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USE OF SAFE SURGERY CHECKLIST IN BRAZILIAN HEALTH SERVICES: INTEGRATIVE REVIEW

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ABSTRACT

In an attempt to mitigate cases of adverse events and incidents with surgical patients, the brazilian Ministry of Health advocates the use of a checklist, which must be applied in the trans-operative period of all surgical procedures performed in the country's health services. The purpose of this study was to identify the brazilian scientific production on the use of the safe surgical checklist and verify the professional adherence to it. We have developed an integrative, in December 2016, in the following sources: Scientific Electronic Library Online; Latin American and Caribbean Literature in Health Sciences; Nursing Database. For the selection of studies, were applied the descriptors: "patient safety", "checklist" and "surgical procedures, operative". Thus, were included six original articles, published between January 2010 and December 2015, with full text available online, in English, Portuguese and Spanish. Of the included studies, three (50%) were documentary research and four (66.67%) were published nursing journals. The brazilian scientific production in incipient. Educational programs can help to improved professional adherence to the instrument.

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INTRODUCTION

Since the establishment of the "World Alliance for Patient Safety" by the World Health Organization (WHO) in 2004, the global challenges for patient safety have been established, and the second challenge proposes the promotion of safety for patients undergoing procedures Surgical, whose theme presents the slogan "Safe Surgeries Saves Lives" (Brazil, 2011). The launching of this topic, already a second challenge for patient safety, is due, in particular, to the fact that the occurrence of adverse events and / or incidents within the surgical center results in damages to the patient, which often lead to death Or leave you with some sequel (Bezerra, 2015). Nevertheless, a study conducted in a private hospital in São Paulo, Brazil, indicates that, adverse events and incidents occur with high frequency in surgical centers. Despite this, the researchers of the mentioned study also point out that approximately half of the occurrences that compromise the safety of the surgical patient is characterized as an avoidable circumstance (Bohomol, 2013). Therefore, in order to mitigate cases of adverse events and incidents with surgical patients, the Brazilian Ministry of Health has adopted the proposal to use a checklist, standardized by the World Health Organization (WHO), which should be applied intraoperative all surgical procedures performed in the country's health services (WHO, 2009).

To date, no review study has been found that presents the potentialities and fragilities of the checklist, as a tool to effectively promote the safety of Brazilian surgical patients. Thus, it is believed that this study may contribute to the evidence-based practice related to promoting patient safety during the surgical process. In this sense, the present study aimed to identify the Brazilian scientific production on the use of the safe surgery checklist and to verify the professional adhesion to the same one.

MATERIALS AND METHODS

This research is an integrative review of the literature, which was developed from a search for scientific articles in the following sources: Scientific Electronic Library Online (SciELO); Latin American and Caribbean Literature in Health Sciences (LILACS); Nursing Database (BDENF). For the development of this study, the following guiding question was raised: what is the Brazilian scientific production on the use of the safe surgery checklist?. Based on this question, we searched the sources mentioned and, using the following described in health sciences: "patient safety"; "check list"; "Operative surgical procedures".

conducted in Brazil, published between January 2010 and December 2015, with full text available online in English, Portuguese and Spanish. Thus, the descriptors were initially inserted in the selected databases, excluding studies that were duplicated (in more than one database).

Subsequently, the abstracts of the remaining studies were evaluated and, excluding those that did not present information consonant with the objective of the present research. The selected studies were then read in full and, finally, those who composed the present review were selected. Figure 1 illustrates the search methodology and the quantitative of studies identified in each step.

Table 1. General characteristics of selected studies

Article (year)	Journal	Region of the country	Methods		Main results
			Desing	Population/Sample	
A1 (2015)	*Esc Anna Nery*	South	Quantitative	257 checklists (with 12,629 items) related to orthopedic surgeries	Of the total items evaluated, only 8.5% (n = 1,071) were not filled
A2 (2014)	*Cad Saúde Pública*	North	Quantitative	375 records of urological (n = 164) and gynecological surgeries (n = 221)	Of the total number of records evaluated, 61% contained the checklist, but only 4% of them were completely filled
A3 (2015)	*Rev Gaúcha Enferm*	South	Evaluation research, with non-participant observation	20 orthopedic surgeries of hip and knee prostheses	Verification of checklist items occurred, most of the time, just formal verbal. There was no significant adhesion to the instrument
A4 (2013)	*Rev Gaúcha Enferm*	Southeast	Descriptive, analytical and qualitative approach	30 members of the surgical team (surgeons, anesthesiologists, nurses, technicians and nursing assistants)	There was no perception of changes regarding the professional interrelationship, but rather, regarding patient safety with the use of the checklist
A5 (2015)	*Rev Sobecc*	Southeast	Quantitative	400 evaluated checklists, before and after a permanent education program	There was an increase in adhesion to the checklist, however, a decrease in the completeness index of the instrument
A6 (2013)	*Rev Bras Ortop*	Southeast	Quantitative	502 questionnaires answered by orthopedists attending the 44th Brazilian Congress of Orthopedics and Traumatology	Of the total respondents, 65.3% reported total or partial ignorance of the checklist, and 72.1% of those said they had never been trained to use it

