



Conduct adopted by nursing technicians **AFTER GETTING INJURED WITH CUTTING MATERIALS**

CONDUTAS ADOTADAS POR TÉCNICOS DE ENFERMAGEM APÓS SOFREREM ACIDENTES COM MATERIAIS PERFUROCORTANTES
CONDUCTAS ADOPTADAS POR TÉCNICOS DE ENFERMERÍA TRAS SUFRIR ACCIDENTES CON MATERIALES PUNZOCORTANTES

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ABSTRACT

Objective: to analyze the behaviors taken by nursing technicians before accidents with cutting-drilling. **Method:** an exploratory study with a qualitative approach, which used as theoretic methodological reference the Theory of Social Representations of Serge Moscovici, with 16 nursing technicians of a private hospital from Teresina-Piauí/Brazil, after the approval of this project, by the Ethics Committee in Research of the Federal University of Piauí, CAAE number 0303.0.045.000-10. The data were processed in ALCESTE 4.8. **Results:** it was found that after the accidents, these professionals perform the disinfection of the affected area and report the accident. Some professionals used antiseptics on the affected region and also squeezed the region in an attempt to avoid any infection. **Conclusion:** the knowledge of the nursing staff on approaches after percutaneous exposure is incipient, depriving them of the right to receive prophylactic drugs when necessary and adequate medical care. There is a need for training and continuing education of these professionals. **Descriptors:** Occupational Exposure; Occupational Risks; Working Nursing.

RESUMO

Objetivo: analisar as condutas tomadas por Técnicos de Enfermagem frente ao acidente com material perfurocortante. **Método:** estudo exploratório, de abordagem qualitativa, que utilizou como referencial teórico metodológico a Teoria das Representações Sociais de Serge Moscovici, com 16 técnicos de enfermagem de um hospital privado de Teresina-PI/Brasil, depois da aprovação do projeto pelo Comitê de Ética em Pesquisa da Universidade Federal do Piauí, CAAE n. 0303.0.045.000-10. Os dados foram processados no ALCESTE 4.8. **Resultados:** foi constatado que após se acidentarem, esses profissionais realizam a desinfecção do local afetado e comunicam o acidente. Alguns profissionais utilizaram antissépticos no local afetado e também espremeram a região na tentativa de evitar alguma infecção. **Conclusão:** o conhecimento dos técnicos de enfermagem sobre as condutas pós-exposição percutânea é incipiente, privando-os do direito de receber medicamentos profiláticos quando necessários e um adequado acompanhamento médico. Verifica-se a necessidade de capacitação e educação continuada desses profissionais. **Descritores:** Exposição Ocupacional; Riscos Ocupacionais; Enfermagem do Trabalho.

RESUMEN

Objetivo: analizar las conductas adoptadas por Técnicos de Enfermería frente al accidente con material punzocortante. **Método:** estudio exploratorio de abordaje cualitativo, que empleó como referencial teórico-metodológico la Teoría de las Representaciones Sociales de Serge Moscovici, con 16 técnicos de enfermería de un hospital particular de Teresina (Piauí, Brasil), tras la aprobación del proyecto por el Comité de Ética en Investigación de la Universidad Federal de Piauí, CAAE nº 0303.0.045.000-10. Los datos se procesaron en ALCESTE 4.8. **Resultados:** se constató que tras sufrir accidente, estos profesionales realizan la desinfección total del local afectado y comunican el accidente. Algunos profesionales emplearon antisépticos en el local afectado así como exprimieron la región para evitar cualquier infección. **Conclusión:** el conocimiento de los técnicos de enfermería sobre las conductas pos-exposición percutánea es incipiente, privándolos del derecho de recibir medicamentos profiláticos cuando fueren necesarios y un adecuado seguimiento médico. Se verifica la necesidad de capacitación y formación continua de estos profesionales. **Descriptores:** Exposición Laboral; Riesgos Laborales; Enfermería del Trabajo.

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INTRODUCTION

Working accidents occur worldwide, both in developed countries and those in development. Concern surrounded this issue is through the removal of the work of people of working age, cost of medical treatment these workers, physical and psychological damage for the victims and their families, and often lead to death of the individual.

