

# THE TEACHING OF PATIENT SAFETY ACCORDING WITH THE PERCEPTIONS AND EXPERIENCES OF NURSING PROFESSORS

## ENSINO DE SEGURANÇA DO PACIENTE SEGUNDO AS PERCEPÇÕES E VIVÊNCIAS DE DOCENTES DE ENFERMAGEM

## LA ENSEÑANZA EN SEGURIDAD DEL PACIENTE SEGÚN LAS PERCEPCIONES Y EXPERIENCIAS DE PROFESORES DE ENFERMERÍA

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**Objective:** To describe the perceptions and experiences of nursing graduation professors regarding the teaching of patient safety. **Method:** Cross-sectional, descriptive, quali-quantitative study, carried out with nursing professors from a federal university from September to November 2018. Data was collected using an electronic form and processed using simple descriptive analysis aided by the software *Interface de R pour Analyses Multidimensionnelles de Textes et de Questionnaires*. **Results:** The sample was formed by 21 professors, and three classes were generated: First steps and encouragement for the teaching of patient safety in the nursing course (42.5%); Actions towards patient safety teaching in graduation (26.4%); and Actors of change in the teaching of patient safety in nursing graduation (31.1%). **Conclusion:** The professors recognized patient safety as an important cross-sectional topic in the formation process, despite its little presence in the institution.

**Descriptors:** Nursing. Patient Safety. Teaching. Professors. Education, Higher.

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*Objetivo: descrever as percepções e vivências de docentes da graduação de enfermagem sobre o ensino de segurança do paciente. Método: estudo transversal, descritivo, quali-quantitativo, realizado com professores de enfermagem de uma universidade federal, realizado de setembro a novembro de 2018. Os dados foram coletados através de um formulário eletrônico e processados de forma descritiva simples com auxílio do software Interface de R pour Analyses Multidimensionnelles de Textes et de Questionnaires. Resultados: a amostra foi composta por 21 docentes e emergiram três classes: primeiros passos e estímulos para o ensino de segurança do paciente no curso de enfermagem (42,5%), ações realizadas em prol do ensino de segurança do paciente na graduação (26,4%) e agentes promotores de mudanças no ensino de segurança do paciente na graduação de enfermagem (31,1%). Conclusão: os docentes reconheceram a segurança do paciente como um tema transversal e importante no processo formativo, mas com pouca expressividade na instituição.*

*Descritores: Enfermagem. Segurança do Paciente. Ensino. Docente. Educação Superior.*

*Objetivo: describir las percepciones y experiencias de profesores de graduación en enfermería sobre la enseñanza de la seguridad del paciente. Método: estudio transversal, descriptivo, cuali-cuantitativo, realizado con profesores de enfermería de una universidad federal, realizado de septiembre a noviembre de 2018. Los datos fueron recolectados a través de un formulario electrónico y procesados de forma descriptiva simple con ayuda del Interface de R pour Analyses Multidimensionnelles de Textes et de Questionnaires. Resultados: la muestra estuvo compuesta por 21 profesores y surgieron tres clases: primeros pasos y estímulos para la enseñanza de la seguridad del paciente en la carrera de enfermería (42,5%), acciones realizadas a favor de la enseñanza de la seguridad del paciente en la graduación (26,4%) y agentes promotores cambios en la enseñanza de la seguridad del paciente en la graduación de enfermería (31,1%). Conclusión: los profesores reconocieron la seguridad del paciente como un tema transversal e importante en el proceso de formación, pero con poca expresión en la institución.*

*Descriptorios: Enfermería. Seguridad del paciente. Enseñando. Maestro. Educación universitaria.*

## Introduction

Patient safety (PS), defined as the reduction of unnecessary harm to the patient, is also one of the most relevant current topics, due to the number of avoidable adverse events that still take place in health services, coupled with the constant search for safe, quality care<sup>(1-4)</sup>.

However, to reach this goal, changes in the education of future health workers are essential, so they can understand the importance of PS in the promotion of successful health care to their patients, coupled with the need to consider the structure-process-results triad<sup>(2,4,5)</sup>.

The World Health Organization (WHO) released, in 2011, the *Patient Safety Curriculum Guide*, translated into Portuguese in 2016, to facilitate the implementation of PS in the health teaching centers by suggesting contents, activities, methods, educational methods, and evaluations targeted at this topic<sup>(6)</sup>.

