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KNOWLEDGE OF NURSING PROFESSIONALS ON THE OCCUPATIONAL HAZARDS IN AN ICU: BIOSECURITY MEASURES

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ABSTRACT

Nursing professionals are exposed to various occupational risk situations during the performance of their activities. Such risks originate from unhealthy activities, triggering the onset of diseases and accidents at work. The research aimed to evaluate the level of knowledge of nursing professionals on the occupational hazards in an intensive care unit, and biosecurity measures. The work presented here, is based on a descriptive exploratory qualitative study, theoretical research associate, held from the understanding of occupational hazards in the hospital environment. As a result, it was found that the potential occupational risks that originate from unhealthy activities taking these professionals an exhibition exacerbated the dangers present in the work environment, because adverse effects to the health of this worker, setting off from the emergence of disease to accidents at work. It is concluded that the concern to meet the demands of maintaining occupational health appears as an integrator of the formation of the nurse. Finally, we highlight the importance of continuing education de-emphasizing the theme of occupational hazards with illustrative demonstrations, as well as intensify studies in this area, both geared to students and professionals, reducing possible accidents of job.

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INTRODUCTION

Occupational health care posture is singled out as responsible for the prevention and reduction of health risks for workers providing safety and quality conditions in the effective exercise of the function. The constant concern to understand the risks to which workers are nursing, gives you the urge to impose on professional conduct within the daily practices of nursing occupational health preservation, conduct that must be embedded in the obligations made to the professional practice in nursing, prevention is urgent since the occupational hazards are highly regarded as the work situations that can break the physical, mental and social balance of workers, and thus interfere in the results of your action while professional who needs to be right to take care of each other. (CARRARA,

2015). In General, the nursing worker acts in a sometimes painful and unhealthy that does not offer favorable conditions for your health and personal satisfaction. The precarious conditions that are exposed to these professionals, either by excessive physical and mental labour activity, accumulation of hours worked, employment system, or even bad remuneration in the health system, is a determining factor of accidents and occupational diseases (MANDAL *et al.*, 2004). Prevention of occupational health was seen as a mechanism for maintaining the quality of life of professional nursing, item pointed to in the literature that addresses such theme as an essential precondition to guarantee the health and professional efficiency.

Artigos e pesquisas apontam que na realidade brasileira o ambiente hospitalar figura como setor terciário da economia, apresentando alto grau de prejuízos a saúde do trabalhador,

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aponta-se para este espaço o grau de risco três, danos provocados pelas atividades insalubres instituídas nas ações ali realizadas mediante a uma infinidade de riscos como por exemplo à presença de agentes biológicos responsáveis pelas infecções causadas por vírus, fungos e bactéria, protozoários, verminoses. O ambiente hospitalar apresenta também, uma série de outros riscos decorrentes de fatores físicos, químicos, psicossociais e ergonômicos, os quais podem ser prejudiciais à saúde dos trabalhadores e por isso, devem ser analisados para que se possam caracterizar as condições de trabalho em cada instituição (ARAÚJO, 2009).

O campo de pesquisa fica no município de Jequié/BA, o Hospital Geral Prado Valadares (HGPV) se apresenta como um dos principais hospitais de referência regional do interior do Estado da Bahia. O referido hospital possui capacidade de mais de 200 leitos operacionais internando nas especialidades de Clínica Médica, Clínica Cirúrgica, Pediatria, Psiquiatria, Neonatologia e Terapia Intensiva (BAHIA, 2016). Toda pesquisa aqui realizada foi elaborada visando direcionamento ao tema conhecimento dos profissionais de enfermagem sobre os riscos ocupacionais em uma Unidade de terapia Intensiva UTI: medidas de biossegurança, visando um estudo pautado no entendimento de que os riscos ocupacionais a que se sujeitam uma equipe de enfermagem.

