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REHABILITATION IN SPINAL CORD: REFLECTION ON THE APPLICABILITY OF THE OREM'S SELF-CARE THEORY

REABILITAÇÃO NA LESÃO MEDULAR: REFLEXÃO SOBRE APLICABILIDADE DA TEORIA DO DÉFICIT DO AUTOCUIDADO DE OREM

REHABILITACIÓN EN MÉDULA ESPINAL: REFLEXIÓN SOBRE LA APLICABILIDAD DE LA TEORÍA DEL DÉFICIT DE AUTOCUIDADO DE OREM

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ABSTRACT

Objective: to examine the applicability of Orem's Self-Care Theory in the process of rehabilitation of people with spinal cord injury. **Method:** we carried out literature on the topic in national and international databases. **Results:** based on the survey of the literature on the aspects involved in nursing care with the person cord spinal injury and the assumptions and structure of Orem's Self-Care Theory, we analyzed the convergences. **Conclusions:** concluded that the theory can be applied to any person including spinal cord injury, because it allows a change in their living conditions, since it includes not only the person in self-care, but also the families and caregivers, thus facilitating their social reintegration, promoting an improvement in their quality of life. It is recommended further studies in the area of rehabilitation in order to systematize the knowledge and to direct the nursing care to individuals with spinal cord injury. **Descriptors:** Rehabilitation; Spinal Cord Injuries; Self-Care; Nursing Theory.

RESUMO

Objetivo: analisar a aplicabilidade da Teoria do Autocuidado de Orem no processo de reabilitação de pessoas com lesão medular. **Método:** estudo de reflexão para o qual foi realizado levantamento bibliográfico acerca da temática nas bases de dados Medical Literature Analysis and Retrieval Sistem on-line (MEDLINE) e Literatura Latino Americana e do Caribe em Ciências da Saúde (LILACS). **Resultados:** a Teoria pode ser aplicada a qualquer pessoa inclusive com lesão medular, pois possibilita mudança nas suas condições de vida, uma vez que inclui não só a pessoa no autocuidado, mas também familiares e cuidadores, favorecendo dessa maneira sua reinserção social, promovendo melhoria na qualidade de vida. **Conclusão:** recomenda-se a realização de mais estudos na área de reabilitação com intuito de sistematizar o conhecimento e direcionar a assistência de enfermagem aos indivíduos com lesão medular. **Descritores:** Reabilitação; Traumatismos Da Medula Espinal; Autocuidado; Teoria de Enfermagem.

RESUMEN

Objetivo: examinar la aplicabilidad de la teoría del déficit de autocuidado en el proceso de rehabilitación de personas con lesión de la médula espinal. **Método:** se llevó a cabo la literatura sobre el tema en bases de datos nacionales e internacionales. **Resultados:** basado en el estudio de la literatura sobre los aspectos involucrados en la atención de enfermería de persona con la lesión espinal y los supuestos y la estructura de la teoría del déficit de autocuidado, se analizaron las convergencias. **Conclusiones:** se puede concluir que la teoría se puede aplicar a cualquier persona, incluyendo lesión de la médula espinal, ya que permite un cambio en sus condiciones de vida, ya que incluye no sólo a la persona en el autocuidado, sino también las familias y los cuidadores, facilitando así su reinserción social y la promoción de una mejora en su calidad de vida. **Descriptor:** Rehabilitación; Traumatismos de la Médula Espinal; Autocuidado; Teoría de Enfermería.

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INTRODUCTION

Spinal cord injuries have been increasingly recurrent, due mostly to increased urban violence. Epidemiological study carried out in 2009, by Rede Sarah de Hospitais de Reabilitação, pointed out that spinal cord injuries were responsible for 63.3 % admissions arising from external causes. In 42.7%, the cause was traffic accident, in 26.4% aggressions by firearm, in 8% falls and, dives in 8%. The most affected segment is male, adult, between the ages of 15-39.¹

A spinal cord injury causes severe disability to the individual with impaired motor skills and sensitivity. It is considered that a sequel brings irreversible changes to the life of a person with paraplegia or tetraplegia, which apart from the person, has a direct impact on his family and the society where he lives.²

In this sense, it becomes necessary to insert the people with spinal cord injury in particular rehabilitation program that aims to help the individual adapting to his/her new condition of living, respecting his/her limitations and stimulating his/her potential depending on his/her level of functional independence. Such a program is proposed to be a dynamic process that contains in addition to the interdisciplinary team of rehabilitation, educational support to individuals, families and caregivers with higher level of requirements in the acute phase, considering aspects of adaptation to spinal cord injury.²

To assist the people with spinal cord injury as a member of the interdisciplinary team it is essential that the nurse aims to promote and restore the health of these persons by preventing complications and promoting their rehabilitation process and therefore, their reintegration into society.

