Operation room nursing in Brazil: thirty years after the Institution of Perioperative Nursing Process*

Enfermagem em centro cirúrgico: trinta anos após criação do Sistema de Assistência de Enfermagem Perioperatória

Enfermería en centro quirúrgico: treinta años después de la creación del Sistema de Asistencia de Enfermería Perioperatoria

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ABSTRACT

Objective: To identify, review, and describe publications of Brazilian operation room nurses. **Methods**: An integrated review approach was used to summarize main aspects of research articles on operation room nursing published in Brazilian journals indexed in LILACS, DEDALUS, and SciELO from 1978 through 2006. Fifty six research articles were retrieved and classified on the following six themes: preoperative visit, intraoperative care; postoperative recovery room care; postoperative visit; instrument development and validation, and perceptions of the patient. **Results**: The research articles addressed issues that facilitated or impeded quality transoperative nursing care. Humanized and individualized transoperative care was found to be important. **Conclusion**: Findings from this review contribute to knowledge development and may influence quality transoperative nursing care to the patient and his or her family.

Keywords: Perioperative nursing; Nursing, team**;** Surgery department, hospital

RESUMO

Objetivos: Levantar os artigos publicados pela enfermagem brasileira em centro cirúrgico (CC), identificar os autores, tipos de pesquisa, resultados e analisar descritivamente seus resultados. **Métodos**: Revisão integrativa, referente à produção nacional na área de enfermagem em CC, com o propósito de sumarizar os estudos já publicados em periódicos nacionais de 1978 a 2006, indexados nas bases de dados: LILACS, DEDALUS e SciELO. Os 56 artigos foram classificados em seis temas: visita pré-operatória; assistência no transoperatório; na sala de recuperação pós-anestésica; visita pós-operatória; construção ou validação de instrumento e percepção do paciente. **Resultados**: Os artigos abordaram as facilidades e adversidades vivenciadas pelo enfermeiro e sua equipe para prestar uma assistência com a melhor qualidade possível. Confirmou-se a importância da assistência humanizada e individualizada. **Conclusão**: As pesquisas analisadas contribuem para a construção do conhecimento e influenciam positivamente o enfermeiro no bom desempenho da assistência ao paciente cirúrgico e família.

Descritores: Enfermagem perioperatória; Equipe de enfermagem; Centro cirúrgico hospitalar

RESUMEN

Objetivos: Buscar artículos publicados por la enfermería brasileña en centro quirúrgico (CC), identificar los autores, tipos de investigación, resultados y analizar descriptivamente sus resultados. **Métodos**: Revisión integradora, referente a la producción nacional en el área de enfermería en CC, con el propósito de resumir los estudios ya publicados en periódicos nacionales de 1978 al 2006, indexados en las bases de datos: LILACS, DEDALUS y SciELO. Los 56 artículos fueron clasificados en seis temas: visita pre-operatoria; asistencia en el transoperatorio; en la sala de recuperación post-anestésica; visita post-operatoria; construcción o validación del instrumento y percepción del paciente. **Resultados**: Los artículos abordaron las facilidades y adversidades vivenciadas por el enfermero y su equipo para prestar una asistencia con la mejor calidad posible. Se confirmó la importancia de la asistencia humanizada e individualizada. **Conclusión**: Las investigaciones analizadas contribuyen a la construcción del conocimiento e influyen positivamente en el enfermero para el buen desempeño en la asistencia al paciente quirúrgico y familia.

Descriptores: Enfermería perioperatoria; Grupo de enfermería**;** Servicio de cirugía en hospital

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INTRODUCTION

Since its beginning, nursing in surgical center (SC) was responsible for a safe, clean and comfortable environment to perform the surgery[1]. Until the 1960's it was predominantly geared to the instrumental area, meeting the needs of the medical team, predicting and providing actions for anesthesia and surgical procedure, limiting care to the surgical patient[2].

After this period, there has been great development of surgery and instrument techniques, these surgeries became more complex, requiring greater scientific knowledge from nurses to support them for these surgeries[3].

In 1985 a care model was proposed, it was called *Sistema de Assistência de Enfermagem Perioperatória* (Perioperative Nursing Care System - SAEP) to promote total, continuous and participative care which was individualized, documented and assessed, considering patients as unique and nursing care as a joint intervention fostering care continuity, the participation of patients' family, making it possible for patients to evaluate care received[4].

