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# Systematization of Nursing Assistance (SAE) in the Care of the Victim Patient of Spinal Cord Injury in the Light of Orem's Theory of Self-Care: Academics' Experience

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## ABSTRACT

**Objectives:** To report the experience of nursing students in assistance based on the Systematization of Nursing Care (SAE), founded by Self-care theory of Dorothea Orem, directed the patient victims of Trauma Spinal Cord (TRM). **Methodology:** study of the type of experience report. The experience occurred during the practical class of the discipline of Adult Health II given in an emergency hospital, located in Arapiraca-AL. During the care, anamnesis and physical examination, diagnosis, planning, implementation and nursing evaluation were performed. **Results:** some of the nursing diagnoses were anxiety, attitude towards positive care, impaired physical mobility, self-care deficit for bathing and hygiene, among others. Regarding the nursing interventions, some of them were to accompany the patient, administer medications, monitor respiratory condition, assess musculoskeletal condition, evaluate neurological condition, assist in mobility, among others. From this, the expected results were defined as presenting gas exchange with normalization of CO<sub>2</sub> and O<sub>2</sub> standards, improvement of respiratory pattern, passive physical mobility, anxiety relief, among others. **Final considerations:** It was noted that the patient with TSC benefits from developing an individual and targeted care plan. The implementation of the SAE ensures the role of nurses in the care and ensures a practice based on scientific evidence and nursing theories. The performance of academics in the hospital care service promotes the gain of experience and, thus, allows a better performance as a nurse practitioner.

**Keywords:** Nursing care, Adult Health, Trauma of the Spinal Cord.

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## INTRODUCTION

Trauma Spinal Cord is a traumatic injury to the spine, causing a stoppage of the neuronal stimuli responsible for the transmission of impulses between the brain and the body. Among the complications are those related to thermoregulation, sensory, motor and sexual losses, lack of control of the bladder sphincters, intestine and potential complications in motor, circulatory, spasticity and pain<sup>1</sup>.

A study by Souza, EPD et al (2013)<sup>2</sup>, shows that the main complications in patients with TRM were: deep venous thrombosis, which is a common complication in people with spinal cord injury due to immobility; medullary shock that is defined as a state of complete spinal cord inflexibility, which occurs after severe trauma to the spinal cord; neurogenic shock where patients with spinal cord injury may also have a drop in blood pressure, accompanied by bradycardia; Autonomic dysreflexia, which is a vasomotor change, occurs particularly in patients with cervical cord injury above the sympathetic flow, but may also occur in patients with high thoracic lesions above T6; neurogenic gut that is a condition that affects the body process for the storage and disposal of solid waste from undigested food. After a spinal cord injury, the nervous system can no longer control bowel function in the same way as it did before; spasticity that occurs when there is increased muscle tone and accompanies the acute and chronic phases following the lesion of the upper motor neuron; onset of pressure ulcer, linked to aging, impairment, prolonged contact with moisture from urine perspiration, faeces, shear forces and frictions, and decreased tissue perfusion; aspiration pneumonia, as patients with tetraplegia or high paraplegia are at increased risk of infection due to diaphragmatic paresis and / or intercostal muscles, which impairs the ability to eliminate secretions and psychological changes that in the acute phase of the spinal cord injury, the individual may experience a range of emotions such as despair, numbness, fear, hope and anger.

In Brazil, in most cases, such injury has a traumatic origin, being the injury caused by firearm, auto accident and falls, most frequent external causes. The victims of these injuries are predominantly young adults, ranging in age from 18 to 35 years and the proportion of four men to one woman. Such injuries generate a high-cost incapacity for the government and entail important changes in the patient's lifestyle<sup>3</sup>. It is estimated that 40 new cases per million inhabitants occur, or about six to eight thousand cases per year<sup>1</sup>. In Alagoas, among the causes of loss of quality of life are the injuries caused by TRM, mainly in the Alagoas agreste, due to the large number of accidents with motorcycles, which is characterized as the most used means of transportation by the population.

Resolution COFEN-358/2009 provides for the systematization of nursing care and the implementation of the nursing process, in addition, Resolution No. 272/2002 of the Federal Nursing Council designates SAE as a private nurse activity to be applied in health units. The nurse performs the nursing process, which consists of five stages, among them the physical examination and the interview, and from this it is carried out the collection of specific data related to the physical disability and disabilities that will guide the actions of the specialized nursing for the assistance to the person with physical disability. This nursing assistance in rehabilitation has as main objectives to help the patient to become independent as much as he can within their conditions, promote and encourage self-care through orientation and training of situations, prepare the physically disabled for a social, family life best possible and with quality<sup>4</sup>.

One of the theories that presents congruence with the specific focus of attention to the person with spinal cord injury is the theory of self-care of Dorothea E. Orem<sup>5</sup>. Dorothea E. Orem's general nursing theory to constitute of three theories that have a mutual relationship: self-care, self-care deficits, and nursing systems. Integrated into the three theories proposed by

Orem, there are six central concepts (self-care, self-care action, self-care deficit, therapeutic demand for self-care, nursing service and nursing system) and, finally, a peripheral concept, which leads to an understanding of the general theory<sup>8</sup>. As in this theory, in rehabilitation the proposal is the active participation of the patient in his treatment, including the definition of goals, in order to achieve the highest possible level of independence<sup>5</sup>.