However, for skilled nursing assistance the nurse must base his/her practice and adapt it with the Nursing Theories, which have been responsible, since the 1950s, for the development and acknowledgment of nursing as both an academic discipline and profession.³

Nursing Theories allow for the systematization of knowledge giving meaning to scientific results and stimulating new research.⁴ Models and theories are conceptual approaches requiring adjustments or adaptations in accordance with the work needs. They account for different views on the nature of the object, methods and particular way of approaching the subject of caring. Theories reflect the different views of their authors regarding the nursing profession,

the concept of health, the interaction with the environment and the social field. Each theory or conceptual model represents a special way of referring to the nursing practice.⁵⁻⁶

Dorothea E. Orem's Self-care Deficit Theory may be applicable to people with spinal cord injury and direct assistance actions of the nurse. This theory considers self-care education a dynamic process that depends on the willingness of the individual and his/her perception about his/her clinical condition.³⁻⁷

Orem's Theory has been the object of multiple national and international studies, because it focuses the person and the family as self-care providers and may be used universally, but still there are few studies correlating Orem's theory with rehabilitation principles.^{3,6,8-9}

Interest in the subject arose in the context of theoretical discussions about nursing in course in the Graduate Program in Nursing at UNB, where a need for a theoretical reflection on the practice of assistance offered to people with spinal cord injury was felt, because of the need for systematization of nursing knowledge in rehabilitation. Thus, the following question was brought into discussion: the Self-care Deficit Theory is applicable to the process of rehabilitation of people with spinal cord injury?

As a consequence, the purpose of this study is to consider the practical applicability of Dorothea E. Orem's Self-care Deficit Theory in the process of rehabilitation of people with spinal cord injury.

METHOD

Study of reflection performed through bibliographical survey concerning aspects involving the care of the subject with spinal cord injury and the reference of Orem's Self-care Deficit Theory, which is comprised in a relationship between the Nursing Systems Theory, Self-Care Deficit Theory and Self Care Theory.¹⁰

The following steps for operationalizing study were taken: establishment of the guiding question of our research, literature review, discussion and interpretation of results, presentation and summary of knowledge.

We conducted searches in databases of Medical Literature Analysis and Retrieval System Online (MEDLINE) and Latin American and Caribbean Literature in Health Sciences (LILACS), selecting national and international articles which reflected the themes under

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investigation, as well as book publications. We used the following keywords: Rehabilitation, Spinal Cord Injuries, Self-Care, Nursing Theory, which were combined in various ways in the research. Articles were selected based on reading of titles and abstracts.

THEORETICAL REFERENCE

Orem's Theory identifies the key metaparadigmatic concepts, human beings, health, environment, nursing and rehabilitation.⁷ A reflection on Orem's General Theory of Nursing to guide care practice of subjects with spinal cord injury, as well as the caregiver or family member can provide support for the nurse's practice. Faced with such a new condition of this person, this theory provides recognition of self-care deficits and the establishment of nursing systems that guide care, focusing on rehabilitation and preparing these individuals for their self-care and improvement in their life quality.

Orem's General Theory consists of three interrelated theories: the self-care theory, the self-care deficit theory and the nursing systems theory.¹⁰ These three theories are supported by six conceptual foundations: self-care, therapeutic self-care demand, self-care action, self-care deficit, nursing service and nursing systems; and a peripheral concept: basic conditioning factors.⁶

The Self-care Theory discusses the self-care practice accomplished by an individual in his/her "benefit to maintain life, health and wellbeing".¹⁰ There are some determining factors for the self-caring ability, among which are: age, development status, life experience, socio-cultural orientation, health and available resources.⁷

Orem's Theory shows three self-care requirements: universal, developmental and health disarrays. The universal self-care requirements are related to life processes and maintenance of the integrity of the structure and operation of the human body, and can be related to daily activities such as maintenance and adequate intake of air, water and food; the provision of care with elimination and excretion; maintenance of balance between activity and rest, between loneliness and social interaction; prevention of risks to life, to functioning and human well-being; promotion of human functioning and development in social groups according to the human potential, known human limitations.^{3,7}

The development requirements are characterized by adaptation of self-care demands arising from new life or

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developmental phases. On the other hand, the requirements for self-care due to health disorders are demanded in conditions of illness, injury or harassment or may be consequences of medical measures, required to diagnose and remedy the condition.^{7,10}

The therapeutic demand for self-care are required and reliable actions to control everything that hinders the development and regulation of the human body. Such actions diverge in their aspects, in their unity and stability, according to the self-care requirements and are characterized based on a survey of self-care requirements. Self-care is an action system.^{3,7,10}