Diante desta premissa surgem as situações problemas que nos faz pensar a saúde ocupacional do enfermeiro gerando os seguintes questionamentos: Afinal o que é saúde ocupacional na perspectiva do profissional de enfermagem? Quais os riscos em potencial a que ficam expostos os profissionais de saúde no ambiente hospitalar de Unidade de tratamento intensivo num Hospital Geral? Qual a conduta dos profissionais que atuam neste hospital mediante as situações de riscos à saúde ocupacional? Que conduta o profissional de enfermagem deve adotar para garantir uma efetiva prevenção aos riscos a sua saúde ocupacional? Quais as políticas públicas voltadas a manutenção da saúde ocupacional de profissionais de enfermagem, adotadas num ambiente de UTI? Como a prevenção e o cuidado com a saúde ocupacional dos profissionais devem ser inseridos nas práticas cotidianas dos profissionais de enfermagem.

A pesquisa objetivou avaliar o nível de conhecimento dos profissionais de enfermagem sobre os riscos ocupacionais em uma unidade de terapia intensiva, e as medidas de biossegurança, destacando aspectos jurídicos e legais (leis e normas, protocolos, como por exemplo a NR 32), as medidas preventivas como elementos integradores da formação do profissional que irá atuar na área de saúde.

Seção Experimental

Neste artigo a temática saúde ocupacional direcionou todo um trabalho de análise pautado no uso de questionário e na validação dos resultados colhidos com embasamentos teóricos baseados em publicações que abordam a saúde e o bem-estar dos profissionais de enfermagem, bem como fatores de riscos e medidas preventivas.

O campo escolhido para realização da pesquisa foi um hospital geral de regime público situado na Bahia, Brasil, setor de unidade de terapia intensiva. O trabalho de levantamento de dados para pesquisa descritiva exploratória foi realizado na

Unidade de Terapia Intensiva, onde contou com a participação de 08 enfermeiros de um total de 14, sendo 65% do corpo de enfermeiros do setor. Foi utilizado como critério de inclusão fazer parte da equipe do setor, estar ativo, aceitar responder ao questionário aplicado. Como critério de exclusão, enfermeiros afastados no momento da entrevista por motivo de saúde, férias ou licença prêmio, assim como aqueles que não aceitaram participar da pesquisa.

O trabalho foi devidamente encaminhado ao CEP através da Plataforma Brasil, obedecendo aos preceitos da resolução 466/2012, fazendo parte de um projeto guarda-chuva intitulado Riscos ocupacionais relacionados aos enfermeiros em um hospital público no interior da Bahia, onde a pesquisa foi iniciada após aprovação do mesmo pelo CEP, sob o parecer nº 1.886.880.

RESULTADOS E DISCUSSÃO

A pesquisa se construiu a partir de entrevistas que no corpo deste texto serão fundamentadas por referencial teórico pertinente visando identificar e delimitar os temas relacionados aos riscos ocupacionais os quais a enfermagem está exposta numa UTI de um hospital geral, neste estudo a implantação de medidas de promoção e de prevenção que porventura poderão implementadas nas equipes de enfermagem, com vista a minimizar o acesso aos fatores de risco, buscando uma forma de diminuir a ocorrência desses riscos os quais acarretam prejuízos a saúde e ao desenvolvimento profissional dos trabalhadores de enfermagem.

Na análise dos dados, além das variantes de caracterização do perfil (TABELA 1), contemplou outras questões (TABELA 2): 1(um) informante disse que começou a trabalhar aos 27 anos com renda mensal de 3 salários. Os informantes 2 (dois) e 7 (sete) começaram a trabalhar aos 26 anos com renda mensal de 4 salários. O informante 3 disse que começou a trabalhar aos 22 anos com renda mensal de 4 salários. O informante 4 disse que começou a trabalhar aos 22 anos com renda mensal de 4 salários. Os informantes 5 (cinco) e 8 (oito), declararam trabalhar 48 h semanais, não realizam plantões noturnos, começaram as atividades profissionais aos 25 anos, não informaram suas renda, o informante 6 (seis), começou com 32 anos de idade, com renda de 4 salários, os não citados trabalham 48 horas semanais com 2 plantões noturnos.