The creation of this model is inserted into a decade with greater scientific production in the Nursing field, directed to the need for knowledge in health and care provided to patients, their families, and the community[5].

As for the Surgical Center, there was a significant increase in the production of research in perioperative nursing care, not only with the publishing of thesis and dissertations, but also by talks in specific events, such as "Jornadas de Enfermagem" and Conferences approaching the Surgical Center[6].

The role of nurses in SC has become increasingly more complex every day, as they need to integrate activities encompassing the technical, management, care, teaching and research areas. To integrate these activities, where there are several professionals interacting on several aspects, interpersonal relationship is very important and it is usually made more difficult, stressful and dynamic in a closed space such as the surgical center[7].

In addition to the constant concern with humanizing health care, there are many other problems that go from learning and teaching actions that should be developed to the issues regarding the reduced number of nurses to introduce them.

SC nurses face a dilemma in the development of their actions according SAEP, there is a conflict between their decisions and the reality. This problem continues because health institution managers do not see the importance of nursing work in surgery patients' care in the perioperative period, nurses functions are transferred from care to management.

Due to the increase in research performed in the last years, especially after the creation of SAEP and in order to help future studies, considering the difficulty above mentioned, we questioned the contributions of studies to perioperative nursing.

The objective of the present study is to: raise the articles published by Brazilian nursing in surgical centers, identify authors, types of research, results, and analyze results descriptively.

METHODS

Integrative review is a method where past research is summarized and conclusions are drawn, considering the design of the studies assessed and, therefore, increasing reliability and depth of the conclusions of the review[8-9]. The present study is an integrative review of the national literature and its production in SC nursing research; the objective is to summarize studies concluded in the area of interest. To that end, the following steps have been established: selection of the thematic issue, establishing the criteria for research selection, representation of the characteristics of the original study, data analysis, results interpretation and review presentation. To select the articles the following inclusion criteria have been established: articles published in national journals by Brazilian nursing in the field of Surgical Centers from 1978 to 2006, indexed in the following data base: LILACS, DEDALUS and SciELO, texts were fully available electronically or in the library collection at Escola de Enfermagem, USP; authors were nurses. The following key words have been used to locate the articles: systematization or perioperative nursing care system; nursing care in surgical center; perioperative – nursing; nursing preoperative visit; transoperative – nursing; nursing postoperative visit; post anesthesia recovery – nursing. Exclusion criteria were: scientific articles with no abstract or which had only the abstract available, abstracts of conference or lectures given in events whose complete texts were not available; dissertations of thesis without published article and reflection articles.

For data collection, a form was designed called Identification and description of the content of the article with: theme, title, authors, source of publication, study number, purpose/objective, data collection/type of research, data analysis, results/discussion, conclusions/recommendations. There were 396 studies found, among them, 340 were excluded, respecting the above mentioned exclusion criteria. Sample was formed by the 56 articles which were left with full texts. Studies have been classified according to title into six themes: preoperative visit (PV); perioperative, transoperative and intraoperative period (PTI); postanesthesia care unit (PACU); postoperative visit (POV); instrument construction or validation (ICV) and patients' perception (PP). These studies have been

respectively distributed into PV (10.7%); PTI (51.8%); PACU (21.4%); POV (1.8%); ICV (8.9%) and PP (5.4%).

RESULTS

Most articles were published from 1989 to 1999. Recently, from 2000 to 2006, there were 25 studies and a yearly increase in the amount of publications**.** Most authors (58 – 40.8%) worked with teaching; 34 (23.9%) were care nurses; 6 (4.2%) were experts; 7 (4.9%) were holders of Master Degree; 11 (7.7%) were undergraduate students and 14 (9.9%) were master degree students. All articles selected showed the complexity involving nursing care to surgical patients in the perioperative period and the concern of nurses with patients and their families.

PV contributed to decrease anxiety, both from patients and families, nurses had the opportunity to give explanations on anesthesia and the surgical procedure and on the postoperative period, it also enabled the continuity of nursing care in the intra and postoperative periods[4].

Articles dealing with PV showed its importance, focusing on the hurdles for its performance, such as lack of time, due to the load of management and care functions, associated with a high number of surgeries and the reduced number of nurses; as well as admissions occurring in the same day of surgery. Positive results highlighted are the important diagnoses for the area such as: anxiety, fear, family anxiety, and anxiety about what will happen at the SC[10-11].

