


ORIGINAL ARTICLE

Communication and safe and effective nursing care in surgical center and intensive care: integrative review

A comunicação e o cuidado seguro e efetivo de enfermagem em centro cirúrgico e terapia intensiva: revisão integrativa

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KEYWORDS

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ABSTRACT

Objective: To identify the importance of communication for safe and effective nursing care in the surgical center and intensive care.

Methods: An integrative review with a survey of productions in February 2023 in the databases Lilacs, MEDLINE, CINAHL, and Scopus. Primary studies, available in full in English, Portuguese, and Spanish, were included.

Results: Of the 1,904 productions initially found, 19 were included for analysis. The studies pointed out that communication is essential to guaranty patient safety and to insert the family in the care process. This skill goes beyond verbal expression and involves other ways of communicating. However, it needs to be improved in some situations, mainly to avoid damage to the customer. It is also suggested that some forms of communication require to be standardized.

Conclusion: Communication is one of the priorities and fundamental actions for the safety and effectiveness of nursing care, whether in surgical centers or intensive care units. Given this context, it is necessary that communication barriers are identified and that strategic organizational actions are put into practice, including the permanent education of professionals and the standardization of information. Actions like these minimize the potential risks that permeate critical care and positively impact relationships in the work environment.

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PALAVRAS-CHAVE

Centros Cirúrgicos
Comunicação
Enfermagem
Unidades de Terapia
Intensiva

RESUMO

Objetivo: Identificar a importância da comunicação para o cuidado seguro e efetivo de enfermagem em centro cirúrgico e terapia intensiva.

Métodos: Revisão integrativa, com levantamento das produções em fevereiro de 2023 nas bases de dados Lilacs, MEDLINE, CINAHL e Scopus. Foram incluídos estudos primários, disponíveis na íntegra, em inglês, português e espanhol.

Resultados: Das 1.904 produções inicialmente encontradas, 19 foram incluídos para análise. Os estudos apontaram que a comunicação é fundamental para a garantia da segurança do paciente e inserção da família no processo do cuidado. Essa habilidade vai além da expressão verbal, envolvendo outras formas de se comunicar. Contudo, necessita ser melhorada em algumas situações, evitando principalmente a ocorrência de danos ao cliente. Sugere-se ainda que algumas formas de comunicação requerem ser padronizadas.

Conclusão: A comunicação é uma das ações prioritárias e fundamentais para a segurança e efetividade do cuidado de enfermagem, seja nos centros cirúrgicos ou nas unidades de terapia intensiva. Diante desse contexto, se faz necessário que as barreiras de comunicação sejam identificadas e que ações estratégicas organizacionais sejam colocadas em prática, entre elas a educação permanente dos profissionais, bem como a padronização de informações. Ações como essas minimizam os potenciais riscos que permeiam os cuidados críticos e tornam positivas as relações no ambiente de trabalho.

INTRODUCTION

In the health environment, communication is a fundamental technology that permeates all forms of care, established through a holistic view, qualified listening, understanding of cases, and information recording. The communicative process creates bonds, especially between team members and the client. Thus, it is possible to understand that communication favors nursing care¹.

The communication relationship, especially between nursing professionals, with the transfer of information about the patient, ensures safe and quality care. This requires effective communication that involves documentation of information in a precise, updated, and concise manner, and above all, detailing the nursing process as one of the necessary measures for the ethical support of the profession and the guaranty of the patient's rights².

In 2004, the World Health Organization (WHO) created the World Alliance for Patient Safety to reduce errors that permeate and limit the client's recovery process. Six international goals were developed, among them, effective communication. However, it remains a current challenge within health services^{3,4}.

In Brazil, the National Patient Safety Program was instituted, through Ordinance No. 529 of April 1, 2013, to promote the qualification of care in all health establishments, proposing actions to avoid risks, incidents, adverse events, and damage to the patient and encompassing actions where professionals, patients and family members can be and are included in care⁵.

In sectors where patients require more complex care, such as intensive care units (ICUs) and surgical centers (SCs), actions to ensure patient safety must be redoubled to ensure the lowest number of errors and possible damage. Due to this complexity, it is necessary that communication be present and conducted effectively^{6,7}.

Evidence indicates that the ICU and CC are the health environments most susceptible to the occurrence of errors during interventions between the team and the patient due to the demands for actions and decisions to

occur quickly, especially those that include the performance of invasive procedures and with technological resources, where actions occur without the necessary pause for their planning. Time is an essential variable when dealing with critical patient care^{8,9}.

