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POST-OPERATIVE OF INTESTINAL OSTOMY: DIAGNOSIS AND NURSING INTERVENTIONS IMPLEMENTED IN CLINICAL PRACTICE

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ABSTRACT

Objective: To identify nursing diagnoses and interventions implemented in clinical practice for patients in the postoperative period of intestinal ostomy based on the Theory of Basic Human Needs (NHB). **Method:** Quantitative, retrospective, and documentary study developed with 57 medical records of patients in the postoperative period of intestinal ostomy who were admitted to a general surgery unit of a hospital in the south of Brazil. Data were analyzed using descriptive statistics and grouped considering the NHB theory. **Results:** Twenty-five nursing diagnoses and 101 interventions were identified, which were mostly related to psychobiological NHB. The most frequent diagnoses were: Impaired tissue integrity (85.75%), and Risk of infection (26.25%). The nursing interventions checking vital signs (85.75%), and implementing colostomy/ileostomy care (80.5%) were characterized as the most prescribed ones. No diagnoses and interventions related to psychospiritual NHBs were obtained. **Conclusion:** The results revealed that nurses prioritized the psychobiological needs of patients, focusing care on the demands arising from the surgical intervention and its possible complications.

DESCRIPTORS: Nursing diagnosis. Enterostomal therapy. Nursing process. Nursing theory.

PÓS-OPERATÓRIO DE ESTOMIA INTESTINAL: DIAGNÓSTICOS E INTERVENÇÕES DE ENFERMAGEM IMPLEMENTADOS NA PRÁTICA CLÍNICA

RESUMO

Objetivo: Identificar os diagnósticos e as intervenções de enfermagem implementados na prática clínica para pacientes em pós-operatório de estomia intestinal, com base na Teoria das Necessidades Humanas Básicas (NHBs). **Método:** Estudo quantitativo, retrospectivo e documental desenvolvido com 57 prontuários de pacientes em pós-operatório de estomia intestinal que se internaram em uma unidade de cirurgia geral de um hospital do sul do Brasil. Os dados foram analisados por meio da estatística descritiva e agrupados à luz da teoria das NHBs. **Resultados:** Identificaram-se 25 diagnósticos de enfermagem e 101 intervenções, os quais estavam relacionados majoritariamente às NHBs psicobiológicas. Os diagnósticos mais frequentes foram Integridade tissular prejudicada (85,75%) e Risco de infecção (26,25%). As intervenções de enfermagem verificar sinais vitais (85,75%) e implementar cuidados com colostomia/ileostomia (80,5%) caracterizaram-se como as mais prescritas. Não se obtiveram diagnósticos nem intervenções relacionados às NHBs psicoespirituais. **Conclusão:** Os resultados

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revelaram que os enfermeiros priorizaram as necessidades psicobiológicas dos pacientes centrando a assistência nas demandas advindas com a intervenção cirúrgica e suas possíveis complicações.

DESCRITORES: Diagnóstico de enfermagem. Estomaterapia. Processo de enfermagem. Teoria de enfermagem.

POSTOPERATORIA DE OSTOMA INTESTINAL: DIAGNÓSTICO E INTERVENCIONES DE ENFERMERÍA IMPLEMENTADOS EN LA PRÁCTICA CLÍNICA

RESUMEN

Objetivo: Identificar los diagnósticos e intervenciones de enfermería implementados en la práctica clínica para pacientes en postoperatorio de estoma intestinal con base en la Teoría de las Necesidades Humanas Básicas (NHBs). **Método:** Estudio cuantitativo, retrospectivo y documental, desarrollado con 57 historias clínicas de pacientes en postoperatorio de ostomía intestinal que ingresaron en una Unidad de Cirugía General de un Hospital del Sur de Brasil. Los datos fueron analizados usando estadística descriptiva y agrupados a la luz de la Teoría NHBs. **Resultados:** Se identificaron 25 diagnósticos de enfermería y 101 intervenciones, en su mayoría relacionados con NHB Psicobiológico. Los diagnósticos más frecuentes fueron: Deterioro de la integridad tisular (85,75%) y Riesgo de infección (26,25%). Las intervenciones de enfermería: Control de signos vitales (85,75%) e Implementación de cuidados de colostomía/ileostomía (80,5%) se caracterizaron como las más prescritas. No se obtuvieron diagnósticos e intervenciones relacionadas con los NHB Psicoespirituales. **Conclusión:** Los resultados revelaron que los enfermeros priorizaron las necesidades psicobiológicas de los pacientes, enfocando el cuidado en las demandas derivadas de la intervención quirúrgica y sus posibles complicaciones.

