

## SAFETY CLIMATE IN THE OPERATING ROOM: ATTITUDES OF HEALTH PROFESSIONALS\*

Cátia Cristiane Matte Dezordi<sup>1</sup>, Sabrina Azevedo Wagner Benetti<sup>2</sup>, Ana Karina Silva da Rocha Tanaka<sup>3</sup>, Eliane Raquel Rieth Benetti<sup>4</sup>, Patricia Treviso<sup>5</sup>, Rita Catalina Aquino Carenato<sup>6</sup>, Eniva Miladi Fernandes Stumm<sup>7</sup>

### ABSTRACT

**Objective:** to evaluate the attitudes of healthcare professionals in an operating room regarding the safety climate.

**Method:** a cross-sectional study carried out in the operating room of a philanthropic hospital in southern Brazil, with 107 healthcare professionals. Data collection was performed using the Safety Attitudes Questionnaire, operating room version, with a satisfactory score equal to or greater than 75, from December 2016 to February 2017. For data analysis we used descriptive statistics, correlation, and factor analysis.

**Results:** the professionals' perceptions of safety climate ranged from 36.24 to 77.99 per questionnaire domain. A satisfactory score was obtained in the "Communication in the Surgical Environment" domain (77.9). The "Perception of professional performance", "Safety climate", "Working conditions" and "Perceptions of management" domains showed significant differences.


**Conclusion:** weaknesses in values, attitudes and behaviors are evident, translated by scores below satisfactory, determining a low safety climate among professionals.

**DESCRIPTORS:** Patient Safety; Organizational Culture; Nursing; Perioperative Nursing; Surgicenters.


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<sup>1</sup>Nurse. Master of Comprehensive Healthcare. Nursing Professor at the Universidade Regional do Noroeste do Estado do Rio Grande do Sul. Ijuí, RS, Brazil. 


<sup>2</sup>Nurse. Master of Comprehensive Healthcare. Prison Services Administration Nurse of the Rio Grande do Sul. Ijuí, RS, Brazil. 

<sup>3</sup>Nurse. Doctor of Geriatrics and Biomedical Gerontology. Professor at the Universidade Federal do Rio Grande do Sul. Porto Alegre, RS, Brasil. 

<sup>4</sup>Nurse. Doctor of Nursing. Nurse at the Hospital Universitário de Santa Maria. Santa Maria, RS, Brazil. 

<sup>5</sup>Nurse. Doctor of Health Sciences. Professor at the Universidade do Vale dos Sinos. Porto Alegre, RS, Brazil. 

<sup>6</sup>Nurse. Doctor of Education. Professor at the Universidade Federal de Ciências da Saúde de Porto Alegre. Porto Alegre, RS, Brazil. 

<sup>7</sup>Nurse. Doctor of Science-Nursing. Professor at the Universidade Regional do Noroeste do Estado do Rio Grande do Sul. Ijuí, RS, Brazil. 

## CLIMA DE SEGURANÇA NO CENTRO CIRÚRGICO: ATITUDES DOS PROFISSIONAIS DE SAÚDE

### RESUMO

*Objetivo:* avaliar atitudes dos profissionais de saúde de um centro cirúrgico referentes ao clima de segurança.

*Método:* estudo transversal desenvolvido no centro cirúrgico de um hospital filantrópico da região sul do Brasil, com 107 profissionais da saúde. Coleta de dados realizada com Questionário de Atitudes de Segurança, versão Centro Cirúrgico, com escore satisfatório igual ou superior a 75, no período de dezembro 2016 a fevereiro de 2017. Análise dos dados por estatística descritiva, correlação e análise fatorial.

*Resultados:* as percepções dos profissionais sobre clima de segurança variaram de 36,24 a 77,99 por domínio do questionário. Foi obtido escore satisfatório no domínio "Comunicação no Ambiente Cirúrgico" (77,9). Os domínios "Percepção do Desempenho profissional", "Clima de Segurança", "Condições de Trabalho" e "Percepção de Gerência" apresentaram diferenças significativas.

*Conclusão:* evidenciam-se fragilidades nos valores, atitudes e comportamentos, traduzidos por escores abaixo do satisfatório, determinando baixo clima de segurança entre os profissionais.

