

MEANINGS ATTRIBUTED TO CAUSES OF ACCIDENT WITH PERFOROCORTANTS: PERCEPTION OF NURSING PROFESSIONALS

SIGNIFICADOS ATRIBUÍDOS ÀS CAUSAS DO ACIDENTE COM PERFUROCORTANTES: PERCEÇÃO DOS PROFISSIONAIS DE ENFERMAGEM

SIGNIFICADOS ATRIBUIDOS A LAS CAUSAS DE ACCIDENTES PROVOCADOS POR ELEMENTOS CORTANTES O PUNZANTES: PERCEPCIÓN DE LOS PROFESIONALES DE ENFERMERÍA

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ABSTRACT

Objective: to understand the causal conditions of accidents with perforocortants using the meanings attributed by nursing professionals. The theoretical reference used was symbolic interactionism. **Method:** qualitative research, based on Grounded Theory (GT). A study was carried out in Macaé-RJ, Brazil, with three nurses and 17 nursing technicians. The instrument of data collection was the semi structured interview. Data were analyzed according to procedures relevant to GT: open, axial and selective coding. **Results:** The study generated three categories: “Experiencing tensions through nursing actions”; “Experiencing accidents that occur during procedural care” and “Experiencing accidents that occur in post-procedural care”. **Final considerations:** it has been verified from the data that hurry, distraction, fatigue, overcrowding, tumult in the wards, excessive hours, professional inexperience and the manipulation of the collection boxes are conditions that generate risks for the occurrence accident. The symbolic interactionism allowed the understanding of how professionals interpret and mean the world around them in the causal conditions of the accident.

Keywords: Nursing; Occupational Health; Nursing Care.

RESUMO

Objetivo: compreender as condições causais de acidentes com perfurocortantes a partir dos significados atribuídos por profissionais de Enfermagem. Referencial teórico utilizado foi o interacionismo simbólico. **Método:** pesquisa qualitativa, tendo como método a Teoria Fundamentada nos Dados (TFD). Estudo foi realizado em Macaé-RJ, Brasil, com três enfermeiros e 17 técnicos de Enfermagem. Instrumento de coleta de dados foi a entrevista semiestruturada. Os dados foram analisados conforme procedimentos pertinentes à TFD: codificação aberta, axial e seletiva. **Resultados:** o estudo gerou três categorias: “Vivenciando tensões mediante a realização de ações em Enfermagem”; “Vivenciando acidentes que acontecem durante o cuidado procedimental” e “Vivenciando acidentes que acontecem no cuidado pós-procedimental”. **Considerações finais:** verificou-se, a partir dos dados, que a pressa, a distração, o cansaço, a superlotação, o tumulto nas enfermarias, cargas horárias excessivas, inexperiência profissional e a manipulação das caixas coletoras são condições que geram riscos para a ocorrência do acidente perfurocortante. O interacionismo simbólico permitiu a compreensão de como os profissionais interpretam e significam o mundo que os rodeia frente às condições causais do acidente.

Palavras-chave: Enfermagem; Saúde do Trabalhador; Cuidados de Enfermagem.

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RESUMEN

Objetivo: analizar las condiciones que causan accidentes con elementos cortantes o punzantes a partir de los significados atribuidos por profesionales de enfermería. Estudio en base al marco teórico del interaccionismo simbólico. **Método:** investigación cualitativa según el método de la teoría fundamentada en los datos (TFD), realizada en Macaé, RJ, Brasil con tres enfermeros y 17 técnicos de enfermería. Como herramienta de recogida de datos se utilizó la entrevista semiestructurada. Los datos se analizaron en conformidad con los procedimientos pertinentes a la TFD: codificación abierta, axial y selectiva. **Resultados:** del estudio surgen tres categorías: "viviendo tensiones a través de las acciones de enfermería"; "viviendo accidentes que ocurren durante el procedimiento" y "viviendo accidentes que ocurren después del procedimiento". **Consideraciones finales:** los datos indican que el apuro, la distracción, el cansancio, el amontonamiento, la agitación en las enfermerías, la carga horaria excesiva, la inexperiencia profesional y el manejo de las cajas de recolección son condiciones que generan riesgos para la incidencia de accidentes con elementos cortantes o punzantes. El interaccionismo simbólico ha permitido comprender cómo los profesionales interpretan y entienden el mundo que los rodea ante las condiciones que causan accidentes.

