Patient safety in Primary Health Care: Perception of the nursing team

Segurança do paciente na Atenção Primária à Saúde: percepção da equipe de enfermagem

Seguridad del paciente en la Atención Primaria de la Salud: percepción del equipo de enfermería

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ABSTRACT

Objective: to understand the perception of the Primary Health Care Nursing team on patient safety. Method: this is an exploratory and descriptive study with a qualitative approach conducted with 22 Nursing professionals working in Primary Health Care. The data were collected through semi-structured interviews recorded and analyzed according to thematic content analysis proposed by Bardin. Results: three thematic units emerged, namely: “The meaning of patient safety”, “Contributing factors to the occurrence of errors in health care” and “Strategies for patient safety”. The Nursing team was unaware of the National Patient Safety Program, but they highlighted safe care actions and factors that lead to the occurrence of errors, in addition to recognizing the need for formal education on the subject matter and improvement of the work process and communication with the senior management. Final considerations and implications for the practice: lack of knowledge in the Nursing team indicates the need to train them on the theme to support changes in the work process with the incorporation of protocols and strategies for mitigating and preventing adverse events in Primary Care Health that guarantee more qualified and safer assistance to the user.

Keywords: Primary Health Care; Nursing Continuing Education; Nursing; Qualitative Research; Patient Safety.

RESUMO

Objetivo: compreender a percepção da equipe de enfermagem da Atenção Primária à Saúde sobre a segurança do paciente. Método: estudo exploratório e descritivo com abordagem qualitativa com 22 profissionais da enfermagem atuantes na Atenção Primária à Saúde. Os dados foram coletados por meio de entrevistas semiestruturadas gravadas e analisados segundo a análise temática de conteúdo proposto por Bardin. Resultados: emergiram três unidades temáticas: “O significado de segurança do paciente”, “Fatores contribuintes para a ocorrência de erros na assistência à saúde” e “Estratégias para a segurança do paciente”. A equipe de enfermagem desconhecia o Programa Nacional de Segurança do Paciente, mas destacaram ações de cuidado seguro e fatores que levam a ocorrência de erro, além de reconhecerem a necessidade de uma educação formal sobre a temática e melhoria do processo de trabalho e da comunicação com a alta gestão. Considerações finais e implicações para a prática: o desconhecimento da equipe de enfermagem indica a necessidade de capacitação na temática para subsidiar alterações no processo de trabalho com a incorporação de protocolos e estratégias de mitigação e prevenção de eventos adversos na Atenção Primária à Saúde que garantam uma assistência mais capacitada e segura ao usuário.

Palavras-chave: Atenção Primária à Saúde; Educação Continuada em Enfermagem; Enfermagem; Pesquisa Qualitativa; Segurança do Paciente.

RESUMEN

Objetivo: comprender la percepción del equipo de enfermería de Atención Primaria de Salud sobre la seguridad del paciente. Método: estudio exploratorio descritivo con abordaje cualitativo, llevado a cabo con 22 profesionales de enfermería que se dedican a la Atención Primaria de la Salud. Los datos fueron recolectados a través de entrevistas semiestructuradas grabadas y analizadas de acuerdo al análisis de contenido temático propuesto por Bardin. Resultados: surgieron tres unidades temáticas: “El significado de la seguridad del paciente”, “Factores que contribuyen a la ocurrencia de errores en la atención de la salud” y “Estrategias para la seguridad del paciente”. El personal de enfermería desconocía el Programa Nacional de Seguridad del Paciente, pero destacó acciones de cuidado seguro y factores que conducen a la ocurrencia de errores, además de reconocer la necesidad de educación formal en el tema y mejora del proceso de trabajo y comunicación con la administración. Consideraciones finales e implicaciones para la práctica: el desconocimiento del equipo de enfermería indica la necesidad de que el mismo reciba formación en la temática para fomentar cambios en el proceso de trabajo con la incorporación de protocolos y estrategias de mitigación y prevención de eventos adversos en la Atención Primaria de la Salud que garanticen una asistencia más cualificada y segura al usuario.

Palabras clave: Atención Primaria de la Salud; Educación Continua en Enfermería; Enfermería; Investigación Cualitativa; Seguridad del Paciente.
INTRODUCTION

Patient safety is defined as the reduction of unnecessary risks and harms associated with health care to an acceptable minimum level and has been a recurrent theme in health programs and policies around the world. It gained visibility after the release of the To err is human report by the Institute of Medicine (IOM) and with the creation of the World Alliance for Patient Safety by the World Health Organization (WHO) in 2004. In Brazil, in 2013 the National Patient Safety Program (Programa Nacional de Segurança do Paciente, PNSP) was instituted together with Resolution No. 36 of the Collegiate Board of Directors (Resolução da Diretoria Colegiada, RDC), which provided for the development of six basic protocols on patient safety and the creation of Patient Safety Centers (Núcleos de Segurança do Paciente, NSPs). These should promote and support the implementation of actions aimed at patient safety in different health care locations such as hospitals, basic health units (BHUs), clinics and specialized diagnostic and treatment services.

