

LINKS BETWEEN DIAGNOSTICS, RESULTS AND NURSING INTERVENTIONS FOR PATIENTS IN THE TRANSOPERATIVE PERIOD

Ligações entre diagnósticos, resultados e intervenções de enfermagem para pacientes no período transoperatório

Conexiones entre diagnósticos, resultados e intervenciones de enfermería para pacientes em el período transoperatorio

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ABSTRACT: Objectives: To build and to validate the links between the main diagnoses, results and nursing interventions for the patients in the transoperative period. **Method:** Methodological study developed in three stages: integrative revision of the literature, to identify the most common diagnoses, results and nursing interventions in the transoperative period; construction of theoretical material, based on the prior research and experience of the authors, containing the link between the main diagnoses, results and interventions; and submission of the material built to the evaluation of content by experts nationally recognized by the performance in the said area of knowledge. The investigation was approved by the Ethics Committee on Research. **Results:** The final version of the constructed material was composed of the link of 27 diagnoses, 25 results, 26 interventions and 141 nursing activities. **Conclusion:** It is believed that the results of the study can be used to substantiate the clinical practice of nurses in the surgical center. Knowing the most common elements of the process of caring in the transoperative period optimizes the assistance provided, giving more autonomy and security for decision making.

Keywords: Operating room nursing. Perioperative nursing. Nursing process. Nursing diagnosis. Nursing care.

RESUMO: Objetivos: Construir e validar as ligações entre os principais diagnósticos, resultados e intervenções de enfermagem para pacientes no período transoperatório. **Método:** Estudo metodológico desenvolvido em três etapas: revisão integrativa da literatura, para identificar os diagnósticos, resultados e intervenções de enfermagem mais comuns no período transoperatório; construção de material teórico com base na pesquisa prévia e na experiência das autoras, contendo a ligação entre os principais diagnósticos, resultados e intervenções; e submissão do material construído à avaliação de conteúdo por especialistas nacionalmente reconhecidos pela atuação na referida área de conhecimento. A investigação teve aprovação do Comitê de Ética em Pesquisa. **Resultados:** A versão final do material construído ficou composta da ligação de 27 diagnósticos, 25 resultados, 26 intervenções e 141 atividades de enfermagem. **Conclusão:** Acredita-se que os resultados do estudo possam ser utilizados para fundamentar a prática clínica de enfermeiros que atuam em centro cirúrgico. Conhecer os elementos mais comuns do processo de cuidar no período transoperatório otimiza a assistência prestada, conferindo mais autonomia e segurança para a tomada de decisão.

Palavras-chave: Enfermagem de centro cirúrgico. Enfermagem perioperatória. Processo de enfermagem. Diagnóstico de enfermagem. Cuidados de enfermagem.

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RESUMEN: **Objetivos:** Construir y legitimar las conexiones entre los principales diagnósticos, resultados e intervenciones de enfermería para pacientes en el período transoperatorio. **Método:** Estudio metodológico, desarrollado en tres etapas: revisión integrativa de la literatura, para identificar los diagnósticos, resultados e intervenciones de enfermería más comunes en el período transoperatorio; construcción de material teórico basado en la investigación previa y en la experiencia de las autoras, conteniendo la conexión entre los diagnósticos principales, resultados e intervenciones; y sujeción del material construido a la evaluación del contenido por expertos nacionalmente reconocidos por actuar en la referida área de conocimiento. La investigación tuvo la aprobación del Comité de Ética en Investigación. **Resultados:** La versión final del material construido quedó compuesta por la conexión de 27 diagnósticos, 25 resultados, 26 intervenciones y 141 actividades de enfermería. **Conclusión:** Se cree que los resultados del estudio podrían utilizarse para justificar la práctica clínica de enfermeros que actúan en el quirófano. Conocer los elementos más comunes del proceso de cuidar en el período transoperatorio, optimiza la asistencia prestada, otorgando más autonomía y seguridad para la toma de decisión.

Palabras clave: Enfermería de quirófano. Enfermería perioperatoria. Proceso de enfermería. Diagnóstico de enfermería. Atención de enfermería.

INTRODUCTION

Nursing, through acquired technical-scientific knowledge, uses systematic care methodologies to organize and provide assistance according to the necessary care identified. Thus, the use of the nursing process (NP) in nursing clinical practice allows the use of Standardized Language Systems (SLS) of the elements of the care process, including diagnosis, results and nursing interventions¹. When standardized, these elements work as organizers and accelerators of clinical nursing reasoning², once that they clarify concepts, point out clinical indicators, describe actions and assist the measurement of results¹.