Tabela 2 Início de carreira/ Horas trabalhadas e renda

	Inform.1	Inform. 2	Inform. 3	Inform. 4	Inform5	Inform. 6	Inform. 7	Inform. 8
Quando Começou a trabalhar	27 anos	26 anos	25 anos	22 anos	25 anos	32 anos	26 anos	25 anos
Horas trabalho por semana	48	48	48	48	36	48	48	48
Plantão noturno ou de 24h	Sim 2 a 3 vezes na semana	Sim 2 a 3 vezes na semana	Sim 1 a 3 vezes na semana	Sim 1 a 3 vezes na semana	Não	Sim 2 vezes na semana	Sim 2 vezes na semana	Não
Renda	Média de 3 salários	Média de 6 salários	Média de 4 salários	Média de 4 salários	-	Média de 4 salários	Média de 4 salários	-

Fonte: arquivo da pesquisa, 2017.

Na Tabela 3 observa-se por amostragem dos dados respondidos que 90% da equipe de enfermagem conhecia a NR 32, que trata da regulamentação das medidas de proteção e segurança do trabalhador que atua no serviço de saúde, 100% está a par de

todos os riscos ocupacionais da profissão que exerce, 50% não participou ou participa de curso em nível de prevenção destes riscos.

Tabela 3 Conhecimentos dos profissionais de enfermagem acerca dos riscos de acidente de trabalho

Nº do informante	Conhece a Norma Regulatória 32	Identifica Todos os Riscos Ocupacionais	Participou de Formação a Nível de Prevenção	Tem contado com as dificuldades fatores que proporciona riscos
Informante 01	Sim	Sim	Não	Sim
Informante 02	Sim	Sim	Não	Não
Informante 03	Sim	Sim	Sim	Sim
Informante 04	Sim	Sim	Não	Sim
Informante 05	Sim	Sim	Sim	Não
Informante 06	Sim	Sim	Sim	Sim
Informante 07	Sim	Sim	Sim	Não
Informante 08	Sim	Sim	Não	Sim

Fonte: arquivo da pesquisa, 2017.

environment, space according to them where the action has to be performed professional sometimes under pressure, sometimes low-security quality. Pointed be aware that in the hospital environment risk is the health care professional and deserve attention of the nurse. The lines below leave this explicit:

[...] on the risks of worker exposure \ biological agents point to contact with blood and/or body fluids, secretions of patients through example needles, syringes, or even his own blood during the care or routine activity _ [...] biggest risk is the biological knowing that we are exposed to all the time the viruses, bacteria and fungi [...]: biological exposure to the environment c/c/patients infectious diseases [...] scratches due contact with biological fluids, secretions [...] exposed to risks biological, (viruses, bacteria, fungi).

Tabela 4 Medidas de Biossegurança

Medidas de segurança	Inform.1	Inform.2	Inform.3	Inform.4	Inform.5	Inform.6	Inform.7	Inform.8
Utilização de EPI	Sempre	Sempre	Sempre	Sempre	Sempre	Sempre	Sempre	Sempre
Quando a qualidade do EPI põe em risco a saúde do enfermeiro	As vezes	As vezes	As vezes	As vezes	As vezes	As vezes	As vezes	As vezes
Recebimento de treinamento/ orientação de como proceder em caso de acidente com material biológico	Na Faculdade	Na Faculdade	Na Faculdade	Na Faculdade	Na Faculdade	Na Faculdade	Na Faculdade	Na Faculdade

Fonte: arquivo da pesquisa, 2017.