**DESCRITORES:** Segurança do Paciente; Cultura Organizacional; Enfermagem; Enfermagem Perioperatória; Centros Cirúrgicos.

## CLIMA DE SEGURIDAD EN EL CENTRO QUIRÚRGICO: ACTITUDES DE LOS PROFESIONALES DE SALUD

### RESUMEN:

*Objetivo:* evaluar actitudes de los profesionales de salud de un centro quirúrgico en relación al clima de seguridad.

*Método:* estudio transversal desarrollado en el centro quirúrgico de un hospital filantrópico de la región sur del Brasil, con 107 profesionales de la salud. Se obtuvieron los datos por medio de Cuestionario de Actitudes de Seguridad, versión Centro Quirúrgico, con score satisfactorio igual o superior a 75, en el período de diciembre de 2016 a febrero de 2017. Análisis de datos hecha por estadística descriptiva, correlación y análisis factorial.

*Resultados:* las percepciones de los profesionales acerca de clima de seguridad variaron de 36,24 a 77,99 por dominio del cuestionario. Se obtuvo score satisfactorio en el dominio "Comunicación en el Ambiente Quirúrgico" (77,9). Los dominios "Percepción del Desempeño profesional", "Clima de Seguridad", "Condiciones de Trabajo" y "Percepción de Gerencia" presentaron diferencias significativas.

*Conclusión:* se evidencian fragilidades en los valores, actitudes y comportamientos, traducidos por scores abajo del satisfactorio, determinando bajo clima de seguridad entre los profesionales.

**DESCRIPTORES:** Seguridad del Paciente; Cultura Organizacional; Enfermería; Enfermería Perioperativa; Centros Quirúrgicos.

## INTRODUCTION

Induced by the report "To err is human: building a safer healthcare system", patient safety has gained notorious importance in public healthcare policies<sup>(1)</sup>. Although progress has been made, with evidence of the impact of errors and Adverse Events (AEs) on healthcare services, the measures adopted to reduce or prevent them are still in the initial stages concerning instruments, financial resources and interventions to measure potential risks and improve patient safety<sup>(2)</sup>.

The patient safety culture is understood as the group and individual product of values, attitudes, perceptions and competences, which determine a pattern of behavior and commitment to the management of institutional safety<sup>(3)</sup>. In a convergent way, the Safety Climate can be assessed by the professionals' individual perceptions about safety management in the institution<sup>(4)</sup>.

To assess the safety culture in healthcare services, research have been conducted in different care contexts to test the safety climate perceived by professionals. In the hospital context, the Operating Room (OR) stands out, as it is a closed environment, with complex work processes, whose surgical complications account for percentages of deaths and temporary or permanent damages, caused by the care process<sup>(5)</sup>.

To assess the safety culture, questionnaires are used to understand and monitor the actions existing in the institutions through indicators<sup>(6)</sup>. Among these instruments, the Safety Attitudes Questionnaire (SAQ)<sup>(7)</sup> stands out in Brazil, which measures the safety climate in healthcare services from the perception of professionals about patient safety. Specifically for the OR scenario, the Safety Attitudes Questionnaire/Operating Room (SAQ/OR) was translated and culturally adapted<sup>(8)</sup>, and was subsequently validated in Brazil<sup>(9)</sup>. This questionnaire allows measuring the safety climate in the OR scenario through the perception of professionals, contributing to safe and quality care in the hospital.

The importance of developing actions that contribute to the improvement of work processes and, consequently, assistance safety<sup>(10)</sup> is emphasized. In this sense, it is believed that the development of studies and research combined with strategies to improve work processes can contribute to the qualification of healthcare services. Thus, this study is justified, whose objective is to evaluate the attitudes of healthcare professionals in an operating room regarding the safety climate.

## METHOD

A cross-sectional study carried out at the OR of a philanthropic hospital, with 250 beds, located in the northwest region of the state of Rio Grande do Sul, Brazil. The data come from the research "Perceptions of teams on safety climate before and after implementation of checklist/safe surgery". The Surgical Center I composed of six operating rooms, equipped for small to high complexity surgical procedures, with an average of 500 surgeries/month. The team has 60 surgeons of different specialties, six resident doctors, 10 anesthesiologists, six pediatricians, six nurses and 42 nursing technicians.