This proposition is in line with the National Patient Safety Program (PNSP), presented in 2013 by the Ministry of Health (MS), whose objectives include fostering the implementation

of PS in technical, undergraduate, and graduate education in health (1,2)

Concerning health services, nursing stands out as a professional category with an expressive number of workers in direct and indirect health care roles, involving both patients and families<sup>(3-5)</sup>.

Nursing is deeply involved with PS, due to the characteristics of the work provided by the category, in addition to national and international managerial initiatives carried out to foster this topic. These include the foundation of the Brazilian Network of Nursing and Patient Safety (REBRAENSP) in 2008, partnered with the Pan American Health Organization (PAHO) in order to disseminate PS in health and teaching institutions<sup>(7)</sup>.

However, as we address the National Curriculum Guidelines (NCG) of the nursing course, approved in 2001, it becomes clear they did not undergo any alterations throughout the years, which suggests the PS has not been included in them, as the topic is fairly recent; as

a result, the topic may not be addressed in the several sciences and lines of care of nursing<sup>(5,8)</sup>.

Thus, aiming to improve the quality of health services, an analysis of the experiences and perceptions of nursing professors regarding the teaching of PS could enable an understanding of how this topic is developed in the formation process; foster discussions/reflections about its relevance in the myriad different contexts in which nursing has a role, such as teaching, research, assistance, and management; strengthen that which is already done and has positive results; and create strategies to reduce the obstacles that hinder its implementation in educational centers.

As a result, this study used the following guiding question: What are the perceptions and experiences of nursing graduation professors regarding the teaching of patient safety? Its objective, as a result, is to describe the perceptions and experiences of nursing graduation professors regarding the teaching of patient safety.

## Method

Cross-sectional, descriptive, qualitative<sup>(9,10)</sup>, carried out in a federal university in the Brazilian northeast, as it is reference point among teaching and research institutions in the region, in addition to having a higher number of subjects that are in line with the profile this study requires from its participants.

The study population was formed by professors who are active in the nursing department of the university. We included permanent graduation professors, who had worked in the institution for more than one year, a period considered to be adequate for the professional to become involved with the project. We excluded those with temporary ties to the institution, as well as those who were on leave during data collection and those who were working in university campi far from its main campus, that is, in other cities of the state.

Data collection took place from September to November 2018. Participants were invited through an e-mail sent to the address obtained from the Integrated System for the Management

of Academic Activities (SIGAA) - the electronic portal of the teaching institution - in order to clarify the research topics and the relevance of their participation in the research. They also were sent the Free and Informed Consent Form.

When the professor accepted participating in the investigation, they were sent the link to a Google Form (<https://forms.gle/xwzWr8fWgcvqnuA8>). Potential participants could see the form with no obligation to answer them, and after responding, the data collected could no longer be changed, and new answers were not accepted. The form was created by the researcher and structured in three parts: I - personal and professional characterization data, including age, sex, field of work, time since graduation, time working as a professor, levels of education where the professor teaches, work load in hours, subjects and types of classes; II - open questions about experiences with PS, including prior experiences with the topic, subjects taught focusing on the topic, advisory projects, research, or extension involving the topic, teaching methods used, and scientific events they participated that involved an approach targeted at PS; III - open questions about perceptions regarding PS, understanding the concept of PS, and the role of the university in encouraging and preparing professors in regard to PS.

At first, the deadline for returning the form was 20 days. In the cases where there was no answer within this period, and the participant could not be contacted via e-mail, we attempted contacting the participant in person, at their workplace, at times that would not interrupt/compromise their work activities.

It should be noted that, to guarantee their anonymity, the participants were identified using a code formed by the letters "PROF", for "professor", followed by a number indicating the order in which the responses were sent.

Data from the first part of the instrument was tabulated, organized in a Microsoft Excel spreadsheet, and analyzed using simple descriptive statistics. Data regarding the second and third parts of the form were processed with the aid of the software *Interface de R pour*

*Analyses Multidimensionnelles de Textes et de Questionnaires* (IRAMUTEQ), through the use of the tools descending hierarchical classification (DHC), and similitude analysis, respectively<sup>(11)</sup>.

These tools were chosen because the DHC facilitates categorizing and organizing text fragments according to the similarities of the vocabulary used, in addition to indicating the confidence level ( $p$ ), as associated with the chi-squared ( $\chi^2$ ). Similitude analyses, in turn, enable a better interpretation of associations between the terms in the statements of the participants, indicating strong relations among them, depending on the thickness of the line connecting the words<sup>(11)</sup>.

