Results:** The students believe that the occurrence of occupational accidents is related mainly to the risks in the environment for the practical teaching activities, possibly indicating their physical and mental health. **Conclusion:** The biological risk by cut and puncture wounds stood out for the occurrence of accidents at work. Although all students use personal protective equipment, there was the occurrence of accidents at work during the practical training. **Descriptors:** Accidents occupational, Nursing students, occupational health.

### RESUMO

**Objetivo:** Descrever as condições de risco para acidente de trabalho na visão dos acadêmicos de enfermagem e discutir as implicações do acidente de trabalho para a saúde dos estudantes. **Método:** Estudo descritivo com abordagem qualitativa, realizado com acadêmicos de enfermagem de uma universidade federal da cidade do Rio de Janeiro. **Resultados:** Os estudantes acreditam que a ocorrência de acidentes de trabalho está relacionada principalmente aos riscos no ambiente durante as atividades de ensino prático, podendo refletir na sua saúde física e mental. **Conclusão:** O risco biológico por perfuro cortante teve destaque para ocorrência de acidente de trabalho. Apesar de todos os estudantes utilizarem equipamento de proteção individual, houve a ocorrência de acidente de trabalho durante o ensino prático. **Descritores:** Acidentes de trabalho, Estudantes de enfermagem, Saúde do trabalhador.

### RESUMEN

**Objetivo:** Describir las condiciones de riesgo de accidente de trabajo en opinión de los estudiantes de enfermería y discutir las implicaciones del accidente de trabajo por la salud de los estudiantes. **Método:** Estudio descriptivo con enfoque cualitativo, realizado con estudiantes de enfermería de una universidad federal en la ciudad de Río de Janeiro. **Resultados:** Los estudiantes creen que la ocurrencia de accidentes de trabajo se relaciona principalmente con los riesgos en el ambiente por las actividades de enseñanza práctica, posiblemente indicando su salud física y mental. **Conclusión:** El riesgo biológico para el pinchazo se destacó por la ocurrencia de accidentes de trabajo. Aunque todos los estudiantes usan equipo de protección personal, hubo la ocurrencia de accidentes de trabajo durante la formación práctica. **Descritores:** Accidentes de trabajo, Estudiantes de enfermeira, Salud laboral.

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## INTRODUCTION

**T**he work is a psychosocial phenomenon essential to human existence, especially in social organizations. Through physical and psychic effort, relationships are mediated with the people there is coexistence. Therefore, the work is characterized as a central category of human life associated with that, in turn, has gone through intense and progressive transformations since the end of the Decade of 1950. <sup>1</sup>

Such changes occur in light of geopolitical changes, social, economic, cultural and psychological, expressed in the intensification of globalization, creating fierce technologies, restructuring of work organization and new organizational architectures. <sup>1</sup>

Worldwide, the health workers belong to a professional group numerous and diverse. Currently, the health system has shown interest in the health of the worker from themes relating to workloads, obligations and risks to which workers are exposed. The humanization of work appears as great interest to obtain a good attention to customers, object of your responsibility, but for this it is necessary to pay special attention to their own health, which needs to be valued. <sup>2</sup>

Highlights that the occupational risks within the area of health and health protection rights of these workers were disregarded until the implementation of NR32, twenty-seven years after the first Regulatory Standard has been established by ministerial order No. 3,214, June 8, 1978. <sup>3</sup>

The adoption of strategies which allow a permanent education through training programs, lectures, courses and personal development, in addition to deployment of measures to develop adequate protection in the workplace are essential to prevent the occurrence of accidents at work. <sup>4</sup>

Accident at work is a sudden event occurred in the exercise of labor activity, regardless of the employment and social security situation of the injured worker, and that causes harm to health, potential or immediate, causing personal injury or functional disturbance that causes directly or indirectly (with cause) death, or loss or reduction, permanent or temporary, of the capacity for work. Includes also the accident in any situation in which the worker is representing the interests of the company or acting in defense of their heritage; as well as that occurred in the course of residency to work or vice versa. <sup>5:11</sup>

About of 2.34 million people die each year because of accidents and work-related diseases. According to the report of the Ministry of Social Welfare, 700 000 cases of occupational accidents are recorded on average in Brazil every year, not counting the cases not notified officially. One of the main causes for this data is non-compliance with basic standards of protection for workers and the poor conditions in the environment and work processes. <sup>6</sup>