Some articles report the importance of structuring the PTI period, focusing on problem solving, with documentation and organization of care so as to enable communication among professionals. Development and assessment of minimal nursing care standards in the perioperative period is a way to favor holistic, individualized, participative and documented care[12-13].

Identification of nursing diagnoses and the risks patients are exposed to in this phase were evidenced as being the following: involved tissue integrity, risk for infection, hypothermia, acute pain, anxiety, lesion risk due to positioning, among others[14-16]. Risk identification aims to anticipate actions to prevent complications, ensuring patients' safety. The concern of nurses with diagnoses and prevention of lesion risk due to positioning of surgical patients is increasing. Risk factors contributing to this occurrence are: loss in the usual protective barriers due to anesthesia, tissue perfusion impairment due to OR low temperature, and patients remaining in surgical position for two or more hours[17]. For prevention, pressure relieve is indicated during positioning and, to that end, the most effective mechanisms are: a multi-cell pulsating dynamic mattress system, a dry viscoelastic polymer pad, and gel cushions[18].

After anesthesia and surgical procedure, patients need evaluation and constant care from the nursing team in an environment integrated with SC and that is prepared with the necessary resources for all kinds of interventions, this place is the PACU[19-21]. Articles grouped under this theme talk about the importance of this unit, from its physical structure, equipment, materials and human resources to its care aspects. Lack of qualified personnel and the small number of people to provide nursing care may be related with complications both in adult and pediatric patients[22]. Nursing team with an adequate number of well trained people that are constant at PACU is essential to develop quality care and to work in prevention of complications[19,23]. In addition to care activities, nurses can also develop their potential in the research field, continuous education, and management[23].

Aspects directly connected with PACU are treated through nursing diagnoses and the most frequent diagnoses are: injury potential, hypothermia, change in the level of comfort (pain, nausea and vomit), anxiety, ineffective cleaning of upper airways/ineffective respiratory pattern, deficit in circulating liquid, change in tissue perfusion and urinary retention[21,24]. Hypothermia is one of the most common complications; three different methods to warm patients have been used to reestablish normothermia, finding the one that reestablished body temperature faster[25]. Complications found in the adult population were: hypotension, shivering, tremor, pain, nausea, vomits, agitation and bradycardia, apnea, bronchospasm, hypothermia, chest pain, facial flushing and dizziness. In pediatric patients they were: agitation, pain and bleeding[22].

The presence of children at PACU is a constant concern for nurses, the use of toys is a strategy for integration to help children in this delicate time, encouraging a positive behavior concerning: orientation, relaxation, trust, confidence, cheerfulness, receptivity and attention[26].

The nurses consider POV essential to their profession because it allows monitoring patients' evolvement and detecting care failures so that solutions can be given. Regarding the nurse responsible for this task, this article points out that over 57% of nurses believed this activity should be developed by the Admission Unit nurse, whereas 43% considered this was an activity for the SC nurse[27].

Care should be documented and should be part of the patients' chart, so that it can continue regardless of the unit patients are transferred to. To approach this, some authors find it important to develop or improve instruments that guide perioperative care.

An instrument can be used for several purposes such

as: identifying nursing diagnoses in the perioperative, transoperative, PACU and postoperative period. The use of printed information help nurses from the units patients are going to. The document should have important information on patients' conditions in the preoperative, transoperative and intraoperative period with aspects on anesthesia and surgical procedure as well as vital signs, hemodynamic conditions, level of awareness, type of surgery and anesthesia, if there were complications and how they were handled[28-29].

Patients' perceptions on care received are scientifically measured and analyzed. Those receiving explanation about anesthesia and the surgical procedure have a better understanding when the vocabulary used is accessible, they feel relaxed and treatment success is assured[30]. Patients transport to the SC is a stressful moment and they like to be treated with care and attention, the absence of family leads to anxiety during transportation[31]. Quality of care during the transoperative period and PACU is measured through patients satisfaction regarding the following aspects: care when arriving at SC, OR and at PACU, receiving orientations from the time of arrival at SC until patients are referred to PACU, support received by the nurse team from the moment patients arrived at OR until the surgery began, amount of time nursing team spent next to patients at OR, confidence demonstrated by nursing team during care at OR and PACU, support received by the nursing team from arrival at PACU until patients were sent to the admission unit[32].