DESCRIPTORES: Diagnóstico de enfermería. Estomaterapia. Proceso de enfermería. Teoría de enfermería.

INTRODUCTION

Stoma is a word of Greek origin that means mouth or opening. The term ostomy originates from it and refers to a surgically made opening in the organs of the respiratory, digestive or urinary system. Among the types of ostomy, the intestinal ones prevail, aiming to divert fecal effluents to the body's external environment through an opening in the abdominal wall and can be classified as ileostomy or colostomy, when located in the small or large intestine, respectively[1].

The leading causes for the creation of an intestinal ostomy are neoplasms of the colon and rectum, inflammatory bowel diseases, congenital malformations and abdominal trauma[2]. Based on the pathology and clinical conditions of the patients, ostomies can be definitive when there is no possibility of reconstruction of the intestinal transit or temporary, aiming to protect the anastomosis[1].

The surgical procedure for making an ostomy is configured as a therapeutic approach that intends to reduce mortality by treating the cause and providing the survival of individuals[3]. However, it must be considered that living with an intestinal ostomy is a complex process that causes several changes in the physical, psychological and social health of patients, directly and significantly reducing their quality of life[4].

Nursing professionals must develop comprehensive and humanized care in the context of care for individuals with an intestinal ostomy, considering the patient as a complex being who needs care from a multidimensional perspective. It should be noted that nursing care should begin in the preoperative period and extend during the trans and postoperative periods of ostomy construction through a comprehensive and continuous care plan[5].

For the development of qualified nursing care for these individuals, the need emerges for nurses to use methods that enable the planning and organization of their work practice, guaranteeing its efficiency and effectiveness. In this sense, the Nursing Process (NP) stands out as an instrument capable of guiding clinical conduct based on scientific evidence, aiming to identify nursing diagnoses and implement interventions consistent with the needs of patients, to obtain positive

results. The NP consists of a technology that involves the dynamics of systematized and interrelated actions and is based on theories and conceptual models of nursing[6].

Among the references that can be used to subsidize the application of the NP, the Theory of Basic Human Needs (BHNs) by Wanda Horta is cited. This theory is based on the principle that human beings have basic needs to be met to achieve their complete well-being, which aim to maintain their dynamic balance in time and space and can be hierarchized into three levels: psychobiological, psychosocial and psychospiritual. Therefore, subsidized nursing care through a holistic and integral approach is capable of maintaining and/or recovering the state of balance and homeostasis of the human being, using the specific knowledge and scientific principles of the profession[7].

The use of the NP in association with theoretical models can provide the nurse with the identification of accurate nursing diagnoses and, consequently, the planning and implementation of targeted and resolving interventions, contributing to the achievement of favorable health outcomes and the qualification of the nursing care[6,7]. However, there is evidence of a need for national and international studies on the implementation of NP in caring for people with an intestinal ostomy, especially concerning research on diagnoses and nursing interventions implemented in clinical practice[8].

Thus, carrying out this research was motivated by the need to characterize nursing work in the care of people with an intestinal ostomy through a language specific to the profession, as well as the importance of knowing the assistance to these patients in the hospital context based on the NP. Given the above, the question is: what are the diagnoses and nursing interventions implemented in clinical practice for patients in the postoperative period of intestinal ostomy based on the theory of BHNs?

OBJECTIVE

To identify the diagnoses and nursing interventions implemented in clinical practice for patients in the postoperative period of intestinal ostomy based on the theory of BHNs.

METHOD

The present paper is a quantitative, retrospective, and documentary study developed in a university hospital in southern Brazil with data from medical records of patients admitted to the institution's general surgery unit (GSU).

Currently, the hospital has 403 inpatient beds, and of these, 52 beds make up the GSU. This unit provides care to individuals in the pre and postoperative period of small, medium and large surgeries in several specialties. The nursing team comprises 54 professionals, 17 nurses and 37 nursing technicians, distributed in three work shifts. It is important to emphasize that none of the professionals working at GSU has a specialization in stomatherapy.

