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THE IMPORTANCE OF TRAINING NURSES TO DEAL WITH TRAUMATIC TRAFFIC EMERGENCIES

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Abstract: This study aims to show the importance of continuous training for nurses in high-risk situations, especially in the management of traumatic emergencies resulting from car accidents, given that in most cases they are responsible for providing the first support to the traumatized client. It also emphasizes the high incidence of these traumas in Brazil, which are part of a major public health problem in the country.

Keywords: Nursing. Trauma emergencies. Training. THEMATIC AREA: Trauma Victim Care.

INTRODUCTION

Trauma is understood to be any injury produced by violent action, whether chemical, mechanical or physical, characterized by a physiological or structural alteration of a part or the whole body, resulting from energy exchanges between the environment and the body (ACS, 2018). Traffic accidents, homicides and suicides together account for around two-thirds of deaths from external causes in Brazil, and are responsible for the increase in morbidity and mortality (DATASUS, 2024). Considering the expected increase in vehicular accidents over the next 20 years and the need for an improved approach to emergency trauma care, it is hypothesized that the implementation of mandatory systematic continuing education, specialization and refresher programs for nurses, sponsored by both public and private hospital institutions, will result in a significant improvement in the effectiveness and safety of care provided to victims of vehicular trauma (Velho, 2020). This research aims to analyze the importance of training nurses in the management of traumatic emergencies caused by car accidents.

METHODOLOGY

This is a qualitative and descriptive study aimed at analyzing nursing practices in trauma situations resulting from vehicle collisions and the importance of training the professionals involved. For the search and selection of articles, renowned academic databases such as Scielo, CAPES, PubMed and Google Scholar were consulted. Specific descriptors were used, including "trauma", "vehicle collisions", "trauma nursing" and "nurse training".

The selection considered peer-reviewed articles published in the last 10 years to ensure that the information was relevant and up-to-date.

The inclusion criteria were set to select only scientific publications that directly addressed nursing practices in trauma contexts and professional training. Relevant articles, theses and dissertations published in Portuguese, English and Spanish were included. On the other hand, documents such as opinion articles, conference abstracts and publications that did not specifically discuss trauma care in vehicle collisions or nursing training were excluded. After selecting the articles, a detailed reading of each one was carried out, focusing on three main areas: the methods of care described, the challenges faced by nurses and aspects related to professional training. The data was analyzed using thematic categorization to identify and synthesize information on nursing practices and the effectiveness of the knowledge required for interventions.

The extraction of qualitative data enabled a deeper understanding of nursing practices and the training needs of professionals, providing a solid basis for evaluating current practices and opportunities for improvement in the training and performance of nurses in trauma situations.

THEORETICAL BACKGROUND

Since trauma is an event that causes physiological and/or structural alterations, as defined, in order to effectively care for victims it is necessary to understand the kinematics of trauma, the study of the movement of bodies, associated with car accidents. This helps to identify the main injuries to be found according to each collision and improve the clinical approach (Costa, 2020). In order to understand the dynamics of trauma, it is necessary for health professionals to understand basic concepts of physics, anatomy and biomechanics, which play a significant role in the resulting injuries. As known worldwide in the world of trauma, Newton's second law, the Fundamental Principle of Dynamics, is expressed by the equation:

$$KE = \frac{1}{2} mv^2$$

Where: KE= kinetic energy; M= mass of the object; V= speed of the object (Silva, 2018).

This is essential for understanding the dynamics of injuries, as it describes how forces affect the movement of bodies. In cases of trauma, such as accidents, the force applied can cause different types and severity of injuries, depending on the intensity and distribution of the force over the mass of the body. Other concepts are part of the framework for understanding, such as deceleration and relative velocity.

Traumas can be classified into two groups: penetrating and blunt, as well as into subgroups such as temporary and permanent.

After the team is called and arrives, it first assesses the scene of the accident and isolates the area, so that it can start providing care. This situation underscores the importance of training the professional involved in the support, who must be equipped with knowledge related to Urgency and Emergency, especially the mnemonic: XABCDE, which will guide the order of the efforts made. Once the victim's traumatic condition has been stabilized, the Mobile Emergency Care Service (SAMU) provides safe transport, depending on the severity of the injuries and the medical needs.

Well-trained nurses are able to coordinate and respond quickly to emergencies, reducing the time between the accident and treatment, which is crucial to increasing the chances of survival and minimizing complications, since time is a determining factor in the quarterly mortality found in trauma (Sena *et al*., 2020).

The financial impact on the government of hospitalizations related to automobile traumas is significant. This includes medical expenses for the health system (emergency care, surgeries, hospitalizations, rehabilitation and other specialized medical services), loss of productivity, ongoing social and financial support, as well as infrastructure repairs, impacting government social assistance programs (Massaú *et al*., 2016).

The growth in demand for health services, rising costs and restrictions, as well as constant changes in clinical practices, have expanded the interest of various nations in monitoring the quality of health services (Campbell *et al*., 1999).

It is estimated that the social impact caused by road accidents represents around 1% of the Gross Domestic Product (GDP) for developing nations, while it can reach 2% for developed nations (Souza *et al*., 2007).

In this context, it can be seen that automobile trauma is a problem of vast magnitude, with significant impacts on both the victims and the public purse. It is therefore imperative to invest in the training and education of the professionals responsible for attending to these situations, in order to guarantee high quality and safe treatment, reducing the possible burdens associated with accidents (Silva *et al*., 2016).

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FINAL CONSIDERATIONS

Based on the analysis carried out, the urgent need for continuous and specialized training of nursing professionals for the efficient management of traumatic emergencies resulting from car accidents was highlighted. The implementation of mandatory systematic continuing education programs, sponsored by both public and private hospital institutions, has proved to be a crucial strategy for improving the effectiveness and safety of the care provided to victims of vehicular trauma.

It is therefore imperative that the National Health Council consider implementing and strengthening public policies aimed at continuing education for nurses. The hypothesis The analysis of the data and the literature reviewed supports the idea that such programs will result in significant improvements in the care provided. Adequate training for nursing professionals not only optimizes emergency care, but also contributes to reducing complications and mortality, thus having a positive impact on national public health.

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