For the purpose of standardizing the writing of nursing diagnoses, the North American Nursing Diagnosis Association (NANDA) was created in the 1970s. In 2002, this organization was renamed NANDA International (NANDA-I), in order to reflect the world scenario represented by it³. Similarly, in consideration of standardizing the nursing actions prescribed by nurses and the nursing results to be achieved, other nursing classifications were created, such as the Nursing Interventions Classification (NIC)⁴ and the Nursing Outcomes Classification (NOC)⁵, some of the most internationally popular classifications.

Such classifications of standardized languages comprise a robust and systematized working apparatus for use in conjunction. “Establishing links between these three languages helps clinicians and students in choosing the most appropriate outcomes and interventions to their clients’ nursing diagnoses”⁶.

To guide the nursing care performed in the pre, trans and postoperative periods, a model called the Systematization of Perioperative Nursing Care (Sistematização da Assistência

de Enfermagem Perioperatória—SAEP)⁷ was developed in the mid-1980s, and its purpose is to assist surgical patients and their relatives in a secure, complete, individualized and continuous manner^{8,9}. However, due to the complex dynamics of the surgical center (SC) and the need to fulfill several assistance and management activities inherent to the sector, nurses find it difficult to perform SAEP in their daily practice^{9,10}.

OBJECTIVES

To build and validate the connections between the main diagnoses, results and nursing interventions for the patient in the transoperative period.

METHOD

It is a methodological study developed in three distinct stages. In the first stage, a literature review was carried out to identify the main diagnoses, results and nursing interventions listed for patients in the transoperative period.

The integrative review was realized in journals indexed in the following electronic databases: Medical Literature Analysis and Retrieval System Online (MEDLINE), Scientific Electronic Library Online (SciELO) and Latin American and Caribbean Health Sciences Literature (Literatura Latino-Americana e do Caribe em Ciências da Saúde—LILACS). The bibliographic survey used the following descriptors, according to the parameters by the Health Sciences Descriptors (DeCS): “Operating room nursing”, “Nursing diagnosis” and “Nursing care”, combined one another by Boolean operators

“AND” and “OR”. In addition, the following free terms were used: “Transoperative nursing diagnosis” and “Perioperative nursing care”.

The inclusion criteria for scientific articles were: papers published in Portuguese, Spanish or English, whose full texts are available online in the selected databases and with no time limit for the publication, due to the scarcity of studies on the subject. The final sample consisted of 20 scientific articles.

In the second stage, the authors put together a theoretical material with the main diagnoses, results and nursing interventions for patients in the transoperative period, based on the integrative literature review and their clinical experiences in perioperative nursing, which were listed according to NANDA-I³, NOC⁵, and NIC⁴, respectively. This material contains the connection between 27 diagnoses, 25 results, 26 interventions and 137 nursing activities.

In the third stage, the material collected was submitted to content validation by nationally recognized experts for their work in the said area of knowledge. Nurses who have published on perioperative diagnoses, results or nursing interventions were considered specialists; they developed researches on diagnoses, results and nursing interventions, perioperative nursing or nursing in medical and surgical clinic during their master’s or doctorate courses; and they had, at the time, a minimum one-year clinical practice in the SC unit, or at a medical or surgical clinic. The identification of the expert nurses was done by means of an online research to the curriculum of Lattes Platform contained in the portal of the National Council of Scientific and Technological Development (Conselho Nacional de Desenvolvimento Científico e Tecnológico—CNPq).

After analyzing the curricula, 23 specialists were consulted via e-mail about their interest in participating in the study. Of the nurses consulted, 10 accepted to contribute with the research; seven did not agree, justifying problems with their work agenda; and six did not reply the e-mails sent. However, of the 10 nurses who agreed to take part in the study, only seven returned the completed instrument within the time frame for data collection.

The data collection instrument, a guide on how to fill out this instrument and the informed consent form, were sent to the nurses who accepted to join the study. Data collection was performed from September to December 2017. The evaluation of specialists aimed to verify the relevance (*yes* or *no*) of the elements in the care process to the reality experienced by patients during the transoperative period.