As for the type of study, in 37 articles, authors do no mention it. Among the 19 studies mentioning type of research there are: 6 (32%) exploratory descriptive studies; 3 (16%) quali-quantitative descriptive studies; 2 (11%) qualitative descriptive studies; 2 (11%) multi-center studies; 1 (5%) literature review; 1 (5%) was a convergent and assistance study; 1 (5%) integrative review; 1 (5%) descriptive study; 1 (5%) experimental study, and 1 (5%) exploratory prospective descriptive study. To characterize the type of study is important since it makes it easier to understand the thinking used by authors to develop it. Allocating articles according to type of research is based on the literature[33].

DISCUSSION

Surgical Center nurses consider PV performance important, even so, this is still insignificant because many times they are alone in their shifts and cannot leave the SC.

PTI period demands specialized care by nurses such as those related to monitoring anesthetized patients, correct positioning, allocation of the nursing team, predicting and providing materials and equipment. Some articles approach the importance of humanizing care to surgery patients, focusing on some strategies such as interaction, orientation and communication. When these articles are analyzed, we notice that patients and their families need emotional support in addition to technical expertise. The nursing team is constantly with patients and their families, observing and intervening to minimize this situation of anxiety and fear, they can also cooperate to patients' recovery.

Additionally, we could see that anxiety and fear are always present among changes. Patients' surgical positioning is a concern both for the medical team and the nursing team. To that end, all resources available to give patients' confidence and safety should be used. Devices used should have a soft surface because those with a hard surface such as compacted folded surgical fields ended up creating a condition that increase discomfort to skin. Nurses should aid patients during positioning very carefully, always thinking about prevention.

PACU is a delicate and important stage in the recovery of patients undergoing surgical intervention, even so, many institutions do not have a permanent nurse at PACU in their staff, making it difficult to provide patients' care, as already mentioned, overloading nurses with management and organization activities and taking them away from patients' care in this critical period.

Overall, nursing technicians and assistants are accountable for care to critical patients; this also reflects the philosophy of institutions of not valuing human beings in their individuality in the anesthesia and surgery period.

Nursing POV is a period where previous orientation and preparation of patients and families can be assessed and, consequently, quality of nursing care can be evaluated. Even so, only one article mentioned the relevance given by nurses to it.

In the design of an instrument, some items are important and should be present such as complete identification of patients with their hospital record number, place, identification of professionals providing care to patients, time and date (day/month/year) it occurred. Time records are important because they explain several events that may have followed and they feed data base and requirements for the improvement of service; they are also a legal protection for professionals in health institutions.

Patients are the main focus of health actions, thus, it is essential to know their opinion on the care they are receiving. Respectful and attentive care is perceived by surgical patients during transoperative and intraoperative period and at PACU, even though they are in an uncomfortable situation, either emotional or physical. This confirms the importance of humanizing and individualizing care.

CONCLUSION

There is a steady growth in the scientific production of Brazilian nursing in the field of surgical center presented by the 56 articles published in national journals. Professors are responsible for most publications, followed by assistant nurses. Most studies are descriptive exploratory, approaching stages of SAEP, the difficult and easy sides of surgical patients' care.

Many authors have reported their practical experiences; others assessed how patients' care was being provided in the institutions they worked for; some of them focused on different and adjusted care to pediatric patients or to a certain specialty; some focused on checking if SC infrastructure is appropriate to the development of safe care, some report the importance of getting family members involved in the care process and some of them emphasized the need for humanizing perioperative care. Studies assessing patients' evaluation on perioperative care received, evaluation the record instruments and patients' perception are lacking.

There were problems regarding the reduced number of nurses working at SC and at PACU compared to the number of surgeries scheduled. This problem is also associated with the lack of understanding on how care is provided by nurses in the SC and at PUCA. From the diversity of issues studied and their impact on care, we may say that the objectives established were achieved and that the 30 years SC has been researched after the introduction of SAEP in Brazil, the studies have strongly contributed to build knowledge and positively influence nurses for good performance in care to surgical patients and their families. Thus, this increase has to continue and the gaps found in the present study have to be filled in order to obtain a perioperative nursing care geared to surgical patients' safety.

The integrative review, as a study method, entails synthesis and analysis of all articles found. A limitation of the present study was the need for restricting the presentation of the 56 articles found to meet the norms of the present journal.

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