



INTEGRATIVE LITERATURE REVIEW ARTICLE

INTERRUPTIONS IN THE NURSE'S WORK AND PATIENT SAFETY

INTERRUPÇÕES NO TRABALHO DO ENFERMEIRO E NA SEGURANÇA DO PACIENTE

INTERRUPCIONES EN EL TRABAJO DEL ENFERMERO Y EN LA SEGURIDAD DEL PACIENTE

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ABSTRACT






Objective: to identify the effects of disruptions on the nurse's work routine and patient safety. **Method:** this is a bibliographical, descriptive, type-integrative review of literature, with the collection of data in the MEDLINE, CINAHL, Web of Science and LILACS databases, in indexed articles from 2013 to 2017, analyzing them in a descriptive way, after the presentation in figures. **Results:** 17 articles were found and it was noticed that they revealed negative aspects regarding interruption in the nurse's work routine and patient safety, and 76.5% also showed positive points. It should be noted that the results analyzed did not consistently support the negative relationship between the interruptions and their implications in the nurse's work routine and patient safety. **Conclusion:** aspects that favor the occurrence of interruptions in nurses' practice were evidenced, however, there are few studies that describe the impact of interruptions on the practice and safety of the patient. There is a need for a broad understanding of the factors that cause disruption and jeopardize patient safety. **Descriptors:** Nursing; Patient Safety; Interruption; Workflow; Nursing Care; Time Management.

RESUMO

Objetivo: identificar os efeitos das interrupções na rotina de trabalho do enfermeiro e na segurança do paciente. **Método:** trata-se de estudo bibliográfico, descritivo, tipo revisão integrativa de literatura, com a coleta de dados nas bases de dados MEDLINE, CINAHL, Web of Science e LILACS, em artigos indexados de 2013 a 2017, analisando-os de forma descritiva, após a apresentação em figuras. **Resultados:** encontraram-se 17 artigos e se percebeu que revelaram aspectos negativos em relação à interrupção na rotina de trabalho do enfermeiro e na segurança do paciente e 76,5% mostraram, também, pontos positivos. Salienta-se que os resultados analisados não apoiaram consistentemente a relação negativa entre as interrupções e as suas implicações na rotina de trabalho do enfermeiro e na segurança do paciente. **Conclusão:** evidenciaram-se aspectos que favorecem a ocorrência de interrupções na prática do enfermeiro, entretanto, há poucos estudos que descrevem o impacto das interrupções na prática e na segurança do paciente. Faz-se necessária uma ampla compreensão dos fatores que ocasionam as interrupções e colocam em risco a segurança do paciente. **Descritores:** Enfermagem; Segurança do Paciente; Interrupção; Fluxo de Trabalho; Cuidados de Enfermagem; Gerenciamento do Tempo.

RESUMEN

Objetivo: identificar los efectos de las interrupciones en la rutina de trabajo del enfermero y en la seguridad del paciente. **Método:** se trata de un estudio bibliográfico, descriptivo, tipo revisión integradora de literatura, con la recolección de datos en las bases de datos MEDLINE, CINAHL, Web of Science y LILACS, en artículos indexados de 2013 a 2017, analizándolos de manera descriptiva, después de la presentación en figuras. **Resultados:** se encontraron 17 artículos y se observó que revelaron aspectos negativos relacionados con la interrupción en la rutina de trabajo del enfermero y en la seguridad del paciente, y el 76.5% mostraron también puntos positivos. Cabe señalar que los resultados analizados no apoyaron de manera consistente la relación negativa entre las interrupciones y sus implicaciones en la rutina de trabajo del enfermero y en la seguridad del paciente. **Conclusión:** se evidenciaron aspectos que favorecen la ocurrencia de interrupciones en la práctica del enfermero, sin embargo, existen pocos estudios que describan el impacto de las interrupciones en la práctica y en la seguridad del paciente. Se hace necesaria una amplia comprensión de los factores que causan las interrupciones y ponen en riesgo la seguridad del paciente. **Descriptor:** Enfermería; Seguridad del Paciente; Interrupción; Flujo de Trabajo; Atención de Enfermería; Administración del Tiempo.