The Self-Care Deficit Theory is the core of Orem's general nursing theory, defining when nursing is needed, that is to say, it is required when an adult is unable or has limitations in the provision of effective and continued self-care.^{3,10-1}

The theory identifies some methods that nurses use for the needs of individuals, that is to say, regarding the self-care deficit how to act or do for another one, mentor and guide, provide psychological or physical support, provide and maintain a personal ambiance, teach the other one.⁷

The Nursing Systems Theory articulates theories because it shows how the nurse will help the person to overcome the deficit and regain self-care. It establishes the structure and guides the Nursing practices and interventions specific to the individual, always determined by demand and therapeutic need for self-care.^{3,7,10}

It is possible to identify three classifications of nursing systems to comply with the requirements of the individual's self-care, which are: the fully compensatory system, when the human being is unable to engage in self-care actions, then the nurse or caregiver assists him/her; the partly compensatory system, when both the person and the nurse carry out the care measures; and the educational support system, when a person is able to perform self-care actions and needs assistance in the form of support and guidance. One or more of three types of systems can be used in a single person, as he/she acquires skills and takes on his/her self-care actions.^{7,10}

The nursing professional upon activating some of these systems considers the components of power that the person, community or group have. The components of power are constituted by the ability to maintain attention; argue, make decisions; acquire knowledge and to become

operational; to order self-care expansion actions to achieve goals; to perform and integrate self-care functions activities of daily living; to use skills in activities of daily living and motivation level.⁶

• Application of Orem's theory in the rehabilitation process for people with spinal cord injury

Spinal cord injuries are caused by direct or indirect trauma to the spinal cord. They result in quadriplegia, when the lesions occur in the neck, leading to a decrease or loss of motor and/or sensitive function of the arms, torso, legs and pelvic organs or paraplegia, when the lesions occur in the thoracic and/or lower back levels, leading to a decrease or loss of motor and/or sensory trunk function, legs and pelvic organs. They may be classified as total or partial spinal cord injury.¹²

A paraplegic or quadriplegic person evolves with secondary dysfunctions inherent to the spinal cord injury, which require specific care in order to prevent complications and prolong life. Among these dysfunctions we can quote the neurogenic bladder and bowel, spasticity or hypotonicity, neuropathic pain, sexual dysfunction, osteopenia and postural hypotension.¹³⁻¹⁶ Among the major complications resulting from spinal cord injury stand out pressure ulcers, deep venous thrombosis, heterotopic ossification, urinary tract infection and intestinal constipation.

In addition to those, the psychosocial changes have increased in recent decades among which stand out depression, anxiety, feelings of hopelessness and poorer quality of life.¹⁷

These clinical and psychological changes resulting from a spinal cord injury require strict care on the part of the person to avoid or reduce complications that endanger life. Therefore, one must consider that in cases of chronic disease, the chances of successful treatment are closely linked to the "perceived disease", because health actions will be taken by patients according to the perceptions, desires, possibilities and modifications that the disease and treatment modalities impose on their lives. There is a complexity involving the process of individual decision making to prevent, treat and rehabilitate themselves of an injury or illness.¹⁰

People with spinal cord injury are mostly young adult, within an active age group, who abruptly suffered spinal trauma, causing physical and functional changes. As a result, Orem's conditioning factors are relevant in the process of adaptation and coping with the limitations imposed by the injury.

The conditions of access to physical space, transportation, education, work, social support and internal control locus show to be important predictors of better adjustment to the condition of the subject with spinal cord injury.¹⁸

People with spinal cord injury experience a process of adapting daily activities to the present condition and begin to perform their everyday tasks with varying levels of functional independence.

In some situations or stages of life, as in the case of people with spinal cord injury, people with spinal cord injury, there are self-care requirements, recognized as actions aimed at providing self-care, with a need to provide them for a certain period of time.⁷

The process of successful coping with spinal cord injury depends on factors inherent to the spinal cord injury, such as injury severity, factors relating to the person, such as education level and internal control locus, factors of the immediate environment, such as health services and existing work opportunities and a broad cultural context, such as applicable legislation and social prejudice.¹⁹

In situations of successful confrontation to spinal cord injury, the person will be able to develop strategies to fulfill his/her care. A paraplegic person, often presents a complete or modified independence for self-care, while quadriplegic the person will usually require from supervised assistance to full assistance, depending on the evaluated activity of daily living. However, the level of dependence does not prevent the person from having a "normal", biopsychosocial and economically active life.

Accordingly, the nurse may use different methods consistent with the requirements arising from the self-care deficit, and may sometimes act or do for him/her, mentor, guide, provide psychological or physical support, provide and maintain a personal ambiance, or teach him/her to deal with the limitations.