Para proceder a análise das entrevistas realizadas, dividimos em duas categorias, sendo a primeira subdividida em quatro subcategorias, as quais foram descritas a seguir:

Categoria 1– Nível de conhecimento dos riscos ocupacionais

As Ribeiro; Chaudhary; Espindula (2010) health professionals in your work environment are exposed to numerous risks, the hospital environment is a location typically unhealthy insofar as it provides exposure of its workers to physical, chemical, physiological risks, Psychics, mechanics and, especially, biological, inherent to the development of their activities. In category 1, according to the analysis of the interviews it was possible to conclude that all nurses know point what kind of risks they are exposed, to better approach we decided to introduce the discussion on the issues in question so subdivided into 4 subcategories as described below:

Subcategory 1.1-Biological risks

Subcategory 1.2-Ergonomic Risks

Subcategory 1.3-Chemical risks

Subcategory 1.4– Physical hazards

Subcategory 1.1-Biological risks

Subcategory 1, based on the analysis of the data in tables 3 and 4 that allowed to observe the design of nurses regarding the types of occupational hazards to which they are exposed by highlighting the contact with biological risks as described below:

Your research informants most claim to have knowledge regarding the presence of biological risk in the hospital

According to the Regulatory Standard 32, "is considered biological risk the likelihood of occupational exposure to biological agents." For your time, biological agents are all those classified as micro-organisms, parasites, viruses, bacteria, fungi and prions (BRAZIL, 2012). Here is evident the need to have attention at the time of service to patients, the use of individual protection equipment and caution, essential care in light of the action taken. Exposure to risks can be classified as intentional or unintentional intent. The first corresponds to activities with direct handling or use of biological agents, such as research, biotechnology, among others. The second corresponds to activity without manipulation or direct use of agents as the main object of the work, such as health care, laboratory, cleaning and laundry in health services (BRAZIL, 2008).

At the end of the approach regarding biological risks is sure aware of the risks and appropriate knowledge about the standards, legal aspects and conduct of zeal with the own health and the health of patients under your responsibility, it is essential understanding of the action of the nurse is a human conduct which if not taken seriously can induce to error. Understanding the occupational hazards, take preventive measures and ensure that the use of individual protection equipment are a daily habit is of paramount importance.

Subcategory 1.2-Ergonomic Risks

Here you can see the hospital environment as workspace consisting of numerous elements ranging from the instruments, methods and organisation of work. In this context are the work

relationships, the organisation of the workplace, the workday, how a procedure is performed, after all according to NR32 ergonomic risks are any working conditions, psychological or physiological reasons, cause discomfort to workers.

The ergonomic risk was one of the aspects pointed out by informers:

[...] ergonomic – the stress produced in the workplace, the wear caused by the exhaustive work [...] sponge bath and change of the patient's decubitus. [...] ergonomic [...] physical effort, repetitive activities. [...] stay too long in the same position to perform a procedure.

This category of risk is directly associated with working conditions in hospitals. In an environment of ICU numerous are the situations that put the nursing Professional on risk. By analyzing the ergonomic conditions of the situation was highlighted that the implementation of the activity of bedridden patients as one of the more taxing physically.

Preventive measures to avoid the professional wear and consequently accidents at work found, conduct that managerial, administrative actions go of humanization of work with nursing. Consistent with Raj (2003) to describe, that, due to the level of illuminance, the risks may predispose to disease professionals, as well as facilitate errors, reflecting on the clients, compromising the quality of care.

In this strand, Dalla (2003) points out that the design of the hospital's ventilation system needs maintenance and operating easy inspection to prevent infection and promote a comfortable environment for the multidisciplinary team, the client and the their companions. The continuing education for nurses, activities that promote the feeling of teamwork moments of relaxation with relaxation, physiotherapy, improved dynamics of space, furniture, signs of the areas presenting risks in potential actions that can minimize the impacts caused by the risks in question.

Subcategory 1.3-Chemical risks

Nurse's contact with chemical substances is inevitable and can be considered potential occupational health hazard once the medicines such as part of the materials used in meeting the demands presented to patients. Chemical material circulating in the hospital environment in various forms and States: gases, vapours and liquids for use in the disinfection of sterilization materials, drug treatments, anesthesia.

Part of the nurse's work routine contact, exposure to chemical loads which represent light as allergic processes and risks until the more serious illness such as cancer. It is of the utmost necessity to carry out preventive measures turns the informational campaigns in their own working environment. Copy of informants was the most frequent chemical risks explicitly in ICU environment.