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INTRODUCTION

Patient safety is considered to be the least acceptable reduction in the risk of unnecessary harm associated with health care.¹ The world alarm about this issue began in the 1980s, when it was found that many patients suffered adverse events due to errors in health care. It is known that efforts to prevent such events remain inadequate due to failures and accidents during care, and iatrogenic rates remain alarming.²

It is reported that, to ensure patient safety, health professionals and other organizational actors need to be involved in projects that prioritize the safe work process, in addition to providing qualified care. It is noticed that many of these professionals do not present adequate training to work with this theme. It is also noted that there are situations in their daily work that jeopardize the safety of the patient, such as the interruption of their work routines to deal with various issues.³⁻⁴ It is understood that disruptions can lead to loss of concentration and the need for restarting the activity, but can also prevent the occurrence of errors. It is recommended to carry out studies to understand the effects of interruptions on the work of health professionals.⁴⁻⁵

In this context, the Nursing team stands out due to the number of professionals and the continuous care of the patient, becoming an essential professional group to promote safe and quality care. The nurse is considered as a reference, being the link between the various professionals and, frequently, the member of the multidisciplinary team more activated and more interrupted during the execution of their activities. It is understood that there are multiple assignments in your routine that require responses and subject you to various interruptions. The nurse is frequently instructed to provide information, clarify doubts and make decisions about the unit and the patients, among other causes, due to the diverse functions of the professional, that unfold in multiple activities.⁴ This idea is corroborated by a study, which showed that the nurse suffers from 0.4 to 13.9 interruptions per hour of work.⁴

A challenge for nurses was to live with the dilemma of being accessible to the staff, the patient and the family, and to remain focused on their activity, which causes a constant rearrangement of priorities, with implications for the continuity of care activities.⁵ For this study, the interruption was adopted as the suspension of the primary activity so that a secondary, unplanned activity could be performed. It is emphasized that, at the end of this interruption, the professional can return to the initial activity or close it.⁶

It is important that the nurse knows the conditions and complexity of the hospital environment, besides the interruptions of their work in the context, as this can influence the quality of care and minimize the risk conditions. It is pointed out that the knowledge about the interruptions of the work of the nurse in the day to day can contribute to distinguish the interruptions that propitiate the safety of the patient and those that generate problems for the concentration in the activity that is being performed.

It is observed that there are few national publications on the interruptions in nurses' work and their impact on patient safety, until this moment, despite their extensive exploitation in other countries, which justifies the development of this research. It is noticed that the studies on the influence of the interruptions in the work of the nurse are little explored in the sense of understanding the phenomenon in the routine of work of this professional.⁴ It should be emphasized that this research may favor the development of processes that prevent the occurrence of disruptive interference, reducing its impact on nursing care and routine work, as well as improving the quality of patient care and safety.

OBJECTIVE

- Identify the effects of interruptions on the nurse's work routine and patient safety.

METHOD

It is a bibliographic, descriptive study, type integrative review of the literature, which has the purpose of analyzing the state of the art of a certain theme. It is known that this modality of study makes possible the synthesis of a subject in order to promote its understanding.⁷⁻⁸

This study was therefore guided by the following guiding question: "What are the effects of interruptions on the nurse's work routine and patient safety?" The guiding question was structured through the PIO strategy:⁹ (P) Patient or Population - nurse; (I) Intervention - interruption in the nurse's activity and (O) Outcome - negative and positive effects of interruptions and patient safety. The following steps were taken for its operation: elaboration of the guiding question; establishment of inclusion criteria and exclusion of studies; definition of the information to be extracted from the studies; evaluation of studies included in the review; interpretation of the results and presentation of the review on the.⁷

It is recorded that the selection of articles occurred from June to August of 2017 in the databases MEDLINE, Latin American and Caribbean Literature in Health Sciences (LILACS), Cumulative Index to Nursing and Allied Health Literature

(CINAHL) and Web of Science. The descriptors used for the elaboration of the search strategy were selected in the vocabulary Descriptors in Health Sciences (DeCS) and Medical Subject Headings (MeSH): Nursing; Patient Safety and Interruption. We chose to use the keyword (uncontrolled descriptor or free term) Interruption to gain sensitivity to the search strategy.

