APPLICATION OF THE NURSING THEORY OF CALLISTA ROY TO THE PATIENT WITH CEREBRAL VASCULAR ACCIDENT

ABSTRACT

Objective: reporting the experience of application of the nursing process implemented in the light of the Theory of Adaptation of Callista Roy to a patient with stroke. Method: a descriptive study of type experience report, resulting from the application of the nursing process to a patient admitted in a neurological clinic of an emergency hospital in the city of Teresina, Piauí, in 2013. Results: showed itself 15 nursing diagnoses listed based on the taxonomy of the North American Nursing Diagnosis Association International and to establish interventions and nursing results there was used respectively the Classification of Nursing Interventions and the Classification and Nursing Outcomes. Conclusion: facing the findings, Roy's theory contributed to nursing care to patients affected by this pathology by giving importance to the stimuli that trigger responses which require the adaptation of the patient. Descriptors: Stroke; Nursing Theory; Nursing Care.

RESUMO

Objetivo: relatar a experiência da aplicação do processo de enfermagem implementado à luz da Teoria da Adaptação de Callista Roy a uma paciente com acidente vascular cerebral. Método: estudo descritivo, tipo relato de experiência, resultante da aplicação do processo de enfermagem a uma paciente internada em uma clínica neurológica de um hospital de urgência do município de Teresina, Piauí no ano de 2013. Resultados: evidenciam-se 15 diagnósticos de enfermagem elencados com base na taxonomia da North American Nursing Diagnoses Association International e para estabelecer as intervenções e resultados de enfermagem utilizou-se respectivamente a Classificação das Intervenções de Enfermagem e a Classificação dos Resultados de Enfermagem. Conclusão: diante dos achados, a teoria de Roy contribuiu com o cuidado de enfermagem a paciente acometida por tal patologia ao dar importância aos estímulos que desencadeiam respostas, as quais exigem a adaptação da paciente. Descriptores: Acidente Vascular Cerebral; Teoria de Enfermagem; Cuidados de Enfermagem.

RESUMEN

Objetivo: presentar la experiencia de la aplicación del proceso de enfermería aplicado a la luz de la Teoría de Adaptación de Callista Roy a un paciente con ictus. Método: un estudio descriptivo del tipo relato de experiencia, resultante de la aplicación del proceso de enfermería a una paciente ingresada en una clínica neurológica de un hospital de emergencia en la ciudad de Teresina, Piauí, en 2013. Resultados: se presentaron 15 diagnósticos de enfermería enumerados basados en la taxonomía de la North American Nursing Diagnoses Association Internacional y para establecer las intervenciones y resultados de enfermería se utilizan, respectivamente, la Clasificación de Intervenciones de Enfermería y la Clasificación de los Resultados de Enfermería. Conclusión: en los resultados, la teoría de Roy contribuyó a los cuidados de enfermería a los pacientes afectados por esta patología, dando importancia a los estímulos que desencadenan respuestas que requieren la adaptación del paciente. Descriptores: Accidente Cerebrovascular; Teoría de Enfermería; Cuidados de Enfermería.

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INTRODUCTION

Through the view of the World Health Organization the patient affected by a chronic disease, such as stroke (CVA), needs planned care able to meet his basic needs and provide integrated care, in addition, this condition requires that the same reorganize his daily life, in order to find new ways of relating to life.1

As the base of nursing process, Nursing offers theories or conceptual models consisting of an organization of central concepts of the profession in an orderly and scientific way to direct data collection, identification of changes in the clinical condition of the patient, the nursing interventions and evaluation of the results.

