

Patient safety culture among academic nursing students

Cultura de segurança do paciente entre acadêmicos de enfermagem

Cultura de seguridad del paciente entre los académicos de enfermería

ABSTRACT

Objective: to assess the perception of students about patient safety culture in a Nursing undergraduate course. **Method:** quantitative and cross-sectional study with 60 students from a public university. For data collection, the *Safety Attitudes Questionnaire – Short Form 2006* was used, adapted for teaching environments. For analysis, descriptive statistics were used. **Results:** dimensions related to management, teamwork, stress, safety, satisfaction and environmental conditions were analyzed. Students assigned a score of less than 75 for most dimensions, which shows that the course has a negative culture for patient safety. The dimension that presented the lowest average was *conditions of the internship/practical activity site* (52%), and the highest average was *perceived stress* in the academic environment (87%). **Conclusion:** it was found that the patient safety culture in the investigated course is weak, and it is necessary to rethink and expand the approach to the elements that constitute it.

Descriptors: Patient Safety; Nursing; Nursing Education.

RESUMO

Objetivo: avaliar a percepção de estudantes sobre a cultura de segurança do paciente em um curso de graduação em Enfermagem. **Método:** estudo quantitativo, transversal, com 60 estudantes de uma universidade pública. Para coleta de dados, utilizou-se o *Safety Attitudes Questionnaire - Short Form 2006* adaptado para ambientes de ensino. Para análise, utilizou-se estatística descritiva. **Resultados:** analisaram-se as dimensões relacionadas à gestão, trabalho em equipe, estresse, segurança, satisfação e condições do ambiente. Os estudantes atribuíram score inferior a 75 para a maioria das dimensões, o que demonstra que o curso possui uma cultura negativa para segurança do paciente. A dimensão que apresentou a menor média foi *condições do local de estágio/atividade prática* (52%) e a maior média foi *percepção do estresse* no ambiente acadêmico (87%). **Conclusão:** verificou-se que a cultura de segurança do paciente no curso investigado é frágil, sendo necessário repensar e ampliar a abordagem dos elementos que a constituem.


Descritores: Segurança do Paciente; Enfermagem; Educação em Enfermagem.

RESUMEN


Objetivo: evaluar la percepción de los estudiantes acerca de la cultura de seguridad del paciente en un curso de pregrado en Enfermería. **Método:** estudio cuantitativo y transversal con 60 estudiantes de una universidad pública. Para recoger los datos, se utilizó el *Safety Attitudes Questionnaire – Short Form 2006*, adaptado para entornos de enseñanza. Para el análisis, se utilizó estadística descriptiva. **Resultados:** se analizaron dimensiones relacionadas con la gestión, el trabajo en equipo, el estrés, la seguridad, la satisfacción y las condiciones ambientales. Los estudiantes asignaron una puntuación de menos de 75 para la mayoría de las dimensiones, lo que señala que el curso tiene una cultura negativa para la seguridad del paciente. La dimensión que presentó el promedio más bajo fue las *condiciones del sitio de pasantía/actividad práctica* (52%), y el promedio más alto fue la *percepción de estrés* en el entorno académico (87%). **Conclusión:** se encontró que la cultura de seguridad del paciente en el curso investigado es frágil, y es necesario repensar y ampliar el enfoque de los elementos que la constituyen.

Descritores: Seguridad del Paciente; Enfermería; Educación en Enfermería.


Aline Massaroli¹

 [0000-0003-4779-5579](https://orcid.org/0000-0003-4779-5579)

Andressa Reginatto Percisi¹

 [0000-0001-6908-4263](https://orcid.org/0000-0001-6908-4263)

Erica de Brito Pitilin¹

 [0000-0003-3950-2633](https://orcid.org/0000-0003-3950-2633)


Rodrigo Massaroli²

 [0000-0002-7746-9021](https://orcid.org/0000-0002-7746-9021)

Vander Monteiro da
Conceição¹

 [0000-0003-0972-0795](https://orcid.org/0000-0003-0972-0795)

Daniela Savi Geremia¹

 [0000-0003-2259-7429](https://orcid.org/0000-0003-2259-7429)

¹Universidade Federal da Fronteira Sul, Chapecó-SC, Brasil.

²Universidade do Vale do Itajaí, Itajaí-SC, Brasil.

Corresponding author

Aline Massaroli

E-mail: aline.massaroli@uffs.edu.br

How to cite this article:

Massaroli A, Percisi AR, Pitilin EB, et al. Patient safety culture among academic nursing students. Revista de Enfermagem do Centro-Oeste Mineiro. 2022;12:e4251. [Access ____]; Available in: _____. DOI: <http://doi.org/10.19175/recom.v12i0.4251>

INTRODUCTION

Debates on the global scenario have intensified in recent decades in order to institutionalize best practices in care settings, which includes elements related to patient safety and requires knowledge, skills, and attitudes on the part of health professionals⁽¹⁻²⁾. Patient safety is essential to qualify health care.