Palabras clave: Enfermería; Salud Laboral; Atención de Enfermería.

INTRODUCTION

Faced with the global challenges for the quality of patient care, there are strategies that aim to guarantee their safety. Therefore, it is essential that health professionals prioritize the provision of risk-free care, not only for the patient, but also for themselves. And understand that, in doing so, there will be an appreciation of measures that aim to identify and mitigate the triggering factors or potential for failures in care practice, especially nursing professionals.¹

In addition, the impacts resulting from failures in care are diverse, while they may affect the health of the patient, the worker, as well as impact on the economic dimension of the institution and, consequently, the State. Therefore, talking about patient safety implies addressing a facet of public health, which is increasingly common due to the increasing flow of care, worker overload, conditions related to the level of professional competence, managerial aspects, among others.^{2,3}

At this juncture, Nursing, as an expressive contingent of human resources in the most diversified health care contexts, exerts and suffers significant influences from the above-mentioned factors, among which it is necessary to highlight the accidents with sharps injuries. This is because this type of accident affects many nursing professionals daily^{4,5} and the associated damages are relevant to public health, given the risk of blood-borne infections due to possible injury.⁶

Exposure to secretions and organic fluids during customer service puts the health of the nursing professional and the patient at risk. It is also worth noting that, despite the possibility of more than 20 pathogens being transmitted by biological exposure to blood, the most epidemiologically important viruses are hepatitis B, C and human immunodeficiency virus (HIV).⁷

In addition to the contextual factors, that is, the working conditions, which potentiate the chance of the accident with sharps, there is the singularity of the worker in the field of valuation that he attributes to the safe practices in developing his work process. Thus, based on the principle of symbolic interac-

tionism, in which actions are preceded by the meanings attributed to them, we ask: what meanings do nursing professionals attribute to factors related to sharps injuries?

Based on the above, it is justified the need to know the meanings attributed by nursing professionals about the causal conditions of the accident with sharps. However, we must consider that these meanings can be modified, modulated from the process of social interaction. However, it is essential to know the rooting to think strategies that modify this panorama. In this way, the objective was to understand the causal conditions of accidents with sharps, from the meanings attributed by nursing professionals.

METHOD

A qualitative study, which had as a methodological reference the Grounded Theory, which in Brazil receives the translation for Grounded Theory (GT). The theoretical reference used was symbolic interactionism.

In this sense, it should be noted that GT is a method that was developed by two American sociologists, Barney Glaser and Anselm Strauss, whose objective is to explain the action in the social sphere from theoretical constructs.⁸

In the perspective of interpretive research, GT is a variant within symbolic interactionism, focused on the meaning that one situation or object has for the other.⁸ Thus, symbolic interactionism is a theory that starts from the perspective of Social Psychology, whose purpose is the seizure of behavior, feelings, expectations of symbolic communication, as well as the meaning of speech, silence, images constructed in drawings, behaviors presented. The symbology allows, at this juncture, the perception of the dynamic interactive processes present in the relations between the subject and the elements of interaction.^{9,10}

Therefore, the purpose of the use of symbolic interactionism in this study is the understanding of how individuals interpret objects and other people with whom they interact,

whereas this process of interpretation can contribute to explain individual behavior in specific situations as well.¹¹ Therefore, the basic assumptions are that individuals act on the basis of the representative meanings of their social interactions. In this process, according to the readings that the individual makes of a certain attitude, action or behavior of others, he elaborates strategies for his behaviors. Thus, the conclusions of what the individual perceives may be determining parameters for the attitudes he will have in a given social group.¹²