Cross-referenced descriptors were used with the use of the "OR" and "AND" booleans and the

asterisk (*) as search operator, with the function of maintaining the Radical descriptor of Nursing / Nursing and covering their variations. It should be emphasized that the same descriptors were used in all databases selected for research, observing the search specificities of each base. The search strategies of this study in were described in figure 1:

Database	Search strategy
MEDLINE	<i>((("Patient Safety"[Mesh]) OR "Patient Safety"[Title/Abstract])) AND (interruption[Title/Abstract] OR interruptions[Title/Abstract])) AND (nurs*[Title/Abstract])</i>
LILACS	<i>(("Segurança do Paciente" OR "Patient Safety" OR "Seguridad del Paciente" AND (interruption OR interruptions OR interrupção OR interrupções)) AND (instance:"regional") AND (db:"LILACS"))</i>
CINAHL	<i>((("Patient Safety" OR safety) AND (interruption OR interruptions)) AND nurs*)</i>
Web of Science	<i>((("Patient Safety" OR safety) AND (interruption OR interruptions)) AND nurs*)</i>

Figure 1. Syntax of the descriptors used for the search strategy. Belo Horizonte (MG), Brazil, 2019.

Inclusion criteria were primary articles in English, Portuguese or Spanish, with titles or abstracts that addressed the interruptions in the work of the nurse and published in the last five years (2013 to August 2017).

Exclusion criteria included documentary type publications, letters to the reader, books, dissertations, theses and editorials, articles that dealt with the interruption of other health professionals and did not include nurses and articles whose research object was the interruption, specifically, in the topic medication. It was found after reading the summaries of the articles that the available studies have focused on the interruptions during the administration of medicines. It was decided to address the interruption in all nursing activities and not in a specific task, in order not to limit the review. It should be emphasized that, in relation to the exclusion of theses and dissertations, the authors followed the inclusion and exclusion criteria that are normally used in integrative reviews.

In order to obtain a greater precision in the results, the search in the literature, independently and simultaneously, was carried out by two researchers, who used the same search strategy. It should be noted that, in the end, there was no disagreement in the selection of articles, and a third researcher was not necessary as a tie-breaking criterion. One then proceeded to define the information to be extracted from the 17 selected studies, in order to proceed to the analysis and interpretation of the results.

RESULTS

Initially, 388 articles were found, reduced to 40, after reading the titles and abstracts, the analysis of the inclusion and exclusion criteria and the withdrawal of duplicate texts. After completing the reading, 17 articles were obtained that responded to the guiding question of the research. The flowchart of selection of the articles in figure 1 is shown.