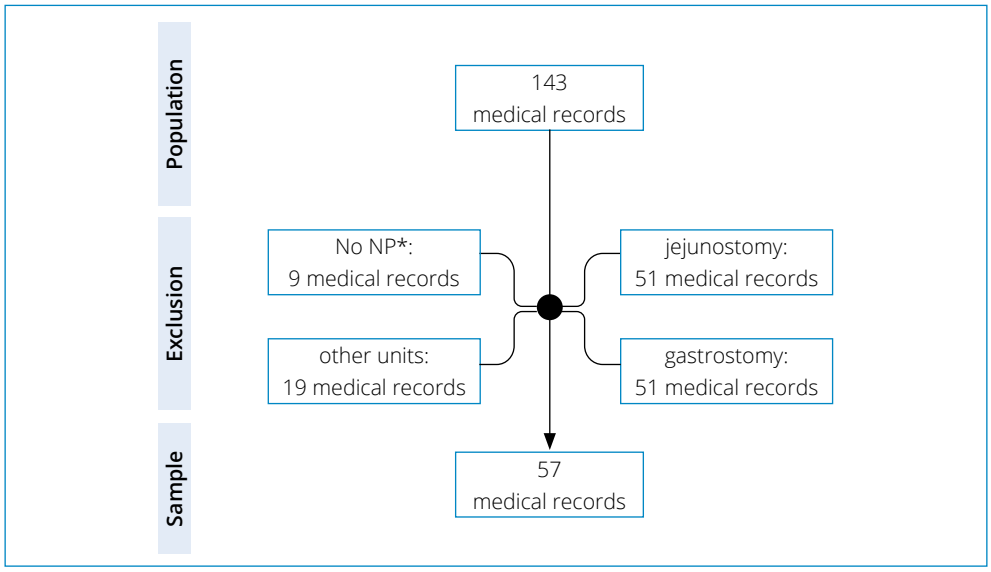
The NP developed in the unit comprises five interrelated stages (data collection, diagnosis, planning, implementation and evaluation) and is based on the theory of BHNs, by Wanda Horta7. All stages of the NP are recorded via an electronic system, allowing professionals to identify and review diagnoses daily and prescribe nursing interventions individually. The records related to the NP are also printed and made available in physical form in the medical records of hospitalized patients.

The nursing diagnoses contained in the electronic system were established based on the NANDA International taxonomy (NANDA-I) and the clinical experience of the institution's nursing professionals. Complementarily, the system lists nursing interventions according to the Nursing Interventions Classification (NIC) and the scientific literature for the care planning stage. Notably, the nursing outcomes of the Nursing Outcomes Classification (NOC) still need to be included in the system.

For data collection, at first, the statistics sector of the institution was asked to provide a list of medical records of patients submitted to the creation of a feeding and/or elimination ostomy (gastrostomy, jejunostomy, ileostomy and colostomy) in the period of January from 2018 to December 2020. Upon request, a list of 143 medical records was obtained, which constituted the study population.

It is worth noting that the hospital jointly registers surgical procedures for making feeding and eliminating stomata. Therefore, it was not possible to perform a previous sample calculation. The choice of a time limit of two years is justified, as in 2018, some changes in the organization and structure of the electronic system of the NP in the institution where the investigation took place took effect.

Subsequently, the list of the population's medical records was physically accessed by the study's first author, in the hospital's archive sector, from April to October 2021. Of these medical records, those that met the following criteria were included in the investigation: being a patient aged 18 years or older and being admitted to the GSU in the postoperative period of intestinal elimination ostomy (colostomy or ileostomy). Records that did not have the NP in the postoperative period were excluded. Of the study population, 57 records met the eligibility criteria, as shown in Fig. 1.



NP: nursing process
Figure 1. Flowchart of the medical records selection process with the respective reasons for exclusion.

A printed collection instrument designed by the research team exclusively for this purpose was used to capture the data. This instrument was composed of two parts. The first contained data related to the patient's clinical and sociodemographic profile, and the second listed the nursing diagnoses and the respective interventions. The data in the collection instrument were coded using numerical symbols and grouped for typing in a spreadsheet in the Excel Online software. This step was carried out in a double-independent check by two previously trained typists, with subsequent verification of divergences.

Data were submitted to descriptive statistical analysis using absolute and relative frequencies, mean and standard deviation or median and 25th and 75th percentiles. The Statistical Package for Social Sciences (SPSS) software, version 21.0, was used. The research team grouped the identified nursing diagnoses and interventions according to Wanda Horta's theory of BHNs[7], following the theoretical framework adopted to support the NP in the research institution.

For the development of this research, the ethical precepts of Resolution nº 466, of 2012, of the National Health Council were respected. The study was submitted to the Research Ethics Committee and obtained a favorable opinion of number 4,594,215.

RESULTS

The study sample consisted of 57 medical records of patients in the postoperative period of making an intestinal ostomy, who had a mean age of 66 (± 18.14) years, was primarily male (29; 50.75%), white (53; 93%), married (19; 33.25%) and with a low level of education (48; 84.25%). The analysis of the clinical characteristics revealed that the most common

reason for making an ostomy was colorectal neoplasia (30; 52.75%). Most patients underwent colostomy (48; 84.25%) in the transverse colon (26; 45.75%). Ileostomies were performed in nine (15.75%) individuals. The length of hospital stay in the postoperative period averaged 12.4 (± 15.23) days.