Man is a psycho-physical-social organism with rational power, in the rehabilitation process he is the subject of the action and not the object.⁷ Thus, their needs are observed by the whole rehabilitation team to ensure that actions are individually directed.²⁰

People with spinal cord injury present self-care deficits, and should be seen as having to relearn skills and potential and/or enhance the self-care actions. This person is able to interact with the environment, and may accomplish his/her self-care, provided that

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health professionals and the family are able to encourage and stimulate this person, seeking control of the factors affecting his/her own development, carrying out activities that promote his/her wellbeing, health and life.

Spinal cord injury rehabilitation is a long learning process, which extends over the whole the life. It is up to the person, family and health professionals sharing the responsibility for the gradual rebuilding of a very different life, which carries a personal reintegration, family and social problem coupled with changes entailed by the injury.

Since the acute phase of spinal cord trauma, people with spinal cord injury may have varying levels of dependence to perform activities of everyday life such as food, hygiene, dressing, transfers and abnormalities in bowel and bladder elimination. This dependence varies depending on the level and degree of with spinal cord injury and, also, over time resulting from the trauma.² Rehabilitation at this stage is critical to prevent further disability and avoid deformities.

Rehabilitation is focused on the person and the nurse participates in the process assisting him to become independent as much as possible within his conditions, encouraging self-care through guidelines, educational activities, family and caregiver training, fostering his social reintegration and improvement in his quality of life.²⁰

A rehabilitation program directed to people with spinal cord injury is crucial and contributes to enable autonomy and quality of life of the person and his family with a focus on functional independence, improving self-esteem and social inclusion.^{2, 20}

Spinal cord injury demands rigorous care of the person related to bladder and intestinal control, spasticity, neuropathic pain, skin care, in order to prevent complications.

Nursing is the art and science and from the appropriation of this field of knowledge that the professional provides assistance when the person is unfit for self-care.⁷ For that reason, the nurse must be a qualified professional to provide care to the subject with spinal cord injury, serving his/her therapeutic demands, also developing educational actions directed to the family, seeking integration and training for care actions that are at his/her disposal.

Orem's theory discusses aspects of disease prevention and health promotion of people.⁷ Therefore, in the rehabilitation these concepts are approached in the process and used by the interdisciplinary team through educational activities in relation to spinal

cord injury, such as skin care to prevent pressure ulcers, neurogenic bowel and bladder as well as possible complications and care to avoid them, guidance and sexual education, physical activity practice, nutritional counseling, psychological support, visits to assess the home, school and work environment concerning needs of the person.

With regard to the Nursing Systems proposed by Orem, important to identify the requirements of self-care of these people, both the fully compensatory system and other systems pointed out by Orem, the partially compensatory system and the educational support system may be identified with people with spinal cord injury.

When people with spinal cord injury is unable to perform self-care actions in the case of fully compensatory system, the nurse should assist them, completing the therapeutic self-care and compensating for their inability to perform self-care. While executing joint self-care measures, partly compensatory system, nurse and patient interact and perform care actions. As these individuals become capable of performing actions by themselves, they will be able to perform their self-care and the nurse shall be watchful to provide support and guidance, identifying the system of educational support.

Within this context, the concepts of the theory of self care allow for to relate the nursing care practice for rehabilitation of people with spinal cord injury.

The family is the basic structure, where the subject with spinal cord injury is included, generally responsible for taking care in a household, so the importance of his inclusion during the rehabilitation process, by actions related to education and education of care according to his demands and needs.

FINAL REMARKS

Orem's Self-Care Deficit Theory presents the fundamentals of Nursing as Science and Art. Therefore, when we reflect on its practical applicability in the rehabilitation process of the person with spinal cord injury, we apprehend the Nursing Art in providing care and education to people with spinal cord injury, family and/or caregiver in order to achieve the self-care goal.

Spinal cord injury causes major changes in people's lives from physiological, psychological, affective, to social changes. Thus, the focus should not be solely on the physical limitations, but on the individual who must be seen as a holistic being.

From this perspective, the self-care deficit theory applied to people with spinal cord injury enables to change their living conditions because it includes not only the people in the care and rehabilitation process, but also their families and caregivers when needed.

The Self-Care Theory can be applied to any person or community. As a result, the model proposed by Orem can be used by nurses who assist people with spinal cord injury, because it centralizes these people as the focus of care, encouraging self-care, promoting preventive actions and health promotion, equally involving the family in self-care and in prevention actions of complications caused by the spinal cord injury.

Orem's Theory has been rarely described in the national literature particularly in the context of rehabilitation. We emphasize the importance of new studies aiming to support the Nursing care practice to provide a scientifically based assistance.

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