In this sense, it is worth mentioning that the occurrence of accidents also happens as a result of exposure to occupational hazard in industrial activities performed by health professionals. These risks are multifactorial form, covering all health workers, including those of nursing, exposed to chemical, physical, biological hazards, ergonomic and accidents.<sup>3</sup>

By identifying these risks, the workers develop a critical thinking and preventive activities, encouraging on so the prevention of accidents at work. The assessment of occupational hazards must be a dynamic, continuous action and accompanying changes in the conditions under which the work is performed.<sup>3</sup>

In the formation of future nurses, students of undergraduate perform practical activity in health institutions if exposing the same risks of accidents that nursing workers. Thus in the teaching-learning process, these students act with a view to acquiring skills imperative to the care of clients, performing actions with sharp and piercing, body fluids, which commonly the expose the risks of accidents with biological materials.<sup>7</sup>

Absence of experience and anxiety by the episode learning, monitoring and constant assessment may contribute to the occurrence of accidents. Particular attention should be paid to the training of nursing professionals in relation to the subject of prevention of accidents, in order to in the future they can act so safe and compatible with the promotion of health and of the customers under your care.<sup>7</sup>

Before the above, interest in the subject stems from the existence of several risks to the rise of accidents at work in the fields of practical teaching, which may affect the health and physical integrity of the students. This study will contribute to the training of nursing students by promoting discussions on the worker's health and emphasizing preventive measures adopted by students in health institutions.

Thus this study aimed to describe the conditions of risk for workplace accident in the view of scholars of nursing and discuss the implications of the accident at work for the health of nursing scholars.

## METHOD

We opted for a descriptive research with qualitative approach. Study on a public University located in the city of Rio de Janeiro with participation of 63 scholars from nursing. For the selection of participants was established as inclusion criteria be regularly enrolled student of the nursing degree course and studying or attending, disciplines with practical education mode. And, the exclusion criteria not be present at the time of data collection.

Data collection took place during the period of October and November 2011. For collecting used as instrument a semi-structured interview and individual, directed to the characterization of the profile of the participants and their views on occurrence of accidents at work.



For the analysis of the interviews were adopted the following procedures: reading and re-reading the interviews; mapping of words and/or phrases defined significant from the goals of the research, with a view to the classification of themes and later analyzed the light of the theoretical framework.

It is important to note that all care related to the ethical aspects involved in the research have been duly observed by the researchers, obtaining the authorization for the Chairman to carry out the study and approval by the Research Ethics Committee of the institution, by ZIP CODE Protocol-UNIRIO No. 0040/2011.

The subject expressed their acceptance to participate in the study in writing, by signing of informed consent, and they have been given to the possibility of giving up at any time, without any kind of prejudice. To ensure the anonymity of the participants were identified by the letter "E" and the corresponding number to the order of your interview.

## RESULTS AND DISCUSSION

Among the students enrolled were interviewed 63 academic undergraduate degrees in nursing from the fourth to the ninth period of a public University located in the city of Rio de Janeiro. Of these 60 (95.0%) almost all are female, 49 (77.0%) of the total number of participants, had the age group ranging from 21 to 24 years. In relation to the term in progress features 41 (65.0%), a significant number of students in the seventh and ninth period, and may be seen in Table 1, below:

Table 1 - Participants profile characterization, Rio de Janeiro, 2011.

Profile of participants	n	%
<b>Sex</b>		
Female	60	95.0
Male	03	5.0
<b>Age group</b>		
From 21 to 24 years	49	77.0
Over 25 years	14	23.0
<b>Period</b>		
7th-9th period	41	65.0
Other periods	22	35.0

Source: Public University, RJ, 2011.

Scholars believe that the occurrence of accidents at work is related mainly to the risks in the environment during the teaching practice activities, and may reflect on physical and

mental health of those students. Two themes emerged: the vision of students on risk of accidents in teaching practical; The implication of the risk of injury to your health.

#### Axis 1- The students' view on risk of accidents in teaching practice

Of those surveyed, 62 (98.0%) believe they are exposed for some type of risk that may lead to accidents at work in the field of practice. The hospital environment is considered of risk for containing several agents can be harmful when not controlled. Remembering that nursing workers have health and safety at the mercy of conditions of work, that expose the occupational hazards.<sup>3</sup>

Among the risks is the biological risk. Students relate to the presence and the constant use of a bladed cutting materials on the wards, the lack of attention to handling, disposal in inappropriate conditions and the reencape of needles, as conditions for accident as we can observe in the following lines:

*Yes, a bladed cutting accident because the equipment used for disposal sometimes are full [...]. (54)*