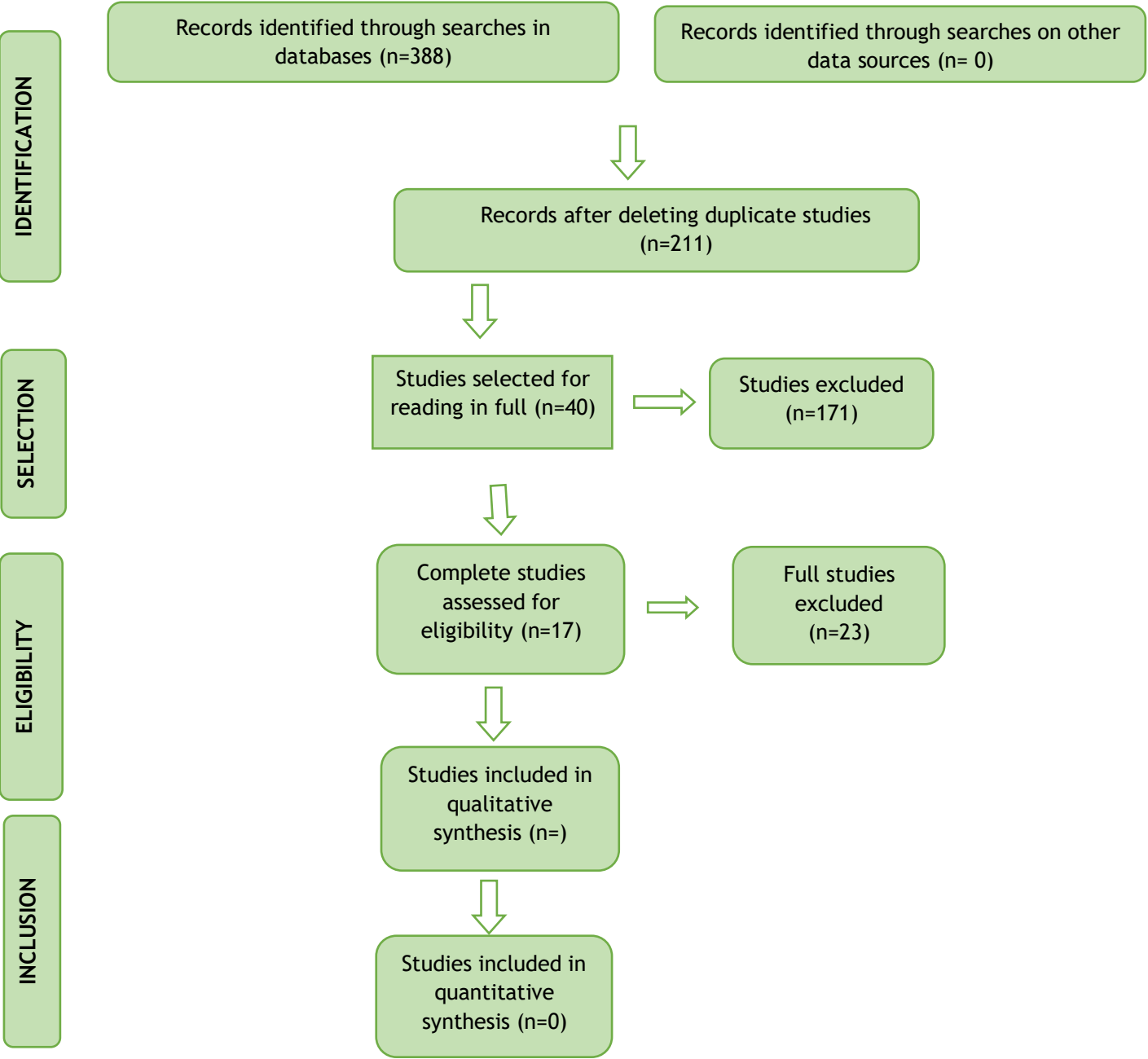


Figure 1. Flowchart of selection of articles. Belo Horizonte (MG), Brazil, 2019.

The synthesis of the knowledge, after the critical analysis and the interpretation of the articles, was presented with enough information

to evaluate the pertinence of the study, as shown in figure 2.

Author(s)/Country/Year	Type of study/ Sample	Level of evidence	Positive effects of interruptions	Negative effects of interruptions
Berg, Källberg, Göransson, Östergren, Florin, Ehrenberg. Sweden, 2013.6	Descriptive, with qualitative and quantitative approaches. 12 nurses and six physicians.	Level IV	Communication, exchange of information among professionals.	Risk of errors. Risk to patient safety. Communication that hinders the running activity. Professional stress. Concentration break.
Berg, Ehrenberg, Östergren, Brixey, Göransson, Kallberg. Sweden, 2016.10	Qualitative and exploratory. Ten nurses and ten doctors.	Level IV	Exchange of information between the team to optimize care and manage the activities of professionals. Efficiency of the work process. Attendance of the secondary activity of major relevance. Patient safety.	Interruptions in activities of higher concentration hamper the execution of the task and make the error feasible. Increased workload. Stress, frustration and irritation of the professional. Decreased effectiveness and productivity.
Myres, McCarthy, Whitlatch, Parikh. USA, 2016.11	Qualitative and quantitative. 47 nurses.	Level IV	Viability of requests for help from both the patient and the nurse.	The nurse may forget to resume the initial activity upon being discontinued. Delays in care can cause patient dissatisfaction. Increased workload.
Rivera. USA, 2014.12	Dimensional analysis. Five nurses.	Level IV	Exchange of information between the team. Ability to solve problems. Enabling of teamwork.	Interference in the concentration of the nurse. Risk of errors in drug preparation. After the interruption, the nurse may forget to return to primary activity. Favor the occurrence of errors. Increased workload.
Berg, Florin, Östergren, Djärv, Göransson. Sweden, 2016.13	Qualitative. Ten nurses and ten doctors.	Level IV	The exchange of information between professionals prevents errors, improves the efficiency of the service and enables patient safety. Improvement of the work process, patient care and safety.	Risk of errors. Decreased effectiveness and productivity of professionals. Stress of the professionals.
Craker, Myers, Eid, Parikh, McCarthy, Zink, et al. USA, 2017.14	Exploratory, with a qualitative approach. 46 nurses.	Level IV	Interruptions provide guidance and problem solving. Optimization of care.	The nurse may forget to resume the initial activity when interrupted or to document information in the medical records. Risk of errors.
Sponner, Corley, Chaboyer, Hammond, Fraser. Austrália, 2015.15	Observational. 40 nurses.	Level IV	Interruptions are important in emergency situations. The information resulting from the interruption facilitates decision making.	Commitment to decision making. Risk to patient safety. Risk of errors. Effort to stay focused. Loss of information.
Prates, Silva. Brazil, 2016.16	Quantitative and observational. 33 Nursing professionals.	Level III	Obtaining information about the patient may prevent the continuation of an unsafe act. Increased accuracy of actions and improvement of the patient's condition.	Cognitive failures, loss of concentration, memory or perception. Forget about the activities that were running. Delay in care, incomplete work, lack of care, risk of errors. Frustration, stress and demotivation of the professional. Incomplete care record. Risk to patient safety.
Sorensen, Brahe. Denmark, 2013.17	Qualitative and observational. Five nurses.	Level IV	Knowledge exchange among the most experienced nurses for the less experienced. Enabling the relationship with the patient.	Inappropriate disruption is considered by nurses to be disrespectful and inappropriate behavior. Loss of focus on the activity performed. Risk to patient safety, the environment and quality of work. Adverse events in the medication process.
Sasangohar, Donmez, Easty, Trbovich. Canada, 2017.18	Experimental. 30 nurses.	Level III	The authors did not comment on the positive effects of interruptions.	Decreased accuracy of nurses when they return to the primary task and delay their return to the initial activity.
Konng, Koot, Eng, Purani, Goh, Teo, et al. Singapore, 2015.19	Qualitative. 31 health professionals.	Level IV	Effective communication. Alert the professionals to the mistakes. Clarification of doubts. Patient	Stress and frustration of the professional. Risk of errors. Interruption of clinical reasoning and the task under way.