The idea that GT has its roots in symbolic interactionism is reinforced by the way in which people give meaning to social interactions. In this method, we highlight the theorization that permeates the data circularity, theoretical sampling, theoretical sensitivity, coding, as well as constant comparison between data, categories and subcategories.¹³

From the screen survey, three nurses and 17 nursing technicians from a public hospital located in the city of Macaé, Rio de Janeiro participated. Therefore, the following inclusion criteria were adopted: professionals who experienced the experience of the accident with sharps. These accidents occurred between March 2011 and September 2013. The exclusion criteria established were: retired professionals, vacationers and maternity leave. In addition, the delimitation of the number of participants of the research followed the criterion of theoretical saturation, that is, when no data are found that develop the properties and dimensions of a category, as well as when the categories already have explanatory density capable of responding, in to the research phenomenon.

The technique of data collection consisted of a script of semi-structured interview conducted from November to December 2013, individually, in a quiet place and recorded in MP3. In this script there were questions to obtain as much information as possible about the phenomenon investigated.

The analysis was performed according to GT procedures, namely: open coding, axial coding and selective coding. For this analysis and subsequent discussion of the findings, relevant literature was used. Thus, the data was initially sorted, transcribing the material from the interview. After reading the material, the open coding process was started, and the raw data was opened, generating the first codes in the vertical distribution of the discourse. These codes, in the axial coding phase, were grouped by similarities, giving rise to the first subcategories. These subcategories were refined from the selective coding, giving rise to the central category that explains the causal phenomenon of the investigated phenomenon.

This explanatory capacity is possible because in the GT there is an analytical resource that makes it possible to order the categories in a wide explanatory capacity, being this the paradigmatic model that establishes the configuration of the theory from the interaction between the following elements:

causal condition of the phenomenon, intervening conditions, context of interactions, strategies and possible consequences.

Thus, GT is a method that allows the construction of a theory rooted in the data and explains the phenomenon under study based on the complexity that sustains it. The rigor of its analytical process has been a highlight and an impact factor for the credibility of the qualitative results.¹⁴

The study was submitted to the Research Ethics Committee of the Anna Nery School of Nursing (EEAN/HESFA) with the approval of the number: 330,070. All ethical precepts involving research with human beings were complied with pursuant to Resolution 466/12 of the National Health Council. To guarantee the anonymity of the participants, the statements were identified with the letter PE (nursing professional) and the ordinal number corresponding to the sequence of the interviews performed. It should be noted that the interviews were only carried out by signing the Term of Free and Informed Consent.

RESULTS

According to the GT procedures and after immersion in the data, concepts and codes, it was possible to arrive at the phenomenon: experiencing the implications of the work of the nursing team in the daily routine. To better understand it, it is necessary to expose its three categories, namely: experiencing tensions by performing actions in nursing; experiencing accidents that occur during procedural care; experiencing accidents that occur in post-procedural care.

It should be noted that these categories are closely related, as shown in Figure 1.

EXPERIENCING TENSIONS THROUGH NURSING ACTIONS

The work routine faced by nursing in health institutions is challenging, since it is influenced by several factors such as human resources deficits, materials, working conditions, among others that increase the chances of failure. In this sense, the rush to carry out the procedures to be able to attend to the clientele increases the risks related to accidents with sharps during health care. Lack of attention and / or distraction when performing procedural actions also lead to situations that may promote the occurrence of the accident, as shown in the following excerpts.

Sometimes I notice that people go a little easier, they do not take the right procedures, the precautions, the standards, I think they sometimes get involved with work and it becomes routine and they often forget about one simple glove (PE1).

