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ICNP® nursing diagnoses for clinical practice in spinal cord injury rehabilitation

Diagnósticos de enfermagem da CIPE® para a prática clínica de reabilitação em lesão medular

Diagnósticos de enfermería de la CIPE® para la práctica clínica de la rehabilitación en lesiones de la médula espinal

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ABSTRACT

Objectives: to construct statements of nursing diagnoses for the clinical practice of rehabilitation of people with spinal cord injury using the International Classification for Nursing Practice (ICNP®) and Orem's theory of self-care. **Methods:** methodological study developed in four steps: identification of relevant terms to clinical nursing practice in the rehabilitation of people with spinal cord injury; mapping of selected terms with ICNP® terms; construction of nursing diagnoses statements; mapping of statements constructed with pre-coordinated concepts of the ICNP®. **Results:** 241 statements of nursing diagnoses were constructed and categorized according to the self-care requisites of the theory. The most prevalent statements were those related to universal requisites, followed by developmental requisites and health deviation requisites. **Conclusions:** the constructed nursing diagnoses reflect the complexity of phenomena evidenced in the clinical practice of rehabilitation, allowing a systematic and comprehensive care to the person with spinal cord injury.

Descriptors: Nursing Diagnosis; Standardized Nursing Terminology; Classification; Rehabilitation Nursing; Spinal Cord Injuries.

RESUMO

Objetivos: construir enunciados de diagnósticos de enfermagem para a prática clínica de reabilitação da pessoa com lesão medular utilizando a Classificação Internacional para a Prática de Enfermagem (CIPE®) e a teoria do autocuidado de Orem. **Métodos:** pesquisa metodológica desenvolvida em quatro etapas: identificação de termos relevantes para a prática clínica de enfermagem na reabilitação de pessoas com lesão medular; mapeamento dos termos selecionados com os termos da CIPE®; construção dos enunciados de diagnósticos de enfermagem; mapeamento dos enunciados construídos com os conceitos pré-coordenados da CIPE®. **Resultados:** foram construídos 241 enunciados de diagnósticos de enfermagem, categorizados conforme os requisitos de autocuidado da teoria, destacando-se com maior prevalência os enunciados relacionados aos requisitos universais, seguidos pelos requisitos de desenvolvimento e de desvios de saúde. **Conclusões:** os diagnósticos de enfermagem construídos refletem a complexidade dos fenômenos evidenciados na prática clínica de reabilitação, possibilitando um cuidado sistematizado e integral à pessoa com lesão medular.

Descritores: Diagnóstico de Enfermagem; Terminologia Padronizada em Enfermagem; Classificação; Enfermagem em Reabilitação; Traumatismos da Medula Espinal.

RESUMEN

Objetivos: construir enunciados de diagnósticos de enfermería para la práctica clínica de rehabilitación de personas con lesión medular utilizando la Clasificación Internacional para la Práctica de Enfermería (CIPE®) y la teoría del autocuidado de Orem. **Métodos:** estudio metodológico desarrollado en cuatro etapas: identificación de términos relevantes para la práctica clínica de enfermería en la rehabilitación de personas con lesión medular; mapeo de términos seleccionados con términos CIPE®; construcción de enunciados de diagnósticos de enfermería; mapeo de enunciados construidos con conceptos pre-coordinados de la CIPE®. **Resultados:** fueron construidos 241 enunciados de diagnósticos de enfermería, categorizados de acuerdo con los requisitos de autocuidado de la teoría. Los enunciados más prevalentes fueron los relacionados con los requisitos universales, seguidos de los requisitos de desarrollo y las desviaciones de la salud. **Conclusiones:** los diagnósticos de enfermería construidos reflejan la complejidad de los fenómenos evidenciados en la práctica clínica de rehabilitación, permitiendo una atención sistemática e integral a la persona con lesión medular.

Descriptores: Diagnóstico de Enfermería; Terminología Normalizada de Enfermería; Clasificación; Enfermería en Rehabilitación; Traumatismos de la Médula Espinal.

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INTRODUCTION

Spinal cord injury (SCI) is a disabling condition of great physiological, emotional and psychosocial impact, in which the main objective is the recovery and promotion of the highest possible level of autonomy of individuals in order to maximize their participation and responsibility for self-care[1].

In this context, Nursing implements comprehensive and systematized care that favors the reduction of the level of dependence for self-care and the improvement of the quality of life of people with SCI. To this end, nurses must use their own theoretical frameworks and standardized language to support the nursing process, resulting in the provision of specialized and quality care, focused on the real needs of these people and on specific knowledge of the profession[2].