[...] chemicals – medicines, material for asepsis [...] hospital chemicals [...] exposure to accident c/gas [...] drugs, talc and latex gloves [...] chemicals-chemicals hospitals [...] exposure to accident c/gas [...] medicines.

There is an infinite variety illnesses that can affect the health of the nursing professional, caused by the access to chemical risks, being that most informers proved to be aware of such a

situation. Exposure to toxic substances are among the risks that chemicals are found in solid or liquid or gaseous form. The toxic elements are used for the purpose of cleaning, disinfection and sterilization. The routes of entry into the body are: inhalation, ingestion, dermal and ingestion, as well as the handling of medicines such as chemotherapy without proper protection. May cause irritant effects, anesthetics, systemic, carcinogenic, flammable, explosive and corrosive (RIBEIRO; CHAUDHARY; ESPÍNDULA, 2010).

Subcategory 1.4-Psychosocial Risk

Nursing is a profession that involves dealing with illness, contact with the ailing patient, their anguish and demonstration of suffering, sometimes unhealthy working environment, environmental pressures, the high level stress caused by the experience in hospital setting once the nursery team faces in the daily work the contact with the anguish and anxiety generated by relationship problems between colleagues, leadership and general direction, the dissatisfaction with the bond and working conditions.

Nursing professional performance when affected carries in perception and failures of difficulties concentrating on tasks to be performed. With this mental and emotional state of the trader is affected leading to stress, therefore headaches, gastrointestinal disorders, mood changes, are referred to as occupational illnesses caused by stress (SUCKLING PIG; FERNANDES; RAMOS, 2008).

The nurse is constantly torn between humanized care and not internalize the example the suffering through which passes the patient, you have to learn to deal with the challenges of a profession that assists all days follow the life and many times the occurrence of death. Live with the dilemmas of the profession and with the conflicts generated in the processes of human interaction that provides assistance with colleagues how many people that require a lot of psycho-social point of view. This was evident in the lines of the informants as below:

[...] the fickleness that circulates in hospitals [...] relationship conflicts that occur at work [...] constant exposure risk situations cause destabilization [...] the fear of making mistakes [...] in some situations of conflict with the patient and or family members [...] stress in dealing with the situations in hospitals [...] risk of verbal aggression [...] stress caused by routine [...] workday.

To the International Labour Organization (ILO), psychosocial risks at work consist, on the one hand, on the interaction between work, your environment, job satisfaction and the conditions of your organization; and on the other, on the capabilities of the worker, your needs, your culture and your personal situation outside of work, which, after all, through insights and experiences can influence health and the worker's income.

Subcategory 1.5– Physical hazards

For the professional who works in the field of nursing the physical risk is the contact with radiation, noise, vibration, radiation ionizing radiation and non-ionizing, temperature extremes (cold and heat), abnormal atmospheric pressure, and others. However the analysis demonstrates that there is a possible poor knowledge about this subcategory of risk,

whereas classified inappropriately, assigning physical risk situations affecting the integrity of the physical body/organic, unlinking from agents such as lighting, vibration, moisture, ventilation, temperature extremes (cold and heat), abnormal atmospheric pressure, and other.

In the workplace there are factors that interfere in workers' health, as the climate control of the workplace, which requires the adaptation of thermal regulation, being necessary for the body to work harder to suit the ideal body temperature physiological. Exposure to high levels of sound noise for long periods causes damage to the auditory system and other compromises, such as sleep disorders and mental rest. The hearing damage produced are irreversible and are often not perceived immediately, damaging the communication and interfering in interpersonal relationships (FREE JUNIOR *et al.*, 2009).

Presented some difficulty of separating the risk of limb, sometimes confusion between the physical and the biological risk or even the psychosocial and ergonomic.

[...] cansaço [...] agressões de pacientes [...] exposição a radiação...é inevitável [...] cansaço, fadiga, dificuldade de concentração, irritabilidade [...] exposição a radiações e ruídos.