Acceptable agreement among evaluators was determined based on the total number of experts participating in the study. When there is participation of six or more evaluators, it is recommended that the agreement rate is not less than 0.78¹¹. Data analysis was done using descriptive statistics, expressed in absolute (n) and relative (%) frequencies.

The study was approved by the Research Ethics Committee, Certificate for Ethical Assessment (CAAE) No. 70825517.5.0000.010.

RESULTS

The total number of nurses who participated in the study as specialists (n=7; 100%) was female, had a doctorate degree and at least one published article on nursing diagnoses, results and/or nursing interventions in the perioperative period.

All the diagnoses (n=27, 100%), results (n=25, 100%) and nursing interventions (n=26, 100%) proposed reached adequate agreement among the evaluators. Of the 137 (100%) nursing activities evaluated, only two (n=2; 1.5%) obtained agreement below 80% among the evaluators, and they were excluded from the instrument. Six other nursing activities were incorporated at the suggestion of the specialists.

Thus, the material containing the connections between the main diagnoses, results and interventions for the patient in the transoperative period consisted of 27 diagnoses, 25 results, 26 interventions and 141 nursing activities. Chart 1 shows the version validated by the specialists. The presentation of the study data in the chart is in alphabetical order of diagnoses.

DISCUSSION

As the objective of the study was to propose connections between the structuring elements of nursing care, it is important to emphasize that this whole process depends on the correct identification of the diagnoses, since accurate clinical interpretations favor the prescription of adequate care, which, in turn, promote the achievement of desirable health outcomes¹². Therefore, conducting the discussion of the results was focused on the representativeness of the nursing diagnoses listed for the patient who experienced the transoperative moment.

Chart 1. Connection between diagnoses, results and nursing interventions in the transoperative period.

Nursing diagnoses (NANDA-I)	Nursing outcomes classification (NOC)	Nursing interventions classification (NIC)
Anxiety (00146)	Anxiety level (1211) (Indicator: verbalized anxiety)	Anxiety reduction (5820) Use calm and reassuring approach. Listen carefully. Stay with the patient to promote safety and decrease fear. Administer medications to reduce anxiety, as appropriate.
Impaired transfer ability (00090)	Transfer performance (0210) (Indicator: transfer from one surface to the other)	Self-Care assistance: transfer (1806) Select appropriate transfer technique for patients. Use proper body mechanics during movements. Keep the patient's body properly aligned during movements. Assess the patient at the end of the transfer for proper body alignment, clearing devices, bedding without folds, unnecessarily exposed body region, adequate comfort and raised safety bars. Take care of the patient's privacy during the transfer. Lock the bed/stretchers wheels during patient transfer.
Impaired verbal communication (00051)	Communication (0902) (Indicator: accurate interpretation of received messages)	Communication enhancement: speech deficit (4976) Recognize emotional and physical behaviors as forms of non-verbal communication. Provide alternative methods of communication. Adjust communication style to meet customer needs (speak in front of the patient, listen carefully, present one idea at a time, speak slowly, use written communication).
Acute confusion (00128)	Neurological status (0909) (Indicator: awareness)	Environmental management: safety (6486) Identify patient safety needs based on physical and cognitive conditions. Use protective devices to avoid dangerous situations.
Decreased cardiac output (00029)	Cardiac pump effectiveness (0400) (Indicator: systolic blood pressure)	Shock prevention (4260) Monitor possible sources of fluid loss (drains, probes, lesions). Monitor circulatory condition (blood pressure, skin color, skin temperature, heart sounds, heart rate and frequency, presence and quality of the peripheral pulse, capillary filling). Monitor oximetry and ECG. Insert and maintain high-caliber IV access. Administer IV fluids and specific medications according to protocol/medical prescription.
Ineffective airway clearance (00031)	Respiratory status (0415) (Indicator: airway permeability)	Airway suctioning (3160) Use personal protective equipment (PPE) such as gloves, goggles and face shield. Check the need for oral and/or tracheal aspiration. Listen for breathing sounds before and after aspiration. Use sterile disposable equipment for each aspiration procedure. Use the lowest suction pressure required to remove secretions (80 to 120 mmHg for adults). Monitor the level of consciousness and cough reflex.

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Chart 1. Continuation.

