



## ORIGINALES

### Patient safety culture from the perspective of the nursing team in a public maternity hospital

Cultura de segurança do paciente na perspectiva da equipe de enfermagem em uma maternidade pública

Cultura de seguridad del paciente en la perspectiva del equipo de enfermería en una maternidad pública

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#### ABSTRACT:

**Objective:** To evaluate the dimensions of patient safety culture from the perspective of the nursing team in a public maternity hospital.

**Method:** Cross-sectional study conducted in a public maternity hospital with 69 nursing professionals, from June to August 2017, through the application of the Hospital Survey on Patient Safety Culture.

**Results:** The average of positive scores ranged from 33.0% to 69.6%, and the best evaluations were made in the following dimensions: organizational learning, teamwork between units, and non-punitive responses to the error. The most fragile evaluations were made in: internal transfers and shift reports, in addition to the frequency of reported events.

**Conclusion:** The study pointed to a weak safety culture in all areas, and indicated that planning targeted strategies in order to achieve quality safety culture for the mother/child binomial is important.

**Keywords:** Culture; Patient safety; Maternity hospitals; Nursing Team.

#### RESUMO:

**Objetivo:** Avaliar as dimensões da cultura de segurança do paciente na perspectiva da equipe de Enfermagem, em uma maternidade pública.

**Método:** Estudo transversal realizado em uma maternidade pública, com 69 profissionais de Enfermagem, no período de junho a agosto de 2017, mediante aplicação do questionário *Hospital Survey on Patient Safety Culture*.

**Resultados:** A média dos escores positivos variou de 33,0 % a 69,6%, sendo que as melhores avaliações foram nas dimensões: aprendizado organizacional, trabalho em equipe entre as unidades e respostas não punitivas ao erro. Das avaliações com maiores fragilidades, destacam-se: transferências internas e passagem de plantão, além da frequência de eventos relatados.

**Conclusão:** O estudo apontou para a cultura de segurança sem nenhuma área de força em todas as áreas. Assim, evidencia a importância do planejamento de estratégias direcionadas, a fim de alcançar a cultura de segurança com qualidade para o binômio mãe/filho.

**Palavras-chave:** Cultura; Segurança do Paciente; Maternidades; Equipe de Enfermagem.

## RESUMEN:

**Objetivo:** Evaluar las dimensiones de la cultura de seguridad del paciente desde la perspectiva del equipo de enfermería en un hospital público de maternidad.

**Método:** Estudio transversal realizado en un hospital público de maternidad con 69 profesionales de enfermería, de junio a agosto de 2017, aplicando el cuestionario de la Encuesta hospitalaria sobre cultura de seguridad del paciente.

**Resultados:** El promedio de puntajes positivos varió de 33.0% a 69.6%, y las mejores evaluaciones fueron en las dimensiones: aprendizaje organizacional, trabajo en equipo entre unidades y respuestas no punitivas al error. Las evaluaciones más frágiles incluyen: transferencias internas y cambio de turno, además de la frecuencia de los eventos informados.

**Conclusión:** El estudio señaló una cultura de seguridad débil en todas las áreas. Por lo tanto, destaca la importancia de planificar estrategias específicas para lograr una cultura de seguridad de calidad para el binomio madre / hijo.

**Palabras clave:** Cultura; Seguridad del paciente; Maternidades; Personal de enfermería.

## INTRODUCTION

Patient safety has become the focus of researchers worldwide, in view of the magnitude of the problem, and has assumed an essential dimension for health quality in the most diverse areas. In this context, reflections on actions aimed at patient safety have gained space. The World Alliance on Patient Safety was created after the phenomenon was recognized globally as a serious public health problem<sup>(1)</sup>. Thus, carrying out health education actions on patient safety and risk management in obstetric and neonatal care is of great importance<sup>(2)</sup>.

Adverse events (AE) related to assistance to women during the puerperal/pregnancy period are relatively common and, often, preventable. Therefore, AE are understood as damages arising from errors or failures in the assistance provided by health professionals, whether intentionally or not, and which can generate permanent or temporary harm, incapacitate patients or even lead to death<sup>(3)</sup>.