Among these, it emphasizes the conceptual model of the proposed adaptation by Callista Roy, which includes the notion of stimuli and responses. The appearance of stimuli takes the need for part of the individual responses for coping mechanisms that are triggered which are processed through two subsystems defined as regulator and knowing. That may be chemical, neural and endocrine, already recognizing that the subsystem is related to higher brain functions of perception, emotion or judgment processing of information.2,3

The resulting behaviors of these subsystems are observed from four adaptive modes. In physiological way the person responds like a physical environmental incentives and involves five basic needs of physiological integrity (oxygenation, nutrition, elimination, activity and rest, and protection) and four complex processes (sensory, fluid and electrolytes, neurological function and function endocrine). The self-mode focuses on the psychological and spiritual aspects of a person and includes self-physical (includes sensation and body image) and self-personnel (includes self-consistency, self-ideal and self-ethical-moral-spiritual).2,4

But the function mode/role performance focuses on the social aspects related to the roles that one occupies in society and finally the interdependence so that is related to emotional fitness as well as to holders of systems, receptive behavior and contribution of behavior identified the patterns of human value, affection, love and affirmation.2,4

The nursing process should not be seized or held for a mere fulfillment of tasks, as this methodological tool scientifically underpins the profession knowledge, allows to develop effective assistance focused on patient safety and provides the identification of individual and collective needs under a holistic and critical view.5-6

The nursing process comprises phases which vary according to nursing theory adopted. The elements of Roy nursing process include: research behavior, research stimuli, nursing diagnosis, goal setting, intervention and evaluation. The first element consists of collecting answers or the person’s behavior in relation to each of the adaptive modes. The second involves the identification of focal, contextual and residual stimuli that are influencing behaviors. The third element of the process is the identification of nursing diagnoses, which reflects the nurse’s judgment on the level of adaptation of the person.4,7

The fourth element includes goal setting, time the nurse lists the resulting behaviors of nursing care. The fifth is for the planning of interventions that should be selected according to pre-established goals, aiming to promote adaptation by stimulating change. Finally, evaluation, it is believed that the effectiveness of nursing intervention is related to human behavior adaptation.4,7

By analysis of Callista Roy adaptation nursing theory, sees it a theoretical framework for the development of care for people with chronic diseases which need to go through a process of adaptation to the new conditions of health and disease, among these the affected by stroke, as this condition creates stimuli that the patient requires an adaptive response.

Given the above, the objective of this study is to reporting the experience of the application of the nursing process implemented in the light of the Theory of Adaptation of Callista Roy to a patient affected by stroke.

METHOD

This is a descriptive study of type experience report, resulting from the application of the nursing process mediated by the Nursing Theory of Adaptation of Callista Roy to a hospitalized patient in June, 2013, in a neurological clinic of an emergency hospital in the city of Teresina, Piauí.

To implement the first phase of the nursing process there was drawn up an interview script with the intention of guiding the research and behavioral stimuli (Appendix A).

After behavioral and stimulation research nursing diagnoses were established, using as basis the taxonomy of the North American Nursing Diagnosis Association International (NANDA-I).8 The process of preparing and inference of nursing diagnoses followed the steps recommended by the reasoning of...
Application of the nursing theory of Callista Roy...

Interventions for the care of UPP were to describe the ulcer features, monitor the color, temperature, edema moisture and appearance of the skin around, monitor wound infection signs, perform changing positions of 2 in 2 hours, advise mattress use appropriate, guide staff and conduct healing of the wound.

The activities for the intervention of oral health maintenance guide were doing oral hygiene after meals and whenever necessary and guide brush of their teeth, gums and tongue. For the restoration of intervention of oral health activities consisted of guiding the use of brush with soft bristles and monitor lesions on the lips and mucous membranes.

For the diagnosis of infection risk interventions were: monitor site of venipuncture, exchange peripheral access where necessary and monitor systemic signs and symptoms and infection sites.

In the nutrition component there was detected the nursing diagnosis of impaired dentition related to ineffective oral hygiene evidenced by loss of teeth and halitosis. Interventions for these diagnoses were the same as diagnosis of impaired oral mucosa.

The physical mobility nursing diagnoses related to impaired neuromuscular impairment evidenced by hemiplegia and disturbed sleep pattern related to environmental changes evidenced by reports of trouble sleeping and staying asleep were listed as adaptive problems of the physiological mode on their activity component and rest.