Among the various existing nursing theories, Orem's theory of self-care emphasizes the understanding of self-care as a practice of activities performed by individuals for their own benefit with the aim to maintain life, health and wellbeing[3-4], which converges with the specific focus of the rehabilitation of people with SCI. Its use in the practice of rehabilitation nurses can contribute to clinical reasoning related to self-care deficits in the construction of nursing diagnoses using nursing terminology.

The International Classification for Nursing Practice (ICNP®) stands out in this scenario. This standardized terminology represents the elements of nursing practice worldwide and supports effective clinical decision-making, recording and evaluation of nursing care[5]. Despite its relevance to professional practice and the growing interest in the use of this terminology in nursing research[6], studies addressing nursing care for people with SCI using the ICNP® are scarce.

Therefore, the present study explores this gap in knowledge and is justified by the need to highlight phenomena of interest to this clinical specialty supported by an appropriate theoretical framework to the context of care and the standardization of professional language. The identification of nursing diagnoses for people with SCI in rehabilitation with an approach based on the theory of self-care and using the ICNP® terminology can contribute to the development of individualized and more effective care plans and documentation of clinical practice, reflecting on better provision of care and greater professional visibility.

OBJECTIVES

To construct statements of nursing diagnoses for the clinical practice of rehabilitation of the person with SCI using the ICNP® and Orem's theory of self-care.

METHODS

Ethical aspects

Approval by the Research Ethics Committee was not necessary for the development of this study since only the literature was used as a data source, without the involvement of human beings.

Theoretical-methodological framework

Orem's general theory of self-care consists of three interrelated theoretical constructs: the theory of self-care, the theory of self-care deficit and the theory of nursing system, showing the importance of patient commitment to self-care[3-4]. We chose to use the theory of self-care in the present study, which addresses the practice of care performed by individuals or their self-care agent, that is, a caregiver who understands, accepts and meets the self-care needs of the dependent person, aiming at maintenance of health and wellbeing.

The theory of self-care presents three categories of therapeutic demands or self-care requisites: universal requisites are related to the maintenance and functionality of the individual; developmental requisites encompass actions necessary for optimal development in new situations; and health deviation requisites include changes arising from health problems that can generate difficulties in maintaining adequate care. When these requisites are not met, self-care deficits are identified, from which the need for nursing work is defined. From this perspective, nursing develops clinical and educational care actions aimed at self-care requisites, stimulating the maximum potential of people's independence to care for their own health[3-4].

Study design and period

Descriptive methodological study conducted in January and February 2020. It was structured in four steps adapted from the Brazilian method for the development of ICNP® terminological subsets: 1) identification of relevant terms to the clientele and/or health priority; 2) mapping of selected terms with ICNP® terms; 3) construction of nursing diagnoses statements; and 4) mapping of constructed statements with pre-coordinated concepts of the ICNP®[2].

Methodological procedures

In the first step, the terms considered relevant for clinical nursing practice in the rehabilitation of people with SCI were selected based on a prior study[7]. Among the 446 terms evidenced in the aforementioned study, 172 terms were selected from the Focus axis, with 129 contained and 43 not contained in the ICNP® 2015 version. Only terms in this axis were chosen because they represent the area of attention and relevance for Nursing, and their inclusion in the development of nursing diagnoses and outcomes is mandatory[8].

In the second step, the selected terms were arranged in electronic spreadsheets and those classified as not contained in the source study[7] were manually mapped and analyzed for equivalence in relation to terms of the ICNP® version 2019[9], according to guidelines of the ISO 12300[10]. This mapping was performed only with not contained terms in order to prevent considering a term as new when it was already included in the 2015 version. If the term was excluded from the 2019 version, it would have a definition in previous versions. At the end of this step, the terms contained and not contained in the ICNP® version 2019 were typed into an electronic spreadsheet and arranged in alphabetical order. They constituted the term bank of the present study.

In the third step, the nursing diagnoses were constructed from the selected terms according to guidelines of the International Council of Nurses (ICN) and ISO 18104 standards[8]. This process was performed manually by the main author and reviewed by the other authors of

the study, considering the clinical judgment and experience in the area of SCI rehabilitation, which enabled the analysis of concepts regarding their pertinence and relevance for clinical practice.

In the fourth step, the statements of nursing diagnoses constructed were mapped. Subsequently, the degree of equivalence of non-contained diagnoses was analyzed in relation to pre-coordinated concepts of the ICNP® version 2019, according to the ISO 12300 standards[10], giving rise to the list of contained and non-contained concepts in this terminology.

Organization and analysis of results

The results were descriptively analyzed in relation to the absolute and relative frequency of concepts, organized into tables and categorized according to the self-care requisites proposed by Orem. The concepts contained in ICNP® version 2019 were presented with the respective terminology classification codes.