*Yes, drill cutting edges, for example due to the constant use and the fast pace of work. (P.47)*

*Yes, by the carelessness of the professionals with a bladed sharp material may occur some accidents. (E18)*

*Yes, some sort of accident with a bladed sharp material. Yes, at the beginning of the course we academics we were worried with so many other things related to other procedures that we can crash. (E59)*

The term exposure to biological material as the possibility of contact with organic fluids and blood. The accident with biological material occurs through percutaneous inoculation or through direct contact with the skin and/or mucous membrane, many pathogens can be transmitted through the accident, such as: hepatitis C virus (HCV), hepatitis B (HBV) and human immunodeficiency (HIV).<sup>8-9</sup>

Even with the sub notifications were published in the world 106 cases of healthcare workers infected with HIV, and 238 suspected cases after occupational exposure from the year 2002, this year where the AIDS epidemic.<sup>9</sup>

It is worth mentioning that more than 50% of the scholar's point to the biological risk, however, nine (15.0%) mentioned other risks present in the working environment of the teaching practice. This data can generate as a consequence the result of a small quantitative professionals who recognize the physical and chemical risks, despite being exposed to extreme temperatures, noise, vibration, radiation, humidity, and handling chemicals.<sup>3</sup> another consequence, and the evidence of the growth of musculoskeletal complications of nursing worker, associated with the inadequacy of the working environment.<sup>10</sup>

*Risk for developing stress due to work overload. (E31)*

*Exposure to radiation, cutting, drill because are the most frequent in the wards. (E53)*

*When the desktop has unfavorable conditions for the worker, as conditions for musculoskeletal problems [...]. (E12)*

One of the ways to minimize the risks present at work is the use of individual protection equipment (IPE). According to the Regulatory Standard 6 (NR6), consider - if all device or PPE product of individual use by the worker, intended for the protection of risks likely to threaten the safety and health at work. <sup>11</sup>

26 (41.0%) to the respondents, the condition of risk for accidents at work in the field of professional practice is associated with no use of Individual protection equipment (IPE).

*Yes, Lack of EPI, hospital does not provide correctly. (E63)*

*The lack of PPE [...] there is no available at the hospital. (E62)*

*Yes, all possible, because we don't have proper equipment to use [...]. (E40)*

Another condition put forward by students is the lack of knowledge of the techniques performed during the internships. The Act insecure (practiced by man) and unsafe conditions (desktop) lead to occurrence of accidents of work. <sup>3</sup> The perception to accidents influences the behavior and, consequently, the exposure to risks.

#### Axis 2 - Implication of risk of injury to the health of the student

All respondents mentioned that use at least one personal protective equipment (PPE) in the field, during the practical education. From the EPIs predominates the use of mask and glove therefore believe that so they are protecting yourself and protecting the patient.

*Yes, all of each action. Is a right, then we should use the PPE. I use for my protection and the user. (E24)*

*Yes, lab coat, cloak, mask, gloves, other [...] because it's relevant use to minimize the risks [...]. (E42)*

*Yes, the necessary to practice, such as gloves and masks. For protection against the risks. (E4)*

However, still 12 (19.0%) of the scholars interviewed suffered some sort of accident at work. They attributed the occurrence of an accident to inattention, inexperience in practice and the disposal and improper handling of the drill. After the incident, students attacked conducted routine tests, however, only two students recorded the occurrence of the accident. As we can see in the following lines:

*Yes, needlestick, was too full [...] lack of attention [...] was forwarded to perform tests. (E25)*

*Yes, cutting drill [...] filled a notification and held quick test [...]. (E22)*

*Yes, with needle. Lack of attention and nervousness [...]. (E24)*

*Yes, punctured her finger with a needle, improper disposal of material [...] the accident was notified and was performed the tests [...]. (E35)*

Several studies indicate that the occurrence of accidents with a bladed cutting material are still occurring in high way between students and health professionals. These studies could present a greater occurrence if there weren't the sub notifications of accidents.