The research is in accordance with the ethical precepts determined by Resolution No. 466/2012

from the National Council of Health and was approved by the Research Ethics Committee under Substantiated Opinion No. 2.454.034, on December 21, 2017. CAAE: 80929617.1.0000.5537

## Results

Of the 36 full professors in the nursing department, 5 were on leave, and 10 did not answer the research. As a result, the final sample included 21 (58.3%) professors, 16 of whom (76.2%) were female, while 5 (23.8) were male.

The mean age was 47.2 (SD±11.2), and the time since they finished their graduation was 21.8 (SD±11.3). Their mean time working as professors was 18.0 (SD±11.7) years (Table 1).

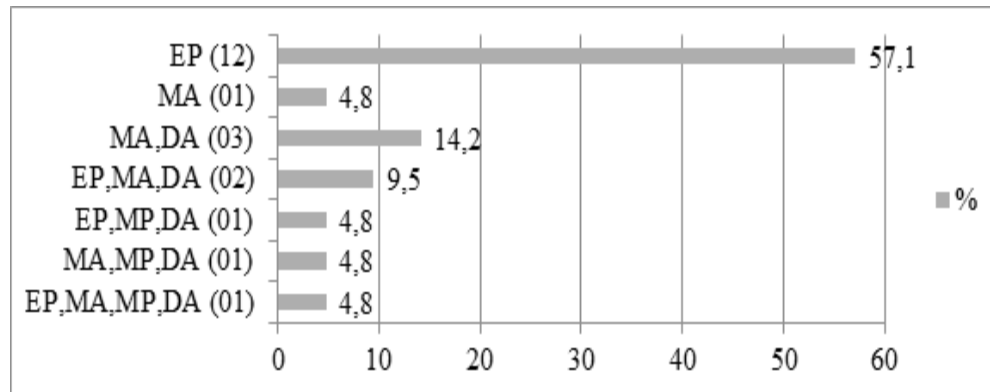
**Table 1** - Age group, time since graduation, and time working as nursing professors (N=21)

Variable	[parcial]n	%
Age group		
≤ 35 years	02	09.5
36-45 years	09	42.9
46-55 years	05	23.8
≥ 56 years	05	23.8
Time since graduation		
≤ 05 years	01	04.7
06-20 years	11	52.6
21-40 years	08	38.0
≥ 41years	01	04.7
Time working as a professor		
≤ 10 years	06	28.6
11-20 years	09	42.9
21-40 years	05	23.8
≥ 41years	01	04.7

Source: Created by the authors.

Regarding their hour workload as professors, 18 (85.8%) work exclusively as professors (EP), while 3 (14.2%) work for 20 hours a week. 20 (35.8%) participants teach theoretical classes, 18 (32.1%) teach practical laboratory classes, and 18 (32.1%) teach practical classes in the health services. It is noteworthy that the same professor can teach in more than one of the modalities mentioned.

Regarding their experience with PS, 15 (71.4%) professors state they have some form of involvement with the topic, while 6 (28.6%) do not. Regarding their academic levels, all (100.0%) professors teach in undergraduate classes, and the same professor can teach in more than one level of education, as Figure 1 shows.

**Figure 1** - Other academic levels in which nursing professors teach (N=21)

Source: Created by the authors.

Note: \*EP=specialization; MA=academic master's; MP=professional master's; DA=academic PhD

After we processed the qualitative content of the responses of professors from the nursing department in the IRAMUTEQ software, using the DHC tool, there was a textual retention of

21 segments and a utilization of the corpus of 75.09%. Three categories emerged, as Chart 1 shows.

**Chart 1** - Descending hierarchical classification of the perceptions and experiences of nursing professors regarding the teaching of patient safety

Category	Words	%	Significant variable*
I - First steps and encouragement for the teaching of PS in the nursing course (42.5%)	Professor	100.0	There was no significant variable
	Clinical	100.0	
	Change	73.6	
	Safety	70.2	
II - Actions to foster PS teaching in nursing graduation (26.4%)	Patient safety	100.0	There was no significant variable
	Subject	100.0	
	Being	100.0	
	Methodology	97.6	
III - Agents of change in the teaching of PS in nursing graduation (31.1%)	Universidade	100.0	There was no significant variable
	Professor	85.7	
	Role Faculty	56.0	

Source: Created by the authors.