Among the types of occupational accidents, especially those involving sharps, are more common and can transmit more than 20 different pathogens professionals, including the HIV virus, Hepatitis B and Hepatitis C.¹ Thus, they are also the most worrisome because they can bring drastic consequences to the worker, both in professional and personal. The absence from work, fear of losing their jobs, distress while waiting for test results after exposure, the fear of the reaction from family and friends before the news of the positive tests of the relationship with the partner or partner after the accident, the prejudice faced due to the established diagnosis, side effects of drugs used in the treatment of infectious diseases acquired, all this makes this type of occupational exposure a real threat to health professionals. The technicians and nursing assistants are the most who accident, for providing patient cares 24 hours a day.²

The causes for these accidents are numerous; among them are the acts of recapping needles, improper disposal of sharps, inappropriate working conditions, patient agitation, inattention, fatigue, and not wearing gloves.³

The injured worker must be promptly evaluated. This assessment should be conducted based on a thorough history of the accident, the patient source characterization, hazard analysis, accident notification and guidance in the management and care measures with the affected site. The assessment regarding the potential transmission of HIV, HBV and HCV will give based on the following criteria: quantity of fluid, the source serostatus, HIV status and susceptibility of the victim's exposed professional. The person who caused the injury must also be examined.⁴

The accidented professional needs to be instigated immediately after the report of the symptoms, such as lymphadenopathy, rash, sore throat and flu symptoms suggestive of acute seroconversion, and also receive emotional support due to stress after the accident. For those who have injured their rights guaranteed, hospitals must make the

record of accidents through CAT and completing the notification form Information System for Notifiable Diseases (SINAN).

It is recommended to verify the performance of vaccination for hepatitis B, demonstrate immunity through the Anti-HBs serology and the victim to HIV, HBV and HCV. It should be done using hyperimmune gammaglobulin (HBIG) within 24 to 48 hours after the accident; however, the pre-exposure vaccination is one of the most important preventive measures. Regarding hepatitis C, there is no effective immunoprophylaxis pre- or post-exposure.⁵

It is necessary that the serological test for HIV is done at the time of the accident being repeated after six to twelve weeks and 6 months. If indicated, postexposure prophylaxis should be initiated as soon as possible, preferably within the first two hours after the accident. The post-exposure regimens may be basic - zidovudine (AZT) and lamivudine (3TC) - or expanded - AZT, 3TC and indinavir or nelfinavir.⁵

It is noteworthy that after the chemoprophylaxis was indicated, the professional must be guided and encouraged to make use of antiretrovirals, as in the case of having been infected by contaminated patient with HIV, for example, will reduce the chances of seroconversion. Many patients experience distressing moments by not receiving the correct information about the effectiveness of chemotherapy treatment after the accident.⁶

Lack of adherence to chemoprophylaxis is another aggravating therefore to act more effectively, it is essential that the victim receives the entire prophylactic regimen. However, it is known that in many cases the practitioner to take their medications due to adverse effects or lack of information concerning the consequences of treatment interruption.⁶

This study is justified by the importance of all nursing professionals are aware of the protocol after percutaneous exposure, so they know how it should be conducted professional rugged, avoiding delay in treatment and thereby decreasing the chances of acquiring diseases that could prevention through prophylactic drugs.

OBJECTIVE

- To analyze behaviors taken by nursing technicians before cutting-drilling accidents.

METHOD

This exploratory, qualitative study, which used as the theoretical framework of social

representations the theory Serge Moscovici dealing with the interpretation given by a group on a specific situation influenced by a culture, belief, myth or any other form of knowledge. This Theory was chosen by the authors to analyze the facts in a subjective way, breaking the paradigm to consider only the biological aspects of an individual, also known as Theory of Common Sense, this form of knowledge, even different from scientific knowledge, can not be considered less legitimate because of its importance in social life and reflection on the cognitive processes and social interactions.

The Social Representation occurs by two processes: anchoring and objectification. Anchoring is the act of evaluating, naming, classifying-based environment in which they live and in their own principles, is the judgment that is done before people and facts. The objectification associates the idea of unfamiliarity with reality. This process gives meaning and logical thoughts and to formulate hypotheses about why you think so.⁷

This study was conducted in a medium-sized hospital's private network in the city of Teresina-PI/Brazil between March and June 2011. The participants were nursing technicians to record work accidents caused by needlestick and still working at the institution in various areas of the hospital, such as emergency care, nursing, operating room, ICU and hemodynamics.