			safety.	Interference in patient safety, work efficiency and quality of care. Lack of prospective memory training and delay to return to primary activity. Impairment in the finalization of the activity with precision. Delayed care of patients. Concern of patients receiving imprecise guidelines.
Cole, Sterfanus, Gardner, Levy, Klein. USA, 2016.20	Observational. 35 Nursing interventions in the patient.	Level IV	The authors did not comment on the positive effects of interruptions.	Delayed emergency care at risk to the patient. Time spent to replay the running activity, with delay of the return to the initial task. Repeated procedure interrupted with increased costs. Inefficient practice and reduced productivity.
Elfering, Nützi, Koch, Baur. Switzerland, 2014.21	Analytical. 133 nurses.	Level III	Nursing care optimization. Prevention of harm to the patient.	Risk to patient safety. Favor of near misses. Risk of errors in solving problems.
Filer, Beringuel, Frato, Anthony, Saenyakul. USA, 2017.22	Observational. 16 nurses.	Level III	The authors did not comment on the positive effects of interruptions.	Harm in the evaluation of the patient, in the synthesis and the accuracy of the collected data, causing their fragmentation. Risk of the nurse not resuming the initial activity by forgetting, and may cause errors by default. Interruptions in the documentation activity encourage error, loss of information or poor quality information. Interruptions during communication with the family may be seen by the patient as a lack of education.
Johnson, Motavalli, Gray, Kuehn. USA, 2014.23	Observational and focus group. Interruptions were tracked for ten days (eight hours daily).	Level IV	The authors did not comment on the positive effects of interruptions.	Distraction, stress and professional dissatisfaction. Delay in patient care. Risk of errors. Risk to patient safety. Loss of concentration and perception of quality of care. Commitment to patient assessment and screening decision. The patient feels devalued and vulnerable, with exposure of his health problems to the switch (loss of privacy).
Sasaki, Perroca. Brazil, 2017.24	Survey. 133 nurses.	Level IV	Transmission of information that influences the delivery of care.	Prejuízo na qualidade da assistência, na segurança do paciente and professional effectiveness. Longer duration of activities. Interference in concentration. Higher mental workload, reduced productivity. The nurse forgets the activity that was running, which can result in negligence, increased errors and costs. Error in preparation and administration of medications. Frustration and stress of the professional. Failures to document information in medical records. Incomprehension of the instructions made by the nurse to the patient / family.
Dante, Andriago, Barone, Bonamico, Chiara, Nait, et al. Italy, 2016.25	Observational. 50 nurses.	Level IV	Viability of nurses' decision-making. Providing patient safety.	Cognitive failure resulting in the loss of information from the primary task. Risk to patient safety. Medication administration errors. Lapse in routine nursing tasks. Forgetting the planned actions. Commitment to communication. Patients feel disrespected. Stress and frustration of the professional.