Data collection took place from December 2016 to February 2017. Healthcare professionals who had been working for at least 30 days were included and those on sick or another type of leave during the data collection were excluded. A total of 113 professionals were invited, of whom 107 agreed to participate in the research, who were categorized into a nursing team (nurses, who act as managers, assistants and perfusionists; nursing technicians and assistants who act as circulators and instrument nurses) and medical staff (anesthesiologists, surgeons, pediatricians and residents).

Data were collected using the SAQ/OR instrument, composed of three parts. The first with 15 items referring to "Communication and Collaboration Quality" among professionals working in the surgical environment. The second part integrates six domains with 40 statements that encompass patient safety: Safety Climate (seven items); Perceptions of Management (five items); Stress Perception (four items); Working Conditions (six items); Communication in the Surgical Environment (four items); and Perception of Professional Performance (four items). The third is composed of demographic information: age, sex, race/ethnicity, professional category, time in the position and experience<sup>(9)</sup>.

Each item of the SAQ/OR is answered using a Likert scale, ordered and scored as follows: totally disagree (zero points), partially disagree (25 points), neutral (50 points), partially agree (75 points) and totally agree (100 points); the option "does not apply" is not scored. To calculate the total score for each SAQ/OR domain, the values attributed to the responses of the respective items are added and the result is divided by the number of items in the domain. Afterward, the scores of all domains are added and this final score is explained as follows: zero represents the worst perception and 100 represents the best perception of the safety climate. Positive values of the total score are those equal to or greater than 75<sup>(8)</sup>.

For data collection, participants were approached in the work environment, when the objectives of the study were explained, and the Informed Consent was provided. The SAQ/OR was made available to professionals in printed form, with a request for a return within three days, in a previously established location.

After collection, data were entered into the Statistical Package for the Social Sciences (SPSS), version 15.0. For the analysis of the variables, descriptive statistics, absolute and percentage values, mean, standard deviation, lower limit, upper limit, range were used, and the results are presented in tables. To compare the means, Student's t-test and Mann-Whitney were applied; to verify the data normality, the Kolmogorov-Smirnov and the Levene test were applied to find out if the variances presented statistically significant differences in the two professional categories, with a significant association if  $p < 0.05$ .

The project was approved by the Research Ethics Committee under opinion number 1.834.908.

## RESULTS

The study included 41 surgeons (38.3%), 40 nursing technicians (37.4%), ten anesthesiologists (9.3%), six medical residents (5.6%), six nurses (5.6%) and four pediatricians (3.7%). Among the participants, 57 (53.3%) were female. Regarding the age group, 59 (55.1%) were between 20 and 40 years old, 32 (29.9%) between 40 and 60 years old, nine (8.4%) over 60 years old, and seven (6.5%) did not answer. A lower age limit of 20 years and an upper 77 (range = 57), mean of 41.4 years and standard deviation of 12.5 was found. As for race 96 (89.7%) were classified as white, nine (8.4%) brown, two (1.8%) Afro-descendants.

The total score of the SAQ/OR ranged from 36.24 to 77.99 per domain, with a general mean of 64.05 ( $SD \pm 14.79$ ). When the six domains were evaluated separately, only the "Communication in the Surgical Environment" domain reached a positive value (77.99). The others respectively scored: "Stress Perception" (73.72) > "Safety Climate" (69.34) > "Working Conditions" (64.84) > "Perceptions of Management" (62.15) > "Perceptions of Professional Performance" (36.24).

Table 1 presents the descriptive measures related to the "Quality of Communication and Collaboration" perceived by the research participants. The "n" in this table represents the number of responses obtained from the 107 participants, indicating the quality of team communication and collaboration by position. It comes out that the highest mean

refers to instrument nurse and circulators (4.38), followed by nurses (4.36 and 4.34). The highest standard deviation was from the preoperative (0.865) and pre-anesthetic (0.852) assessment team.