5.12

According to the report most (95.0%) of the investigated claim that the occurrence of an accident at work during the professional practice might cause some damage to their health. The most cited was to acquire diseases, however it's called attention to the fact there's also damage to mental health, to the point of abandoning the profession. As the following lines:

*Yes, can interfere with my physical and psychological health, and may bring consequences for life and even abandonment of the profession. (E28)*

*Yes, developing some sort of disease, can I get a picture of depression, social isolation. (E10)*

*Yes, it may reflect physiological issue, about the disease [...] and also in psychological issue, and can generate insecurity, fear [...]. (E6)*

*Yes, depending on the accident can get sick [...] besides me feel insecure to perform the same function. (E2)*

The symptoms and mental disorders have been increasingly observed, among the possible consequences after accidents at work. Subjective post-traumatic syndrome is the only recognized clinical entity of origin well limited to organization of work. Yet little recognized in practice, but reaches thousands of workers injured each year.<sup>13</sup>

## CONCLUSION



Nursing academics investigated highlight that in the realization of practical education are prone to risks that may generate accidents at work, highlighting the biological risk for drill.

Although all students use personal protective equipment, there was the occurrence of an accident at work during practice in the field of education. The respondents believe that the occurrence of an accident at work during the professional practice might cause any damage and injury to their health.

Soon, this study proposes the need to emphasize to students the protection measures to be adopted in the fields of practice, in order to minimize the risks, in addition to intensify discussions about workplace accident, accident risks and the measures to be taken in the event of an accident, during the lectures of different disciplines.

## REFERENCES

1. Silva N, Tolfo SR. Trabalho significativo e felicidade humana: explorando aproximações. *Rev. Psicol., Organ. Trab.* [Online] 2012; [citado em 22 jan. 2015]; 12(3):341-54. Disponível em: <http://www.scielo.br>
2. Mauro MYC, Paz AF, Mauro CCC, Pinheiro, MAS, Silva VG. Condições de trabalho da enfermagem nas enfermarias de um hospital universitário. *Esc. Anna Nery Rev. Enferm.* 2010; 14(2):13-8.
3. Oliveira QB, Santos RS, Santos CMF. Acidentes de trabalho na equipe de enfermagem: uma revisão de literatura. *Revista Enfermagem Contemporânea* [periódico online]. 2013; [citado em 22 jan. 2015]; 2(1):32-52. Disponível em: <http://www.bahiana.edu.br/revistas>
4. Lima CDS, Pinto WM. Riscos ocupacionais no ambiente hospitalar: fatores que favorecem a sua ocorrência na equipe de enfermagem. *Saúde Coletiva em Debate* [internet]. 2012; [citado em 22 jan. 2015]; 2(1):62-29. Disponível em: <http://fis.edu.br/revistaenfermagem/artigos/vol02/artigo10.pdf>
5. Ministério da Saúde (BR). *Notificação de acidentes de trabalho fatais, graves e com crianças e adolescentes*, 2. Brasília (DF); 2006.
6. Organização Internacional do Trabalho (OIT) no Brasil. *A prevenção das doenças ocupacionais: dois milhões de trabalhadores morrem por ano*. Brasília (DF); 2013.
7. Canalli RTC, Moriya TM, Hayashida M. Acidentes com material biológico entre estudantes de enfermagem. *Rev. Enferm UERJ.* 2010; 18(2):259-64.
8. Valim MD, Marziale MHP. Avaliação da exposição ocupacional a material biológico em serviços de saúde. *Texto Contexto Enferm.* 2011; 20(esp.):138-46.
9. Dias MAC, Machado AA, Santos BMO. Acidentes ocupacionais com exposição a material biológico: retrato de uma realidade. *Medicina (Ribeirão Preto)* [periódico online]. 2012; [citado em 22 jan. 2015]; 45(1):12-22. Disponível em: [www.fmrp.usp.br](http://www.fmrp.usp.br)

10. Santos MRS, Mota GV, Faria DCC, Brasileiro ME. A enfermagem do trabalho frente lesões por esforços repetitivos/doenças osteomusculares relacionadas ao trabalho. *Revista Eletrônica de Enfermagem e Nutrição* [periódico online]. 2013; [citado em 22 jan. 2015]; 2(2):1-15. Disponível em: <http://www.ceen.com.br/revistaeletronica>
11. Garcia GFB. NR6 Equipamento de proteção individual - EPI. In: Garcia GFB, organizador. *Legislação de segurança e medicina do trabalho*. 2ª. São Paulo (SP): Método; 2008.
12. Galon T, Robazzi MLCC, Marziale MHP. Acidentes de trabalho com material biológico em hospital universitário de São Paulo. *Rev. Eletr. Enf.* [Internet] 2008; [citado em 22 jan. 2015]; 10(3):673-85. Disponível em: <https://www.fen.ufg.br>
13. Dejours C. *A loucura do trabalho: estudo de psicopatologia do trabalho*. 5ª. São Paulo (SP): Cortez; 2012.



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