Figure 2. Characterization of the studies included in the integrative review. Belo Horizonte (MG), Brazil, 2019.

There are qualitative (n = 07), mixed (n = 03), quantitative (n = 06) and dimensional analysis (n = 01) approaches and the following methods of data collection: observation (n = 07); observation and interview (n = 03); interview (n = 02); questionnaire (n = 02); focal group (n = 01); observation and focal group (n = 1) and observational designer of repeated measurements (n = 01). Research was conducted in the United States (n = 06), Sweden (n = 03), Brazil (n = 02), Australia (n = 01), Denmark (01), Singapore (n = 01), Italy (n = 01) and Switzerland (n = 01).

It is emphasized that 13 articles brought a definition of interruption, but there was little similarity between the concepts. It is emphasized that one of them defined the interruption as the time when the primary activity was suspended, and five conceptualized the term according to the source of interruption, while another five considered the definition of interruption generalized, as the act to suspend an activity. It is noted that two studies related the interruption to the deviation of attention from the primary activity and four articles addressed the interruption subject, but did not present their concept.

Data was collected in the emergency room (n = 05), the ICU (n = 04), the surgical center (n = 04), the trauma center (n = 02), the hospitalization unit (n = 1) and in primary care (n = 01).

DISCUSSION

Health services are characterized as an environment that, in addition to being dynamic, requires interaction between professionals and sectors, as it involves patients with different levels of complexity.³ Interruptions are known to be frequent in these patients, and researchers have made efforts to understand this phenomenon, as well as its implication in patient safety and the professionals' workflow.¹¹

From the analysis of the 17 articles, the existence of factors that make it difficult to understand the effects of interruptions, among which the absence of a standard definition of interruption, is highlighted. This factor was observed in an American study, in which the authors discussed the difficulty of conceptualizing the interruption, due to the diversity of meanings present in the literature, which becomes an obstacle in the choice of a reference.²⁶

It should be emphasized that the analysis of the results of the selected studies was hampered by the lack of standardization in data collection and in the classification of interruptions in relation to source, frequency, motif and duration. It is pointed out that an American study has added that the lack of standardization of sampling units, the lack of studies that produce stronger evidence, and the absence of consistent counting

methodologies and interrupt classification terminology make it difficult to condense the results. It is understood that these authors complement the lack of theoretical structures to guide the investigations and the interpretations of the findings.²⁷

From the analysis of Figure 2, it was observed that 100% of the articles brought negative aspects of the interruption in the nurse's work routine and the safety of the patient. It is verified that 13 also pointed out positive points in this regard, that is, there is no unanimity regarding the effects of interruptions, which reinforces the need for further studies.

It is indicated, in relation to the benefits that can result from an interruption, that nine articles discussed that this action makes communication possible.^{6; 10; 13-7; 19} It is known that the exchange of information among professionals, besides optimizing patient care, allows the management of Nursing care.^{3,10,24} It is added that the interruption can favor the exchange of experiences between the professionals, which facilitates the decision-making of the nurse and the teamwork.^{12,14-6,19,25}

It is evaluated that obtaining information about the patient, from an interruption, gives nurses greater precision in their actions.¹⁶ This idea is corroborated by a Norwegian study, which comments that interruptions may provide new information that is important to the professional, such as updating data on the patient's clinical condition.²⁷

It should be emphasized that the four studies that discussed the exchange of information as important pointed out the alert to professionals regarding the continuity of an unsafe act, that is, the interception of errors, that prevents the harm to the patient.^{13,16,19,21} A Brazilian study was identified that reports that interruptions, besides preventing errors, help the professional to be more precise in their activities.⁴

Another positive point of the interruption, understood as a factor that makes the efficiency of the work process feasible, while other studies approach interruption as an action that increases the problem-solving capacity.^{10,12-4,19,21} It is revealed that interruptions also allow the professional to attend a secondary activity of greater relevance, being necessary in emergency situations.^{2,15} It is noted that requests for help, both by the patient and by the nurse, as well as the clarification of doubts, are possible when there is interruption.^{11,17,19}

As to the negative aspects, 11 studies have found that interruptions favor the occurrence of errors, both in care and in the preparation or administration of medications.^{6,10,12-6,19,21,24-5} It is evidenced that the interruption impairs the safety of the patient, a result similar to that found in a