Nursing interventions prescribed for the diagnosis of impaired physical mobility were neurological positioning and therapy exercises with the following activities: avoid applying pressure on the affected side of the body, supporting the affected body part, hold stimuli and passive exercises on the affected side, guide family to monitor the realization of exercise and physical therapy forward.

For intervention improves sleep has prescribed the following activities: monitor sleep patterns and the amount of hours slept, discouraging daytime sleep and provide comfort measures while sleeping.

As the adaptive problem senses component found that the impaired verbal communication and diagnostics risk of falls.

The activities for communication improvement intervention were listening, encouraging the patient to repeat words, offer positive reinforcement and support, when necessary, to maintain dialogue with the patient, encourage the patient to talk slowly and observe nonverbal clues. For diagnosing...
risk of falls, interventions were guiding on the use of assistive devices and guide the patient to call help when jogging.

The last mode of the physiological adaptive problem was identified in neurological function component with the nursing diagnosis risk of inefficient brain tissue perfusion. Although the patient be affected by a condition in the neurological system, found only a nursing diagnosis in the component neurological function, this fact can be explained because the neurological function is configured as a component of the hardest physiological mode analysis due to the condition of relationship between this complex process and the other components of the physiological mode.²

Interventions for diagnosis of neurological function component were: monitor the size, shape, symmetry and reactivity of pupils, monitor level of awareness and guidance, applying the Glasgow coma scale, observe headache complaints, monitor speaks characteristics and monitor the presence of signs and symptoms of increased intracranial pressure.

In so self-evident that the adaptive problem in self-staff component formed by anxiety as nursing diagnosis. The interventions were outlined using a calm and safe approach, explain the procedures to be performed and encourage the patient to verbalize feelings.

The last way in which it showed an adaptive problem was the role of performance mode which nursing diagnosis raised was ineffective control of the therapeutic regimen. The activities for the nutrition counseling intervention were to identify the behaviors to be changed, provide information to diet modification and discuss preferences and food which the patient does not like. For behavior modification intervention activities were encouraging the replacement of undesirable habits by desirable habits, discussing the process of change with the patient and caregiver and promote family involvement in the change process.

The last step of the nursing process, as Callista Roy, is the evaluation in which the nurse questions and weaves judgment about the achievement of objectives in the process of adaptation by which the individual passes.

After 3 days of use of the nursing process based on Roy’s theory in patient care it will found that interventions have allowed changes in decreased anxiety with positive patient discourse and planning for execution of daily life activities after hospital discharge configurating itself change in strategy planning indicator is inserted into the nursing outcome “self-anxiety.” To the result of level of anxiety became evident change in the indicator improved in the pattern of sleep and rest of patients with nocturnal sleep improvement report allowing adaptation of the patient to self-concept mode and activity and rest.

The physiological mode results achieved for the diagnosis of oral hygiene with an improvement in halitosis indicator and the inefficient respiratory pattern diagnosis and ineffect airway clearance with changes in respiratory rate indicators and dyspnea at rest and the result of vital signs there was change in respiratory rate indicator.

The mode of performance was a result of knowledge and control of hypertension with changes in control benefits indicators of the disease and strategies to improve adherence to diet and result of family support during treatment with change in the collaboration window with family sick in determining the care and information request indicator.