Patient safety goes through all work processes that make up the health services, where all professionals belonging to this context are responsible for its success and efficiency. Nursing, as well as other professions, has an important relationship with the consolidation of principles directed to patient safety, since it is the profession that develops a considerable number of procedures with the patient and remains at the bedside in constant contact with the patient and his/her needs, besides the fact that nurses develop the role of care managers and are the articulators and integrators with the multiprofessional team⁽³⁾.

In order to ensure responsible and committed performance with patient safety, universities play a key role in the training of new health professionals. This learning needs to be supported by technical-scientific knowledge about patient safety, which is essential for qualified care⁽⁴⁾.

From this perspective, in order to stimulate the training process articulated with the precepts of patient safety, the World Health Organization (WHO) published in 2011, the *Patient Safety Curriculum Guide Multi-professional Edition*, with the purpose of supporting schools that have undergraduate courses in the field of health, with recommendations for the insertion of content and teaching methodologies that promote patient safety culture⁽⁵⁾.

Accordingly, following the movements of the WHO, in 2013, the Ministry of Health (MS, as per its Portuguese acronym) of Brazil, through Ordinance nº 529, established the National Patient Safety Program (PNSP, as per its Portuguese acronym) and one of its specific objectives is to “encourage the inclusion of the topic of patient safety in technical, undergraduate and graduate teaching in health care”⁽⁶⁾, which has been occurring gradually in Brazil⁽⁷⁾.

Health services and teaching institutions have used strategies to investigate patient safety culture through structured instruments that allow understanding the weaknesses and strengths that permeate the different realities of health care delivery. Safety culture is defined as the product of

values, attitudes, perceptions, competencies and behavior patterns of groups and individuals, which directly influences the commitment and the way the organization will position itself and conduct its activities⁽⁸⁾.

Thus, knowing how patient safety has been addressed in the teaching process during the training of new professionals becomes a key action in the search for strengthening the necessary competencies for safe care. Studies developed in Brazil on the teaching of this theme highlight weaknesses in relation to the insertion of this subject in the curricula of courses, in addition to the negative perception of students regarding the attitudes related to patient safety, which are essential for establishing a safety culture^(4,7).

It is believed that patient safety is a topic that must be developed in a continuous and transversal way during training so that, by the end of the training process, the student has developed the competencies and the very patient safety culture. To that end, it is necessary to monitor how it has been established throughout the course so that this process of professional development can be continuously improved. Thus, the following research question arose: what is the perception of students about patient safety culture in a Nursing undergraduate course? Given this context, this study had the objective of assessing the perception of students about patient safety culture in a Nursing undergraduate course.

METHODS

This is a quantitative cross-sectional study developed in a Nursing undergraduate course from a federal public institution of higher education situated in Southern Brazil.

The Nursing undergraduate course, the research scenario, completed, in 2020, 10 years of its implementation and its main objective is to train generalist nurses with critical, reflective and creative capacity, qualified to work in the dimensions of care, management, education, research, as well as to contribute to the implementation of the principles and guidelines of the Unified Health System (SUS, as per its Portuguese acronym) in Brazil.

The curricular matrix is organized in 10 full-shift semesters, with a total workload of 4,395 hours, and includes a set of curricular components organized into three axes: common, related and specific domains. The first one characterizes the components that are common to all the courses offered in the institution. The related domain

represents components that are common to certain areas of knowledge; as far as nursing topics are concerned, the relationship occurs with the other courses in the field of health. The specific domain refers to the knowledge of the specific area of the future professional.

The first semesters are grouped together with the basic subjects that prepare the student for practical activities. The theoretical-practical activities take place until the 8th semester, while the supervised curricular internship and the end-of-course paper in the last two semesters, which are essential requirements for the performance of the profession according to what is established by the National Curricular Guidelines for Nursing undergraduate courses ⁽⁹⁾. It is also noteworthy that this course does not present a specific subject on patient safety, and the theme is addressed as the specific components of the profession are developed.

Participants were considered to be Nursing undergraduate students with active enrollment in the first semester of 2019. Inclusion criteria were considered to be regularly enrolled in the Nursing undergraduate course in the first semester of 2019 and have already started the theoretical-practical activities of the course. The exclusion criteria were applied to students under 18 years of age, away on sick leave at the time of data collection.

Students from the 5th, 7th and 9th semesters of the course participated in the study, since we

are in the odd semester, since the university has an annual admission in the course of Nursing, with the 5th semester class having 41 students, the 7th semester 29 and the 9th semester 33. To that end, the sample of this study was obtained by convenience, consisting of 60 students. Of the students who did not participate in the study, some were on sick leave and others chose not to participate.