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study carried out in the USA.^{6,15-7,19,21,23-5,28} It is verified that the interruption causes a change in the focus of attention of the professional, which can cause the dispersion of the activity of the care and adverse effects.²⁸

It is pointed out in an American study that human reasoning is largely automated, quick and effortless, and that some activities require attention and focus to be addressed.²⁸ One reports, paradoxically, studies that highlighted the occurrence of interruptions in activities that require greater concentration and focus of the nurses.^{6,12,15-7,19} This result is confirmed by a study carried out in Turkey, which discussed the interruption as a factor detrimental to the concentration of the professional, leading to the occurrence of errors.²⁹

It is considered, in relation to cognition, that human memory has limitations, which makes it difficult to simultaneously assimilate various information.⁴ It is revealed in an American study that interruptions can lead to overloading of information in an unnecessary way, which leads to errors considered avoidable in the area of health.³⁰ Note that among the articles selected, five presented the notion that interruptions may allow for cognitive failures in attention, memory or perception.^{16,19,23-5}

It is understood that the reasoning failure caused by the interruption can cause delays in the resumption of patient care, which generates dissatisfaction with the patient.^{11,15-6} It is inferred that the nurse may also forget to document information in medical records or make incomplete records of the care taken.^{14,16,24} The reduction of clinical performance, efficiency, effectiveness and productivity of the professional is emphasized.^{10,13,15,19,24-5}

The increase in nurses' workload is indicated as a consequence of the interruption.^{10-2; 24} It complements, in a Swiss study, that, when finishing the secondary activity, the professional demands certain time to resume the initial task, which causes an increase of the work load.³¹ Studies that address the nurse's difficulty in returning to interrupted activity.^{11-2,14,16,18-9,24-5}

Other failures resulting from the interruptions described by articles were observed, among them the interference in decision-making, loss of information, incomplete work, omission of care and adverse events.^{15-6,23-5} It is also known that interruptions considered unnecessary by professionals can cause stress, irritability, frustration and demotivation.^{6,10,13,16,19,23-5} It is stated in a Brazilian study that interruptions can trigger, besides these feelings, the feeling of incapacity and discouragement in the professionals, since the irrelevant interruptions make difficult the continuous assistance.⁴ It should be stressed that it is fundamental to differentiate

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between interruptions favorable to the work process and those that undermine it.

As with other effects cited, the patient's longer waiting time for care and concern about imprecise instructions.^{19,23} Patients are perceived to be disrespectful and vulnerable due to exposure of their health problems to the switch.^{23,25} It is understood that patients may feel devalued when there are frequent interruptions during the delivery of their care, according to a US study.³²

The analysis of the results of the studies, in which consistent support for the negative relation of the interruptions is not found, although they are more frequent, despite their implications in the nurse's work routine and patient safety, is denoted. Negative but also positive aspects are noted, suggesting that the outcome depends on the context in which interruptions occur. It is evaluated that this aspect raises questions about the interruptions and opens perspectives for new studies in different contexts, with different forms of organization of the work of the nurse, and also questions about the hypothesis that certain interruptions are more harmful than others for the patient safety.

CONCLUSION

It is concluded from this review that it was possible to identify relevant aspects of the nurse's practice that favor the occurrence of interruptions, however, few studies describe the effects of interruptions on clinical practice and patient safety, most of which of the articles only describes the characteristics of the interruption and presents few proposals of interventions of practical applicability.

It points out the scarce knowledge about interruptions and how they relate to the work of nurses in their multiple activities in Brazil. It is therefore important to look beyond isolated nursing activities to achieve a fuller understanding of how disruptions affect the totality of the complex work performed by nurses. It is possible, when trying to isolate the activities of the nurse, to render an artificial description of the configuration of the work. Therefore, a broad understanding of the multiple factors involved that cause the interruptions and that put the safety of the patient at risk is necessary.

It is believed that a practical approach would be to identify failures in the organization of work that produce disruptions and to follow the process in order to identify the complete set of events involved in these disruptions. It is necessary for the professional to stick to the activity in execution and to evaluate the pertinence of the intervention in accordance with the situation. It is noteworthy that, despite international and multidisciplinary attention given to the subject, current studies suggest that beliefs about the

negative effects of disruptions remain more a product of assumption than of evidence.

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