Note: \* $p < 0,005$

In Class I, "First steps and encouragement for the teaching of PS in the nursing course", we found that, considering the experiences in the academic life and the improvement of professor knowledge through new resolutions and curriculum propositions, some professors developed an interest for PS, and started disseminating this content in their teachings, as the statements below indicate:

*I started working with PS when I got involved with my PhD project, which was related to the topic of safe surgeries. Since then, I started addressing the topic in class, during the subject I teach with other professors in the surgical ward. (PROF07)*

*Since 2009, starting with a change in the syllabus, I teach woman safety at childbirth as a specific content within the syllabus of the subject. (PROF12)*

*I started working with PS in the practical teaching of primary care with the current health legislation. Many health programs refer to specific care for their application with the users. (PROF18)*

*My experience with PS is associated with research about nursing diagnoses in the domain safety and protection of the NANDA I taxonomy. The subject is not specifically about PS, however, the topic is within contexts of healthcare, such as the Intensive Care Unit, and the first-aid post. (PROF20)*

Class II, “Actions to foster PS teaching in nursing graduation”, mentions initiatives to implement this topic in the educational process of future nurses, in different subjects and using different methodologies, as shown in the statements below:

*I have been teaching the mandatory subject “semiology and symptomatology” since 2010, for the nursing graduation course. There, I address the 10 steps of PS with expository classes and written evaluations. (PROF08)*

*In the mandatory subject Integral Adult Health Care I, we always address the topic of PS regarding integral care, as part of the abilities and competences developed in the subject in regard to medical clinics, surgery, and surgical centers [...]. In this semester, we are applying a specific activity about PS in the form of workshops developed by the students. (PROF10)*

*In the topic of Elderly Person’s Health, there is concern in regard to safety, be it in the hospital and home contexts [...]. Teaching methodologies used were mainly those targeted at case studies. (PROF17)*

*I teach the optional subject Topics of PS with professors from the fields of nursing, pharmacy, medicine, infectious diseases, and collective health [...] using active and practical methodologies about the topics addressed, and a final exam in the form of OSCE. (PROF19)*

Class III “Agents of change in the teaching of PS in nursing graduation”, presents proposals regarding how the teaching of PS must be added as a relevant topic in the nursing course, and who can be responsible for such measures. According with the statements:

*One role of universities is working with permanent professor education regarding PS, since this has been one of the main concerns of health organizations in regard to improving the quality of their services [...]. (PROF04)*

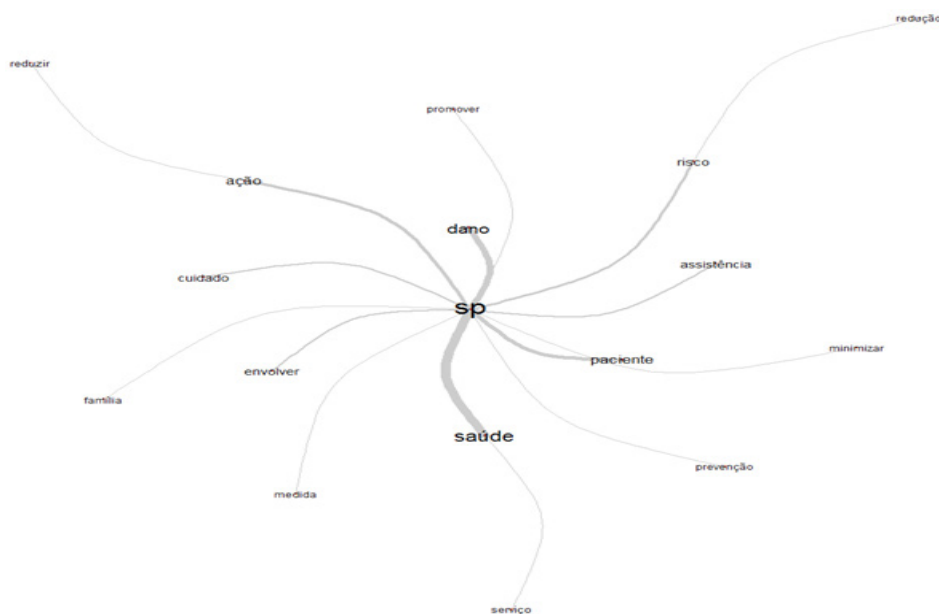
*I would not say that the university has the role of fostering the discussion about PS, but the nursing faculty itself could do so. I find it to be essential, since this is a profession whose quintessence is caring. (PROF06)*