In order to perform this study, the *Safety Attitudes Questionnaire – Short Form 2006 (SAQ – Short Form 2006)* was applied, which was adapted in 2014 for application in a teaching environment for Nursing undergraduate students and teachers ⁽⁴⁾. The SAQ questionnaire was created with the objective of assessing the patient safety culture of an institution or unit through the assessment of the attitude of professionals who contribute to this safety culture.

The questionnaire is composed of six dimensions, as shown in Figure 1: management perceptions; teamwork climate; stress recognition; safety climate; job satisfaction; and working conditions. It also contains demographic information (age, gender, work experience), totaling 64 items that should be responded to from a 5-point Likert scale (strongly disagree, partially disagree, neutral, partially agree and strongly agree) ⁽¹⁰⁾.

Figure 1 - Variables that compose each dimension of the instrument used for data collection. Chapecó, SC, Brazil – 2019

Dimension 1: Climate of group activities
1. Suggestions of students are well received at this internship/class site.
2. In this internship/class site, it is difficult to speak openly if I perceive a problem with patient care.
3. In this internship/class site, disagreements are resolved in an appropriate way (e.g., not what is right, but what is best for the patient).
4. When I need it, I have the support of other colleagues to take care of the patients and to clarify doubts and anxieties.
5. In this internship/class site, it is easy for students to ask questions when there is something they do not understand.
6. The teachers at this internship/class site work together as a well-coordinated team.
Dimension 2: Safety climate
7. I would feel safe if I were treated at this internship site as a patient.
8. Mistakes made by students are dealt with appropriately at the internship/class site.
9. I seek to know the appropriate means of addressing patient safety issues in this area.
10. I receive appropriate feedback from teachers about my performance.
11. In this internship/class site, it is difficult to discuss mistakes.
12. I am encouraged by my colleagues to report any concerns I have about patient safety.
13. The patient safety culture at this internship/class site facilitates learning from the mistakes of others (e.g., mistakes are identified, reflected upon, and then discussed).
14. My suggestions about safety would be put into action if I expressed them to the teachers in this stage.
Dimension 3: Course satisfaction
15. I like the activities I do at this internship/class site.
16. Studying here is like being part of a big family.
17. This is a good place to develop my knowledge.
18. I am proud to study here.
19. Morale at this internship/class site is high.
Dimension 4: Perceived stress
20. When my activity load is excessive, my performance is impaired.
21. I am less efficient in the internship/class when I am tired.
22. I am more likely to make mistakes in tense or hostile situations.
23. Fatigue impairs my performance during tense situations (e.g. exams, presentation of papers, group discussions, providing direct patient care).
Dimension 5: Perceptions of coordination and teaching
24. The subject teachers support my daily efforts.
25. The subject teachers do not compromise patient safety.
26. The subject teachers are doing a good job.
27. Problematic students in the group are dealt with in a constructive way by our coordinators and teachers.
28. I receive adequate and timely information from the subject teachers about events that may affect my activities (e.g. cancellation of activities, changes to the schedule, etc.).
29. In this internship/class site, the number of students is sufficient to handle the dynamics and activities of the internship/class.
Dimension 6: Conditions of the internship/practical activity site
30. I receive adequate training before doing the practical activities in the internship field.
31. All the information needed to perform the practical activities safely is made available by the teachers.
32. As an intern, I am adequately supervised.
33. I experience good collaboration with the nurses at this internship/class site.
34. I experience good collaboration with the medical staff at this internship/class site.
35. I experience good collaboration with the pharmacists at this internship/class site.
36. Failures that lead to delays in the development of the internship/class are common (e.g. delays, restrictions by staff/or teachers).

Source: instrument adapted in 2014 for application in teaching environments⁽⁴⁾.

The application of the questionnaire was carried out in the first semester of 2019, at times of collective activities of the groups in the classroom, so that it was possible to access the largest number of students, previously agreed with the course coordination and with the teacher who was active at that moment. All participants received and signed the Free and Informed Consent Form (FICF).

The organization of the collected data was performed by assigning a numerical codename to each questionnaire; the data were then entered into a *Microsoft Excel*[®] spreadsheet, which served as the basis for the process related to the analysis of such data. Double data entry was performed, with subsequent validation to correct inconsistencies.

Thus, the database for this research was digital and physical, allowing the archiving of

consent forms and completed physical forms. The physical materials were stored in a protected and specific place for this purpose.