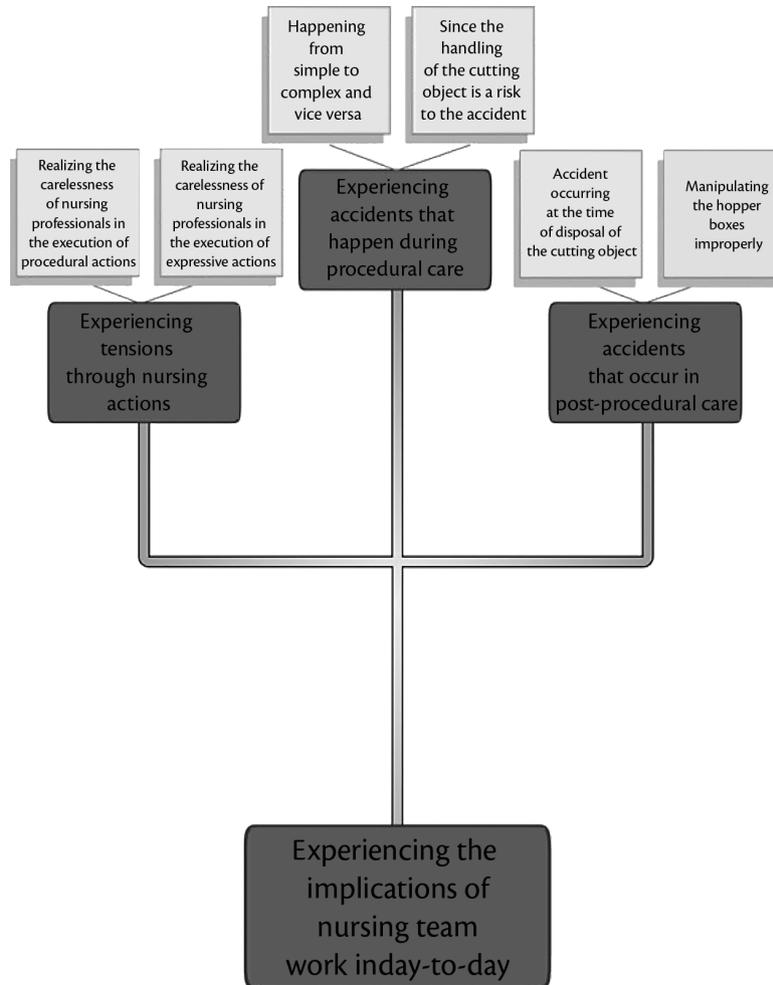


Figure 1 - Visual representation of causal conditions: experiencing the implications of the work of the nursing team in the daily routine. Source: own preparation.

And the major focus of the accident was my lack of attention, I should have paid more attention to the procedure I was doing (PE2).

Other factors related to accidents are also attributed to fatigue, turmoil in the wards or to professional inexperience in the execution of technical procedures.

I feel that sometimes when people are very tired we become slower, more inattentive. Maybe the fatigue is a great cause of accident (PE3).

Because that day I listened a lot to the tumult of the wards [...]. Today I focus more on what I'm doing (PE5).

I think it was lack of attention and experience in handling the intravenous device (PE6).

Some factors that condition the accident end up relating. The conversation with the client can distract the professional, even if it is for some purpose, such as reducing his tension during a procedure. Tension at the time of the procedure can lead to inattention. This triggers untimely conditions that significantly compromise care. Dangerous cycle of stresses concomitant with care.

I was at the point when I was removing the stitches from the patient's head with a scalpel blade. Was talking to him. When I pulled the first stitch, he screamed, and I got scared and the blade cut off my finger (PE7).

She had to have a venipuncture on the child and her mother asked to be close. I explained to her about the procedure. But with the child's crying, the mother became so nervous that I distracted myself and ended up piercing my finger with the intravenous device (PE8).

EXPERIENCING ACCIDENTS THAT HAPPEN DURING PROCEDURAL CARE

Accidents in health care are not in accordance with the results presented, related to the complexity of the procedures. As can be observed, intramuscular injection, calcaneal glucose test in newborns, venous puncture for administration of antibiotics, considered as simple procedures for some professionals, provide opportunities for the phenomenon in question.