It is fundamental in a work environment that communication and the bond between the interdisciplinary and multidisciplinary teams be harmonious and efficient. These attitudes allow weaknesses and strengths of the communicative process to be recognized by each professional so that the security of transmitted information happens correctly, which is paramount for harm-free assistance¹⁰.

Therefore, this study aims to identify the scientific evidence for the importance of communication for safe and effective nursing care in the operating room and intensive care.

METHODS

For the elaboration of this study, the integrative literature review method was adopted¹¹. After defining the topic, the following research question was created using the acronym PICO¹² (Population: Nursing team; Interest: Importance of communication for safe and effective care; Context: Surgical Center and Intensive Care Unit). Thus, the following question was formulated: "What is the evidence on the importance of communication for safe and effective nursing care in the operating room and intensive care?"

As a way to operationalize the evidence survey, the following descriptors and keywords were identified and selected in the *Descritores de Ciências da Saúde* (DeCS), Medical Subject Headings (MeSH), and the MH Exact Subject Headings (CINAHL vocabulary): *Enfermagem / Nursing; Comunicação / Communication; "Centros Cirúrgicos" OR "Surgical Center" / Surgicenters OR Surgicenter; "Unidade de Terapia Intensiva" OR "Intensive Care Unit" / "Intensive Care Units" OR "Intensive Care Unit"*. The terms were combined with the Boolean operators AND and OR, generating specific

search expressions used in the following databases: Latin American and Caribbean Health Sciences (Lilacs), Medical Literature Analysis and Retrieval System Online

(MEDLINE), Cumulative Index to Nursing and Allied Health Literature (CINAHL) and Scopus, shown in Table 1. This step occurred in February 2023.

Table 1 – Search expressions and databases used in the review.

Database	Search strategy
LILACS	((mh:(Comunicação)) AND ((mh:("Enfermagem")))) AND ((mh:("Centros cirurgicos") OR ("centro cirurgico")) ((mh:(Comunicação)) AND ((mh:("Enfermagem")))) AND ((mh:("Unidades de terapia intensiva")) OR ("Unidade de terapia intensiva"))
MEDLINE	((("communication"[MeSH Terms]) AND ("nursing"[MeSH Terms])) AND ("surgicenters"[MeSH Terms])) OR ("surgicenters"[All Fields]) ((("communication"[MeSH Terms]) AND ("nursing"[MeSH Terms])) AND ("intensive care units"[MeSH Terms])) OR ("intensive care unit"[All Fields])
CINAHL	((MH "Communication") OR "communication") AND "nursing" AND ((MH "Surgicenters") OR "surgicenter") ((MH "Communication") OR "communication") AND "nursing" AND ((MH "Intensive Care Units") OR ""intensive care units"" OR ""intensive care unit"")
Scopus	(TITLE-ABS-KEY (communication)) AND (TITLE-ABS-KEY (nursing)) AND ((TITLE-ABS-KEY (surgicenters) OR TITLE-ABS-KEY (surgicenter))) (TITLE-ABS-KEY (communication)) AND (TITLE-ABS-KEY (nursing)) AND ((TITLE-ABS-KEY ("intensive care units") OR TITLE-ABS-KEY ("intensive care unit")))

Primary studies were adopted as eligibility criteria, available in full, in Portuguese, Spanish, and English, and answered the research question and objective. Duplicate studies, reviews, theses, dissertations, editorials, and letters to the editor were excluded. The authors opted for no temporal restriction for selecting productions since the intention was to investigate how the theme has been studied over the years.

The Rayyan¹³ reference manager was used to organize the sorting of articles and the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews (PRISMA-ScR)¹⁴ was used to represent the evidence selection process. It is noteworthy that, as a means of minimizing possible biases at this stage, this was performed independently and simultaneously by two reviewers. The productions selected by both were compared to identify possible discrepancies. The contribution of a third reviewer was requested in cases where there were differences in the inclusion or not of a publication to find a consensus.

First, the title and abstract of the texts were read. Those eligible underwent full-text reading. The productions included were critically analyzed according to the following variables of interest: year of publication, country of study, methodological approach, objectives, results, and conclusions.