*I believe the university could offer training for professors in the field of health regarding the topic and make available means to encourage interdisciplinary work in the subject. (PROF10)*

*I believe the initiative of centers such as the faculties and post-graduation courses to foster this topic would be extremely valuable, following the example set by current attempts by the collective health faculty in partnership with the QualiSaúde program. (PROF17)*

The understanding of nursing professors regarding the meaning of PS were processed through a similitude analysis, which showed that the participants understand PS as conducive to the promotion of patient health, also believing that it is necessary to take action to prevent harm to these individuals (Figure 2).

**Figure 2** - Similitude analysis of the concepts of nursing professors regarding patient safety



Source: Created by the authors.

## Discussion

The fact that most participants are female is a constant through time when it comes to the sociodemographic profile of nursing workers, stemming from a historical background where women were considered to be responsible for care, since it is seen as an extension of maternal duties<sup>(12,13)</sup>. However, there have been changes in the last years in regard to the presence of men in this role, due to the growth of their presence in nursing assistance, as well as in the political and scientific settings occupied by members of this profession<sup>(13)</sup>.

The mean age of the professors indicates they have life experiences that significantly aid them in the teaching-learning process, as they can explain in more detail the situation which contributed to the establishment of the current PS panorama in the national setting. Examples include the 1988 Federal Constitution, the report "To err is human", the process of DCN elaboration, and others<sup>(8,12,14,15)</sup>.

Furthermore, in class I "First steps and encouragement for the teaching of PS in the nursing course", some professors state they started to insert PS in the content of the subjects starting with changes in syllabi and/or legislation that took place at least 10 years ago.

Comparing these findings, the mean age, and the statements of Class I, we notice that nursing has increasingly updated itself when it comes to knowledge and initiatives in order to improve its practice, which becomes clear considering the valorization of historical movements and documents, and their importance to the advancement of nursing as a science and profession that is extremely important in health services<sup>(3-5,7,13)</sup>.

Regarding time since graduation and working as a professor, the means were similar, indicating the participants had a predisposition for being licensed professors, considering the small, two-year interval<sup>(12)</sup>.

It should be noted that this small separation between academic studies and academic teaching raises questions about whether these

individuals have had some prior approximations to PS and whether they can identify gaps in their formation process in the topic. Therefore, this can suggest strategies to prevent this type of deficit to expand<sup>(16)</sup>.

This perspective corroborates the statements from Class I, where the professors state that they got in touch with PS during their PhD or when developing other research. The same is true in Class III "Agents of change in the teaching of PS in nursing graduation", when they suggest measures that can be taken to foster PS in the formation of future nurses.

The fact that most nursing professors work exclusively as professors gives them more opportunities to structure and carry out research, extension, and advisory projects, which, despite having a certain topic at its fulcrum, can include PS as a transversal topic<sup>(5,13,17)</sup>.

Regarding the type of class taught by the subjects in this research, the professors show a desire to encourage practice considering the complementarity of the activities suggested, since the association between theory and practice allows the student to improve their critical-reflexive thought. When the PS is the main topic of discussion, we expect these participants to understand it as germane, something present in several contexts and configurations of health care<sup>(2,4,5,7,18)</sup>.

Nonetheless, to facilitate the apprehension of knowledge, respecting different styles of learning and achieving better results, the Multiprofessional Curriculum Guide for Patient Safety suggests discussions in small and large groups, case studies, games, guided study, dramatizations, simulations, improvement projects, and problem-based learning (PBL)<sup>(6)</sup>.

Considering this context, Class II, "Actions to foster PS teaching in nursing graduation" shows some teaching techniques in accordance with the propositions of the guide, such as case studies, workshops, and Objective Structured Clinical Examinations (OSCE).

However, it should be noted that the goal here is not using the highest number of active methodologies to make the teaching-learning

environment more dynamic; it is necessary to understand how to use these pedagogical tools in such a way that they are pertinent to the topic of PS they are being used to teach<sup>(5,6,16,18)</sup>.

Regarding the academic level where these professors teach, graduation was the most common, since it was a requirement for participation in this research. However, the implementation of PS in post-graduation also was common, as the professors attempted to reduce/rectify some gap in the competences of their students during their education, reiterating the relevance of working with PS in the educational system (academic MS and PhD) and in direct assistance (professional specialization and MS)<sup>(5,16,18,19)</sup>.