Table 1 - Descriptive measures of the communication and collaboration quality. Ijuí, RS, Brazil, 2017

| Position                                     | n   | LI | UI | M    | SD    |
|--|-----|----|----|------|-------|
| Surgeon/Assistant Surgeon                    | 102 | 3  | 5  | 3.99 | 0.764 |
| Resident in Surgery and Intern               | 100 | 1  | 5  | 3.89 | 0.852 |
| Instrument Nurse and Circulators             | 105 | 3  | 5  | 4.38 | 0.712 |
| Perfusionist                                 | 57  | 3  | 5  | 4.09 | 0.808 |
| Anesthesiologist                             | 104 | 2  | 5  | 3.97 | 0.841 |
| Anesthesia Resident                          | 29  | 3  | 5  | 4.14 | 0.833 |
| Anesthetist Nurses                           | 38  | 3  | 5  | 4.18 | 0.766 |
| Anesthesiologist Assistant                   | 92  | 3  | 5  | 4.27 | 0.786 |
| Operating Room Nurse                         | 106 | 3  | 5  | 4.34 | 0.729 |
| Post-Anesthesia Care Nurses                  | 89  | 2  | 5  | 4.08 | 0.801 |
| Staff Nurse                                  | 84  | 2  | 5  | 4.04 | 0.813 |
| Operating room (OR) Nurse Supervisor         | 105 | 2  | 5  | 4.36 | 0.774 |
| Pre-operative/pre-anesthetic evaluation team | 86  | 2  | 5  | 3.65 | 0.865 |
| Support Team                                 | 90  | 2  | 5  | 3.87 | 0.810 |

Table 2 presents descriptive measures of the attitudes of the nursing and medical teams according to the SAQ/OR domains. In this, it is evident that the domains "Perception of professional performance", "Safety climate", "Working conditions" and "Perception of management" were statistically significant.

Table 2 - Descriptive measures of the attitudes of the operating room nursing and medical teams according to the SAQ/OR domains. Ijuí, RS, Brazil, 2017 (continues)

| Domains                  | Team    | N  | Mean  | Standard deviation | Levene test p-value | T-test p-value |
|--------------------------|---------|----|-------|--------------------|---------------------|----------------|
| Safety Climate           | Medical | 61 | 65.08 | 16.70              | 0.802               | 0.004*         |
|                          | Nursing | 46 | 74.79 | 15.04              |                     |                |
| Perception of Management | Medical | 61 | 58.24 | 22.71              | 0.020               | 0.042*         |
|                          | Nursing | 46 | 66.19 | 17.22              |                     |                |

|   |         |    |       |       |       |        |
|---|---------|----|-------|-------|-------|--------|
| Stress Perception                         | Medical | 61 | 71.82 | 22.90 | 0.927 | 0.396  |
|   | Nursing | 45 | 75.51 | 20.70 |       |        |
| Working conditions                        | Medical | 61 | 60.96 | 17.27 | 0.007 | 0.005* |
|   | Nursing | 46 | 70.03 | 12.02 |       |        |
| Communication in the Surgical Environment | Medical | 61 | 77.60 | 12.06 | 0.916 | 0.826  |
|   | Nursing | 46 | 78.13 | 12.55 |       |        |
| Perception of professional performance    | Medical | 61 | 27.66 | 23.20 | 0.390 | 0.000* |
|   | Nursing | 46 | 49.95 | 24.43 |       |        |

Source: Data collected by the authors (2017)

\*p-value of the Mann-Whitney test; p <0.05 statistically significant

Table 3 shows the descriptive measures of the SAQ/OR Domains, according to the characteristics of the participants. It was evidenced that, in the analysis of the Domain "Safety Climate" according to age, most participants are between 40 and 59 years old. Concerning the Domain "Stress Perception", the highest mean was elderly, while in the "Perception of Professional Performance" Domain, the highest mean was of younger professionals.