The data were entered into a *Microsoft Excel*[®] spreadsheet, and later transferred to the SPSS 20.0 software and submitted to descriptive statistical analysis, assessing the average responses in each dimension. The averages were considered positive when higher than or equal to 75 and negative when lower ⁽¹⁰⁾. The association among the categorical variables was tested using Pearson's chi-square test and Student's t-test; moreover, the ANOVA test was used to test associations when the dependent variable had more than two categories. The p-value considered was <0.005. In order to assess the reliability of the instrument, Cronbach's alpha coefficient was calculated, which can vary from 0 to 1, and the

closer to 1, the greater the consistency of the instrument.

This study was approved by the Ethics Committee for Research with Human Beings, CAAE nº 02894618.4.0000.5564, and followed the precepts of Resolution 466/2012 of the National Health Council.

RESULTS

The initial part of the questionnaire refers to sociodemographic data and analyzes the profile of students to better understand the context in which they are inserted and what aspects could interfere with patient safety culture. Thus, it was noticed that, from the total of participants, 92% (55) were female and 8% (5) male, and the age range varied from 18 to 46 years. The distribution of the characterization data will be presented in Table 1.

Table 1 - Characterization data of the participants. Chapecó, SC, Brazil – 2019 (n=60)

Variable	Category	N	%
Age range	< 20 years	9	15.0
	20 to 24 years	46	76.6
	25 to 29 years	3	5.0
	30 to 34 years	1	1.7
	35 to 39 years	0	0
	> 40 years	1	1.7
Course stages	Total	60	100
	5 th stage	20	33.3
	7 th stage	20	33.3
	9 th stage	20	33.4
Has already repeated some stage	Total	60	100
	Yes	8	13.0
	No	52	87.0
Has already carried out some extracurricular internship	Total	60	100
	Yes	5	8.3
	No	53	88.3
	Did not respond	2	3.4
Has another profession	Total	60	100
	Yes	5*	8.0
	No	55	92.0
	Total	60	100

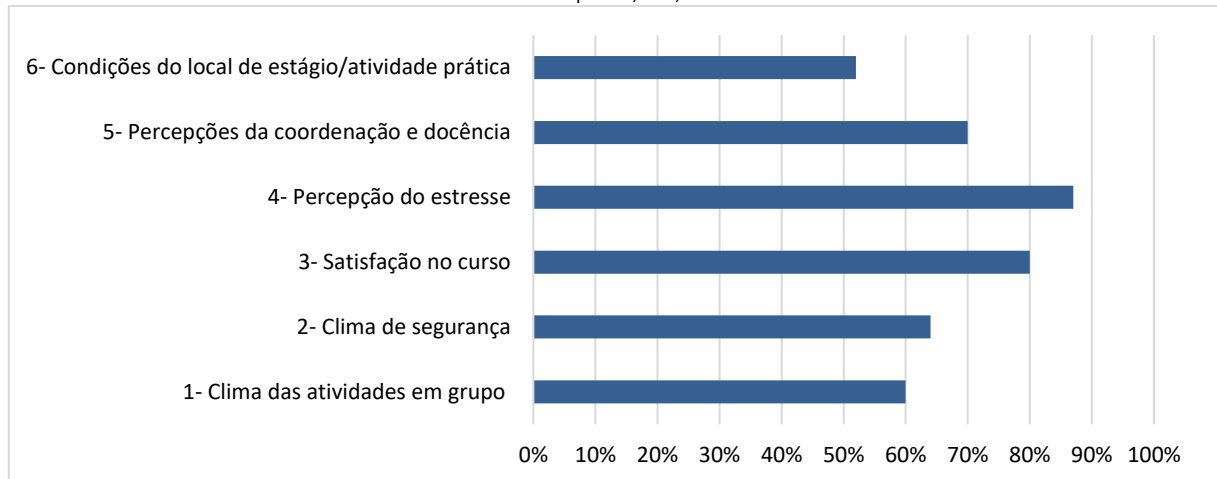
* Other profession: farmer, counter attendant, public municipal servant and computer technician.

Source: designed by the authors, 2019.

When analyzing the dimensions and classifying them as positive or negative, the percentage obtained by each category was taken into account. They were classified as positive when the percentage was higher than or equal to 75. In this sense, it highlights a favorable environment for the development of patient safety, with trained professionals and institutions, where the mistake is worked not under the perspective of punishment,

but as a moment of learning and improvement of care. As for the safety culture being considered negative, that is, with a percentage lower than 75, it can be seen that there is some deficiency in the process preventing positive actions to be established ⁽¹⁰⁾. In Figure 2, the oscillations of each dimension with respect to positive responses are presented.

Figure 2 – Relation of positive responses to patient safety culture according to the averages by dimension. Chapecó, SC, Brazil – 2019



Source: designed by the authors, 2019.

Caption: 1 – Climate of group activities; 2 – Safety climate; 3 – Course satisfaction; 4 – Perceived stress; 5 - Perceptions of coordination and teaching; 6 – Conditions of the internship/practical activity site.