In a hospital context, it is identified that patient safety is already being discussed more vigorously and that the safety culture is better established. However, in Primary Health Care (PHC), it is necessary to make progress since, despite being considered relatively safe, errors and adverse events are also present at this care level. It is noteworthy that the concept of error in patient safety consists in a failure performing some planned action, that is, doing it wrong (mistake by commission) or by incorrectly carrying out a plan (error due to omission). In this context, adverse events occur when some circumstance can result in harm to the patient.

A study showed that errors in PHC can be influenced by ineffective communication, inefficient management, problems with physical space and training of health professionals. Among the most common errors in PHC, medication errors and diagnostic errors were reported. Recently, a Brazilian study at in PHC identified three incidents per 1,000 cases in a trimester of 2018. In this case, administrative errors were the most reported, followed by treatment errors. Thus, many of the complications that reach the hospital environment come from other health units, such as PHC.

In 2017, patient safety was officially included in the National Primary Care Policy (Política Nacional de Atenção Básica, PNAB) by encouraging the development of safe care and promoting the safety culture among the professionals working in PHC. Patient health care in PHC is offered by a multidisciplinary team, with Nursing being an integral part of this composition.

Nurses must be responsible for planning and carrying out Nursing activities, from the provision of materials to team training. In addition to that, they work in Nursing consultations; requests for exams; prescription of medications; referral to other services; planning; management; permanent and continuing education; and control of inputs destined to the BHUs.

Considering that the activities performed by the Nursing team are complex and, therefore, likely to generate incidents, it is important that they occur in order to ensure safe care with a focus on promoting the patient safety culture. In this context, it is understood that the PHC nurse must understand the concepts of safety and act according to their guidelines.

Therefore, carrying out a study that identifies how the Nursing team perceives patient safety in the daily work in PHC can open paths for developing strategies to control and mitigate adverse events and to strengthen patient safety in the BHUs.

It is also worth mentioning that it is necessary to advance with the theme in the PHC scenario, since it is considered the patient’s gateway to the Unified Health System (Sistema Único de Saúde, SUS), in addition to being the reference center in communication with the entire care network, ordering and coordinating health care.

In this context, this study aims at understanding the perception of the PHC Nursing team about patient safety, based on the following guiding question: How does the Nursing team perceive patient safety in their work process?

METHOD

This is an exploratory and descriptive study with a qualitative approach. Qualitative research allows working with the universe of meanings, beliefs, values and attitudes, being therefore concerned with aspects of reality that cannot be quantified.

It is noteworthy that the methodological guidelines were based on the Consolidated Criteria for Reporting Qualitative Research (COREQ) checklist, in order to guide conduction of this study.

The study setting was a municipality located in the Midwest Region of Minas Gerais that had 100% coverage by PHC. It had 12 Family Health Strategy (FHS) teams with 24 active Nursing professionals, including nursing technicians and nurses. All the Nursing professionals who comprised the FHS teams were considered potential study participants, and the study sample was intentional and non-probabilistic, considering the following inclusion criteria: being a nursing technician or nurse working in PHC with at least six months of experience. Those who were distanced from PHC activities due to any type of medical or vacation leave during the period of interviews were excluded.

Prior contact was made with the 12 FHS Nursing teams to present the study objective. After accepting to participate, the interviews were scheduled and carried out in a reserved place in the FHS premises, on a day and time agreed upon with the participants to ensure confidentiality and secrecy of the information collected. The participants were 22 Nursing professionals. Two professionals were excluded from the sample, one for having worked in the FHS for less than six months and the other for being on vacation when data collection took place. The interviews were conducted by the research team, consisting of a PhD nurse with extensive experience in the subject matter and in conducting the methodology, together with a properly trained undergraduate Nursing student. They lasted a mean of twenty-five minutes.
and were audio-recorded with the participants’ consent after signing the Free and Informed Consent Form (FICF), and were later transcribed in full for data analysis. The transcripts were not returned to the participants for reading and corrections, which represents a limitation of this study.

Data collection was carried out in July 2018, using a semi-structured script developed by the researchers with the following guiding questions: What do you understand by patient safety? Can Nursing care impose risks on the patient? If so, in what way? In the last year in your work environment, did you experience errors related to assistance? Could you briefly report what happened? Which strategies can be used to improve patient safety in your work environment? The script contained some questions about the participants’ sociodemographic profile, such as: training time, time working in PHC and knowledge about the PNSP. The interviews were ended when there was exhaustion of the possible number of participants, that is, when there were no more participants who fit the inclusion criteria.

The data were analyzed after applying the interview script according to the theoretical and methodological framework proposed by Bardin, which consists of a thematic content analysis technique conducted in three stages: (1) Pre-analysis: characterized by the transcription of raw data and “floating reading” of the data, an activity that aims at generating initial impressions about the material to be analyzed; (2) Material exploration: organization of categories that express the content analyzed, by reducing the text to expressions or words and subsequent data aggregation into categories; (3) Treatment of the results and interpretation: it consists in analyzing the data obtained based on selected theoretical material or on new theoretical dimensions. The analyst, having at his disposal significant and faithful results, can then propose inferences and advance interpretations regarding the foreseen objectives, or concerning other unexpected discoveries14. The analysis categories were defined and refined during the interview coding process.