Nursing diagnoses (NANDA-I)	Nursing outcomes classification (NOC)	Nursing interventions classification (NIC)
Acute pain (00132)	Client satisfaction: control of pain (3016) (Indicator: controlled pain)	Pain management (1400) Ensure analgesic care for patients. Explore with the patient the factors that improve/worsen the pain. Evaluate pain changes to identify potential injuries to the patient (frequency, intensity / severity, duration, etc.). Guidance on the principles of pain management. Observe, record and communicate nonverbal indications of pain (facial expression, protective gestures, tachycardia, sweating, hypertension). Maintain body alignment. Investigate drug allergy before drug administration. Check, record and report changes in vital signs. Apply the pain level scale: () No pain: 0 to 2; () Moderate pain: 3 to 7; () Severe pain: 8 to 10.
Impaired tissue integrity (00044)	Tissue integrity: skin & mucous membranes (1101) (Indicator: tissue integrity)	Incision site care (3440) Inspect the incision site for changes (bleeding, redness, edema, evisceration, etc.). Maintain correct positioning of drains and/or probes. Perform dressing change when necessary. Perform and register trichotomy of the skin, observing indication and area to be operated. Perform and record ergometric procedures, observing the characteristics of the area to be operated and using standardized antiseptic solutions.
Fear (00148)	Fear level (1210) (Indicator: verbalized fear)	Emotional support (5270) Make sympathetic or empathetic statements. Support the use of appropriate defense mechanisms. Stay with the patient and provide the assurance of safety and protection during the period.
Nausea (00134)	Discomfort level (2109) (Indicator: nausea)	Nausea management (1450) Observe nonverbal signs of discomfort. Identify factors that may cause or contribute to nausea. Make sure the effectiveness of the anti-emetic drugs administered. Observe and record the frequency, duration, and severity of nausea episodes.
Ineffective breathing pattern (00032)	Respiratory status (0415) (Indicator: frequency, rhythm and respiratory depth)	Respiratory monitoring (3350) Monitor breathing frequency, rhythm, depth, and effort. Observe the thoracic movements, noting asymmetry, use of the accessory muscles and retraction of the supraclavicular and intercostal muscles. Monitor O ₂ saturation levels. Open airways using the technique of chin elevation or jaw traction.

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Chart 1. Continuation.

Nursing diagnoses (NANDA-I)	Nursing outcomes classification (NOC)	Nursing interventions classification (NIC)
Risk for aspiration (00039)	Aspiration prevention (1918) (Indicator: identifies risk factors)	Aspiration precautions (3200) Monitor the level of consciousness, cough and gag reflex, and capacity of swallowing. Keep airway working. Keep the tracheal cuff inflated, as appropriate. Use prokinetic agents, if appropriate. Keep O ₂ system and airway aspiration accessible for immediate use. Aspirate airways, record and communicate characteristics and amount of secretions.
Risk for contamination (00180)	Risk control (1902) (Indicator: identifies risk factors)	Environmental risk protection (8880) Assess the environment in relation to actual and potential risks. Monitor the incidence of diseases and injuries related to environmental hazards.
Risk for compromised human dignity (00174)	Client satisfaction: protection of rights (3008) (Indicator: maintaining privacy)	Patient rights protection (7460) Ensure patient privacy during procedures. Check patient's special and individual needs. Observe religious preference. Intervene in situations involving insecure and inadequate care. Maintain confidentiality with patient health information.
Risk for peripheral neurovascular dysfunction (00086)	Immobility consequences: physiological (0204) (Indicators: venous stasis, muscle strength, joint movement)	Positioning: transoperative (0842) Determine range of motion and joint stability. Check for peripheral circulation and neurological status. Coordinate the transfer and placement with the anesthetic stage or level of consciousness. Use auxiliary equipment to support limbs and head. Maintain the patient's body alignment. Use of devices to prevent the formation of venous thrombi. Assess, record and report changes in skin (color, edema, texture, heat, ulceration) at the site of application of the tourniquet. Communicate the surgeon about the time of the tourniquet at regular intervals. Evaluate, record and report skin changes under the cuff after removal, as well as evaluate peripheral pulse, sensitivity/ability to move the fingers after deflating the cuff.
Risk for unstable blood glucose level (00179)	Blood glucose level (2300) (Indicator: blood glucose)	Risk identification (6610) To review the history of health and previous documents regarding the evidences of previous medical and nursing diagnoses and treatments. Monitor blood glucose. Monitor hyper/hypoglycaemia signs.

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Chart 1. Continuation.