The other results listed in Figure 1 represent the expected results compared to the listed diagnoses and nursing interventions.
<table>
<thead>
<tr>
<th>Mode of Adaptation</th>
<th>Component</th>
<th>Nursing diagnosis (NANDA-I)</th>
<th>Nursing intervention (NIC)-Code of NIC</th>
<th>Nursing results (NOC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protection</td>
<td>Impaired tissue integrity related to impaired mobility, decreased dermal vascularization secondary to ageing and moisture evidenced by grade III pressure ulcer on sacral region.</td>
<td>Caring for pressure ulcers (3520).</td>
<td>Wound healing: second intention (1103). Tissue integrity: skin and mucous membranes (1101).</td>
<td></td>
</tr>
<tr>
<td>Protection</td>
<td>Impaired skin integrity related to motor deficit, impaired mobility and decreased Vascularity secondary dermal aging evidenced by grade II pressure ulcer in calcaneal region.</td>
<td>Caring for pressure ulcers (3520).</td>
<td>Wound healing: second intention (1103). Tissue integrity: skin and mucous membranes (1101).</td>
<td></td>
</tr>
<tr>
<td>Activity and rest</td>
<td>Impaired physical mobility related to neuromuscular impairment evidenced by hemiplegia.</td>
<td>Impaired mobility (0208). Body mechanics performance (1616).</td>
<td>Mobility (0208).</td>
<td></td>
</tr>
<tr>
<td>Activity and rest</td>
<td>Disturbed sleep pattern related to environmental changes, evidenced by reports of difficulty to sleep and stay asleep.</td>
<td>Improvement of communication: speech deficit (4976). List actively (4920).</td>
<td>Communication (0902). Communication: expression (0903).</td>
<td></td>
</tr>
<tr>
<td>Senses</td>
<td>Impaired verbal communication related to changes in the central nervous system, mediated by dysarthria.</td>
<td>Prevention of falls (6490).</td>
<td>Risk control (1902). Care with the affected side (0918).</td>
<td></td>
</tr>
<tr>
<td>Physiological</td>
<td>Risk of falls related to impaired physical mobility.</td>
<td>Prevention of falls (6490).</td>
<td>Risk control (1902). Care with the affected side (0918).</td>
<td></td>
</tr>
</tbody>
</table>

**Figure 1.** Diagnoses, interventions and outcomes of nursing for a patient with STROKE according to the Adaptive Model of Roy. Teresina-PI, 2014.
The grounded nursing process in Roy’s theory contributed to effective nursing care to patients affected by stroke to give importance to the stimuli that trigger responses which require the adaptation of the patient.

Before long the patient has demonstrated adaptive behaviors with regard to diagnosis of oral hygiene, ineffective breathing pattern, and ineffective airway pattern of sleep and rest, anxiety and ineffective control of the therapeutic regimen.

In view of this is salutary that care implemented resulting from the nursing process based on the theoretical model of Roy and the use of NANDA-I taxonomy, NIC and NOC allowed direct the activities to adaptive problems contributing to the adaptation of the patient, and provide scientific nature to care practice with consequent empowering care by nurses. Therefore, the experience raises the need to use a conceptual framework in nursing care.

REFERENCES


APPENDIX

GUIDE FOR BEHAVIORAL AND STIMULUS RESEARCH

Name: ____________________________
Birthdate: ________________       Age: _____________________
Gender: (  ) Male        (  ) Female

Skin color: (  ) White (  ) Black (  ) Yellow (  ) Maroon

Marital status: (  ) Married (  ) Single (  ) Widower/Widow (  ) Separated
(  ) Stable union

Schooling: (  ) Illiterate (  ) Incomplete elementary school (  ) Complete elementary school (  ) Incomplete high school (  ) Complete high school (  ) Incomplete higher education (  ) Complete higher education

Occupation: ______________________________________________________

City: ________________________ State: _________________________

Date of admission: ___________________

Origin:        Home             Hospital             Other: ________________

Nursing: ________________    Bed: _________________

2 PHYSIOLOGICAL MODES

2.1 OXIGENATION

2.1.1 Breath
Breath: (  ) Spontaneous (  ) Nasal catheter (  ) Mask

Chest: (  ) Flat (  ) Cask or Barrel (  ) Funnel-shaped (  ) Carinate
Other: ______________________________

Respiratory frequency: ________ respiratory movements per minute

Respiratory auscultation: (  ) Adventitious noise absent
(  ) Adventitious noises present: (  ) Snoring (  ) Ping (  ) Rattle     Other: __________