To assess the quality of the studies, the Level of Evidence (LE) classification was performed: level 1, evidence from a systematic review or meta-analysis of

randomized controlled clinical trials or from clinical guidelines based on systematic reviews of randomized controlled clinical trials; Level 2, evidence derived from at least one well-designed randomized controlled clinical trial; level 3, evidence obtained from well-designed clinical trials without randomization; level 4, evidence from well-designed cohort and case-control studies; level 5, evidence from a systematic review of descriptive and qualitative studies; level 6, evidence derived from a single descriptive or qualitative study; level 7, evidence from the opinion of authorities and/or report of expert committees¹⁵.

RESULTS

Figure 1 represents the article selection flowchart. The initial search generated 1,904 productions. After applying the eligibility criteria, 19 texts were included as a sample for this review.

Concerning the country where the studies were developed, the United States of America^{19,22,28-31} stood out with 6 productions. The other articles were divided accordingly: 5 were carried out in Brazil^{16,18,25,32,33}, Mexico¹⁷, England²⁰, Israel²³, Australia²⁴, Botswana²⁶, Jordan²⁷ and Colombia³⁴ were represented with one publication each. One investigation occurred simultaneously in Poland and Turkey²¹. The year of publication of the productions ranged from 1999¹⁷ to 2020^{25,32}, with 2017^{16,19,21} concentrating 4 of the articles found.

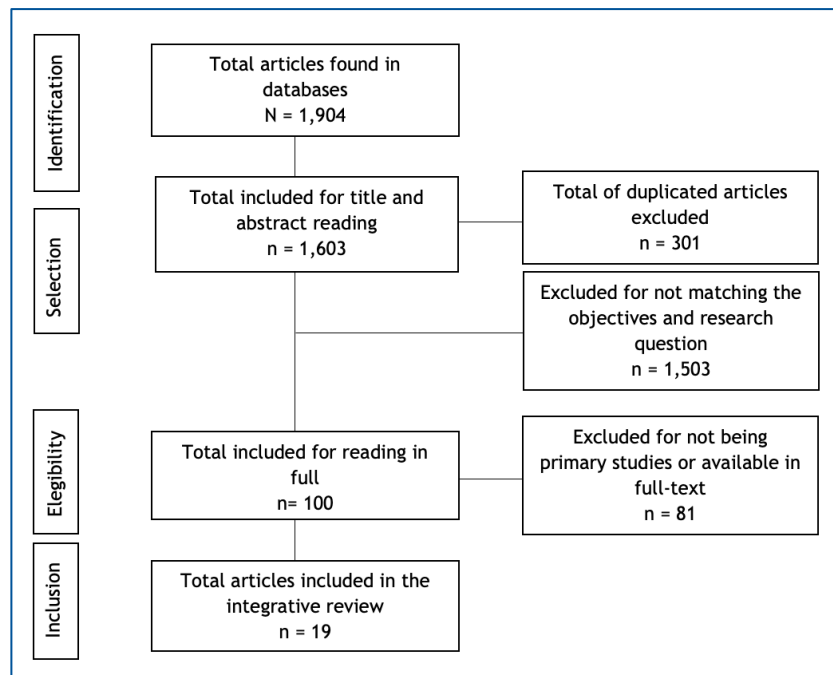


Figure 1 – Flowchart of the article selection process.

According to the methodological approach, the studies were characterized as LE 3^{19,28,29,31}, 4²² and 6^{16-18,20,21,23-27,30,32-34}. Table 2 presents the characterization of the productions in detail.

The studies pointed out that communication is essential to ensure patient safety and is a means of including the family in the care process. This skill goes beyond verbal expression and involves other ways of communicating. However, it needs to be improved in some situations, mainly to avoid damage to the customer. It is also suggested that some forms of communication require standardization. Table 3 presents in detail the synthesis of the productions.

DISCUSSION

Communication in the process of safe and effective care between the nursing team and the client

The nursing professional who works in critical care needs to develop characteristics and skills within his/her competence, the main one being communication. Effective communication is related to patient safety, which has become a priority area for health and care institutions. In this scenario, poor communication between professionals, clients, and other team members has been one of the intrinsic factors in health errors³⁵.

Limitations in interprofessional communication, insufficient information, lack of patient-team interaction, and weaknesses in communication during shift changes and patient transfer become some of the main risk points, which can lead to a negative experience in the care process, affecting the safety, clinical results, client recovery, and family satisfaction³⁶.