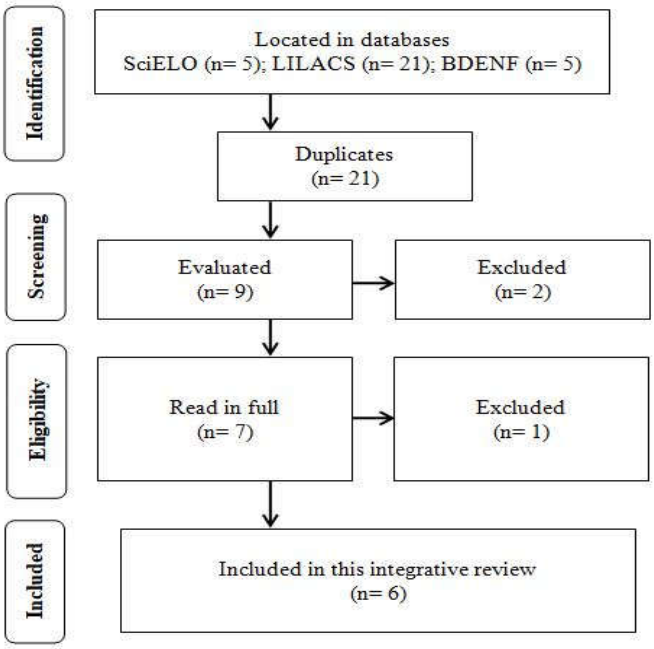

Figure 1. Flowchart of selection of studies

In this sense, it is highlighted that the Boolean operator "AND" was inserted between the descriptors. The search occurred during the month of December 2016, and the inclusion criteria were: original articles, from research

RESULTS AND DISCUSSION

Among the six selected studies, three (50%) were documentary research, and only one (16.67%) presented a qualitative

approach. In addition, four (66.67%) articles were published in nursing journals and three (50%) surveys were conducted in the southern region of Brazil. Regarding the year of publication of the studies, it was verified that three (50%) were published in the year 2015. Table 1 shows the characteristics of the studies included in this review. This review allowed the location of six national publications focused specifically on the objectives listed. As can be seen in Table 1, selected research showed that the checklist was 100% adhered to by the health team, nor did the same always have all items checked. Article A1 (Amaya, 2015) presents results of research conducted by researchers from the Federal University of Paraná, in which it was found that more than 90% of the items from a total of 257 checklists were filled, and the margin of error / inconsistency in the fills Was very low. On the other hand, in the study of 375 surgical records, A2 (Freitas, 2014) found that 61% (n= 228) had a checklist, of which only 4% (n = 15) If completely filled. The presence of the checklist next to the chart was statistically higher in gynecological procedures and in those with longer duration. On the other hand, checklists of urological surgeries presented higher quality in terms of filling the items. In A3 (Maziero, 2015), it was noted that the checklist was used in 100% (n = 20) of the surgical procedures evaluated, however, its adhesion was not 100% in the three moments. In addition, in no procedure was there complete completeness of the items.

The authors of study A5 (Elias, 2015) point out that, after five years of implementation, there was a decrease in the number of unfilled instruments, however, an increase in the number of incomplete checklists was observed. In the region of Murcia (Spain), when developing a retrospective study to evaluate the difficulties of implanting a checklist in surgeries, it was possible to observe that the adhesion to the instrument was also not 100%, and the checklist was present in 75 (83.33%) of the procedures. The Spanish study also points out that only 27.8% of the checklists were fully filled. Interestingly, the completeness of checklist items was statistically associated with the type of anesthesia (local) and the hospital port (small and medium) (Soria-Aledo, 2012). In Mexico, when developing a prospective study to evaluate the level of completeness and factors that influence adherence to the safe surgery checklist, nurses from a cardiology institute verified that the percentage of total checklists in 326 surgeries was 87.97%. Among the instruments that were not fully filled out, 50.6% presented check / check items related to the need for effective communication and exchange of critical information for safe conduction of the incomplete surgical procedure. Regarding the main factors related to the adhesion to the checklist, 91.8% of the 93 professionals interviewed stated that the instrument had good viability of application, 86.3% reported that the checklist had some benefit and 91.2% % stated that its application contributed to avoid adverse events during the procedures (García, 2012).