Cough: (  ) No     (  ) Yes:   (  ) Nonproductive    (  ) Productive

2.2.2 Circulation

Blood pressure: ___________mmHg              Heart frequency: ______bpm
Pulse: (  ) Regular (  ) Irregular (  ) Thready (  ) Full (  ) Impalpable
Capillary filling time: ________seconds

The presence of edema:   (   ) No (  ) Yes:   (  ) MMSS    (  ) MMII     Other: ____________

2.2 NUTRITION AND ELIMINATION

Diet: (  ) Oral (  ) SNG (  ) SNE (  ) Parenteral

Dentition: (  ) Absence of teeth (  ) Loss of teeth (  ) Presence of teeth

Oral mucosa:   (   ) Full (   ) With lesions

Oral hygiene: (  ) Unsatisfactory     (   ) Satisfactory

Abdomen: (  ) Flat     (  ) Globulous   (  ) Distended (  ) Flaccid (  ) Painful on palpation

Fluid intake per day:   (  ) less than 5 glasses      (  ) 5-10 glasses
(  ) more than 10 glasses

Number of meals a day:    (   ) less than 3 meals (  ) between 3-5 meals
(  ) more than 5 meals

Weight: ______kg          Height: _____m         BMI: __________

Bowel sounds: (  ) Absent (  ) Present (  ) Increased (  ) Diminished

Nausea:     (  ) No     (  ) Yes                           Vomiting:  (   ) No     (  ) Yes

Dyspepsia:     (   ) No      (  ) Yes                     Diarrhea:     (  ) No     (  ) Yes

Frequency of defecation: __________times per week

APPENDIX
Date of the last defection: _______________

Urinary elimination: ( ) Spontaneous ( ) SVD ( ) Urinary device
( ) Urinary retention ( ) Urinary incontinence ( ) Dysuria ( ) Hematuria ( ) Anuria ( ) Oliguria
Urinary volume:

2.3 Activity/rest and protection, and four complex processes (sensitive, liquid and electrolytes, neurological function and endocrine function).

Sleep: ( ) Increased ( ) Diminished ( ) Without complaints
Sleep on the day shift: ( ) No ( ) Yes: ___________hours
Mobility: ( ) Not changed ( ) Changed: ________________

Mucous membranes: ( ) Normochromic ( ) Hypochromic _____/4+ ( ) Icteric

Eyes: ( ) Jaundice ( ) Eyelid edema Other: ______________
Skin: ( ) Normal ( ) Cyanosis ( ) Jaundice ( ) Pallor
Wound: ( ) No ( ) Yes Local: __________________________
Dimensions: _________________________________________

CLASSIFICATION:
The wound: ( ) Closed ( ) Open ( ) Chronic ( ) Acute
The tissue: ( ) Necrosis ( ) Mortification of tissues ( ) Granulation ( )
Epithelialization
The exudate: ( ) Serous ( ) Sanguineous ( ) Purulent ( ) Fibrinous exudation
Quantity of the exudate: ( ) Small ( ) Moderate ( ) Intense ( ) Abundant
Odor: ( ) Odorless ( ) Fetid
Recommended therapy for wound treatment:

_______________________________________________________________

2.4 NEUROLOGICAL FUNCTION

Glasgow Coma Scale: Eye Opening: ______
Verbal answer: __________ Motor answer: __________
Pupils: ( ) Equal ( ) Anisocoric ( ) Miosis on the right ( ) Miosis on the left ( ) Mydriasis
on the right ( ) Mydriasis on the left
Conscious: ( ) Yes ( ) No
Guided: ( ) Yes ( ) No

3. What do you know about your present illness?

_______________________________________________________________

4. Important complaints:

_______________________________________________________________

_______________________________________________________________

VITAL SIGNS:
T: _______ P: _________ R: _________ PA: _______

IMPORTANT LABORATORY DATA:

_______________________________________________________________

_______________________________________________________________

_______________________________________________________________

SIGNATURE
Santos FS, Arruda AJCG de, Vasconcelos JMB.

Aplicabilidade do código de ética nas ações...

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