Under any assistance, the patient needs care for

the body, mind, and social status. Studies developed to evaluate nurses' communication with critical patients, using the Patient-Nurse Effectiveness with Assisted Communication Strategies methodology (SPEACS) concluded that this interaction improves the patient's hospitalization conditions. It was also verified that the time of intubation and the patient's level of consciousness are directly related and are influenced by the duration of communication practiced by professionals in the ICU^{22,30}.

Patients under intensive care or who need to undergo major surgical procedures may need ventilator support and, for that, be submitted to the intubation process, a fact that limits their communication. In these cases, alternative and standardized tools are necessary. A cross-sectional study conducted in Mexico demonstrated that the use of images for the exchange of information between the team and the patient was significant, being suggested as an effective and facilitating option to establish communication despite limitations related to the client¹⁷.

The assessment of the ability to communicate in intubated patients is essential for accurate and effective assistance, seeking to meet psychological and physiological needs. Professionals should focus on developing technologies and therapies to communicate with patients in a state of unconsciousness; this process needs to be constantly evaluated in search of its resolution³⁷.

Despite its fundamental importance, investigations indicate a failure in the communication process between nurses and clients in intensive care units and surgical centers, which is characterized as insufficient. These communication barriers increase patient stress levels because communication and care offer them a better view of their self-esteem and self-identity^{36,27}.

Table 2 – Characteristics of productions included in the review according to country, year, methodological approach and level of evidence.

Reference	Country / Year	Methodological approach	Level of evidence
E1 ¹⁶	Brazil/2017	Qualitative study with 28 medical professionals and intensive care nurses.	6
E2 ¹⁷	Mexico/1999	Cross-sectional study with 28 critically intubated patients in a post-surgical and intensive care unit.	6
E3 ¹⁸	Brazil/2015	Cross-sectional study, in which the information received during the shift change from the Surgical Center to the ICU was analyzed.	6
E4 ¹⁹	United States of America/2017	Pre- and post-intervention prospective study in a pediatric intensive care unit. The I-PASS <i>Nursing Handoff Bundle</i> intervention consisted of educational training, verbal transfer I-PASS mnemonic implementation, and visual materials to provide reinforcement and sustainability.	3
E5 ²⁰	England/2017	Observational study, in which the shift change between nurses in an oncology ICU was observed.	6
E6 ²¹	Poland and Türkiye/2017	Descriptive study, carried out with intensive care nurses in Poland and Türkiye.	6
E7 ²²	United States of America/2014	Three-phase quasi-experimental sequential cohort study conducted with 89 awake, responsive, and unable to speak intubated patients and 30 ICU nurses.	4
E8 ²³	Israel/2019	Cross-sectional descriptive study with 130 family members of patients in two ICUs.	6
E9 ²⁴	Australia/2015	Prospective observational study.	6
E10 ²⁵	Brazil/2020	Cross-sectional study carried out in the surgical center of a philanthropic hospital in southern Brazil, with 107 health professionals.	6
E11 ²⁶	Botswana/2016	Descriptive and exploratory research with a quantitative approach. 159 ICU patient files were audited and 50 nurses chosen by purposive sampling.	6
E12 ²⁷	Jordan/2005	Qualitative phenomenological research with intensive care nurses.	6
E13 ²⁸	United States of America/2007	Prospective study of the implementation of a spreadsheet of daily goals among nurses in a pediatric ICU.	3
E14 ²⁹	United States of America/2016	Interventional prospective study.	3
E15 ³⁰	United States of America/2013	Secondary analysis study that used data collected from patients and nurses. Through non-participant observation, the communication process between both was followed.	6
E16 ³¹	United States of America/2012	Quasi-experimental study with nurses in an ICU.	3
E17 ³²	Brazil/2020	Qualitative, exploratory study, developed with the nursing team of an ICU.	6
E18 ³³	Brazil/2019	Cross-sectional analytical study carried out with 92 nursing professionals from a surgical center.	6
E19 ³⁴	Colombia/2016	Descriptive, quantitative and cross-sectional study with 200 relatives of patients under intensive care.	6

Table 3 – Synthesis of productions according to main results/conclusions.