The accident happened when I was working in pediatrics with an intramuscular injection (PE9).

In my case, as much as you are alarmed by the accident, it was a simple procedure, it was a puncture in the soles of the foot (PE10).

To go to the infirmary to do a blood glucose test for an infant and when I came across the child in the cradle, in the child's rapid movement, after piercing the same, the needle entered my finger (PE11).

It was in the very act of administering the medication. The needle came back and pierced my finger (PE12).

Some nursing professionals perceive, during their work routine, that the way of manipulating the sharps equipment can present risks for the occurrence of the accident.

Suddenly I should have left the newborn in the cradle, in an adequate position so I would not have to bend over, it would stay in the cradle, give a hole in his foot and discard it in a bowl initially and then lead to the disposal and would not be holding that needle in his hand to be able to discard (PE13).

It was an accident that occurred in the Emergency Service where I went to help my colleague. She withdrew the IV device and instead of discarding it into the kidney tub, pushed. Then the guide took my finger (PE14).

I think that, being acting in a training of another professional, the colleague was very insecure to puncture the venous access [...]. It turned out that it crashed (PE15).

The insecurity, poor professional positioning of the professional during the execution of an invasive procedure, as well as the manipulation of sharps without support material such as a kidney tub, helps to the occurrence of the accident involving biological material.

EXPERIENCING ACCIDENTS THAT OCCUR IN POST-PROCEDURAL CARE

Disposal of the sharpening device, whether in a support instrument or in the collection box itself, is as important a time as its handling during the care. The professional must act with great care, caution and care, as the risk of accident is real and constant.

There was another accident that I went to put the needle in the collection box and had a syringe with a needle facing upwards. Then when I went to put the needle, the other syringe stuck my finger (PE18).

The accident happened at the time I threw the intravenous device into the collection box and came back on my finger, it was very fast, it happened very fast (PE19).

I was preparing an intramuscular medication. [...]. After the procedure I placed the syringe in the tank for disposal and it stuck my finger (PE20).

Another situation that exposes the health of the nursing professional is the way he handles the collection boxes. Many may be overcrowded, surpassing the safety margin, and may cause the accident.

At the time I was discarding the intravenous device in the collection box, I ended up crashing because it was too full, beyond the limit of that dotted line (PE 13).

DISCUSSION

In the case of a perforocortant accident, professionals are aware of the risks to which they are exposed when carrying out a procedure for dealing with customers. Not everyone, however, is concerned to protect themselves properly. Some attribute the accident to something inherent in the profession. Thus, there is a need to discuss the rates of accidents involving biological material, the risks of disease transmission, the causes of accidents, the disposal of sharps, and the significance of the accident.

Regarding exposure to biological material, studies conducted by the World Health Organization (WHO) between 1989 and 2001 estimated that there were more than three million percutaneous exposures among 35 million professionals worldwide. This would result in approximately 16,000 cases of hepatitis C (HCV) transmission, 66,000 cases of hepatitis B (HBV) and 200 to 5,000 cases of transmission of human immunodeficiency virus (HIV).¹⁵

Occupational transmission of HIV, hepatitis B, and hepatitis C is an important potential hazard for health workers. Stan-

standard precautions play a key role in minimizing the incidence of occupational exposure to biological material.¹⁶ Thus, nursing professionals need to be aware of the standard precautionary norms, as well as being submitted to a permanent education.¹⁷

The National Worker and Worker Health Policy, instituted by Ordinance 1.823/12 of the Ministry of Health, aims to define the principles, guidelines and strategies to be observed by the three spheres of management of the Unified Health System (SUS), for the development of comprehensive health care for workers, aimed at promoting and protecting workers' health and reduction of morbimortality due to development models and production processes.¹⁸