In a pilot study performed in a pediatric hospital in Argentina, the implementation of the instrument was accomplished through the accomplishment of five predefined steps. In the first moment, a project was conducted for three months, while the last phase consisted of the preparation of the final version of the checklist adapted to the local reality. The level of adherence to the checklist evolved from five to 85% over the 18-month study period. Nevertheless, the authors emphasize that, in addition to assessing the level of adherence, it is important to verify the impact of the use of the instrument in the possible reduction of operative complications (Dackiewicz, 2012). Following the provisions and, returning to the analysis of the potentialities and fragilities of the checklist, authors of article A4 (Pancieri, 2013) describe that the participants of the research recognize that the instrument promotes more patient safety in the procedure. Moreover, it is worth remembering that one of the objectives of the "Safe Surgeries Saves Lives" program is to improve the communication among members of the surgical team, and the proposal to use the checklist is precisely to ensure that this is achieved (as well as the other objectives of the program). Despite this, professionals in the A4 study (Pancieri, 2013) point out that no changes were noticed in the interpersonal communication of the team after joining the instrument. In spite of this, in an experience report about the application of the checklist in surgeries of a university hospital in São Paulo, the authors consider that "communication is essential for the smooth progress of the procedure and the checklist causes this to occur in the best possible way "(Pancieri, 2014, p. 30).

In A6 (Filho, 2013), the authors indicate that of the 502 respondents who answered the questionnaire applied during a national scientific event, 65.3% (n = 327) reported not knowing all or part of the safe surgery checklist proposed by the WHO and 72.1% (n = 362) were never trained to make use of it. On the other hand, 40.8% (n = ~ 205) of the respondents stated that they had experienced the experience of surgery in a patient or in the wrong place, of whom 25.6% (n = ~ 128) reported "communication failures" as Main factor responsible for the error. In addition to preventing technical errors, the use of the checklist presents other potentialities. Proof of this is evidenced in a study conducted between 2007 and 2008 in eight hospitals in eight cities located in various parts of the world, in which both the mortality rate went from 1.5% to 0.8% (p-value = 0.003), while the surgical complications rate was 11% to 7% (p <0.001) after the checklist implantation in the surgical centers of the respective hospitals surveyed (Haynes, 2009). Similarly, another study also found a statistically significant decrease in mortality rates (from 18.4% to 11.7%, p = 0.0001) and surgical complications (from 3.7% to 1.4%, p = 0. 0067) after the surgical team started using the checklist proposed by the WHO during the procedures (Weiser, 2010). In the United Kingdom, after performing a surgical team training program for the correct use of the checklist, the rate of early complications was 8.5% to 7.6% and the mortality rate from 1.9% to 1.6%. Additionally, the professionals' adherence rate to the instrument was 47% to 77% (Weiser, 2010).

According to Brazilian researchers (Bohomol, 2013), physicians at a university hospital in Buenos Aires (Argentina) say that among the benefits of the safe surgery checklist is the fact that it can prevent up to 50% of surgical adverse events, And for them the application of the instrument is primarily intended to "reduce exposure to failure by compensating for the potential limitations of memory and human attention" (Etcheto, 2013, p. 99). Although the scientific evidences presented in this review point to many benefits of applying the checklist, it is emphasized that it is necessary to conduct training for professionals who work in surgical centers, to enable them to make appropriate use of the instrument and thus increase their potential, Guaranteeing patient safety in all care actions as recommended (WHO, 2009). In addition, it was found that the filling rate of the items in the checklist was considerably variable, both among the articles selected to

compose this review and among the international ones, making it reasonable to assume that adherence to the instrument depends, in particular, on the Awareness of its importance, as well as engagement with institutional proposals. Researchers in France add that the main barriers to implementation and effective adherence to the checklist are linked to the organizational culture of each institution (Fourcade, 2012). In addition, international surveys conducted in Spain (Soria-Aledo, 2012), Thailand (Kasatpibal, 2012), London (Sewell, 2011) and in other countries (Haynes, 2009 and Weiser, 2010) show that using checklists during procedures provides innumerable benefits to both patients and surgical teams of the health institutions. Thus, in spite of the low quantity of scientific production, the use of the instrument at the national level, it is believed that the use of the checklist has already become a reality in many Brazilian health services located in all regions of the country. More publications about the experiences (successful or not) experienced by health services and professionals when using it.

Conclusion

The Brazilian scientific production on the use of the safe surgery checklist in health services is still incipient, a fact that inhibits incisive and generalized conclusions on the potentialities (and / or weaknesses) of the instrument. Nevertheless, it is possible to conclude that the lack of adhesion by the teams, as well as the non-completeness of the items that make up the checklist, certainly can mitigate the benefits of its use as a tool to promote patient safety during operative surgical procedures. In this sense, it is understood that educational programs can help in the improvement of professional adhesion to the instrument.

Disclosure of Potential Conflicts of Interest: The authors declare that they have no conflicts of interests.

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