Thus, patient safety is defined as the reduction of risk of unnecessary harm associated with health care to an acceptable minimum<sup>(5)</sup>. Thus, authors emphasize the shared responsibility for implementing strategies aimed at correcting the weaknesses found, in favor of qualified, effective, efficient, and safe care<sup>(1)</sup>. Still, a critical analysis of the weaknesses of the patient safety process is recommended so as to seek strategies for the adoption of a positive safety culture, benefiting patients, family members and professionals, and especially maternal and child health<sup>(4)</sup>.

In this sense, a study carried out in maternity hospitals of seven hospitals in the city of Ilam, Iran, showed a receptive attitude of the team towards patient safety culture, but they were still far from achieving a safety culture of excellence. Only 59.1% of the participants reported a reasonable level of perception of general safety<sup>(5)</sup>. On the other hand, a study carried out in the South African region showed important reductions in

maternal mortality after the implementation of the safe surgery checklist, modified for maternity care<sup>(6)</sup>.

At the national level, a study conducted in a philanthropic maternity hospital in the city of Lagarto, Sergipe, showed a positive patient safety culture in the maternity hospital, with the need for minor adjustments in the organizational and managerial commitment of the service.<sup>(2)</sup> Another survey to assess the perception of nursing professionals working in a private hospital about the safety climate found a distance between the nursing management of the unit and the hospital and the workers who worked *in loco*. An expanded look both in the unit and in the hospital was thus necessary <sup>(7)</sup>.

Therefore, it is fundamental to focus on improving the quality of systems that strategically invest in resources to achieve the fourfold objective. In other words, it is necessary to improve the health of people who seek health care, lowering the costs for the system, improving patient care and promoting an engaged and productive workforce in order to redirect health services towards promotion of population health<sup>(8)</sup>. Thus, considering the importance of the performance of the Nursing team on patient safety, based on the knowledge acquired and experiences with challenges that influence safety culture, and also the way these factors can facilitate the development and implementation of better strategies, some authors point out several challenges hindering an effective and positive safety culture in healthcare organizations.

Thus, in order to meet international standards, health managers must employ modern management methods to overcome the challenges faced by the institutionalization of safety culture and to make a difference in the health system<sup>(9)</sup>.

In view of these considerations, studying safety culture in maternity hospitals is essential to ensure the provision of care free from AE, or at least with AE at acceptable levels. It also allows knowing the factors involved in the teamwork process, which sometimes represent gaps in theory and practice so as to strengthen the care by providing it with the best scientific evidence.

As a result, the encouragement and creation of safety culture in maternity hospitals, which take into account the local reality and the skills of the professionals involved, can enable action strategies for the development of attitudes, skills and knowledge to promote patient safety.

Based on the above, the objective of this study was to assess the dimensions of the patient safety culture from the perspective of the Nursing team in a public maternity hospital.

## METHODS

The methodology adopted in this work was a cross-sectional study with quantitative approach in a public maternity hospital, in the Northeast of Brazil, responsible for 63% of births that occurred in the capital of Piauí, Teresina <sup>(10)</sup>. Data collection took place from June to August 2017.

Therefore, the following inclusion criteria were adopted: being a professional of the nursing team; working in direct assistance to patients admitted to the normal delivery center, superior obstetric center, and surgical center; being employed for at least three

months, with effective bond or not. Professionals who were on sick leave, maternity leave, vacation and/or absent for other reasons were excluded, as well as those who were making scheduled replacements and who did not belong to the sector under study.

Participants were recruited using the non-probabilistic sampling technique for convenience. Thus, all eligible professionals had the opportunity to participate in the study. Therefore, only 69 among 74 professionals accepted to participate, which corresponds to 31 nurses, 37 nursing technicians and 1 nursing assistant.

Data collection took place by applying a version of the Hospital Survey on Patient Safety Culture (HSOPSC)<sup>(11)</sup>, translated and validated for Brazil, prepared by the Agency for Healthcare Research and Quality (AHRQ).<sup>(12)</sup> Thus, the instrument contemplated sociodemographic (sex, age, educational level) and professional aspects (time of work in the hospital, time of work in the current area, weekly workload).