It is believed that a nursing care focused on the prevention of complications can contribute to minimize sequelae, reduce hospitalization time, improve self-confidence, credibility and adherence to treatment, since people who are victims of MRT have a long process of rehabilitation that is difficult for all involved and requires adjustments and adaptations in the daily life of the patients so that they become productive<sup>2</sup>.

## **OBJECTS**

To report the experience of nursing students in assistance based on the Systematization of Nursing Care, founded by Self-care theory of Dorothea Orem, directed the patient victims of Trauma Spinal Cord (TRM).

## **METHODOLOGY**

This is a descriptive, qualitative and observational study of the type of experience, lived by nursing students from the activities developed in the discipline of Adult Health II. The inclusion criterion for the application of nursing care systematization was to be hospitalized in the hospital environment where the study took place.

The study scenario was an emergency public hospital, located in Arapiraca, in the interior alagoan. The data collection was carried out in September 2018, having as instrument the medical record made available by the hospital unit, as well as the physical examination in the nursing consultation to the bed, paying attention to the aspects that relate to self-care.

The actions of the academics were to perform the nursing care, contemplating the steps of the Systematization of Nursing Assistance (SAE), which concerns research (anamnesis and physical examination), nursing diagnosis, actions planning, implementation of actions and evaluation, based in the theoretical reference of the self-care of Dorothea E. Orem. The nursing diagnoses and interventions were based on the International Classification for Nursing Practice (CIPE) for the year 2017.

## **RESULTS**

The SAE, in accordance with the resolution of COFEN 358/2009, should be composed of five interdependent steps that guide nursing care based on scientific theories. Among the steps, are Nursing history that is carried out anamnesis and physical examination, Nursing diagnosis, raising the main findings, Nursing planning, Nursing Implementation and Evaluation.

To obtain the results regarding the health status of the patient, searches were carried out in the medical record, an instrument now available from the hospital unit, which provides information about the diagnosis, the patient's arrival at the health service, the daily evolutions performed by the multiprofessional team, described in detail, as well as the physical examination, in order to look for signs and symptoms that corroborate with the clinical condition.

During the accomplishment of these steps, some relevant aspects were found, taking into account the theory of self-care, paying attention to the basic conditioning factors, health deviations, universal and development needs, and self-care deficits. The aspects found were adult-juvenile, history of rollover in motor vehicle, severe general health, apparent MRT, polytrauma, face trauma, right pleural effusion, anxiety episodes, sleep quality and rest decreased, concomitant use of various medicines.

Given the information acquired, it was possible to draw up nursing diagnoses and interventions that, in light of Dorothea Orem's theory of self-

care, should be approached from the needs and interests of the individual.

Nursing is a profession that forms to recognize the needs of patients and hence provide special care by promoting health as well as preventing

their injuries. In this sense, one of the theories proposed by Orem, The Theory of Nursing Systems, is very categorical, when it comes to the nursing performance in a situation of self-care deficit.

Nursing Diagnostics	Nursing interventions	Expected results
Anxiety	Reduction of anxiety; Encouraging rest; Guidance on the disease	Anxiety Relief
Impaired physical mobility	Evaluate musculoskeletal condition; Assist in mobility; Mobility Assistant in Bed	Passive physical mobility
Self-care deficit for bath and hygiene	Bathe the patient; Assistant in Hygiene	Maintain satisfactory hygiene
Self-care deficit for dressing and dressing	Helping to get organized; Helping to Dress Up	Self-care to dress up and dress appropriately
Self-care deficit for food	Auxiliary in Food or Liquid Intake	Self-care for proper feeding
Risk for autonomic dysreflexia	Perform bladder catheterization; Assess signs and symptoms for urinary tract infection; Evaluate neurological condition; Teach the patient, caregiver and / or family member to identify the harmful stimuli capable of precipitating autonomic dysreflexia; Evaluate care plan	Prevention of autonomic dysreflexia
Risk for impaired skin integrity	Skin care; To evaluate the need for change of position, considering the presence of hyperemia and excoriations in bony prominences; Keep sheets in bed without folds or wrinkles; Prevention of pressure ulcers	Whole skin; Prevention of pressure ulcer involvement
Risk of infection present	Change daily the dressing of the AVP; Assess signs and symptoms of infection	Prevention of infection
Adverse drug risk	Accompany patient; Administer needed medications	Responding to Effective Medication
Chronic pain present risk	Evaluate Response to Treatment; Evaluate Response to Pain Management (Control); Evaluate Psychosocial Response to Instruction on Pain; Assess neurological condition	Pain prevention
Risk of ineffective thermoregulation	Monitor body temperature; Monitor blood pressure; Monitor respiratory condition; Monitor signs and symptoms of hypothermia and hyperthermia	Preventing temperature changes
Risk of ineffective coping	Advise on Hope; Support Family Coping Process	Feeling of coping and acceptance of clinical status
Ineffective breathing	Monitor respiratory condition; Check and record respiratory frequencies	Improvement in respiratory pattern
Impaired gas exchange	Perform respiratory auscultation and evaluate oxygen saturation; Perform aspiration of the airways	Gas exchange with normalization of CO <sub>2</sub> and O <sub>2</sub> standards

**Board 01** - Nursing diagnoses, nursing interventions and expected results according to the International Classification for Nursing Practice (CIPN) of the year 2017 in a patient admitted to a hospital in the interior of Alagoas in the year 2018.