By analyzing the medical records, 25 nursing diagnoses were identified, with the median number of diagnoses per medical record = 3 (1.5-3). Of the diagnoses identified, 17 (68%) were of the problem-focused type, seven (28%) were at risk, and one (4%) was syndrome. Related to psychobiological BHNs, there were 23 (92%) diagnoses, with emphasis on Impaired tissue integrity (49; 85.75%) and Risk of infection (15; 26.25%), as shown in Table 1.

Table 1. Nursing diagnoses and related/risk factors associated with psychobiological basic human needs are identified in patients' medical records in the postoperative period of intestinal ostomy. Santa Maria, RS, Brasil, 2021.

Psychobiological needs	Diagnostic Title related factor/risk factor	n (%)
Oxygenation	**Inefficient breathing pattern**	4 (7)
	Evolution of the disease	2 (3.5)
	Medication effects	1 (1.75)
	Neuromuscular/musculoskeletal impairment	1 (1.75)
	Risk for impaired breathing function	2 (3.5)
	Medication effects	1 (1.75)
	Neuromuscular/musculoskeletal impairment	1 (1.75)
	Impaired Gas Exchange	1 (1.75)
	Imbalance in the ventilation-perfusion ratio	1 (1.75)
Hydration	**Risk of imbalance in fluid volume**	1 (1.75)
	Alteration of the gastrointestinal tract	1 (1.75)
Nutrition	**Imbalanced nutrition: less than the body needs**	7 (12.25)
	Dietary restrictions and/or eating habits	4 (7)
	Lack of appetite	2 (3.5)
	Medication effects	1 (1.75)
	Deficit in self-care: eating	1 (1.75)
	Neuroperceptive or cognitive impairment	1 (1.75)
Elimination	**Dysfunctional gastrointestinal mobility**	4 (7)
	Surgical procedure	2 (3.5)
	Evolution of the disease	1 (1.75)
	Therapeutic diagnosis	1 (1.75)
	Bowel incontinence	3 (5.25)
	Alteration of the gastrointestinal tract	3 (5.25)
	Diarrhea	1 (1.75)
	Infectious process	1 (1.75)
	Impaired urinary elimination	1 (1.75)
	Neuromuscular/musculoskeletal impairment	1 (1.75)
	Constipation risk	1 (1.75)
	Mechanical Factors	1 (1.75)

continue...

Table 1. Contiuation...

Psychobiological needs	Diagnostic Title related factor/risk factor	n (%)
Exercise and physical activity	**Impaired physical mobility**	11 (19.25)
	Neuromuscular/musculoskeletal impairment	6 (10.5)
	Pain	3 (5.25)
	Trauma	2 (3.5)
Body Care	**Deficit in self-care: bathing and/or hygiene**	10 (17.5)
	Pain in the surgical wound	8 (14)
	Immobility	2 (3.5)
	Self-care deficit syndrome	1 (1.75)
	Neuromuscular/musculoskeletal impairment	1 (1.75)
Cutaneous-mucosal integrity	**Impairment of tissue integrity**	49 (85.75)
	Mechanical trauma	40 (70)
	Surgical procedure	9 (15.75)
	Risk of impaired skin integrity	5 (8.75)
	Unbalanced nutritional status	1 (1.75)
	Excretions	1 (1.75)
	Mechanical Factors	1 (1.75)
	Immobility	1 (1.75)
	Invasive Procedures	1 (1.75)
	Risk of pressure injury	2 (3.5)
	Impaired physical mobility	1 (1.75)
	Impaired mobility	1 (1.75)
	Impaired skin integrity	2 (3.5)
	Excretions	1 (1.75)
	Immobility	1 (1.75)
Regulation: thermal, hormonal, neurological, hydrosaline, electrolyte, immunological, cell growth, vascular	**Risk of infection**	15 (26.25)
	Invasive procedures	12 (21)
	Increased environmental exposure to pathogens	3 (5.25)
	Ineffective tissue perfusion: peripheral	1 (1.75)
	Compromised blood flow	1 (1.75)
	Risk of unstable blood glucose	1 (1.75)
	Metabolic changes	1 (1.75)
Perception: olfactory, visual, auditory, tactile, gustatory, painful	**Acute pain**	13 (22.75)
	Harmful agents: biological, chemical, physical and psychological	5 (8.75)
	Injuries	5 (8.75)
	Evolution of the disease	3 (5.25)
	Impaired comfort	3 (5.25)
	Postoperative	3 (5.25)

Two (8%) nursing diagnoses were related to psychosocial BHNs, specifically the under need for safety. The most frequent diagnosis was Fear in three (5.25%) patients, as shown in Table 2.