In this context, the questionnaire also covered the variables of dimension of safety culture, which included: variables within the unit (teamwork in the unit, expectations and actions to promote patient safety by the supervisor/manager, organizational learning and continuous improvement, feedback and communication of errors, openness to communication, personnel and non-punitive responses to errors); variables within the hospital organization (support of hospital management for patient safety, teamwork between hospital units, internal transfers and shift reports); and outcome variables (general perception of patient safety, frequency of reported events).

Two additional questions were included: a global assessment of patient safety and the number of prevalence of AE reported by professionals in the last 12 months. In this study, the proportion of positive responses in each HSOPSC category was adopted as primary outcome.

The collection took place in a reserved and adequate space, after informed consent by the participants. Data were collected in the participants' work shift. In order to guarantee greater adherence of participants, before data collection, the managers communicated the immediate heads of the unit about the purpose of the study, as well as the importance of their participation in the process. Also, to ensure greater reliability of the information provided, a white envelope without an identifier was delivered together with the questionnaire to be later deposited in a sealed box.

In this study, HSOPS responses were coded using a five-point Likert scale of agreement (strongly disagree, disagree, neither agree nor disagree, agree, strongly agree) and frequency (never, almost never, sometimes, almost always, always). The results were evaluated based on the performance of each item and of the dimension.

After collection, the data were submitted to double entry, in which two people tabulated them in the Microsoft Excel software. Then, the results were crossed in order to reduce typing errors. After that, they were exported to the IBM<sup>®</sup> SPSS 21.0 and, then, the percentage frequency of each dimension was calculated and classified as recommended by AHRQ: items and dimensions with 75% of positivity were used as strengths, and those with less of 50% of positivity as fragilities.<sup>(12)</sup> Inferential analyses used descriptive statistics with frequency tables and means for the percentages of positive scores of the dimensions.

This study was approved by the Research Ethics Committee of the Federal University of Piauí, with opinion nº 1,971,732.

## RESULTS

Of the 74 nursing professionals eligible for the study, 69 agreed to participate. There was a predominance of nursing technicians 37 (57.0%), 65 (94.2%) of whom were female, and the age ranged from 20 to 50 years; 23 (67.9%) were aged between 31 and 40 years. Regarding the level of education, 24 (77.4%) of the nurses had graduate level *Lato sensu* and 18 (48.6%) of the nursing technicians had complete high school (Table 1).

**Table 1** - Sociodemographic and professional characteristics of the nursing team in a public maternity hospital (N = 69). Teresina, PI, Brazil.

Variables	Nurse		Nursing technician		Nursing Assistant		Total
	n	%	n	%	n	%	
<b>Sex</b>							
Female	27	87.1	37	100.0	1	100.0	65
Male	4	12.9	0	0.0	0	0.0	4
<b>Age group (years)</b>							
20 to 30	14	45.2	6	16.2	0	0.0	20
31 to 40	11	35.5	12	32.4	0	0.0	23
41 to 50	4	12.9	8	21.6	1	100.0	13
> 50	2	6.5	11	29.7	0	0.0	13
<b>Level of education</b>							
Incomplete secondary school	0	0.0	0	0.0	1	100.0	1
Complete secondary school	1	3.2	18	48.6	0	0.0	19
Incomplete higher education	0	0.0	3	8.1	0	0.0	3
Complete higher education	1	3.2	10	27.0	0	0.0	11
Postgraduation ( <i>Lato sensu</i> )	24	77.4	4	10.8	0	0.0	28
Postgraduation ( <i>Stricto sensu</i> )	5	16.1	2	5.4	0	0.0	7
<b>For how long have you been working in this hospital (years)</b>							
< 1	2	6.5	7	18.9	0	0.0	9
1 to 5	19	61.3	9	24.3	0	0.0	28
6 to 10	7	22.6	13	35.1	0	0.0	20
11 to 15	2	6.5	0	0.0	0	0.0	2
16 to 20	1	3.2	1	2.7	0	0.0	2
> 20	0	0.0	7	18.9	1	100.0	8
<b>For how long have you been working in your current area/hospital unit (years)?</b>							
< 1	4	12.9	6	16.2	0	0.0	10
1 to 5	19	61.3	9	24.3	0	0.0	28
6 to 10	6	19.4	13	35.1	1	100.0	20
11 to 15	1	3.2	2	5.4	0	0.0	3
16 to 20	1	3.2	1	2.7	0	0.0	2
> 20	0	0.0	6	16.2	0	0.0	6