Table 3 - Descriptive measures of the SAQ/OR domains according to the professionals' characteristics in the operating room. Ijuí, RS, Brazil, 2017 (continues)

| Domains SAQ/OR       | Safety Climate Mean±SD | Perception of Management Mean±SD | Stress Perception Mean±SD | Working conditions Mean±SD | Communication in the Surgical Environment Mean±SD | Perception of professional performance Mean±SD |
|----------------------|------------------------|----------------------------------|---------------------------|----------------------------|---|--|
| Age                  |                        |                                  |                           |                            |   |  |
| 20  ---- 40          | 68.28±17.45            | 60.99±19.63                      | 75.11±21.02               | 63.95±14.90                | 77.54±10.64                                       | 39.69±26.26                                    |
| 40  ---- 60          | 71.71±16.05            | 66.21±22.87                      | 72.20±22.63               | 68.10±18.15                | 82.10±12.78                                       | 38.09±27.88                                    |
| 60  ---- 80          | 66.40±14.55            | 55.00±18.37                      | 77.78±23.41               | 56.94±14.28                | 71.53±14.69                                       | 25.69±21.97                                    |
| Position             |                        |                                  |                           |                            |   |  |
| Surgeon              | 66.36±15.46            | 58.78±20.67                      | 74.70±21.65               | 58.69±16.59                | 77.74±11.18                                       | 28.05±20.55                                    |
| Resident             | 64.29±9.58             | 42.50±23.82                      | 53.13±23.63               | 63.89±17.41                | 67.71±11.47                                       | 23.96±27.79                                    |
| Nursing technician   | 74.73±15.63            | 64.87±17.77                      | 73.50±21.21               | 68.76±11.15                | 78.13±12.89                                       | 50.10±23.78                                    |
| Anesthesiologist     | 59.88±26.25            | 59.75±26.15                      | 71.88±28.60               | 68.33±22.15                | 83.13±13.19                                       | 31.25±33.46                                    |
| Nurse                | 75.20±11.45            | 75.00±10.00                      | 88.54±10.77               | 78.47±15.23                | 78.13±11.00                                       | 48.96±30.98                                    |
| Pediatrician         | 66.07±7.43             | 72.50±29.01                      | 70.31±5.98                | 61.46±7.12                 | 77.08±14.13                                       | 20.31±18.66                                    |
| Time in the position |                        |                                  |                           |                            |   |  |
| Less than 5 years    | 70.01±16.22            | 60.06±20.60                      | 71.15±23.89               | 65.57±15.18                | 78.13±11.32                                       | 34.06±24.18                                    |
| 5 to 10 years        | 66.51±17.69            | 58.32±18.57                      | 80.29±16.65               | 64.02±17.34                | 79.09±9.83  | 44.47±25.27                                    |
| More than 10 years   | 69.97±16.38            | 65.62±22.94                      | 72.31±22.92               | 64.54±16.19                | 77.69±14.15                                       | 36.79±28.76                                    |
| Years of Experience  |                        |                                  |                           |                            |   |  |

|                    |             |             |             |             |             |             |
|--------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Less than 5 years  | 70.11±13.62 | 62.84±17.95 | 71.43±23.23 | 69.32±13.26 | 77.37±12.09 | 37.72±28.47 |
| 5 to 10 years      | 66.48±19.68 | 55.48±22.04 | 78.02±20.21 | 60.89±17.63 | 76.81±9.44  | 36.49±22.54 |
| More than 10 years | 70.91±16.37 | 65.44±21.51 | 72.31±22.37 | 64.92±15.90 | 79.21±13.86 | 37.73±27.86 |

SD - Standard Deviation

It was evident that, regardless of the professional category, the domain "Communication in the Surgical Environment" obtained the highest mean (77.60 and 78.13, medical staff and nursing staff, respectively), except for nurses.

Table 4 shows that there were correlations between "Safety Climate" with "Perception of Management" (0.039;  $p=0.000$ ); "Stress Perception" (0.229;  $p=0.018$ ); "Working conditions" (0.566;  $p=0.000$ ); "Communication in the surgical environment" (0.416;  $p=0.000$ ); "Perception of professional performance" (0.196;  $p=0.043$ ). There are also correlations between "Communication in the Surgical Environment" and "Perception of Management" (0.470;  $p=0.000$ ); "Communication in the Surgical Environment" and "Working Conditions" (0.512;  $p=0.000$ ); "Working Conditions" and "Perception of Management" (0.477;  $p=0.000$ ); and "Perception of professional performance" and "Perception of stress" (0.296;  $p=0.002$ ).

