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ROY'S ADAPTIVE MODEL FOR THE CARE OF THE BEDRIDDEN ELDER: EXPERIENCE REPORT

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ABSTRACT
As the Brazilian population is aging, there is an increased vulnerability, diseases risks and prevalence of chronic diseases, which increases the number of bedridden, fragile and highly dependent elders. This study aimed to identify the stimuli that act in a bedridden elder, establish nursing diagnoses and interventions to assist in the promotion of adaptive responses. This is an experience report, developed during the follow-up of a bedridden elder due to Cerebrovascular Accident (CVA) complications. A script for data collection based on Roy's Adaptation Model was used. The evaluation of behaviors and stimuli recognized the diagnoses: risk of disuse syndrome, aspiration risk, reflex incontinence, impaired skin integrity, self-care deficit and impaired comfort. Through nursing interventions, the main results were: improved muscular rigidity and reduced diameter of the pressure ulcer. Roy's nursing process provided the stimuli identification, enabling a more specific assistance.

Keywords: Nursing Theory. Psychological adaptation. Nursing care. Nursing diagnosis

INTRODUCTION

With the aging of the Brazilian population, arising from the demographic changes that have occurred in recent years, there is an increased vulnerability, risk of harms and prevalence of chronic diseases, which increases the number of bedridden, fragile and highly dependent elders. Thus, it is necessary to produce knowledge aimed at the development of a nursing care plan and development of high-effective care, able to promote the comfort, well-being and improvement in the elders' quality of life[1].

In this sense, health professionals of the Primary Health Care are challenged to deal with these fragile and bedridden elders, who are unable to go to the health unit. Through the home visit, the professional can establish a greater link to the family and the user, and may promote attention focused on reality and uniqueness of the subject and his/her family, favoring the establishment of goals and priorities for effective assistance and holistic family care[2].

The nurse plays an increasingly decisive and proactive role regarding the identification of the bedridden elder's needs, as well as in the promotion and protection of the individuals' health, in their different dimensions[3], ensuring a safe care by care management. The nursing role consists of a comprehensive health action, of which the nurse is part, actively and proactively, in different spaces of experience, professional sectors and social contexts.

Based on the professional's concern to intervene on the health problems, printing a theoretical orientation that allows systematizing his/her practice, developing a care plan based on a scientific process that provides subsidies and allows reflecting and evaluating, nursing theories have arisen. In order to implement a care plan to the elder who suffers from senility process – pathological ageing – who has lost his/her ability to perform activities of daily living and has started to depend on others to do them, it is important to use Roy's Adaptation theoretical model to identify adaptive or ineffective responses to changes and their different conditions, contributing to individualized care[4].

Roy describes the person as an adaptive system with inborn and acquired mechanisms, which allow competing with the internal and external changes that may occur. He classifies these mechanisms as regulators or innate, whose answer is automatic and arises out of the neural, chemical and endocrine activities, and recognizing and acquired mechanisms, whose answer is given by

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cognitive/emotional channels, that is, behavior arising from experience learning[5].

The resulting behaviors are observed from four adaptive modes:

a) Physiological mode - the way the person responds, as a physical being, to environmental incentives. This mode involves five basic needs of physiological integrity (oxygenation, nutrition, elimination, activity and repose, and protection) and four complex processes (sensitive, liquid and electrolytes, neurological function and endocrine function); b) Self-concept mode - focuses on the person's psychological and spiritual aspects. It is the combination of a person's beliefs and feelings at certain time. It includes two components: the self-physical (which covers the feel and body self-image) and self-personal (which includes self-consistency, self-ideal and self-moral-ethical-spiritual); c) Role-performance mode - focuses on social aspects related to the person's roles in the society and d) Interdependence mode - focuses on interactions related to giving and receiving affection, respect and values[5].

The adaptive model describes three types of internal and external stimuli, that is, focal, contextual and waste[6].

The internal or external stimuli faced by a person are the focal stimuli, creating a need in one of the four adaptive modes; the contextual stimuli are those that somehow influence positively or negatively the situation, contributing to the effect of focal stimulation; and the external or internal stimuli present, or not, in the person, which may affect the adaptation, but whose effects cannot always be confirmed, such as beliefs and attitudes are the residual stimuli[5,6].