**How many hours per week do you normally work at this hospital (hours/week)?**

< 20	1	3.2	1	2.7	1	100.0	3
20 to 39	25	80.6	26	70.3	0	0.0	51
40 to 59	5	16.1	8	21.6	0	0.0	13
60 to 79	0	0.0	2	5.4	0	0.0	2
<b>Total</b>	<b>31</b>	<b>100.0</b>	<b>37</b>	<b>100.0</b>	<b>1</b>	<b>100.0</b>	<b>69</b>

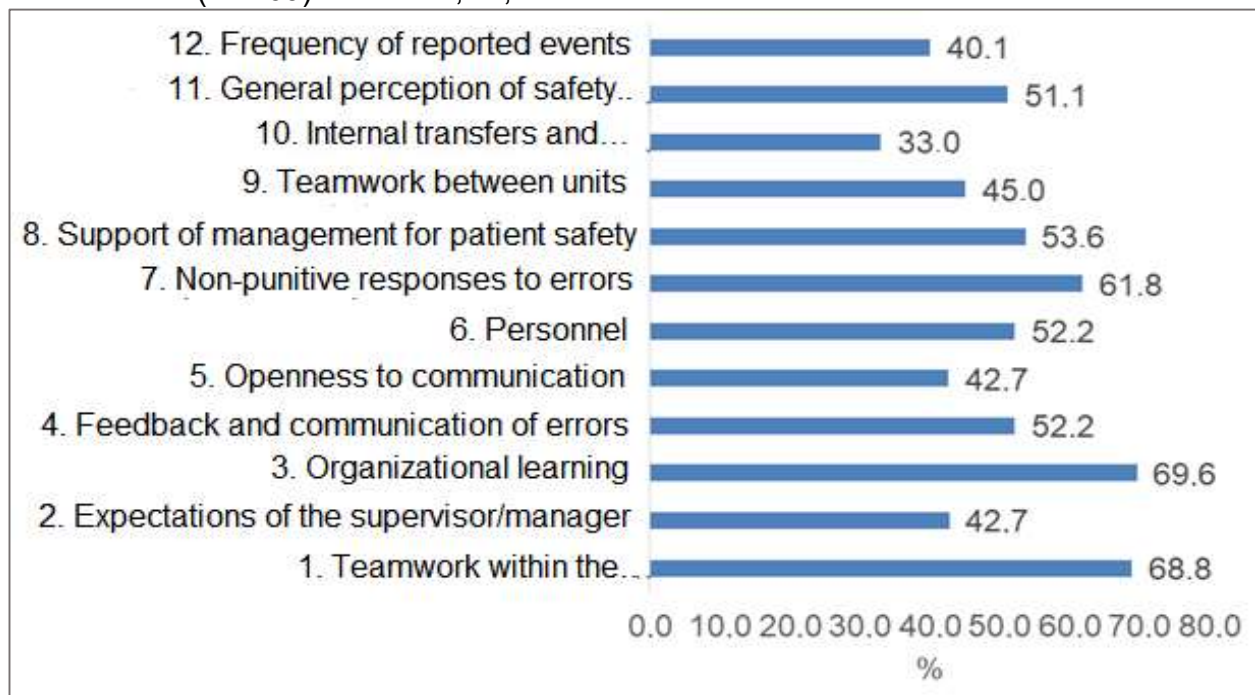
Source: prepared by the authors

Regarding professional aspects, the majority of the participants had been working at the hospital from 1 to 5 years, of these, 19 (61.3%) were nurses. The predominant weekly workload was 20 to 39 hours for both nurses, 25 (80.6%), and nursing technicians, 26 (70.3%) (Table 2).

Regarding the average positive percentage scores of the patient safety culture dimensions, the average percentage of positive responses ranged from 33.0% for the dimension internal transfers and shift reports to 69.6% for the dimension organizational learning (Figure 1).

In this study, most of the dimensions assessed were classified as neutral areas, since the items or dimensions in which the percentage of positive responses was greater than 50% and smaller than 75% ranged from 51.1% to 69.6%, corresponding to 58.4% (Figure 1).

**Figure 1** - Average of positive percentage scores of the patient safety culture dimensions (N = 69). Teresina, PI, Brazil.