Nursing diagnoses (NANDA-I)	Nursing outcomes classification (NOC)	Nursing interventions classification (NIC)
Risk for perioperative hypothermia (00254)	Thermoregulation (0800) (Indicator: hypothermia)	Temperature regulation (3902) Establish a continuous central temperature monitoring device. Monitor, record and communicate signs and symptoms of hypo- or hyperthermia. Control body temperature before surgery begins. Adjust room temperature to the needs of the patient. Minimize the patient's exposure during the surgical preparation and the procedure itself. Install and regulate active heating device. Monitor room temperature. Check, record and report changes in vital signs
Risk for infection (00004)	Risk control: infectious process (1924) (Indicator: adoption of immediate measures to reduce risk)	Infection control: transoperative (6545) Monitor and maintain room temperature between 20 and 24°C. Monitor and maintain the relative humidity of the room between 20 and 60%. Limit and control traffic. Check that prophylactic antibiotics are being given appropriately. Use universal precautions. Control the proper use of private clothing. Check the integrity of the sterile package. Check sterilization indicators. Open supplies and instruments using aseptic technique. Assist in the paramenting of team members. Monitor the sterile field to detect sterility breaks and correct errors. Apply antimicrobial solution to the surgery site. Check the number of surgical pads and gauzes used in surgeries and cavities.
Risk for perioperative positioning injury (00087)	Pre-Procedure preparation (1921) (Indicator: knowledge of risks and potential complications)	Positioning: transoperative (0842) Determine range of motion and joint stability. Use auxiliary equipment for immobilization. Apply padding over bony prominences. Maintain the patient's body alignment. Monitor patient position during surgery. Record the position and equipment used. Position the patient in such a way as to favor ventilation/perfusion. Assess, record and report changes in the skin (color, edema, texture, heat, injury). Application of the Scale for Risk Assessment for the Development of Injuries from Surgical Patient Positioning (ELPO)* () Lower risk: 7 to 19; () Higher risk: 20 to 35.

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Chart 1. Continuation.

Nursing diagnoses (NANDA-I)	Nursing outcomes classification (NOC)	Nursing interventions classification (NIC)
Risk for corneal injury (00245)	Tissue integrity: skin & mucous membranes (1101) (Indicator: mucosal lesions)	Eye care (1650) Remove contact lenses. Apply eye protection. Apply lubricating ointment. Keep eyelids closed with duct tape.
Risk for thermal injury (00220)	Tissue integrity: skin & mucous membranes (1101) (Indicator: tissue integrity)	Surgical precautions (2920) Provide electrosurgical unit, neutral plate and active electrode. Confirm proper operation of the electrosurgical unit. Confirm that the patient is not in contact with metal parts. Confirm absence of cardiac pacemaker, other electrical implants or metal prostheses that contraindicate the use of electrosurgical cauterization. Place the neutral plate on dry, intact skin with as few hairs as possible on a large muscle mass and as close to the operative site as possible. Remove residual flammable preparative agents before starting surgery. Use device to store the active electrode during surgery.
Risk for impaired oral mucous membrane (00247)	Tissue integrity: skin & mucous membranes (1101) (Indicator: mucosal lesions)	Airway insertion and stabilization (3120) Mark the endotracheal tube in the position of the lips or nostrils, using the centimeter markings in the ET, fix the artificial airway (oropharyngeal or nasopharyngeal) in a suitable place with adhesive tape and document it. Monitor oral mucosa.
Risk for falls (00155)	Safe health care environment (1943) (Indicator: fall prevention policy)	Positioning: transoperative (0842) Lock the wheels of the stretcher and the surgical table. Use appropriate number of people to transfer the patient. Apply safety band and upper limb restriction. Monitor patient position during surgery. Apply Morse Drop Scale** () Low risk: 0 to 24; () Medium risk: 25 to 44; () High risk >=45.
Risk for latex allergy response (00042)	Immune hypersensitivity response (0707) (Indicator: allergic reactions)	Latex precautions (6570) Ask the patient or other appropriate person about the history of systemic reaction to natural rubber latex (facial or scleral edema, watery eyes, urticaria, rhinitis, wheezing in the chest). Monitor the patient's signs and symptoms of a systemic reaction.
Risk for bleeding (00206)	Blood loss severity (0413) (Indicator: visible blood loss)	Bleeding precautions (4010) Monitor the occurrence of signs and symptoms of persistent bleeding. Check for suspension of the use of anticoagulant substances. Administrate blood components and derivatives. Maintain patent venous access, of large caliber.