The sample consisted of 16 professionals selected through the database industry's Occupational Safety and hospital contact was made with the participants personally. We recruited only those who have suffered accidents involving sharps; they were still part of the staff at the interview and, who agreed in writing to join the search. In the interview the participant was asked to describe how the accident occurred, the conduct taken, how you felt after having an accident and the causes he attributed to his accident. Data were recorded using MP3 player and transcribed by the researcher after the interview. For the identification of speech of each search were used Arabic numerals. Survey participants were asked to complete the Statement of Consent in accordance with the requirements of Resolution 196/96 which deals with the rules and guidelines for research involving humans.⁸

The data were processed by software ALCESTE (Lexicale pair Contexte Analyse d'un ensemble de Texte of Segments), a program that aims to quantify a text to extract meaning from a stronger structure. Created in

France by Max Reinert, this program was introduced in Brazil in 1998, becoming an instrument used in research, involving social representations theories, built on a single file that must be prepared according to certain standards. A set of Initial Context Units (ICU) form a corpus analysis that the appropriate analysis ALCESTE, should constitute a whole centered on a theme. If interviews are used, as in the case this work, each of which is one UCI.

From this, the program divides the material into units of context Elementary (UCE), which are segments of up to three lines of text, scaled by this software depending on the size of the corpus. It then applied the method of descending hierarchical classification to obtain the classes. The results generated by the software ALCESTE have the largest vocabulary with x2, i.e. greater statistical association to the class as well as the UCEs that contributed most to the formation of classes.

Data collection was initiated after approval by the Ethics Committee of the Federal University of Piauí, on 24/09/2010 by Opinion No. CAAE 0303.0.045.000-10.

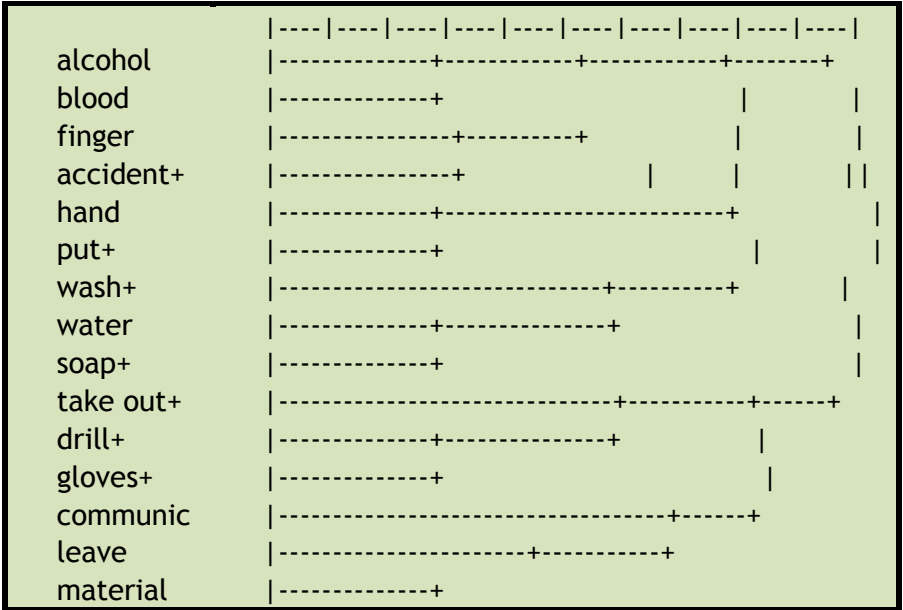
RESULTS

The ALCESTE sued interviews and divided into six classes: Class 1 - professional conduct adopted by after getting injured with cutting material, Class 2 - adopted by care professionals with the affected area; class 3 - CBG as the most involved in accidents with sharps, Class 4 - feelings experienced by professionals; class 5 - causes of accidents involving sharps, and Class 6 - fear of contracting HIV and hepatitis.