Source: prepared by the authors

Regarding the level of patient safety, 48.8% of the nurses considered it to be very good and 41.7% of the nursing technicians assessed it as regular. As for the number of events reported in the last 12 months, 96.5% of the nursing technicians did not report any events and only 6.5% of the nurses reported six or more events (Table 3).

**Table 2** - Evaluation of level of patient safety and number of events reported in the last 12 months by the Nursing team. Teresina, PI, Brazil.

Variables	Nurse		Nursing technician		Nursing Assistant		Total
	n	%	n	%	n	%	
<b>Quality of patient safety in the unit</b>							
Excellent	1	3.2	2	5.6	1	100.0	4
Very good	15	48.4	14	38.9	0	0.0	29
Regular	12	38.7	15	41.7	0	0.0	27
Bad	2	6.5	4	11.0	0	0.0	6
Very bad	1	3.2	1	2.8	0	0.0	2
<b>Number of reports made in the last 12 months</b>							
None	23	74.2	32	86.5	1	100.0	56
1 to 2	5	16.1	4	10.8	0	0.0	9
3 to 6	1	3.2	1	2.7	0	0.0	2
More than or equal to 6	2	6.5	0	0.0	0	0.0	2
<b>Total</b>	<b>31</b>	<b>100.0</b>	<b>37</b>	<b>100.0</b>	<b>1</b>	<b>100.0</b>	<b>69</b>

Source: prepared by the authors

## DISCUSSION

The data collected in this study showed a safety culture in the maternal care environment with potential for improvement in all areas, particularly on internal transfers and shift reports. Even so, none of the dimensions reached the recommended percentage above 75.0%. These results are in line with other national studies<sup>(13,14)</sup>.

In the international context, a research carried out in Australian maternity hospitals showed that assessing safety culture is complex and that achieving satisfactory responses involves local engagement, commitment and the capacity of the place of study<sup>(5)</sup>.

However, it is emphasized that the absence of strength areas may be related to the recent concern with the theme and time of implementation of Patient Safety Centers, which were structured in health services mainly in 2013, after publication of the National Patient Safety Program<sup>(15)</sup>.

In this perspective, there is a need for ensuring care during labor and delivery with better patient safety and greater emphasis on weak points, as well as for encouraging strong points in care, in order to guarantee healthy delivery and birth.

Regarding the dimension "internal transfers and shift reports", significant negative responses were noteworthy. In this perspective, it is worth noting that, according to the Ministry of Health, the shift reports between health teams are considered, in the current context, essential tools for the continuity of quality care, as well as for preventing failures and errors<sup>(3)</sup>.

In this context, there is an urgent need to review this dimension because it presents a fragile aspect within the institution. In other words, loss of important information and procedures can occur and patient safety can be consequently compromised.

Some authors stress that although practical strategies to create a safety culture may seem simple, their implementation is not precisely easy. There are several challenges to overcome in order to cultivate an effective and positive safety culture in healthcare organizations<sup>(9)</sup>.

To keep up with international standards, health managers must employ modern management methods to overcome the challenges faced by the institutionalization of the safety culture and to make a difference in the health system<sup>(9)</sup>. In this perspective, the search for safety culture requires proactive attitudes from all actors involved and the identification of gaps in care provision both at a personal and collective level, in order to overcome personal and organizational challenges.

Although the dimensions “organizational learning” and “teamwork” did not reach the desired minimal percentage of 75% of positive responses, they deserve to be highlighted because they presented the best percentage of positive responses for patient safety.

A survey conducted at three general hospitals in Arabia to assess the current safety culture is in line with the present findings; nurses perceived only two areas of patient safety as strengths: teamwork within the units and organizational learning - continuous improvement.<sup>(16)</sup> Thus, despite the difficulties and barriers, professionals sought to work as a team in the three sectors of direct care for delivery and birth.

In this context, it is emphasized that integrative and cooperative teamwork between nursing professionals, as well as mutual respect for individual limits and time of each person during activities are fundamental to subsidize safe and qualified nursing care, with a high degree of professional satisfaction and consequent reduced mortality rates<sup>(17)</sup>. Thus, as health professionals improve the idea of collective responsibility during health care, they will advance towards satisfactory patient safety culture, with fewer failures and errors<sup>(18)</sup>.