It must emphasize the need for continuing training aimed to discuss and reflect on the occupational hazards in its various subcategories as a preventive measure in the quest for health maintenance of the nurse and consequently the improvement of patient care.

Category 2– Cases of Exposure To Risk

With respect to category 2: in the process of construction of the research was cited by some of the informants contact with exposure to risks, declared exposure to occupational hazards in its subcategories. Through these accounts became apparent that with biological material is one of the most frequent and worrisome, signaled the emotional wear and tear, also was apparent concern about use of personal protective equipment.

[...] Biohazard [...] psychosocial [...] [...] chemical hazard contact no [...] using materials or individual protection equipment (gloves, masks, etc.).

Duarte; Mauro (2010) point out that the project of reorganization of health services requires the adoption of a policy committed to improving the integration of workers in health services, giving priority to the principles of professional valuation and the participation of employees, in order to produce changes in your mentality and in their actions, through the qualification and/or the incorporation of new knowledge. According to the research of Costa; Felli (2005), the nursing workers, entered production in health, are exposed to a variety of charges that are generating processes of wear. The problems at work in health is accentuated to working in hospitals, since that institution is typically unhealthy.

CATEGORY 3-Conduct vis-à-vis the occupational risk exposure

At the time of research where appeared the reports of contact with risk situations, automatically arose the question of was done in front of the occupational risk exposure generating the category 3, it sought to understand, what measures have been

taken by nurses, with most of the informants answer the fact that it was made a statement about the accident the hierarchy of the institution.

Through the collected material if allowed the observation that in some cases the pipelines by risk exposure require only communicate the sector responsible, not taking into consideration perform tests for prophylaxis to example. The intervention process through the contact risk of any natures occurs in fragmentary form, in some cases regardless of the protocols that the Ministry of Health offers in order to systematize the assistance to victims of accidents, especially in the various biological levels of complexity. For part of the informants to conduct related to risk exposure implies in communicating to the sector responsible, not taking into consideration perform tests for prophylaxis.

[...] notice to the responsible sector [...] notification and triggering of the sectors responsible [...] no [...] using materials or individual protection equipment (gloves, masks, etc.).

The Protocol of the Ministry of health provides guidance and advice to the rugged against: the risk of accident, the possible use of chemoprophylaxis, the need for consent to serological tests, victim's commitment with your monitoring for six months and the importance to observe symptoms suggestive of acute serum conversion. In addition to information about the accident in the statement of work (CAT) and fill the information system notification of reportable diseases-SINAN (BRAZIL, 2006). In line with (MACHADO *et al.*, 2013) in Brazil, accidents related to occupational activity need to be reported soon after the fact, through the Communication of an accident at work (CAT), and forwarded to the Social security system, the worker rugged, the Union of the category that the employee is inserted, to the hospital, the unified health system (SUS) and the Ministry of labor. Being the mandatory notification.

CONCLUSION

By the results obtained in this research it was possible to understand that the vast majority of nurses who were willing to appear as informants presented have knowledge about occupational hazards to which they are exposed at a level satisfactory. It was also implied that the moments of interviews also worked as moment of self-evaluation of your professional conduct. Is apparent the need for monitoring and supervision of managerial and administrative sectors of all nursing staff about occupational risks with taking into consideration the before and the after, pre-and post-exposure prophylaxis. Such conduct must be entered in the dynamics and in daily life experienced by nurses in hospitals. The study presented here through the analysis of the interviews allowed the identification and delimitation of risks and occupational health risks sub-categories of nurses, found weaknesses in relation to this approach and points out the prevention and measures to protection as part of the professional training of nursing, assess the occupational hazards to which they are exposed employees nursing a intensive care unit during your workday. Can contribute to the implementation of measures of promotion and prevention, through courses and training, as well as the right conduct in cases of exposure, through protocols with the aim of systematizing the assistance to victims of accidents, and not just communicate hierarchically responsible sector.

Know about this theme induces idea of great need for continuing training and implementation of policy measures of prevention ranging from training the constant campaigns within the framework of the hospital to guarantee of equipment individual protection should have ensured the quality of the service provided.

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