This work will not be analyzed the relationship between classes (Descending Hierarchical Classification), but the relationship between the words contained within the classes 1 and 2 (Ascending Hierarchical Classification) due to the object of study is focused only on those classes. Class 2 will be analyzed by the first follow-up to ensure a logical and chronological sequence of events.

In the second class, the words "water" and "soap" is linked to "wash" (figure 1), which means that the practical nurse performs crash if after washing the injured area with soap and water, according to the UCEs below:

I washed immediately with soap and water. Communicated to the competent sector of the hospital and laboratory tests were collected to see how it was, from me and from the patient. (Witness 11)

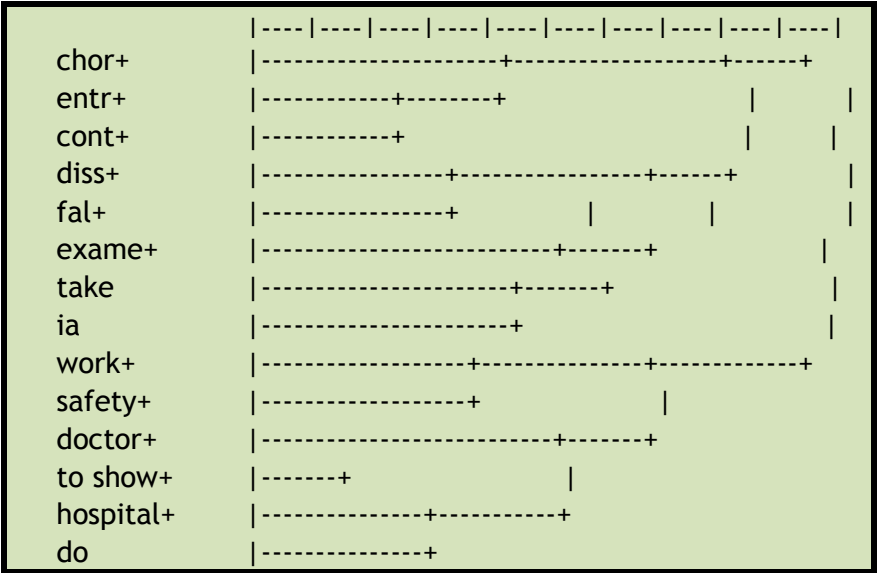


Picture 1 - Hierarchical rising of the class 2.

In the same figure, the words "alcohol", "finger", "accident", "hand" and "pass +" refers to another procedure performed by the professional after the accident: he spends alcohol in hand or finger affected, as shown follows:

Immediately, I washed my hands with soap and water and put alcohol. (Witness 3)

In Class 1, the words "test +" and "Harvest +" are linked to "count +", "diss +" and "false +", which shows that, after the accident be reported, are harvested examinations of professional nursing. The terms "hospital +" and "+ Showing Faults" are directly related and linked to the words "medical +", "safety" and "Job +" (Figure 2).



Picture 2. - Hierarchical rising of the class 1.

Thus, it is demonstrated that the occupational physician of the hospital is the professional for whom the injured shows the result of these tests and that there is need to start chemoprophylaxis and make collections of later examinations, as evidenced in the following ECUs:

Then I went up to the clerk, and already made the occurrence and everything. She asked me to look for the occupational physician and he asked me to do an exam, no, the occupational physician he took a look at my exam later, I did this blood test and such. (Witness 5)

DISCUSSION

The results shown demonstrate the actions taken by nursing technicians who participated in this study when the accident. The first step is to wash the contaminated area with soap and water. Hand washing, now called Hand

hygiene is a fundamental and indispensable procedure in health services for healthcare staff due to its proven effectiveness in infection control in these environments. Its purpose is to remove dirt, oil, sweat and dead skin cells where micro-organisms are deposited. To be effective action, should have duration of 40 to 60 seconds. Should be performed before and after contact with patients before performing procedures and assistance handling invasive devices, before donning gloves for insertion of invasive devices that do not require surgical preparation, after risk of exposure to body fluids when changing a site contaminated body to another clean, after contacting inanimate objects and surfaces near the patient and immediately before and after removal of the gloves. Thus, it is also an effective means of reducing the risk of

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infection following exposure to body fluids proven, as blood.