Reference	Results/Conclusions
E1 ¹⁶	Professionals understand that errors in care can expose the patient to damage and that the communication of these events is necessary to improve the service. However, they pointed out that when an error occurs, there is no opportunity for discussion and search for solutions.
E2 ¹⁷	The study allowed evaluating the understanding of each image, obtaining as a result the general understanding of 87.3% of the communication code, therefore it was considered to be a useful option to facilitate communication with the critical patient.
E3 ¹⁸	It was evident that the information is not being passed on completely, which violates the code of ethics and compromises the quality and continuity of care.
E4 ¹⁹	I-PASS implementation has been associated with improvements in verbal communication.
E5 ²⁰	There is a miscommunication on the part of the nurses during the transfer of patient information, including erroneous and unnecessary information while essential elements are missing.
E6 ²¹	Nurses in Poland primarily used therapeutic touch for non-verbal communication, while nurses in Turkey used facial expression. Critical care nurses in both countries experienced similar difficulties in patient communication.
E7 ²²	The frequency and positive behaviors of nurse-patient communication increased significantly in only one ICU.
E8 ²³	Better nurse communication with family members was associated with a decrease in acute stress, regardless of personal characteristics or perceptions of the patient's health status.
E9 ²⁴	The average number of interruptions was 2 per <i>handover</i> , ranging from 0 to 7. The most frequent number of interruptions was seven, occurring during a 15-minute <i>handover</i> . Doctors, nurses and alarming IV pumps were the most frequent source of interruptions. Administration staff and wards also interrupting transfers.
E10 ²⁵	The research showed that lack of attention, teamwork and communication problems were the main causes that compromise the patient safety culture.
E11 ²⁶	The findings of this study showed that there was minimal communication used with patients under mechanical ventilation. Lack of communication has been linked to anxiety in patients.
E12 ²⁷	Unconscious patients received less verbal communication and interaction. Communication with these patients should not only be seen as an interactive process, but also as one of the means to provide necessary information and support.
E13 ²⁸	Respondents reported that the daily goals worksheet led to better communication between physicians and nurses in the unit.
E14 ²⁹	Anesthetist and ICU nursing staff satisfaction levels increased significantly after the intervention. In addition, the perceived effectiveness and grade of the transfer process increased significantly.
E15 ³⁰	Talking duration was negatively associated with a Glasgow Coma Scale ≤ 14 . The time of intubation and the patient's level of consciousness may influence the duration of nurse communication in the ICU.

Table 3 – Synthesis of productions according to main results/conclusions (cont.).

Reference	Results/Conclusions
E16 ³¹	The results of the pilot study indicated that the perceived communication between nurses in general and the specific communication for the shift report significantly improved after the implementation of the tool.
E17 ³²	While there is recognition of the importance of communication for nursing care, on the other hand, there is little participation of nursing technicians, with parallel conversations, inattention, and incomplete information, compromising the effectiveness of care.
E18 ³³	The dimension of safety culture with less positive results were “Openness for communication” and “Feedback and communication about errors”.
E19 ³⁴	Communication between the health team and family members is a way to humanize care in intensive care units.

In a comparative study carried out in an ICU in Poland and another in Turkey, 46% and 42.3% of nurses reported having problems communicating with patients. It was also found that nurses in Poland primarily used therapeutic touch for nonverbal communication, whereas nurses in Turkey used facial expressions. Intensive care nurses in both countries experienced similar difficulties communicating with patients²¹.

Surgical and intensive care sectors should not be seen only as places for procedures associated with pain and suffering but should offer quality care and humanization, factors necessary for the patient's recovery. A humanized customer service is based on support, attention and information about the procedures to which he will be submitted, as he is often fragile and fearful, which feeds his insecurity and anxiety³⁸.

Another point to be considered is the family involvement in the care process. The family member inserted in the context of hospitalization contributes positively to reducing the patient's length of stay under intensive care. During hospitalization, the family experiences significant emotional reactions such as stress, fear, depression, anguish, loneliness, and uncertainty. Communication between the health team and these family members is necessary to restore balance³⁴.

Communication between the nursing team and the family members is essential for establishing bonds and trust, which contributes to a faster recovery of the client and is also a way of humanizing care, as it enables the family to be welcomed. Better communication between the team and the relatives of patients under intensive care contributed to reducing stress levels and better coping with the situation. However, it is pointed out that humanization in Brazilian intensive care environments is still an issue that requires in-depth discussions and further investigations^{23,39}.

Customer care in the SC and ICU includes effective clinical handover, involving communicating patient-relevant information from one care

provider to another. However, this process can suffer the effects of environmental interruptions that can contribute to potential errors. An Australian observational study highlighted that noise caused by professionals and equipment and frequent interruptions by employees from other sectors interrupt shift changes, which can lead to loss of information and result in adverse events for the patient²⁴.