In Table 2, the positive responses were analyzed, according to the dimensions and the stage the student was taking, where, on average, most of them remained in the negative index in relation to patient safety culture.

Table 2 – Association among the dimensions of the Safety Attitudes Questionnaire adapted for the teaching and the stage of Nursing undergraduate students. Chapecó, SC, Brazil – 2019 (n=60)

Dimension	Category	N	Score	Standard deviation	p-value*
1 – Climate of group activities	5 th stage	20	70.83	14.1	0.000**
	7 th stage	20	42.50	24.4	
	9 th stage	20	65.83	21.2	
	Total	60	59.72	23.6	
2 – Safety climate	5 th stage	20	73.13	10.9	0.001**
	7 th stage	20	50.63	18.3	
	9 th stage	20	67.50	25.7	
3 – Course satisfaction	Total	60	63.75	21.3	0.119
	5 th stage	20	87.00	13.4	
	7 th stage	20	73.00	22.7	
	9 th stage	20	80.00	25.1	
4 – Perceived stress	Total	60	80.00	21.4	0.749
	5 th stage	20	90.00	18.8	
	7 th stage	20	85.00	27.3	
	9 th stage	20	85.00	24.8	
5 – Perceptions of coordination and teaching	Total	60	86.67	23.6	0.007**
	5 th stage	20	85.83	13.5	
	7 th stage	20	59.17	29.8	
	9 th stage	20	64.17	33.8	
6 – Conditions of the internship/practical activity site	Total	60	69.72	29.1	0.168
	5 th stage	20	57.14	29.3	
	7 th stage	20	41.43	24.9	
	9 th stage	20	55.00	29.7	
Overall score	Total	60	51.19	28.4	0.001
	5 th stage	20	77.32	9.1	
	7 th stage	20	58.62	13.7	
	9 th stage	20	69.58	18.8	
	Total	60	68.51	16.1	

* ANOVA

**Post hoc Dunnett's test (2-sided)

Source: designed by the authors, 2019.

The one-way ANOVA showed that there are no differences among the studied periods in the averages of the positive responses for the dimensions on climate of group activities, safety climate and perception of coordination and teaching, as well as the overall index of patient safety. Post hoc Dunnett's test (2-sided) revealed that, on average, the responses for the dimensions on climate of group activities and safety climate in the intermediate period (7th) are different from the

last period (9th), but not from the initial stages. For the dimension on perception of coordination and teaching, on average, the responses in the initial stages (5th) are different from the other periods.

Table 3 presents the analysis of the characteristics of the study participants with regard to the positive averages for safety culture, aiming to assess if they interfered positively or negatively.

Table 3 – Characteristics of participants regarding positive averages for safety culture. Chapecó, SC, Brazil – 2019 (n=60)

Variable	Category	N	Score	Standard deviation	p-value*
Age range	Up to 20 years	9	77.09	10.9	0.212*
	20 to 24 years	46	66.70	16.0	
	Over 25 years	5	69.67	23.0	
Gender	Female	55	68.34	16.2	0.797**
	Male	5	70.31	16.8	
Extracurricular internship	Yes	5	67.51	16.0	0.113**
	No	55	79.51	14.9	
Repeated some period	Yes	8	72.19	13.2	0.291**
	No	52	67.64	16.5	
Has another profession	Yes	5	63.57	20.9	0.481**
	No	55	68.96	15.8	

*ANOVA

**Pearson's chi-square and Student's t

Source: designed by the authors, 2019.

In order to test the association among the categorical variables, Pearson's chi-square and Student's t-tests were used; moreover, the ANOVA test was used to test associations when the dependent variable had more than two categories. There were no differences among the averages of patient safety culture and the studied characteristics.

The reliability of the internal consistency of the instrument was tested by means of Cronbach's alpha coefficient, which obtained a result of 0.89, thus characterizing that the instrument presents high internal consistency.

DISCUSSION

Of the participants, most are female, aged between 20 and 24 years. When analyzing the overall averages of all dimensions, it was found that most were classified/assessed as negative culture for patient safety. This finding highlights the need to improve the approach to elements related to patient safety culture, as well as the development of related competencies during the training process of future nurses.

A study carried out at a university in Southern Brazil obtained similar results and brings

reflection about how the information and contact with patient safety has been during academic training, under which methodologies the topic is worked on, and how the curricula are being formulated, since patient safety is transversal to most of the nursing contents⁽⁴⁾.

The use of active methodologies for teaching in health has been growing and consolidating in order to strengthen student learning for the moment of insertion into health services⁽¹¹⁾. The use of clinical simulation has been shown to be effective in training processes as a teaching strategy that allows students to experience the representation of a real event with the objective of developing competencies, decision making, clinical reasoning and self-confidence, thus favoring patient safety, since it does not expose them to risky situations due to the lack of experience on the part of students⁽¹²⁻¹³⁾.