The use of antiseptic solutions was cited in testimony and is not contraindicated, but also has no proven efficacy. Many centuries ago antiseptics are used to disinfect skin and wounds. Widely used in health services, alcohol was effective in inactivating bacteria in vegetative form and enveloped viruses (such as hepatitis B and C and HIV) without presenting therefore activity esterilizante.¹¹ Currently this chemical is used more for disinfecting surfaces and hands when in gel form. A hand cleaning with alcohol to be effective must be performed for at least 15 seconds. Another antiseptic is used by professionals after accident, is the PVP-I:

I washed it till the bleeding stopped, and then I spent povidone. (Witness 10)

Iodine has been used for antisepsis since the 18th century. Today is diluted with another substance, polyvinylpyrrolidone (PVP), as its isolated application can cause irritation and skin discoloration. Its antimicrobial activity may be affected by pH, temperature, exposure time, concentration of total iodine in the solution and the amount and type of organic and inorganic compounds present, such as alcohol and detergent. The uptime of the chemical after being removed from the skin with water is controversial. However, it is known that the antimicrobial activity is reduced substantially in the presence of organic matter such as blood or secretion. Although considered an excellent antiseptic, its use is responsible for most of the dermatitis compared to other products used for this purpose.¹²

Another procedure performed also by the professional is to squeeze the area with the goal of eliminating micro-organisms, according to the speech below:

In a hurry to leave, I took the ribbon, the cotton, everything what was in the pot without the glove. When I managed, it stuck. Hence, I began to squeeze my finger and washed with soap and water. (Witness 5)

It is essential to follow the measures recommended by the Ministry of Health, for performing procedures that do not fall under existing guidelines, as the act of squeezing the injury, can cause delay in reporting the accident, sample collection and receiving prophylactic drugs if are indicated.

Through their reports, it is evident that the nursing technicians know how to handle the exposed area, however, seem not to be as safe as the approach recommended, so that some washing, antiseptic pass, squeeze, or even perform all these actions together. It is

noticed that there is no guidance to support their actions, which is perceptible in following statement:

As for knowing really what to do after the accident did not know, just so I heard some rumors that people said. No, when you stick with someone, you talk to the nurse, reaps the exam and everything, patient and everything, that's all ... (Witness 7)

It is evident that, in general, the technician is not qualified for the event this type of accident. The knowledge that an individual has of reality determines their actions. And this knowledge can not be grounded in what he heard, but scientifically proven recommendations.

After the direct care to the injured area, the Practical Nursing communicates then his accident. However, he does the nurse first before heading to the Department of Safety. Besides being your immediate supervisor, to talk to the injured employee and explain what will be done, this professional helps decrease your anxiety, according to the speech below:

The P. entered at that time, she told me: let me look, why you're crying M.? Do not cry no, you will not die but it does not. Okay, then I got calmer. (Witness 5)

Thus, it is imperative that the nurse be prepared to intervene in these cases and be aware of the protocol of the hospital and the Ministry of Health on the referral of professional that crashed with sharps. The professional nurse has as one of its bases of managerial leadership capability, among other skills that are therein: the ability to solve problems, interpersonal relationships, commitment and respect among the staff, and listening. The Nurse is a link between your child in case the Practical Nursing, and the institution.

The success of the leadership of the nurse depends on your attitudes, as good relationships with employees, be involved with the issues of work, demonstrate driving safety team and maintain effective communication. The position that the nurse holds before his subordinates must convey credibility, so that they can entrust a problem to be solved.¹⁴

The nurse should participate in the continuing education of Practical Nursing, must show interest in their actions within the institution.¹⁵ The functions of this professional, as they relate to biosecurity include accident prevention through employee orientation, as well as your referral after suffering an accident, reporting and recording of accidents, the injured emphasizing its importance, and the aid the health institution to develop and implement safety measures against accidents.¹⁶

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Among the respondents, those who did not have a correct routing after accident, they had a bad conduction of the problem by Nurse, as seen below:

She tried to contact the head nurse of the hospital. She said the laboratory personnel could not take my exam without asking for permission [...]. Then it stopped like this, and nobody authorized the collect of the exam. Hence it was. They did it after 3 days. (Witness 6)