Table 2. Nursing diagnoses and related/risk factors associated with psychosocial BHNs identified in patients' medical records in the postoperative period of intestinal ostomy. Santa Maria, RS, Brazil, 2021.

Psychobiological needs	Diagnostic Title related factor/risk factor	n (%)
Safety	**Fear**	3 (5.25)
	Pain	2 (3.5)
	Physical damage	1 (1.75)
	Anxiety	1 (1.75)
	Threat or change in health status: invasive procedure and hospital environment	1 (1.75)

A number of 101 nursing interventions were identified, with a median = 13 (8-16) per medical record. Most nursing interventions were considered related to psychobiological BHNs (86; 85.15%). Among them, the most frequent were: checking vital signs (49; 85.75%) and implementing colostomy/ileostomy care (46; 80.5%), as shown in Table 3.

Tabela 3. Nursing interventions related to basic psychobiological human needs identified for patients in the postoperative period of intestinal ostomy. Santa Maria, RS, Brasil, 2021.

Psychobiological needs	Nursing Interventions	n (%)
Oxygenation	Observe and report changes in ventilatory pattern, heart rate and oxygen saturation	9 (15.75)
	Perform tracheostomy suction when secretion is present	4 (7)
	Check oximetry	3 (5.25)
	Observe the position of the endotracheal tube communicating changes	2 (3.5)
	Perform nasal suction before oral suction	1 (1.75)
Hydration	Stimulate water intake	2 (3.5)
Nutrition	Implement nasoenteric/nasogastric tube care	15 (26.25)
	Communicate signs and symptoms of hypo/hyperglycemia	7 (12.25)
	Observe and communicate diet acceptance	5 (8.75)
	Implement gastrostomy care	1 (1.75)
	Implement total parenteral nutrition care	1 (1.75)
Elimination	Implement colostomy/ileostomy care	46 (80.5)
	Implement care with bladder catheterization	27 (47.5)
	Record aspect and frequency of eliminations	9 (15.75)
	Implement intestinal elimination care	2 (3.5)
	Assess bladder distention	1 (1.75)
	Assess ostomy	1 (1.75)
	Implement urinary elimination care	1 (1.75)
	Maintain a closed urinary drainage system	1 (1.75)
	Implement wet colostomy care	1 (1.75)

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Table 3. Continuation...

Psychobiological needs	Nursing Interventions	n (%)
Sleep and rest	Avoid procedures while the patient is asleep	2 (3.5)
Exercise and physical activity	Assist active movements	1 (1.75)
Body mechanics	Keep headboard elevated	22 (38.5)
	Stimulate movement in bed	14 (24.5)
	Help the patient to sit on a chair	4 (7)
	Provide a comfortable position for the patient	2 (3.5)
Body care	Help in the shower	19 (33.25)
	Perform bed bath	22 (38.5)
	Stimulate hygiene care	13 (22.75)
	Assist patient with oral hygiene	4 (7)
	Encourage and supervise oral hygiene	3 (5.25)
	Perform oral hygiene	3 (5.25)
	Sanitize scalp	2 (3.5)
	Arrange the organization of bath items and help with it	3 (5.25)
	Implement care for facial trichotomy	2 (3.5)
	Keep perineum clean and dry	1 (1.75)
	Keep nails short and clean	1 (1.75)
Cutaneous-mucosal integrity	Implement care protocol for the prevention and treatment of pressure injuries	33 (57.75)
	Perform dressings	32 (56)
	Evaluate and report the appearance of the surgical wound	25 (43.75)
	Inspect the skin for hyperemic or ischemic spots	24 (42)
	Keep airflow or pyramidal mattress	14 (24.5)
	Keep the external dressing clean and dry	10 (17.5)
	Perform rotation in subcutaneous applications	11 (19.25)
	Perform decubitus change or assist in it	9 (15.75)
	Observe suture conditions	8 (14)
	Protect the skin over bony prominences	5 (8.75)
	Record the aspect of the lesion	5 (8.75)
	Communicate, assess and describe hematoma formation	4 (7)
	Protect skin areas close to the ostomy	4 (7)
	Observe perineum conditions	3 (5.25)
	Assess the presence of edema	2 (3.5)
	Moisturize the skin	2 (3.5)
	Apply barrier cream to dermatitis after intimate hygiene whenever necessary	1 (1.75)
	Evaluate the skin and observe the formation of lesions along the path of the lace	1 (1.75)
	Protect the region above the auditory pavilion with gauze	1 (1.75)
		1 (1.75)

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Table 3. Continuation...