When considering the analysis of the six dimensions regarding the positive culture for patient safety, it was found that there are variations among them, and the *Dimension on perceived stress* obtained the highest percentage of positive responses in terms of safe culture. In general, the process of professional training has

been considered a period of stress in the lives of students.

The training stage is extremely stressful for students, where personal and professional aspects generate feelings that cause uncertainty, imbalance and difficulties in professional life. These elements were highlighted in a review study that approached stress in Nursing academic students and its generating agents⁽¹⁴⁾. In addition, health courses work with methodologies in which students are inserted in health services through theoretical-practical activities and supervised internships, which corroborates for them to perceive their training-related limitations when facing different situations of the health and disease process⁽¹⁵⁾.

Another study shows that one of the main factors that stress academic students during the undergraduate stage is the number of activities, as well as the lack of time to perform them, besides other personal factors that often need to be set aside to devote to studies and internships⁽¹⁴⁾. Students are aware that excessive loads of activities generate burnout, fatigue and stressful situations in general. It is worth pointing out that, in professional life, where students come into contact with theoretical-practical activities and internships, these emotional overloads can compromise patient safety and generate situations that are favorable to the occurrence of adverse events, whether during the teaching and learning process or during future professional practice⁽¹⁶⁾.

In this context, the occurrence of positive responses regarding patient safety culture in the *Dimension on course satisfaction* also stands out. It can be inferred that, when students are satisfied with their study site, they can improve their performance in theoretical-practical activities, which provides better conduct regarding patient safety. In addition, the issue of students being satisfied with the course may be associated with the ability on the part of teachers to conduct their insertion into health services. Therefore, the integration between teaching institutions and health services becomes essential, since it strengthens the communication and integration of students with their teachers and other professionals, besides contributing to the teaching-learning process⁽¹⁷⁾.

Regarding the dimension with the lowest percentage of positive responses for safe culture, the *Dimension on conditions of the internship/practical activity site* is highlighted. In this dimension, the perception of nursing students

in relation to their experiences in health institutions is identified, the way in which they perceive the collaboration of professionals working in the services, as well as the safety when performing procedures. The articulation among the subjects of the field of health contributes to the association of knowledge in health care spaces, besides providing the integration between education and service⁽¹⁸⁾.

Furthermore, it is noticeable that the positive responses of the students in the 7th stage for the *Dimensions on climate of group activities and safety climate*, as well as the overall score of the responses about patient safety, are better when compared to the responses of the students who are in the last year (9th stage). This finding may be related to how long students have been working in the health services and, consequently, to the influence they suffer from this environment in the formation of their professional competencies, since experiences contribute to making students more reflective and having a more critical perception about their experiences.

When students live with health professionals in the various fields of theoretical-practical activities and internships, they end up identifying them as a reference model and mirror their actions and behaviors to structure their professional profile⁽¹⁹⁻²⁰⁾. Thus, the weaknesses that are recorded in the safety culture of health services can influence the understanding and the conduct of students who experience a reality that often lacks further development regarding patient safety practices. Nevertheless, this difference among students in the intermediate and final stages may be precisely influenced by their experience in the health services, where students in the intermediate stages have an initial view of the care process, compared to the others, who have been in the health services for a longer period of time and, therefore, replicate the experienced attitudes⁽²¹⁾, which negatively influences their perception of the climate of group activities and the very safety climate.

As for the *Dimension on perceptions of coordination and teaching*, it was found that the best averages of positive responses occurred in the initial stages. It is believed that this may be related to the fact that the first contacts with the field of practice take place in the initial stages. Accordingly, students end up having their teachers as a support point and, therefore, perceive a positive relationship about this context⁽²²⁾.

It was perceived that a major challenge for Nursing undergraduate courses is to develop teaching strategies for the topic of patient safety and articulate teaching and service, since there is sometimes a gap between the very theory and the experiences lived by students in health services. Overcoming the gaps pointed in the face of patient safety culture needs to be assumed throughout the care network so that the generalist training of the profession is effectively associated with the relationship of care and the organization of the SUS, in such a way that the realistic means are intensely used for the critical and reflective training of nurses⁽²³⁾. The services are spaces for action and reflection on the practices, and through them the interlocutions between the work process and the health training process are shaped, and can transform the realities of care and generate strategies to insert a safety culture, in order to bring theory and practice closer together.

Thus, the strategy that needs to be explored and intensified by Nursing undergraduate courses are the teaching methodologies that instigate students to recognize the risk situations that involve the care process throughout the care network of SUS so that they can transform the different care scenarios, thus ensuring patient safety. The early insertion, during the process of professional training of this critical view on care processes has the capacity to develop this culture focused on safety among students. In addition, this insertion establishes important connections between the teaching and professional practice scenarios. These can be recognized as dialogic spaces that together have the capacity to advance in terms of qualified nursing care.