RESULTS

From the 172 terms of the Focus axis, 241 statements of nursing diagnoses were constructed, of which 205 (85%) were pre-coordinated concepts and 36 (15%) were new statements in relation to the ICNP® 2019 version.

The nursing diagnoses were classified according to the self-care requisites and distributed as follows: 170 (70.5%) in universal requisites, 52 (21.6%) in developmental requisites and 19 (7.9%) in health deviation requisites, exposed in Charts 1 and 2.

Chart 1 – Distribution of nursing diagnoses for people with spinal cord injury undergoing rehabilitation according to universal self-care requisites, São Luís, Maranhão, Brazil, 2020

Universal requisites	Nursing diagnoses
Oxygenation and circulation	Bradycardia (10027274); Heart rate within normal limits (10029229); Effective tissue perfusion (10028593); Impaired peripheral tissue perfusion (10044239); Altered blood pressure (10022954); Blood pressure within normal limits (10027647); Tachycardia (10027288).
Nutrition and hydration	Impaired self feeding (10000973); Low weight (10027316); Impaired swallowing (10001033); Excessive food intake (10000682); Insufficient food intake (10000607); Improved food intake (10047324); Improved fluid intake (10047330); Impaired fluid intake (10029873); Weight within normal limits (10027392); Impaired weight (10013016); Overweight (10027300).
Elimination and excretion	Constipation (10000567); Constipation absent; Improved constipation; Bowel continence (10027741); Urinary continence (10027836); Effective defecation (10028403); Impaired defecation (10022062); Peripheral edema (10027482); No peripheral edema absent (10029020); Increased urinary frequency; Normal urinary frequency; Reduced urinary frequency; Fecal impaction (10021885); Bowel incontinence (10027718); Urinary incontinence (10025686); Stress urinary incontinence (10026797); Urge urinary incontinence (10026811); Functional incontinence of urine (10026778); Overflow incontinence of urine (10026914); Reflex incontinence of urine (10026784); Total urinary incontinence (10026807); Effective urination (10047245); Impaired urination (10021790); Absent urethral resistance; Urethral resistance; Urinary retention (10034654); Risk for constipation (10015053); Risk for urge incontinence of urine (10026848); Risk for urinary retention.
Activity and rest	Effective active range of motion (10052082); Impaired active range of motion (10052095); Impaired ability to transfer (10001005); Able to mobilize (10028461); Able to move in bed (10029240); Able to transfer (10028322); Activity intolerance (10000431); Impaired walking (10001046); Effective wheelchair mobility; Impaired wheelchair mobility (10001363); Effective mobility in bed; Impaired mobility in bed (10001067); Impaired mobility (10001219); Paralysis (10022674); Risk for activity intolerance (10015011); Adequate sleep (10024930); Impaired sleep (10027226); Somnolence (10040141).
Social interaction and loneliness	Effective social support (10045794); Lack of social support (10022753); Social isolation (10001647); Risk for social isolation (10047213).
Prevention of risks to life and wellbeing	Health care associated complication (10042451); No health care associated complication; Aggressive behavior (10002026); No aggressive behavior (10035645); Comfortable (10025574); Confusion (10023633); No confusion (10028847); Pain control (10025831); Inadequate pain control (10039910); Discomfort (10023066); Autonomic dysreflexia (10000496); No autonomic dysreflexia; Acute pain (10000454); Increased pain (10051555); Absent pain (10029008); Chronic pain (10000546); Neurogenic pain (10013125); Reduced pain (10027917); Excoriation (10047060); Spasticity (10018520); increased spasticity; Spasticity absent; Reduced spasticity; Fever (10041539); Suicidal ideation; Infection (10023032); No infection (10028945); Urinary tract infection (10029915); Inflammation (10029927); Effective skin integrity (10028501); Improved skin integrity (10028517); Impaired skin integrity (10001290); Pressure injury (10025798); No pressure injury (10029065); Fall-related injury (10038513); No fall-related injury (10038545); Transfer injury (10030074); No transfer injury (10033659); Friable skin; Dry skin (10047073); Altered perception (10001242); Effective sensory perception (10028173); Fall (10029405); No fall (10034704); Complex medication regime (10022983); Risk for health care associated complications (10041296); Decreased risk for health care associated complications; Reduced risk for plaster cast related complications; Risk for plaster cast related complications; Decreased risk for orthotic device related complications; Risk for orthotic device related complications; Risk for autonomic dysreflexia (10015030); Risk for infection (10015133); Risk for cross infection (10041807); Risk for urinary infection (10051950); Risk for impaired skin integrity (10015237); Risk for pressure injury (10027337); Risk for fall-related injury (10038521); Risk for fall (10015122); Risk for suicide (10015356); Decreased suicide risk (10027938); Risk for impaired thermoregulation (10015244); Risk for deep vein thrombosis (10027509); Risk orf violence (10022487); Body temperature within normal limits (10027652); Effective thermoregulation (10033848); Impaired thermoregulation (10033560); No deep vein thrombosis (10036406); No dizziness (10045681); Dizziness (10045584); No violence (10029168); Improved vision (10047353); Impaired vision (10022748).
Health promotion and maintenance	Impaired ability of caregiver to perform caretaking (10035414); Impaired family ability to manage regime (10000902); Impaired ability to groom (10029632); Ability to perform impaired hygiene (10000987); Impaired ability to perform leisure activity (10040351); Impaired ability to perform oral hygiene (10029645); Impaired ability to perform caretaking (10029621); Ability to manage external continence device (10042548); Impaired ability to participate in care planning (10035134); Improved ability to toilet self (10047266); Impaired ability to dress (10027578); Able to dress and groom (10028207); Effective verbal communication; Impaired verbal communication (10025104); Caregiver able to perform caretaking (10035405); Self-care deficit (10023410).