Psychobiological needs	Nursing Interventions	n (%)
Regulation: thermal, hormonal, neurological, hydrosaline, electrolyte, immunological, cell growth, vascular	check vital signs	49 (85.75)
	Watch for signs of infection	29 (50.75)
	Implement catheter care	25 (43.75)
	Monitor bleeding	17 (29.5)
	Implement care in venipuncture	16 (28)
	Implement care with drug administration and serum therapy	14 (24.5)
	Implement drain care	14 (24.5)
	Observe ports and catheter insertion sites	12 (21)
Regulation: thermal, hormonal, neurological, hydrosaline, electrolyte, immunological, cell growth, vascular	Report abdominal distension	7 (12.25)
	Assess circulatory conditions	3 (5.25)
	Keep positioning	3 (5.25)
	Report blood pressure changes	2 (3.5)
	Report changes in color and temperature of extremities	2 (3.5)
	Implement care with venipuncture in large vessels	2 (3.5)
	Implement care in checking capillary blood glucose	2 (3.5)
	Keep the patient warm	2 (3.5)
	Record the appearance of drainage and/or secretion	2 (3.5)
	Watch temperature and signs of cooling	2 (3.5)
	Implement perineal folley drain care in a closed system	1 (1.75)
Locomotion	Accompany and assist patients on their journeys	9 (15.75)
	Stimulate ambulation	3 (5.25)
	Offer a wheelchair	1 (1.75)
Perception: olfactory, visual, auditory, tactile, gustatory, painful	Evaluate pain and effectiveness of analgesia using an intensity scale	18 (31.5)
	Administer analgesia after assessment	9 (15.75)
	Communicate pain signals	4 (7)
	Implement epidural catheter care	1 (1.75)
Environment	Sanitize areas close to the bed with a standardized solution	6 (10.5)
	Provide a calm and comfortable environment	1 (1.75)
Therapy	Request evaluation	3 (5.25)

Of the 101 nursing interventions identified, 15 (14.85%) were associated with psychosocial BHNs. The most frequent were: promoting safety and comfort in eight (14%) patients and previously explaining the procedures in five (8.75%), as shown in Table 4.

Table 4. Nursing interventions related to basic psychosocial human needs identified for patients in the postoperative period of intestinal ostomy. Santa Maria, RS, Brasil, 2021.

Psychosocial Needs	Nursing Interventions	n (%)
Safety	Promoting safety and comfort	8 (14)
	Explain procedures in advance	5 (8.75)
	Evaluate and report anxiety-indicator behavior	3 (5.25)
	Keep crates in bed	2 (3.5)
	Keep personal belongings close to the patient	1 (1.75)
	Reassure the patient	1 (1.75)
Communication	Enable the patient to verbalize their feelings	1 (1.75)
Learning (health education)	Guide the patient and family on ostomy care and collection equipment	3 (5.25)
	Advise patient and family on injury care	2 (3.5)
Space	Respect the patient's privacy	1 (1.75)
Participation	Encouraging the presence and participation of the family in the treatment: postoperative	4 (7)
	Support patient and family	1 (1.75)
	Stimulate self-care	1 (1.75)
Self-image	Help with changing clothes	1 (1.75)
	Brush the hair	1 (1.75)

DISCUSSION

This study identified a higher prevalence of nursing diagnoses and interventions related to psychobiological BHNs, mainly associated with human physiological demands. These findings can be justified because, during the assessment of patients, nurses prioritized care related to biological needs to the detriment of psychosocial and psychospiritual needs, focusing care on the demands arising from surgical intervention and its possible complications. This finding may be related to the fact that the immediate and mediate postoperative period is characterized as a delicate period full of particularities concerning the clinical condition of the patients, requiring specific care by the nursing team, which aims to restore physiological functions[9].

Impaired tissue integrity was the most frequent nursing diagnosis associated with psychobiological BHNs. This result could be expected when considering the break in the skin and underlying tissues that patients undergo during the surgical procedure, which is characterized as one of the conditions associated with this diagnosis[10]. The high prevalence of this diagnosis justifies the identification of several interventions aimed at caring for the skin and injuries, such as assessing the surgical wound, observing suture conditions, performing dressings and recording the appearance of the injury.

Corroborating with the data of this study, in research carried out in a university hospital in southern Brazil with 143 patients in the postoperative period of abdominal surgery, the results showed that this diagnosis was also one of the most frequent. Regarding the care identified for this diagnosis, the importance of monitoring bleeding, observing signs of infection and performing compressive dressings was highlighted[11].