A survey that assessed the opinion of nurses and midwives working in clinical departments and providing services in obstetrics, gynecology and neonatology, about patient safety culture and about exploring potential predictors for general perception of safety concluded that, in the hospital environment, the critical domains in health units that provide services in the abovementioned areas were: teamwork in hospital units and at the unit level, open communication, teamwork within units, and non-punitive response to personal errors. The other domains were seen with potential for improvement<sup>(19)</sup>.

In this study, there was a predominance of females. This agrees with another research carried out in 2015 about the profile of nursing professionals in Brazil. Through this study, it was possible to observe that, in the national scenario, 89% of the professionals were female and only 10.9%, male.<sup>(20)</sup> Still, young adults and those with workloads over 20 hours prevailed, a fact evidenced also in another study.<sup>(12)</sup>

Regarding the professionals' assessment of the level of patient safety, the vast majority rated it as very good. A research carried out with 1,229 clinical and non-clinical employees from all public hospitals in the West Bank revealed that the majority of participants (70.5%) rated the level of patient safety in their units/hospitals as excellent/very good<sup>(21)</sup>.



In Brazil, authors identified that most professionals in Neonatal Intensive Care Units evaluated patient safety as regular (45%), very good (38%), and excellent (3%).<sup>(22)</sup> Even though the positive coefficients were below the expected and desired for patient safety culture in the different areas, the Nursing team made a positive evaluation of the care provided with a certain degree of safety, thus reinforcing the need for improvement of the degree of safety in the evaluated dimensions.

With regard to reports of AE, there was low communication by the team as a whole. It is worth mentioning that international findings go against this study.<sup>(22)</sup> Therefore, there is an urgent need for professionals of the nursing team to understand AE, as well as to adopt a non-punitive culture in face of the installed AE. This will contribute to a greater number of reports by professionals and, consequently, to the adequate management of the occurrences<sup>(23)</sup>.

It is necessary to train nurses and supervisors to improve the general patient safety culture and implement additional actions necessary to improve areas such as reporting AE and adopting non-punitive responses to errors<sup>(24)</sup>.

The voice of employees plays an important role in organizational intelligence about risks to patient safety, directly influencing the quality of care<sup>(25)</sup>. In this perspective, ombudsman services are suggested to communicate AE within health care institutions, in order to guarantee the anonymity and confidentiality of the reported events, in order to generate a safe environment for assertive communication.

Thus, it is clear that, given the context analyzed, safety culture in the sectors of childbirth assistance is still in the process of development, with no areas of strength. In this sense, it is suggested that specific strategies be drawn based on the dimensions identified with the greater number of weaknesses. In this regard, authors emphasize the importance of continuing education in health to encourage the diversification of strategies to share knowledge and experiences in the world of work<sup>(14)</sup>.

In this context, healthcare organizations should strive to improve their safety culture, creating environments where healthcare professionals trust each other, work collaboratively and share responsibility for patient safety and quality of care<sup>(26)</sup>. Measuring the current culture and understanding the gaps in practice, as well as creating strategies to overcome some of the main challenges for success in each of these areas will result in sustainable changes<sup>(27)</sup>.

It is important to note that this study has the limitation of covering a local and specific reality, and this prevents the generalization of the findings. It should also be noted that the universe researched corresponds to a single professional category, and cannot represent the other professionals involved in direct care to women in labor and childbirth. It is possible, therefore, that some of the information provided may have generated response bias, as it was the care provided to patients that was assessed.

## CONCLUSION

In the present study, the patient safety culture in a maternity ward was assessed, and it was perceived by the nursing team as presenting no one area of strength in all areas and with possibilities for improvement in all dimensions, especially among those with

low evaluation scores, particularly internal transfers and shift reports, as well as frequency of reported events. It was also possible to show that the safety culture is in the process of maturation, with no areas of strength, and thus requiring better development.

Thus, the importance of commitment on the part of professionals and managers in the search for patient safety is emphasized. Moreover, further research on the topic is necessary to incite more discussions and to achieve a strong culture of safety, with more qualified assistance and lower probability of AE within hospital institutions assisting women in labor and childbirth, making it possible to improve the quality of care to the mother/child binomial, based on the main scientific evidence.

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