Based on this assumption, the nursing team of the hospital unit can act according to the Theory of Nursing Systems, proposed by Orem, when related to the patient suffering from TRM. It is considered that the most adequate is the Fully Compensatory System<sup>8</sup>, since the individuals affected by MRT generally present inactive movements and decreased or absent sensitivity, characterizing the inability to perform self-care, being the nursing competent to assist and be sufficient for him.

Patients who are victims of MRT are generally critical and require a long period of hospitalization and treatment. Imbricated to this, the prevention of secondary injuries by the nursing team towards these patients may be a critical node and, in its entirety, may be related to the care in block mobilization, especially at the moment of the bath and the absence of a method that organizes and directs the team's conduct according to the needs of each patient.

In a study by Campoy et al. (2012), it was evidenced that individuals with MRT were, in the great majority, men with mean age of 35 years, single, with complete secondary education and without post-injury occupation. The main cause of MRE was due to accidents with motor vehicles, followed by falls, with a predominance of complete lesion at the cervical level, with a lesion time of one to five years.

The patient, a victim of MRT, should be, from the initial care, immobilized with a cervical collar, mobilized in a block, running the bearing<sup>11</sup>, positioned on a rigid board and transferred to the emergency room. It should be emphasized that block mobilization is not only performed in the out-of-hospital environment, but also, and due to its importance, in the hospital environment, since the patient should be moved in block, on the stretcher and in the head and the cervical region being supported and protected, both for examination of the spine and at the moment of bathing<sup>12</sup>.

It is substantial that the nurse is trained to attend the victims of TRM, exhibiting a technical-scientific approach, with an integral and

individualized approach based on the systematization of nursing care, thus reflecting a good patient prognosis and increase of survival. For this, it is important that the nursing team adopt a working method capable of directing and organizing their activities according to the patient's individual needs, providing a better understanding of the team in the systematized care process<sup>9,10</sup>.

Nursing diagnoses corroborate with the study by Cafer, CR et al. (2005)<sup>7</sup>, which indicates the predominance of impaired physical mobility (100%), self-care deficit for bathing and hygiene (100%), self-care deficit for dressing and tidying up (100%), risk for infection (80%) and risk for impaired skin integrity (70%) in spinal cord trauma, among others, such as anxiety, found in 30% of the patients, risk for autonomic dysreflexia and self-care deficit to be fed at a frequency of 20%, and among nursing interventions, exercise therapy was identified: joint mobility, positioning, bathing, self-care assistance: bathing and hygiene, self-care assistance: dressing / tidying up, infection control, pressure control over body areas, pressure ulcer prevention, anxiety reduction, supervision control of dysreflexia, self-care assistance: feeding, teaching: disease process, bladder catheterization, pain control.

## FINAL CONSIDERATIONS

It was noticed that the nursing care carried out by the academics was extremely important, demonstrating the role of nursing in relation to the patient affected by TRM in the intrahospital area, as well as the continuous need to have professionals able to act in front to the patient with TRM. The elaboration of a plan of individual and integral care, with constant evaluation, allows the professionals to understand the particularities of these patients, preventing secondary lesions and the success of the treatment. It is necessary that the nursing student have experiences such as these so that, in the future, he can provide a higher quality care, based on the Systematization of Nursing

Assistance (SAE) in the light of a scientific theory.

Nursing consultation, which is private to the nurse, needs to be strengthened, as well as teamwork in the face of a more complex care. The scientific knowledge allied to the practice equips the professional for the clinical practice, being the responsibility of this professional to make decisions regarding health. It is necessary to implement nursing diagnoses and interventions in a precise way, guiding care, providing effective rehabilitation and improving the quality of expected results.

In applying Orem's self-care theory in the systematization of nursing care to the victim of TRM, it was possible to understand the importance / utility of the theory, which allowed to emphasize the link between the professional and the patient, making the patient the protagonist of the care, aiming at the prevention of secondary lesions and the improvement in quality of life.

Nursing theories are necessary to reshape professional practice, with scientific support. The contributions of Orem's theory have directly reflected on the learning about self-care in nurses' clinical practice. In this sense, nurses need to be aware of their role in the self-care process, considering that he must be together with the patient. The patient can not lose his autonomy, so it is necessary to engage him in the planning of his nursing care, where he will have the opportunity to present his own decisions, implementing self-care practices, beneficial to him and to the professional. It is important to highlight the importance of using the theory associated with SAE in the health service in order to guarantee excellence throughout the nursing care.

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