Communication in the process of safe and effective care among health team professionals

The communication process, despite its complexity, is one of the necessary bases for building the interpersonal relationship between the nursing professional and other health team members. This interaction can be used as a facilitator for the practice of humanized care as it helps professionals to share teamwork that provides opportunities for participation, sharing, and searching for solutions to problems⁴⁰.

Communication between the health team is a fundamental strategy to minimize risk situations and contributes positively to patient safety, with professional training being an essential factor for the effectiveness of this process. However, conflicting relationships, power struggles, lack of empathy, professional devaluation, and work overload, among other negative points of professional interpersonal relationships, can cause gaps in the communication process, causing damage to customer care¹⁶.

To assess the safety culture in health services, research has been conducted in different care contexts. In the hospital context, SC stands out as a closed environment with complex work processes, whose surgical complications account for the percentage of deaths and damage, temporary or permanent, caused by the care process. Studies point to weaknesses in

professionals' values, attitudes, and behaviors, translated by safety climate scores below satisfactory²⁵.

It is emphasized that assessing the professionals' view of the safety culture makes it possible to identify problem areas that require attention. Constant improvements must occur in the development of this culture, especially concerning the need for an organizational structure that provides nursing professionals with the identification and explanation of errors committed and their causes, corroborating the creation of patient safety strategies³².

Possible failures in this dynamic are observed during the shift change from one team to another, whether in SC or ICU, or between both sectors. A Brazilian investigation highlighted that the exchange of information is carried out only by telephone in certain situations. Such attitudes can lead to errors that corroborate with adverse events, such as errors in medication, procedures, or even switching patients between surgical centers and intensive care units¹⁸.

In line with previous findings, an analysis carried out in a surgical ICU of a hospital in Rio de Janeiro investigated the meanings constructed by the nursing team about communication during handover in the transfer of shifts in the ICU. In the unit in question, the handover occurred with a checklist-type instrument used to support team communication³².

The term handover is used in clinical activity to characterize how information is transferred about the patient, between professionals from different shifts, either at hospital admission or discharge. This practice involves the transfer of information, responsibility, and competence for making decisions about patient care⁴¹.

American research has observed the dynamics of transfer in an oncology ICU. He highlighted that interruptions while transferring information about the patient make the process longer and less secure, suggesting the need for structured and more effective transfer methods. As one of the alternatives to improve this process, providing real-time education, guidance, and feedback to employees can improve transfer communication methods, producing positive results for the patient²⁰.

Another possibility to strengthen patient safety during information communication between the health team is using standardized instruments. When evaluating an intervention that used a spreadsheet of daily goals for records about the care process, nursing professionals reported that from the use of this instrument, there was an improvement in communication with other professionals, especially with doctors^{19,28}.

Standardization of communication is suggested as a practical approach to improving communication during patient transfers, such as using the shift report. ICU leaders and nursing staff developed and pilot-tested this

communication tool using the clinical microsystem framework. The results indicated that the perceived communication between nurses and the specific communication for the shift report improved significantly after implementing the tool³¹.

Another prospective study evaluated the effectiveness of applying a combined intervention to improve the quality of clinical transfer from the operating room to the ICU. A direct telephone transfer report was suggested between the anesthetist and the ICU nurse responsible for receiving the patient. There was a noticeable improvement in the professionals' satisfaction with the transfer process between the units. To provide vital information, a telephone call from the anesthetist to the intensive care nurse provided a direct communication channel between the teams²⁹.

As limitations identified in this review, it should be noted that the number of databases consulted allowed presenting only part of the evidence related to the topic. As for the quality of most of the evidence, the type of study does not allow the generalization of the results, considering that these are related to the context in which they were carried out, involving different cultures and characteristics of the health services in each country.

However, the findings obtained provide a theoretical framework for further research to be carried out on the subject, especially about deepening investigations on communication and safety climate in surgical centers. Moreover, they subsidize the interest of professionals in the search for improving their knowledge about patient safety.

CONCLUSION

Communication is one of the priorities and fundamental actions for the safety and effectiveness of nursing care, whether in SC or ICU. This ability allows for interpersonal relationships between professionals and the client, providing an environment free of errors that could delay the patient's recovery.

This study contributes to the scientific field, as it identified potentialities and limitations related to the communicative process that require further investigation. Given this context, it is necessary that communication barriers are identified and that strategic organizational actions are put into practice, including the permanent education of professionals as well as the standardization of information. Actions like these minimize the potential risks that permeate critical care and make relationships in the work environment positive.

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