Chart 2 – Distribution of nursing diagnoses for people with spinal cord injury undergoing rehabilitation, according to developmental self-care and health deviation requisites, São Luís, Maranhão, Brazil, 2020

Self-care requisites	Nursing diagnoses
Developmental requisites	Spiritual distress (10001652); Decreased spiritual distress (10027149); Anxiety (10000477); Reduced anxiety (10027858); Positive self-esteem (10025751); Negative self-image (10022724); Positive self-image (10027108); Low self-esteem (10029507); Chronic low self-esteem (10000533); Situational low self-esteem (10000844); Adequate knowledge (10027112); Knowledge of skin care; Knowledge of care with plaster casts; Knowledge of orthotic device care; Knowledge of wound care (10033784); Knowledge of disease (10023826); Knowledge of spinal cord injury; Knowledge of pain management (control) (10033750); Knowledge of medication (10025968); Knowledge of safety measures (10028643); Knowledge of rehabilitation regime; Knowledge of medication regime (10023819); Knowledge of fall prevention (10040276); Knowledge of treatment regime (10025733); Helplessness (10039952); Impaired sexual functioning (10001288); Difficulty coping (10001120); Readiness for effective coping (10001469); Effective caregiver coping (10034838); Impaired coping of the caregiver; Effective coping (10022378); Effective family coping (10034770); Impaired family coping (10034789); Lack of knowledge (10000837); Lack of knowledge about skin care; Lack of knowledge of plaster cast care; Lack of knowledge of orthotic device care; Lack of knowledge of wound care; Lack of knowledge of disease (10021994); Lack of knowledge of pain management (10040016); Lack of knowledge of medication (10025975); Lack of knowledge of safety measure (10022015); Lack of knowledge of medication regime (10021941); Lack of knowledge of rehabilitation regime; Lack of knowledge of fall prevention (10040230); Lack of knowledge of treatment regime (10021925); Lack of knowledge of spinal cord injury; Depressed mood (10022402); Improved Mood (10050027); Fear about death (10037834); Reduced fear (10027889); Risk for situational low self-esteem (10015180).
Health deviation requisites	Effective adaptation; Impaired adaptation (10022027); Adherence to rehabilitation regime (10033671); Adherence to dietary regime (10030159); Adherence to medication regime (10030192); Adherence to therapeutic regime (10030205); Health-seeking behavior (10000735); Impaired health-seeking behavior (10022920); Effective Continuity of Care (10035507); Effective role performance (10027940); Impaired role performance (10000941); Impaired health maintenance (10000918); Non-adherence to rehabilitation regime; Non-adherence to dietary regime (10022117); Non-adherence to medication regime (10021682); Non-adherence to therapeutic regime (10022155); Denial (10000624); No denial (10044260); Inadequate income (10022563).

DISCUSSION

In the present study, 241 statements of nursing diagnoses that sought to establish proximity to the reality of clinical practice in the rehabilitation of people with SCI were proposed. The vast majority was identified in the ICNP® version 2019. This demonstrates that the concepts reflecting clinical practice of nursing to this clientele and area of expertise are covered in the terminology, ensuring its importance as a technological instrument for entering data in electronic health information systems, recording professional practice and generating nursing indicators worldwide[5,7].