Tissue rupture associated with invasive procedures and increased exposure to microorganisms during hospitalization may be linked to the high frequency of the Risk of infection diagnosis identified in this study. In a survey conducted in northeastern Brazil with 48 patients in the postoperative period, this diagnosis was present in 100% of the analyzed sample[12]. The literature also reveals that the evaluation of the appearance of the skin, the dressings, the surgical wound and the condition of invasive devices can constitute interventions that can be prescribed by nurses to prevent this complication[11], which allows confirming the data shown in this research.

The third most established diagnosis related to psychobiological BHNs was Acute pain, conceptualized as an unpleasant sensory and emotional experience associated with actual or potential tissue damage, lasting up to three months[10]. Pain is a common discomfort in the postoperative period due to the injury caused by the surgical procedure and is clinically manifested through hypertension, tachycardia and tachypnea[13]. Once considering that pain is characterized as the fifth vital sign, similar to the results of this study, it is verified in the literature that it is up to nursing to monitor pain intensity through standardized scales. In addition, care should be implemented to promote comfort and relaxation, administer analgesia and immobilize the surgical wound when performing active movements[14].

The presence of postoperative pain can lead patients to reduce their movement, which may be related to the high frequency of the diagnosis of Impaired physical mobility in the sample. This diagnosis was also identified in other studies developed with surgical patients[11,15]. Among the nursing care that can be prescribed to patients in the postoperative period of surgeries that generate intestinal ostomy and who have reduced mobility, we mention the stimulation of active movements and early walking, given that these interventions can stimulate gastrointestinal motility and promote fecal elimination[16].

In 2016, the Associação Brasileira de Estomaterapia (Sobest) launched the document "Interventions in the areas covered by stomatherapy", which consists of material prepared based on the NANDA-I, NIC and NOC taxonomies and which aims to direct clinical practice in the three areas of expertise of the specialty (stomies, wounds and incontinence), contributing to systematized assistance based on scientific evidence[16]. When considering the diagnoses identified in this study, it is observed that there is a correspondence between those recommended by Sobest for aid to people in the postoperative period of intestinal ostomy: Impaired tissue integrity, Risk of impaired skin integrity, and Intestinal incontinence.

In a research carried out in Spain that aimed to determine the nursing diagnoses in 102 people with intestinal stomas and their associations with sociodemographic and clinical variables, the results differed from the present study, as the diagnoses Willingness to control improved health (100%), Knowledge disabled (100%) and Sleep pattern disturbance (71.6%) were the most established. It was also observed that the identified diagnoses were mainly associated with the patients' psychosocial changes. This divergence can be explained by the fact that the research was developed based on a previously validated collection instrument, which contained a list of diagnoses related to the significant repercussions of the ostomy on patients' daily lives and suggested by stoma therapist nurses[17], unlike the present study.

Concerning nursing care, it was found in this research a high frequency of intervention to implement colostomy/ileostomy care. This fact demonstrates that nurses recognize the importance of performing care actions with the ostomy and the collector equipment during the postoperative period, not going unnoticed during the evaluations and becoming a focus of nursing care. However, the description of this intervention can be considered generic or imprecise, making its implementation difficult in clinical nursing practice. This point may reflect one of the weaknesses identified by this study, which is associated with the scarcity of specific interventions for the care of individuals with an intestinal ostomy available in the electronic system of the hospital setting for this investigation.

When analyzing the data in the literature, it was observed that there is disagreement with the findings of the present study, as it is perceived the tendency of the researchers to suggest especially the implementation of interventions related to the psychosocial needs of patients with ostomy[18,19]. In an international study that aimed to determine which nursing care is prescribed for people with intestinal stomas and their relationships with sociodemographic and clinical characteristics, it was shown that the most frequent NIC interventions were: support for decision-making (100%), ostomy care (100%), sleep improvement (71.5%) and skin supervision (64.7%). The authors also observed that nurses are more likely to prescribe interventions to reduce anxiety, nutritional counseling, and strengthen self-esteem during hospitalization. The intervention to improve self-image was associated with the late postoperative period at home[18].

The scarcity of psychosocial interventions found in this research may reveal a gap in nursing care, considering that care must be based on a holistic perspective to transcend the technical care for the body and the ostomy, considering the specificities for the adaptation and rehabilitation of these individuals. In this way, identifying human psychosocial responses and implementing interventions that promote the ostomate's autonomy and quality of life, based on the principles of comprehensiveness and humanization, become essential[19].

The nursing diagnoses associated with identified psychosocial BHNs were fear and anxiety, which were related to pain, physical harm, and a threat or change in health status. The postoperative period can be difficult for individuals undergoing the creation of an intestinal ostomy since when faced with the collection equipment for the first time, they can express negative feelings, such as fear, anguish and anxiety[20]. Thus, these nursing diagnoses may also be associated with patients' experiences during hospitalization and justify the prescription of care to promote comfort and relaxation and evaluate and communicate behavior that indicates anxiety.