The nursing practice is performed through the nursing process. The nursing process of Roy's Adaptation Model highlights six phases: the) behavior evaluation; b) stimuli evaluation; c) nursing diagnosis; d) setting targets; e) intervention; f) evaluation[5].

In this sense, the study aimed to describe the experience report of the application of nursing care systematization for a bedridden elderly patient according to Roy's adaptive model.

METHODOLOGY

This is an experience report, with descriptive and qualitative approach, performed during the follow-up of a bedridden elder, aged 87 years, due to Cerebrovascular Accident (CVA) sequelae, linked to a multidisciplinary team from the Family Health Strategy (FHS), a Basic Care Unit in the Fortaleza Regional Office I - CE.

The nursing staff collected the data during the period from January to February 2014, through home visits to the elder in question, chosen by the team based on his care needs. In the first and second visits, there were the data survey and the behavior and stimuli assessment, with an interval of one week between those visits. The data survey used a script based on Roy's Adaptation Theory, developed and designed by this study authors. After emphasizing and evaluating the elder's behaviors and stimuli, nursing diagnoses were established, based on the NANDA-I taxonomy. This resulted in the establishment of a care plan, which was built in conjunction with the family, in order to promote a better adaptive answer to the elder's conditions.

In the third visit, held two weeks after the previous visit, the changes after implementing the interventions were evaluated and a more detailed physical examination was performed. For this, semi-structured physical and neurological examination guide was used. The fourth visit, also within fifteen days, aimed to assess the results obtained with the implemented plan.

Due to the elder's high neurological impairment, the behavior observation in the adaptive, self-concept, role performance and interdependence modes was not possible, which restricted the analysis to the physiological mode.

This study was submitted to the Research Ethics Committee, respecting the provisions of the resolution number 466/12, and approved under protocol number 442,795.

RESULTS

Behaviors and stimuli assessment

The use of the collected data, following the survey guide, allowed evaluating the elder's stimuli and behaviors, identifying the stimuli resulting from neurological sequelae caused by a previous CVA, as shown in Table 1.

The CVA is a disease characterized by the acute onset of a neurological deficit that persists for at least 24 hours, reflecting focal central

nervous system involvement resulting from a disturbance in cerebral blood flow. These lesions are caused by an infarction, due to ischemia or hemorrhage, resulting in the impairment of brain function. The presence of neurological function damage leads to deficits in terms of motor, sensory, behavioral, cognitive, perceptual and language function, limiting the individual's social, professional and family activities[7]. The elder has significant deficits at all levels, staying in bed, without mobility, stiff and totally dependent for the implementation of activities of daily life, since he does not have environmental interaction.

Table 1: Relation between the adaptive mode, present stimuli and associated behaviors. Fortaleza, CE, Brazil. 2014.

Adaptive Mode	Behavior	Focal Stimulus (F), Contextual Stimulus (C), Residual Stimulus (R)
	Stare	CVA Neurological sequelae (F)
	No environmental interaction	Physical immobility (C)
Physiological	Curved arms and hands	Neurological deficit (F)
	Joint stiffening	Little change of decubitus (C)
	Dry kin	Bed restricted (C)
	Presence of pressure ulcer	Little environmental sitmulus (C)

Nursing diagnoses and their interactions

From the diagnoses established through behaviors and stimuli data collection, nursing interventions wree developed to help the elder and his family to promote adaptive responses to stimuli that are present in his condition.

According to Roy's Adaptive Model, the nursing goal is to promote adaptive responses in relation to the four adaptive modes[6]. Therefore, based on the nursing diagnoses of NANDA-I and literature related to CVA and bedridden elders, the following interventions were planned, as shown in table 2.

Caregivers are individuals who assume the responsibility to protect. They are essential in the elders' homecare and represent the link between the family and the health services[8]. Health professionals need to support elders' caregivers through the Health Education for the proper care, since a number of disabilities take the elderly to dependence. Thus, the established action plan viability was only possible due to the family contribution, who improved the care to be developed, agreed with the outlined interventions and applied them.