Classes I and II still show that, although PS is not a topic that stands out among mandatory subjects taught by the professors in this research, it is a transversal topic, present in many different approaches, including surgical nursing, women's health, primary care, elderly health, and high-complexity health.

In this regard, associating the topics of PS proposed in the guide of didactic content is a way to foster the discussion and increase the relevance of this topic in the educational process of nursing students, in addition to producing professionals that are more attentive to the practice of PS in the different sectors and complexity levels of health services, especially in regard to permanent education and the management of the Patient Safety Center (PSC)<sup>(5,6,18)</sup>.

As a result, regarding the use of educational methods, lectures, laboratory simulations, and workshops/tutorials are the most commonly used in the teaching of PS in the nursing course, and are in accordance with the proposals in the guide elaborated by the WHO<sup>(5,6,16,18,19)</sup>.

However, it is relevant to employ/implement other tools, in order to increase the understanding of students, attend the different styles of learning, and increase the potential of the 3.0 student as someone active, the main responsible for their own process of teaching-learning<sup>(2,16)</sup>.

Class III shows some suggestions of how to foster the implementation of PS in the nursing course and who should be responsible for doing so. An example is the role of the university as the fulcrum of the promotion of training and encouragement of professors to participate in events that address the topic, to later insert it during their teaching activities.

In this regard, Resolution No. 569/2017 considers it essential for teaching institutions to revisit their Course Pedagogical Projects (PPC) and promote transformative education. That said, it is essential to include PS in the curricular guidelines, in order to reiterate the commitments in the PNSP and the advice from the WHO<sup>(1,2,6,20)</sup>.

Therefore, periodical meetings between university managers and professors are essential, in order to discuss matters that can facilitate the insertion of PS in nursing teaching. These can include improving personnel—thus encouraging leadership and the evolution of professors—and offering structural improvements (materials, instruments, physical structure, and others)<sup>(12,18,19)</sup>.

It should be noted that the influence of partnerships between local, regional, national, and international bodies increases the potential and presence of PS in education, training nursing leaders that can replicate this knowledge as they provide care, a relevant goal for universal care<sup>(3,4,16,18,19)</sup>.

Regarding the concept of PS, the understanding of the professors is like that of the WHO, as they understand it as a factor directly connected to health, contrary to harm, which requires the promotion of safe care in all health services, family involvement as a measure to strengthen care, and actions to prevent/reduce risks to the patient.

Therefore, far from a simple situational diagnosis, this study contributes to cement the importance of PS, while also disseminating the discussion about its implementation in teaching institutions and health services, since many nurses working in assistance did not have the opportunity of learning PS, which, in turn, can be a failure in continued education with direct consequences to work activities.



Furthermore, despite being a local investigation, the results presented here reflect a reality that is common around the world, aiding in the elaboration of further work and aiming to identify barriers that difficult its insertion in the teaching centers, as well as its positive aspects that can be optimized or replicated in other regions.

A limitation of this study is the number of participants, since more respondents would produce more varied perspectives and experiences, which could add to/optimize the data collected.

### Final considerations

According to the participants of this research, the teaching of PS is present in part of the programmatic content of the subjects they teach, and there are initiatives to solidify the presence of this topic in higher education. In addition, they recognize that PS should be a transversal topic; that it is essential to develop it in the education of future nursing professionals, to optimize the quality of care; and that the university and its campuses are essential for the construction of partnerships with other teaching and/or health organizations, be them national or international, with the goal of raising awareness about the topic.

### Collaborations:

1 – conception, project, analysis, and data interpretation: Manacés dos Santos Bezerril and Viviane Euzébia Pereira Santos;

2 – data interpretation and analysis: Manacés dos Santos Bezerril, Flávia Barreto Tavares Chivone, Vanessa de Araujo Lima Freire, Maria Eduarda Gonçalves da Costa and Renilly de Melo Paiva;

3 – writing and relevant critical review of the intellectual content: Manacés dos Santos Bezerril, Flávia Barreto Tavares Chivone, Marcos Antônio Ferreira Júnior e Viviane Euzébia Pereira Santos;

4 – approval of the final version: Marcos Antônio Ferreira Júnior and Viviane Euzébia Pereira Santos.

### Conflicts of interest

There are no conflicts of interest.

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### Note.

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