For the assistance provided to the person with a stoma to include all dimensions of being and existing, it is essential to consider the family, which must be viewed as a unit of nursing care. In this context, professionals must be sensitized to welcome and resolve the doubts and concerns of family members, as they are the primary source of support and security for people with a stoma and, in most cases, the caregivers of patients when they return home[21]. However, the results of this study revealed that nursing interventions involving family members were rarely prescribed. Of the 101 interventions identified, only four directly encompassed family members, and all had low frequency.

It was also observed that educational guidelines related to ostomy care and collection equipment needed to be more frequent. Educational activities are one of the essential attributions in the therapeutic process, as they can promote the autonomy and independence of patients, favoring the adaptation process and reducing the chances of developing complications related to inadequate self-care practices[22]. In research that aimed to develop and validate diagnoses, outcomes and nursing interventions for the care of people with a stoma using the International Classification for Nursing Practice, the importance of nurses prescribing guidance on peristomal skin care, signs of complications, hygiene and proper choice of collection material19, measures that contribute to autonomy and independence.

No diagnoses and nursing interventions related to psychospiritual BHNs were identified in this research, which may reveal that nurses still have difficulty recognizing spirituality as a dimension of the patient that needs attention from the team, making psychospiritual needs a little visible aspect in clinical nursing practice[23].

For patients and their families, spirituality can be viewed as a way to face and minimize the adversities of illness, obtaining greater hope and positively impacting the therapeutic process [24]. Thus, it is emphasized that the performance of nursing professionals in this dimension can be characterized as an essential tool in the care of ostomates.

As a limitation of the study, mention is made of the fact that it was developed in a single research scenario with unique characteristics, which may weaken the generalization of the findings. The need for more investigations into the use of PN in caring for people with an intestinal ostomy may have limited the discussion of the data. Still, it also corroborated the need to expand studies on the subject.

The importance of new research that aims to improve and refine the use of nursing taxonomies in the care of individuals with an intestinal ostomy is evident to contribute to the standardization of professional language in the care of this clientele.

Future investigations that provide subsidies for nurses' clinical reasoning during the identification of nursing diagnoses are essential, as they may contribute to greater diagnostic accuracy and, consequently, to the implementation of interventions that are more reliable to the real needs of patients.

Studies that address the NOC nursing outcomes for people with an intestinal ostomy are also crucial to complement the investigation results. It is believed that the development of a clinical protocol, based on the classification systems that includes diagnoses, results and nursing interventions for the hospital discharge of patients with an intestinal ostomy and their families, can constitute an effective strategy to systematize and qualify the assistance, in addition to providing visibility for nursing care.

It is worth noting that the results presented contribute to qualifying the implementation of the NP in the research hospital. After the development of this study, the research team returned the data to the Nursing Care Systematization Working Group of the institution, which made an effort to strengthen and add various nursing care directed to people with an intestinal ostomy in the electronic system of the hospital, to guide the actions of the nursing team in assisting this population, making it possible to expand the list of available interventions.

CONCLUSION

A number of 25 nursing diagnoses and 101 interventions were identified, mostly related to psychobiological BHNs. The most frequent diagnoses were: Impaired tissue integrity, Risk of infection, Acute pain and Impaired physical mobility. Nursing interventions to check vital signs, implement colostomy/ileostomy care, implement a care protocol for preventing and treating pressure ulcers, perform dressings and observe signs of infection were the most prescribed.

Identifying nursing diagnoses and interventions implemented in clinical practice allowed to characterize caring through specific elements of the profession and to promote reflections on NP implementation in caring for people with an intestinal ostomy. The results revealed that the nurses prioritized the patients' psychobiological needs, focusing assistance on the demands arising from the surgical intervention and its possible complications. Few nursing interventions were prescribed that addressed families and educational guidelines to be developed with the ostomate to contribute to their autonomy and rehabilitation.

AUTHORS' CONTRIBUTION

Conceptualization: Gomes ES, Girardon-Perlini NMO, Dalmolin A and Simon BS; Methodology: Gomes ES, Girardon-Perlini NMO, Dalmolin A and Simon BS; Data cure: Gomes ES, Druzian JM and Girardon-Perlini NMO; Writing - First Version: Gomes ES, Girardon-Perlini NMO, Dalmolin A and Simon BS; Writing - Review and Editing: Gomes ES; Formal analysis: Benetti ERR, Martins FC and Druzian JM; Supervision: Girardon-Perlini NMO.

DATA AVAILABILITY STATEMENT

The availability of data can be consulted with the corresponding author.

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