In a literature review on the nursing diagnoses identified in the elderly population assisted by the basic attention in Brazil, 14 out of the 42 identified diagnoses referred to changes in mobility, which can help to ensure that the patient is increasingly dependent on the care of others and in the commitment of his/her quality of life[9].

The condition of bed restraint and immobility brings disorders to the physical and emotional condition of the elder with cognitive and neuromuscular deficit, and deficit to perform basic daily activities, which overloads caregivers and impairs the subject's quality of life. In addition, it generates discomfort, risks for life and can result in pressure ulcer, currently termed as pressure injury (PI)[10].

The elder in this study showed a grade II pressure injury of approximately 3 cm in diameter in interscapular region and a grade I pressure injury in the left scapular region with about 4 cm in diameter. Moreover, he had upper limbs atrophy, which were strict and constantly flexed, which was causing a hyperemia due to pressure on the left clavicle region. The arms and hands offered great resistance, which hindered the extension of these members. This same resistance was present in all the joints, which hindered the elder's mobilization process.

Advanced age is recognized as one of the most relevant factors involved in the development of PI, especially when associated with morbid conditions, such as CVA. The PI is considered a serious problem, especially for bedridden elders, who are more exposed to risk factors such as friction, shear, moisture, mobility impaired, change in sensory perception and nutritional deficiencies[11-12].

Nursing interventions have been prepared in accordance with each diagnosis made, being implemented and guided to the family, in order to assist the elder to express adaptive behaviors and help the caregiver who also suffers with his/her relative's situation.

Table 2. Nursing interventions according to the nursing diagnoses. Fortaleza, CE, Brazil. 2014.

Nursing Diagnosis	Nursing Intervention
Risk of disuse syndrome related to immobilization and altered consciousness.	- Monitor the skin; Use pressure-reducing devices (such as cushions, pillows, and eggshell mattresses); - Stimulate balanced feeding intake; Make change of decubitus every 2 hours; Guide the family to perform passive exercises.
Reflex urinary incontinence related to neurological damage.	Supervise and encourage water intake (regulating the intake of liquids at predetermined times creates a predictable urinary pattern); Recommend use of diapers; Highlight the importance of hygiene of the perineum.
Impaired skin integrity related to neurological dysfunction.	- Examine the color, texture and turgor of the skin; Determine degree and depth of the lesion; Examine surrounding skin; Evaluate odor and extent. Keep the area clean and cover with appropriate dressing; Guide change of decubitus; Evaluate skin daily; - Use devices such as pillows to help change the decubitus; Guide the family on the importance of moisturizing the skin with fatty acid or sunflower oil in order to prevent further injury.
Risk of aspiration related to reduced level of consciousness.	- Keep the patient in Fowler or semi-Fowler position; Slowly feed and offer small amounts; Offer syrup or crushed medication; Feed with the headboard raised.
Impaired bed mobility related to neuromuscular and cognitive impairment.	- Change of decubitus every 2 hours, with active and passive exercises; Encourage the family to move the client and promote personal hygiene of the client; Examine the skin of bony prominences; Include physiotherapist.
Deficit in self-care for dressing, feeding, bathing and intimate hygiene related to neuromuscular and cognitive impairment.	- Guide the family to carry out these activities to meet the client's needs; Train and guide the family to carry out the client's basic daily life activities; Carry out the home visit for continuous evaluation; Be available to help plan family activities and listen to them.
Impaired comfort characterized by environmental stimuli.	- Perform necessary measures for better comfort and rest (e.g. high headboard, use of cushions and/or pillows); Collaborate in hydric control, hydration and eliminations - Guide the family so that the client has periods of rest, as well as receive stimuli at the appropriate times.

Interventions Assessment

With the course of the visits, the elder presented mild improvement in his rigidity condition, through mobilization and change of decubitus guidance provided to caregivers. In addition to the provided guidance, the acquisition of three pillows to aid in the change of decubitus and protection of bony prominences was indicated.