To be seen the accident, the employee must report it immediately to the person responsible for the workplace, this usually represented by the nurse on duty. Because this is a medical emergency, the serious consequences that can result from percutaneous exposure, the employee needs to be evaluated as soon as possible. The need for speed this assessment does not seem to be aware of Nursing Technicians surveyed. This can be seen in the following statement:

Then I went to talk to the nurse on duty after washing, past alcohol. And then so she asked a doctor what was the conduct. Then the doctor said, no, it's just a test. She tried to contact the head nurse of the hospital. After 3 days I was picked. (Witness 7)

Health institutions have a duty to provide written instructions to workers, in accessible language, the protocol on the measures to be taken after occupational accidents and preventive measures.¹⁷ For those that have reported so crashed and were not routed correctly, just wondering if anyone who sought it was also aware of how to proceed and the eminence of these procedures. In RS means that the attitude we take toward the object is related to the representation that it has, as part of the knowledge acquired about you.¹⁸ The lack of knowledge of some nurses on the protocol reflected in their actions against the employee's accident. Thus, the direction given to it was much to be desired.

Again, the Ministry of Health intervenes with Norm 32 on the training being offered by the employer to all its employees at risk of exposure to biological agents, and should this prove to labor inspection through the completion of these training documents that inform date, time, workload and signature of the workers involved. This training should include available data about potential risks to health;-control measures that minimize exposure to agents; standards and hygiene procedures, use of PPE; accident prevention measures and actions to be taken by workers in accidents.

The work accident itself is a traumatic event for the worker. When it receives the necessary assistance, his anguish is softened, feeling welcomed, as shown below:

From the moment I entered also in contact with the nurse in charge and the technical work safety, I felt the safest procedure and saw that he was no longer alone. (Witness 3)

Despite the notification rate is still low by many factors, there is also the UCE that after communicating the accident is as if they had taken a load of the back of the professional. By dividing the problem, he realizes that he will have a specialized monitoring, receiving guidance that let calmer. So, too, it is important that the institution has a staff ready to make a correct and efficient routing of the injured employee.

Not only at the time of the accident, but the company must continue monitoring for months later, causing the employee to undertake to make the necessary examinations. The professional should also receive guidance and counseling regarding the possible need to make use of prophylactic medications and prevent secondary transmission in case of conversion seropositive.⁵

It is evident that these nursing technicians do not have information on how it should be full of the referral process, from notification to their subsequent medical care. Some reported only days after the accident, showing ignorance about the possibility of receiving chemoprophylaxis and treatment efficacy. For them, after accident, just collect the exams and expect the result to know if they were infected or not, the consultation with the doctor's work seems to be a mere formality. There the employee to know about the standard procedure post-exposure, for knowledge that has already been built. In RS, one can say that the knowledge gained by an individual does not cause a critical or questioning, but only their reproduction.¹⁹

The Nursing Technicians communicate what happened to whom it is more affordable and has the power to help you. The nurse is the professional most popular and therefore have to be prepared to handle the situation the way it is recommended, otherwise the physical and mental health professional may be compromised. This host employee can not be done in a cold and uncaring, but should include much dialogue about the next steps to be followed for it, leaving room for them to be cleared all your doubts.

CONCLUSION

After accident, the Nursing Technicians perform the disinfection of the affected area and report the accidents with cutting-drilling materials. These actions are not performed because these workers are trained to deal

with this kind of accident, but are based on common sense. The statements, it is clear that knowledge incipient mechanical and fragmented in relation to accidents involving sharps by these professionals prevails, triggering disposition as to the procedures recommended for this type of situation. Thus, the worker is deprived of the right to receive prophylactic drugs when needed and better medical care during the period subsequent to exposure.

The nurse is shown as a prominent character in welcoming function that conveys confidence when the employee provides clear information on how the procedure will be based on the record of the accident and what might happen to him. If the worker has no where to turn after the accident or is treated as if your problem did not matter, your anxiety level increases.

Thus, it becomes evident the need for training and continuing education guidelines on post-percutaneous exposure, not only of Practical Nursing, but for all professionals involved in the monitoring of workers.

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