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Chart 1. Continuation.

Nursing diagnoses (NANDA-I)	Nursing outcomes classification (NOC)	Nursing interventions classification (NIC)
Risk for deficient fluid volume (00028)	Fluid balance (0601) (Indicator: blood pressure)	Hypovolemia management (4180)
		Monitor possible sources of fluid loss.
		Monitor circulatory condition (blood pressure, skin color, temperature, heart rate and frequency, presence and quality of peripheral pulses and capillary filling).
		Monitor ECG.
		Insert and maintain large caliber venous catheter.
		Observe, communicate and record the intensity and frequency of nausea/emesis.
Impaired spontaneous ventilation (00033)	Post procedure recovery status (2305) (Indicator: O ₂ saturation)	Ventilation assistance (3390)
		Maintain a patent airway.
		Position patient to relieve dyspnea.
		Encourage deep, slow breathing, change of position and cough.
		Monitor signs of respiratory muscle fatigue.
		Initiate/maintain prescribed oxygen therapy.
Monitor respiratory and oxygenation status.		

NANDA-I: North American Nursing Diagnosis Association International; ECG: Electrocardiogram; IV: intravenous; ET: Endotracheal Tube; *ELPO Scale validation can be done through the link: <http://www.scielo.br/pdf/rlae/v24/pt_0104-1169-rlae-24-02704.pdf>; **Morse Scale validation can be done through the link: <<http://www.scielo.br/pdf/reeusp/v47n3/0080-6234-reeusp-47-3-00569.pdf>>.

According to the NANDA-I classification, the 27 diagnoses presented in the study are contained in seven of the 13 domains of said classification: safety/protection (n=14, 51.9%), activity/rest (n=4, 14.8%), nutrition (n=2, 7.4%), perception/cognition (n=2, 7.4%), coping/tolerance to stress (n=2; 7.4%), comfort (n=2, 7.4%), and self-perception (n=1, 3.7%).

It is important to highlight that most of the diagnoses listed belonged to the “safety/protection” domain, and of these, most were classified as “risk diagnoses” (n=12, 85.7%).

Risk diagnoses are related to the individual’s vulnerability to develop an undesirable response to their clinical condition³. Based on this definition, it is possible to understand why almost 60% (n=84; 59.6%) of the nursing activities proposed to assist the patient in the transoperative moment are aimed at promoting their safety and preventing risk diagnoses from becoming real diagnoses. While acknowledging its therapeutic purpose, it is undeniable that any anesthetic-surgical procedure constitutes potential harm to the patient’s health.

In order to identify nursing diagnoses with high degrees of accuracy, nurses must carry out a detailed survey of the clinical and emotional conditions of surgical patients, the environmental conditions, the professionals’ paramentation, the

type of anesthesia, the surgical technique to be used, the technique of the health team, the circulation of people in the operating room, the condition of the surgical materials and the actions to be taken considering the inherent risks of the procedure¹³.

Currently, it is essential to prioritize actions that ensure patient safety and minimize the occurrence of adverse events associated with health care¹⁴. Patient safety is directly connected to the institutional work process, in which lack of care protocols or inadequate care planning may increase the risk of harm to patients’ health¹⁵. Resolution actions of nurses working in SC contribute to the maintenance of patient safety and reflect in the adequate post-surgical recovery^{16,17}.

The theoretical material developed favors nursing care with scientific foundation and is in agreement with the profile of the patient in the transoperative period. In this sense, the major contribution of the study is the effort to consolidate knowledge on nursing care to be performed during the transoperative period. As a limitation of the investigation, it is pointed out that the research was designed with the purpose of meeting the needs of the patient who goes through the surgical experience without considering the specialty of the patient’s intervention, age range or gender as variables.

Failure to take into account the particularities of a given clientele may make the study too broad and unspecific.

CONCLUSION

The final version of the theoretical content consisted of 27 diagnoses, 25 results, 26 interventions and 141 nursing activities.

It is believed that the results presented may be used to support the clinical practice of nurses working in SC. However, it is important to highlight that the connections proposed here should not replace the clinical judgment of perioperative nurses.

The need for further studies that explore the practical application of the proposed connections in different scenarios and in specific populations is emphasized.

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