On the other hand, the presence of statements not contained in the ICNP® indicates the use of a nursing language in the rehabilitation care of people with SCI. This datum confirms the need to update and include these concepts in the terminology in order to complement the list of pre-coordinated concepts and highlight a phenomena of interest in clinical practice in this care specialty[7], contributing to expansion and strengthening of the ICNP®.

The use of Orem's theory of self-care as a basis for the categorization of nursing diagnosis statements favors the implementation of comprehensive and individualized care, encouraging people to take responsibility for their own health care, which converges with the main objectives of the rehabilitation in SCI. This way, nurses can use different methods according to the requisites arising from self-care deficits, being able to act or do for the patient, advise, guide, supervise, offer physical and/or emotional support, provide and maintain a personal environment or teach them how to deal with their limitations[3].

Most statements were grouped into universal self-care requisites, with emphasis on the physiological repercussions and complications related to the organic functions of maintaining an adequate supply of air, water and food, vesico-intestinal elimination, mobility, safety, social interaction and health promotion. Spinal cord injury results in important motor, sensory and autonomic dysfunctions, vasomotor, respiratory, intestinal and genitourinary impairment, in addition to potential complications such as neuropathic pain, spasticity, pressure injury, deep vein thrombosis, autonomic dysreflexia and urinary tract infection[11]. This draws attention to the need to implement preventive, recovery, rehabilitation and control actions in order to avoid complications and reduce the level of dependence, through stimulation and training for self-care and preparation for care in the home context.

The theoretical nursing framework adopted in this study highlights that other factors than the biological dimension exert influence in adherence to self-care, for example culture, developmental status, environment, life habits, health knowledge, health care systems and adequacy and availability of resources. It also reinforces the need to know individuals in their biopsychosocial unit[3]. Thus, the emotional, psychosocial and spiritual dimensions were also considered in the construction of nursing diagnosis statements.

In developmental self-care requisites, statements related to psychological changes and difficulties in adjusting to the new life condition were grouped, as well as the knowledge and skills required to perform self-care. Spinal cord injury is an event that usually occurs abruptly and requires changes in life, based on new knowledge and experiences, causing a series of psychosocial changes that can interfere with the expected development of these patients and their family members[12]. Studies[13-14] indicate negative emotions (denial, disbelief, helplessness, feelings of isolation and depression), difficulty in dealing with life and physical changes, and unrealistic expectations of recovery as the main challenges faced in the rehabilitation of these patients, generating self-care deficits.

Authors[15] suggest an association between the adoption of positive coping strategies and more successful results in

psychosocial adjustment after SCI. Nurses play a fundamental role in this scenario by supporting patients to cope and adapt during the rehabilitation process[16]. According to Orem, nursing should identify the levels of development and possible deficits presented by each person and provide support to patients and their family, ensuring the provision of comprehensive care[3].

In health deviation self-care requisites, concepts related to factors, barriers and difficulties involved in the therapeutic demand for self-care were classified. The lack of a social support network, discrimination, environmental barriers to access, and inadequate provision of services, among other factors, can be limiting aspects in the rehabilitation of individuals with SCI[13-14]. The self-care practice in this context will be associated with specific requisites aimed at recovery, rehabilitation and control, namely: seeking adequate medical care; knowing the disease and its complications; adhering to treatment; knowing and regulating the discomforts of treatment; accepting the disease and the need for health care; learning to live with effects of the disease and consequences of medical diagnosis and therapeutic measures in the lifestyle[3-4].

Nurses and other members of the interdisciplinary health team play an important role in identifying the difficulties faced by people with SCI during the rehabilitation process, and seek to overcome them by encouraging the participation of a family and social support network, reducing barriers to access and participation, providing guidance and preparing family members for home care, offering psychological support, and encouraging self-care[17].

Limitations of the study

Future studies are needed in order to submit the constructed nursing diagnoses to content validation by experts.

Contributions to the field of Nursing

The study made it possible to name and document the phenomena of interest to nursing practice in the context of SCI rehabilitation, in accordance with the proposal to standardize professional language worldwide. In addition, the constructed statements of nursing diagnoses may help rehabilitation nurses in the development of safer and more effective care plans, supported by an appropriate theoretical framework to clinical practice, reflecting on better quality of care for the person with SCI.

CONCLUSIONS

As intended, 241 ICNP® nursing diagnoses for people with SCI in rehabilitation were constructed and categorized according to the self-care requisites of Orem's theory. The statements related to universal requisites stood out with greater prevalence, followed by developmental requisites and health deviation requisites. When continuing the research, statements of nursing interventions will be developed to structure an ICNP® terminological subset directed to this clientele, collaborating to an individualized, scientific, effective and quality nursing care.

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