In relation to pressure injuries, there was a significant improvement from one week to another, showing visible grade II ulcer involution and grade I ulcer reduction to about 2 cm in diameter. The family collaboration in changing the decubitus every 2 hours and hydration of the elder's skin with Essential Fatty Acid was instrumental, in addition to daily changing the injuries dressings, promoting an adequate diet, according to their financial conditions. In the last visit, he elder was in lateral decubitus, emphasizing family care to reduce the damage caused by bed immobility.

FINAL CONSIDERATIONS

The nursing process proposed by Roy in his Adaptation Model is considered relevant, since it provides a detailed analysis of all stimuli that are present in the situation experienced by the client, which allows elaborating strategies to care actions that are specific to that situation.

Within this, the patient's follow-up was fundamental to offer subsidies to plan and implement interventions, besides allowing the evaluation of these interventions according to their effectiveness and promotion of adaptive responses in the elder, which contributes to a better quality of life.

Thus, the incorporation of nursing theories into care practices strengthens the autonomy of nurses facing the development of interactive and integrative care practices, with repercussions on health education, promotion and rehabilitation, which reinforces his/her role in the production of care and transformative actions in the daily health work.

APLICAÇÃO DO MODELO ADAPTATIVO DE ROY NO CUIDADO AO IDOSO ACAMADO: RELATO DE EXPERIÊNCIA

RESUMO

Com o envelhecimento da população brasileira, há um aumento da vulnerabilidade, riscos de agravos e prevalência de doenças crônicas, aumentando o número de idosos acamados, fragilizados, com elevado grau de dependência. Objetivou-se identificar os estímulos que atuam no idoso acamado, estabelecer os diagnósticos de enfermagem e intervenções que auxiliem na promoção de respostas adaptativas. Trata-se de um relato de experiência realizado durante o acompanhamento a um idoso acamado por sequelas de AVC. Utilizou-se um roteiro de levantamento de dados baseado no Modelo de Adaptação de Roy. Na avaliação de comportamentos e estímulos reconheceram-se os diagnósticos: risco da síndrome do desuso, risco de aspiração, incontinência urinária reflexa, integridade da pele prejudicada, déficit no autocuidado e conforto prejudicado. Por meio das intervenções de enfermagem, os principais resultados obtidos foram: melhora da rigidez muscular e redução do diâmetro da úlcera por pressão. O processo de enfermagem de Roy proporcionou a identificação de estímulos, possibilitando uma assistência mais específica.

Palavras-chave: Teoria de Enfermagem. Adaptação psicológica. Cuidados de Enfermagem. Diagnóstico de enfermagem

APLICACIÓN DEL MODELO ADAPTATIVO DE ROY EN CUIDADO DE ANCIANOS POSTRADOS EN LA CAMA: INFORME DE EXPERIENCIA

RESUMEN

Con el envejecimiento de la población brasileña, hay un aumento de la vulnerabilidad, los riesgos de enfermedades y la prevalencia de las enfermedades crónicas, lo que aumenta el número de ancianos prostrados en cama, frágiles y con un alto grado de dependencia. Se objetivó identificar los estímulos que actúan en ancianos prostrados en la cama, establecer diagnósticos de enfermería y las intervenciones que ayudan en la promoción de respuestas de adaptación. Es un relato de experiencia desarrollado durante el seguimiento de un anciano prostrado en la cama, debido secuelas del accidente cerebrovascular. Se utilizó un guion para la recolección de datos basado en el Modelo de Adaptación de Roy. En la evaluación de los comportamientos y estímulos, fueron reconocidos los diagnósticos: riesgo de síndrome de desuso, riesgo de aspiración, incontinencia refleja, integridad de la piel afectada, déficit de autocuidado y deficientes comodidad. Después de la intervenciones, los principales resultados fueron la mejora de la rigidez muscular y diámetro de las úlceras por presión reducido. El proceso de enfermería de Roy proporcionó la identificación de los estímulos, que permite una asistencia más específica.

Palabras clave: Teoría de Enfermería. Adaptación Psicológica. Atención de Enfermería. Diagnostico de enfermería.

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