In the meantime, it is necessary to emphasize Regulatory Norm 32 on health and safety at work in health facilities. This standard is considered of extreme importance in the Brazilian context, since the changes proposed by the procedures and protective measures are extremely beneficial, with the objective of promoting safety at work and prevention of accidents and occupational diseases.¹⁹

According to items 32.2.4.9.1 it is necessary to carry out training within the process of admission of employees, even before the beginning of their work activities. It should be emphasized that continuing education should occur during the period in which the professional is performing his working day. In addition, it should happen whenever there is a change in working conditions. This can help reduce accident rates.²⁰

Accidents involving sharp equipment among nursing workers are frequent, mainly due to the high number of needle manipulation, intravenous catheters, slides and other materials used in the execution of technical procedures during nursing care.²¹

Regarding the execution of technical procedures, a survey consisting of a sample of 100 volunteers showed that 27% of accidents were due to venipuncture and 12% in intramuscular administration.⁷ This reveals the importance of professionals being more attentive in handling intravenous and intramuscular devices.

The above devices must be disposed of in specific containers. Among the 45 nursing professionals participating in a survey, 82,2% had a habit of disposing of sharps in standardized boxes and 17,8% discarded them in containers not suitable for this purpose.²¹ In addition to the type of disposal container, the excess of sharps disposal in addition to the safety margin also contributes to the accidents.

Another factor that reveals the occupational risk in the working environment of nursing professionals is the excessive workloads they perform. The number of employment bonds and the consequent workload well above the recommended one, 30 hours a week, lead to changes in sleep, nervous disorders, deficits in the level of attention and disorganization of social and family life. The duplicity of employment, necessary for survival due to low wages, ends up depleting the physical and mental condition of the professionals, increasing the chances of the accident.²²

However, it is possible to infer that the human being acts and reacts to these circumstances according to the meaning that a certain thing or situation has for him. The human being within a society uses the symbols and from these symbols is that he elaborates meanings; these meanings can change from the interaction process.

From the perspective of symbolic interactionism, meaning is an important element in understanding human behavior, interactions and processes. To achieve full understanding of the social process, the researcher must grasp the meanings that are experienced by the participants in each context.¹¹

In this sense, it is perceived that each nursing professional has a way of signifying the accident. The process of signifying and re-signifying occurs all the time. From an accident, professionals can change their way of viewing the problem based on the re-signification and, in this way, modify their actions. However, educational actions must be carried out that work the symbolic so that signification is modulated with the purpose of preventing accidents.

FINAL CONSIDERATIONS

Health professionals, especially nursing professionals, are exposed to the main occupational risks, such as chemical, physical, ergonomic and biological. The accidents with sharps expose the professional to the biological risk and, therefore, the possibility of contamination with some diseases. The occupational risks to which these professionals are exposed refer to the importance of safety in the workplace as a guarantor of good professional practice. For this, the understanding of the signification about the phenomenon investigated was possible from the symbolic interactionism.

The apprehension of meanings considering the causal conditions of the phenomenon demonstrates how complex and dangerous the situations experienced by nursing professionals are in face of daily care. Multiple factors determine the occurrence of the accident with sharp equipment, including the way the professional interprets and responds to the actions of the care.

The life trajectory of the human being is marked by his interaction with the universe that surrounds him. From the assumptions of symbolic interactionism, it is possible to understand how nursing professionals mean and interpret the world around them, and these meanings can change from their interaction with other human beings and with themselves.

Therefore, to reduce the risk of accidents with sharps injuries, the causal aspects should receive special attention from the professionals, given the possibility of transmission of diseases and the psychological commitment of the injured to the detriment of the social repercussion of the diseases. The causes of accidents, such as haste, distraction, fatigue, overcrowding,

tumult in the wards, excessive hours, professional inexperience and handling of the collection boxes, are conditions that create risks for the accident.

Regarding a potential limitation of the study, the phenomenon investigated can be influenced by institutional management, so the voice of managers could bring other aspects. However, considering that knowledge is dynamic and complex, this potential limitation is also indicative of new investigative movements.

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