CONCLUSION

The research highlighted that, from the perspective of the surveyed students, the patient safety culture in the investigated course is weak. The dimensions that indicated a negative safety culture were *climate of group activities, safety climate, perceptions of coordination and teaching and conditions of the internship/practical activity site*. Among the strengths found in the investigated course, the satisfaction on the part of students with the course and the recognition of the stress that involves the training process stood out.

The results instigate critical reflection, with the perspective of expanding and qualifying the approach to the elements that relate to patient safety and constitute the very safety culture, aiming to establish an environment and training

process that provide a favorable atmosphere for new professionals to be prepared to develop care based on safe attitudes, with the purpose of reducing the risk of harm to patients and promoting greater quality throughout the health care network. It is also believed that, if students are inserted in a place with a positive safety culture from the beginning of their training process, this culture is more likely to be transferred to the health services in which the new professionals will be inserted in the future.

As a limitation of this study, it can be mentioned the application of the questionnaire in a single course. Thus, it is important to expand the study with different teaching institutions to better understand the different contexts of Nursing undergraduate courses regarding patient safety culture. Applying the study from the initial stages of the course can provide information that helps to visualize the process of constitution of patient safety culture from the initial contact until the professional action.

REFERENCES

1. Bohomol E, Freitas MAO, Cunha ICKO. Ensino da segurança do paciente na graduação em saúde: reflexões sobre saberes e fazeres. *Interface comun saúde educ.* 2016;20(58):727-41. Disponível em: https://www.scielo.br/scielo.php?script=sci_arttext&pid=S1414-32832016000300727.
2. Garzin ACA, Melleiro MM. Segurança do paciente na formação dos profissionais de saúde. *Ciênc cuid saúde.* 2019;18(4):1-8. Disponível em: <https://periodicos.uem.br/ojs/index.php/CiencCuidSaude/article/view/45780>.
3. Cavalcante AKCB, Rocha RC, Nogueira LT, Avelino FVSD, Da Rocha SS. Cuidado seguro ao paciente: contribuições da enfermagem. *Rev cuba enferm.* 2015 [citado em: 29 de jan. 2021]; 31(4):1-13. Disponível em: <http://www.revenfermeria.sld.cu/index.php/enf/article/view/907>.
4. Ilha P. A cultura de segurança do paciente na ótica dos acadêmicos de enfermagem [dissertação]. Florianópolis; 2014 [citado em: 25 de jan. 2021]. Disponível em: <https://repositorio.ufsc.br/xmlui/handle/123456789/132420>.
5. Farley D, Zheng H, Rousi E, Leotsakos. A field test of the world health organization multi-professional

patient safety curriculum guide. PLoS ONE. 2015;10(9):1-16. Disponível em: <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0138510>.

6. Ministério da Saúde (BR). Portaria nº 529 de 1º de abril de 2013. Institui o Programa Nacional de Segurança do Paciente (PNSP). Brasília: Ministério da Saúde; 2013 [citado em: 20 de jan. 2021]. Disponível em: http://bvsmms.saude.gov.br/bvs/saudelegis/gm/2013/prt0529_01_04_2013.html.

7. Bohomol E. Ensino sobre segurança do paciente em curso de graduação em enfermagem na perspectiva docente. Esc. Anna Nery Rev. Enferm. 2019;23(2):1-8. Disponível em: https://www.scielo.br/scielo.php?pid=S1414-81452019000200213&script=sci_abstract&tlng=pt.

8. Andrade LEL, Lopes JM, Souza Filho MCM, Vieira Júnior RF, Farias LPC, Santos CCM, et al. Cultura de segurança do paciente em três hospitais brasileiros com diferentes tipos de gestão. Ciênc Saúde Colet. 2018;23(1):161-172. Disponível em: https://www.scielo.br/scielo.php?pid=S1413-81232018000100161&script=sci_abstract&tlng=pt.

9. Ministério da Educação (BR). Resolução CNE/CES nº 3 de 7 de novembro de 2001. Institui as diretrizes curriculares nacionais do curso de graduação em enfermagem. Diário Oficial da União; 2001 [citado em: 10 de fev. 2021]. Disponível em: <http://portal.mec.gov.br/cne/arquivos/pdf/CES03.pdf>.

10. Sexton JB, Helmreich RL, Neilands TB, Rowan K, Vella K, Boyden J, et al. The safety attitudes questionnaire: psychometric properties, benchmarking data, and emerging research. BMC Health Serv Res. 2006;6(44):1-10. Disponível em: <https://bmchealthservres.biomedcentral.com/articles/10.1186/1472-6963-6-44>.