Table 4 – Correlation according to SAQ/OR domains. Ijuí, RS, Brazil, 2017

| Domains                                   | Safety Climate          | Perception of Management | Stress Perception      | Working conditions     | Communication in the surgical environment |
|---|-------------------------|--------------------------|------------------------|------------------------|---|
| Perception of Management                  | 0.0379(**)<br>$p=0.000$ | 1                        |                        |                        |   |
| Stress Perception                         | 0.229(*)<br>$p=0.018$   | 0.093<br>$p=0.341$       | 1                      |                        |   |
| Working conditions                        | 0.566(**)<br>$p=0.000$  | 0.477(**)<br>$p=0.000$   | 0.095<br>$p=0.333$     | 1                      |   |
| Communication in the surgical environment | 0.416(**)<br>$p=0.000$  | 0.470(**)<br>$p=0.000$   | 0.186<br>$p=0.056$     | 0.512(**)<br>$p=0.000$ | 1   |
| Perception of professional performance    | 0.196(*)<br>$p=0.043$   | 0.025<br>$p=0.798$       | 0.296(**)<br>$p=0.002$ | 0.072<br>$p=0.464$     | 0.100<br>$p=0.307$                        |

## DISCUSSION

It is highlighted in this research that the domain of SAQ/OR "Communication in Surgical Environment" had the highest score. This is an important factor for professionals working in the OR, as it demonstrates the effectiveness of communication between the teams. This result comes from the research on safety culture with professionals who work in the perioperative period of a healthcare network in Pennsylvania<sup>(11)</sup>. It evidenced that the

lack of patient-centered attention, problems of teamwork and communication were the main causes that compromise the safety culture. The authors highlighted that the severity of the hierarchy, by not allowing the creation of an effective communication route, made it difficult to dialogue about needs and promoted environments that were difficult to expose and communicate incidents.

When considering the descriptive measures related to the “Quality of Communication and Collaboration” perceived by the participants, nursing professionals obtained the best averages. The support and pre-anesthetic evaluation teams, residents of internal surgery and anesthesiologist obtained lower results. Communication is one of the determinants of quality and safety in care, constituting the main cause of errors and obstacles for teamwork, motivation, and satisfaction of professionals<sup>(12)</sup>.

The “Stress Perception”, a domain that identifies professionals’ perception of stressful situations at work, was the second most scored domain (73.72), with the best average perception among nurses (88.54). These, because they are leaders and reference for the surgical team, have a greater awareness of the stressors that influence the execution of the work. In this sense, professionals who participated in an evaluation of the safety culture in public hospitals in Ceará and the Federal District also demonstrated, by the value of a positive score, the recognition of the influence of stressors in the execution of their activities<sup>(6,13)</sup>.

Occupational stress is often reported by healthcare professionals, especially among the nursing staff. Another study, also with nurses, but who worked in cardiology and cardiovascular surgery at a university hospital in Izmir, Turkey, the “Stress Recognition” obtained a lower score<sup>(14)</sup>, a result that is in line with the research presently analyzed. The authors highlighted that nursing is a profession susceptible to stress due to continuous interaction with others, diversity, and complexity. The excessive stress to which nurses are exposed to OR can be a factor that contributes to the occurrence of incidents.

The general mean of the score of the professionals’ perceptions about the Safety Climate in the present study was 64.05 (SD±14.79). In the literature, national investigations were found in three hospitals in Ceará, one public hospital in Minas Gerais and one in São Paulo<sup>(6,15,16)</sup>, whose means were also below that recommended by international guidelines, in which a score above 75 shows a good perception of the safety culture. Investigations in Brazilian ORs that used SAQ also obtained a safety climate score below the recommended<sup>(13,17)</sup>. Authors reinforce that the score above 80 points to a strong consensus among professionals about the safety climate, however, below 60 means alertness to organizations, as it requires the implementation of actions to improve the safety culture<sup>(7)</sup>.