11. Paiva MRF, Parente JRF, Brandão IR, Queiroz AHB. Metodologias ativas de ensino aprendizagem: revisão integrativa. Sanare [Internet]. 2016 [citado em: 12 de fev. 2021]; 15(2):145-53. Disponível em: <https://sanare.emnuvens.com.br/sanare/article/view/1049>.

12. Costa RRO, Medeiros SM, Martins JCA, Menezes RMP, Araújo MS. O uso da simulação no

contexto da educação e formação em saúde e enfermagem: uma reflexão acadêmica. Espaço saúde [Internet]. 2015;16(1):59-65. Disponível em: https://www.researchgate.net/publication/316178607_O_uso_da_simulacao_no_contexto_da_educacao_e_formacao_em_saude_e_enfermagem_uma_reflexao_academica.

13. Camarero ARA, Romero AG, Cobo CMS, Arce AM. Simulação clínica como ferramenta de aprendizagem na graduação em enfermagem: validação de um questionário. Nurse Educ Today. 2016;39(1):128-34. Disponível em: <https://pubmed.ncbi.nlm.nih.gov/27006044/>.

14. Santos RJLL, Sousa EP, Rodrigues GMM, Quaresma PC. Estresse em acadêmicos de enfermagem: importância de identificar o agente estressor. Braz J Hea Rev. 2019 [citado em: 25 de fev. 2021]; 2(2):1086-94. Disponível em: <https://www.brazilianjournals.com/index.php/BJHR/article/view/1304>.

15. Cestari VRF, Moreira TMM, Pessoa VLMP, Florêncio RS, Da Silva MRF, Torres RAM. A essência do cuidado na vulnerabilidade em saúde: uma construção heideggeriana. Rev Bras Enferm. 2017;70(5):1112-16. Disponível em: https://www.scielo.br/scielo.php?script=sci_arttext&pid=S0034-71672017000501112.

16. Girão ALA, Lacerda AJA, Carvalho LS, Lousada LM, Nascimento KMB, Cruz KT, et al. Cultura de segurança do paciente em unidades de terapia intensiva: percepção de profissionais de saúde. Rev eletrônica enferm. 2019;21:1-10. Disponível em: <https://revistas.ufg.br/fen/article/view/50649>.

17. Baquião LSM, Costa AMB. A interação entre instituição de ensino e serviço de saúde: estágio em saúde coletiva. Braz J Hea Rev. 2019;2(4):3599-602. Disponível em: <https://www.brazilianjournals.com/index.php/BJHR/article/view/2487>.

18. Da Silva APSS, Eberle CC. Compreensão de estudantes de enfermagem sobre a segurança do paciente. Rev Baiana Enferm. 2016;30(4):1-9. Disponível em: <https://periodicos.ufba.br/index.php/enfermagem/article/view/21701>.

19. Kong LN, Zhu WF, He S, Chen SZ, Yang L, Qi L, et al. Attitudes towards patient safety culture among postgraduate nursing students in China: a cross-sectional study. Nurse Educ Pract. 2019;38:1-6.

Disponível em:
<https://pubmed.ncbi.nlm.nih.gov/31163311/>.

20. Hinkin J, Cutter J. How do university education and clinical experience influence pre-registration nursing students' infection control practice? A descriptive, cross sectional survey. *Nurse Educ Today*. 2014;34(2):196-201. Disponível em:
<https://pubmed.ncbi.nlm.nih.gov/24090618/>.

21. Massaroli A, Martini JG, Medina-Moya JL, Bitencourt JVOV, Reibnitz KS, Bernardi MC. Ensino do controle de infecções na graduação em saúde: opinião de experts. *Rev Bras Enferm*. 2018;71(4):1626-34. Disponível em:
https://www.scielo.br/scielo.php?script=sci_arttext&pid=S0034-71672018001001626.

22. Macedo EP, Pessoa OS, Domingues VB. A relação professor-aluno e a ética no ensino superior. *Rev Educ*. 2018;42(155):26-40. Disponível em:
<https://revistas.anec.org.br/index.php/revistaeducacao/article/view/90>.

23. Ferreira FDC, Dantas FC, Valente GSC. Nurses' knowledge and competencies for preceptorship in the basic health unit. *Rev Bras Enferm*. 2018;71(Suppl 4):1564-71. Disponível em:
<https://pubmed.ncbi.nlm.nih.gov/30088625/>.

Responsible editors:

Patrícia Pinto Braga

Mayra Gonçalves Meneguetti

Note: Promotion Agency Federal University of Fronteira Sul, Public Noticia Nº 1010/GR/UFS/2018 - PIBIC/UFS.

Received in: 09/09/2021

Approved in: 25/03/2022