The “Safety Climate” domain specified in the SAQ/OR instrument was the third-most scored by the participants, with an overall mean of 69.34, a score below the recommended. These results show an important gap in initiatives to improve perceptions of safety culture among these professionals. In Brazil, studies that used SAQ, in the ORs of Brasília and Southern Brazil, also obtained low means, of 48.9 and 50.66 respectively<sup>(15,16)</sup>. Similar data were obtained in another study, with 1,301 professionals from clinical and surgical units from six Brazilian hospitals, with a means of 69.4 for this domain<sup>(17)</sup>. International studies that used the same instrument also obtained a low score related to the “Safety Climate”<sup>(7)</sup> and in Turkey, it was the second least scored domain (15.25)<sup>(18)</sup>.

Still referring to the “Climate of Safety”, in the research now analyzed, the medical team had lower scores of 65.08 (SD±16.70), when compared with nursing, of 74.79 (SD±15.04), close to satisfactory score. Anesthesiologists were those who obtained the lowest averages, 59.88 (SD±26.25) and nurses, the highest 75.20 (SD±11.45). In this context, the safety climate varies from person to person, the way the worker perceives and sees him/herself while providing assistance and the moment he/she is living<sup>(14)</sup>. The authors associated the low qualification of the nursing team with the increase in patient mortality and a significant relationship between nurses’ empowerment, support environments for nursing practice and the perception of a positive safety climate.



The surgical team's perceptions regarding "Professional and Management Performance" obtained the lowest scores. In this sense, the low perception of management, combined with working conditions, suggests that healthcare professionals do not observe the commitment of the management of institutions to hidden factors in the safety culture<sup>(15)</sup>. Management committed to safety recognizes the care environment, better understand, and identifies the gaps and qualifies its professionals, providing the institution and its team with an adequate work environment, focusing on patient safety<sup>(17)</sup>.

The correlations analysis of the SAQ/OR domains shows that there was a significant correlation between the "Safety Climate" and the other domains. "Perception of Professional Performance" and "Stress" did not show any significant correlation between "Perception of Management", "Working Conditions" and 'Communication in the Surgical Environment'. These results were also observed by the authors who created the instrument<sup>(4)</sup>. The fact that there is no significant correlation is expected, because greater perceived stress should result in a lower total score of the instrument.

Accurate information on safety culture can be considered as indicators for the OR manager. These data are relevant to guide the planning and implementation of actions aimed at creating a favorable work environment, which provides satisfaction, motivation and, above all, which guarantees quality and safety to the patient and staff. Studies suggest that SAQ data are starting points to guide needs and opportunities for improving patient quality and safety<sup>(14,16)</sup>.

This research is one of the first national studies on the assessment of the safety climate in a OR in southern Brazil and that used the validated SAQ/OR<sup>(17)</sup>. Another aspect refers to the fact that this research used a questionnaire, but the data cannot be interpreted alone. The assessment of organizational characteristics, values and mission needs to be considered. In this way, the SAQ is a management tool that even favors the nurse's decision-making process.

The study's limitations can be attributed to the fact that it was carried out in only one healthcare institution, being limited to the reality of this institution.

## CONCLUSION

When evaluating the attitudes of the professionals who work in the researched OR, it was evidenced that the safety climate is fragile, expressed by scores below the satisfactory. The greatest weakness refers to the perception of professional performance and management. A satisfactory score from the nursing team was evidenced regarding the perception of stress, in addition to the dichotomy between the high domains of communication and the low score of the safety climate.

This research is considered relevant because it allows managers to know the results found, being able to use the indicators to develop managerial actions, with emphasis on continuous educational interventions, considered the main contributions to improving perceptions about the safety climate. Another potential is the perception of the surgical team about communication in the surgical environment, which denotes a good articulation for the exchange of information between the teams.

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Corresponding author:

Cátia Cristiane Matte Dezordi

Universidade Regional do Noroeste do Estado do Rio Grande do Sul

R. Paulo Klemann, 364 - 98700-000 - Ijuí, RS, Brasil

E-mail: [catiamatte@yahoo.com.br](mailto:catiamatte@yahoo.com.br)

Role of Authors:

Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work - SAWB, ERRB

Drafting the work or revising it critically for important intellectual content - PT, RCAC

Final approval of the version to be published - AKSRT

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