The research was approved by the Committee of Ethics in Research with human beings of the proposing institution, under opinion number 2,555,888. It is noteworthy that all the participants signed the FICF and that the ethical aspects were followed and respected according to Resolution 466/12, which deals with research in human beings. To ensure the participants' anonymity and confidentiality of the information, their statements were identified by the letters E for nurse (“Enfermeiro” in Portuguese) and TE for nursing technician (“Técnico de Enfermagem” in Portuguese), followed by ascending Arabic numerals following the order of participation in the research, according to these examples: (E1, E10, TE5, TE11...).

RESULTS

Regarding the participants’ sociodemographic characteristics, of the 22 Nursing professionals, 50% were nursing technicians and the other 50% were nurses. Of these, 100% were women. Regarding the time working at PHC, it varied from one to fourteen years. In relation to the time since graduation, 36% of the participants graduated less than five years ago, 41% between six and ten years ago, 18% between eleven and twenty years ago, and 5% more than twenty-five years ago. In the question referring to knowledge about the PNSP, 100% of the sample reported not knowing the program.

By analyzing the interviews with the participants, the results were organized and systematized into three categories: The meaning of patient safety; Contributing factors for the occurrence of errors in health care; and Strategies for patient safety.

The meaning of patient safety

In this category, the participants’ perception of patient safety in PHC was portrayed. It was noticed that they understand patient safety as harm-free care, whose perspective must be holistically directed to the patient.

Providing better quality of care to the patients, starting from their entry into the unit, at their welcoming. It ranges from speaking, detecting the problem, knowing the patient’s need, and from that we refer to the service providing the best quality for the patient (NT6).

Preserving their safety, taking care not to injure them, not to be causing any harm to them (E11).

They stated that patient safety is associated with the safe performance of procedures, which must follow operational standards. Despite declaring not knowing the basic protocols provided for by the PNSP, the speeches converged with their contents.

Daily care with the tube, decubitus change, doing any type of procedure, always respecting how it’s done, the material that is used, observing if it really is the right patient (E3)!

[…] it’s very broad, right, both in the medication form, the right amount, the right dose, at the right time, the right route, knowing what you’re doing, right, mainly vaccines (E5).

The Nursing professionals considered professional safety as part of patient safety, since one complements the other.

The professionals at that moment have to have all the material, all the equipment so that they can both preserve their own safety the patient’s (NT2).

I understand how I can use all the PPE that is necessary, both for my protection and for theirs. I think that one of the main things is that we always wear gloves, masks when necessary […] (TE4).

In view of the participants’ statements, it was noticed that they understand the concept of patient safety as multifactorial and, despite declaring that they do not know the PNSP, their knowledge converged with the guidelines recommended in it.
Contributing factors for the occurrence of errors in health care

The participants reported situations that can contribute to the occurrence of errors in health care. In addition to that, they described the experiences related to errors and how they impact on their daily work process and professional career.

Infrastructure can be a predisposing factor to the occurrence of failures in the care process, since many units are not designed for this purpose, and are located in old and adapted buildings, which can expose the user to greater risks.

Our unit is not able to receive patients, in fact, we don’t even have a wheelchair. The structure is not designed, the doors... There’s the issue of the bathroom... We have a little stair there that we couldn’t put the ramp on. Access is difficult in the little hallway there at the entrance because there are two small stairs that you can trip over (E1).

[...] do nebulization along with other procedures, medication along with a dressing, apply a dressing along with serum therapy... Mix of procedure in the same room. Even when separated – more or less separated – it can happen, after an hour in the tumult, mixing (NT3).

Work overload with consequent fatigue of health professionals was identified by one participant as a risk factor for the occurrence of errors.

In primary care, that’s the thing: we work very suffocated, we don’t have all the means we should have to work and sometimes we get a bit overwhelmed with functions and have to do a million things at the same time and we end up with a little bit of inattention, maybe because of stress or fatigue and also due to lack of responsibility, the error happens because we make mistakes because of the smallest details (NT4).

Some participants believed that errors in health care had a direct connection with basic precepts that should be followed by Nursing, but that are put aside by many professionals.

Unfortunately, sometimes there are people who don’t have another job, so they’re there in Nursing, they do it because they do it and don’t really pay attention, you know? When you’re going to talk, he’ll tell you the whole theory right, he’ll be one of the best to ask a question, to make an objective test, but at the time of practice he knows he’s wrong, but he never changes. He’s going to do it the same way, it’s no use (E3).

[...] you don’t know what you’re doing, you’re not sure, you’re not safe and do it anyway (E5).

When asked about the experience of errors in health care in the workplace, the participants brought up significant reports, describing the errors experienced. It is noteworthy that medication errors (MEs) were the most commonly mentioned by the participants, with failures being identified in all stages of the medication and immunobiological administration process.

Lots of errors with vaccines, wrong administration, wrong needle, almost vaccine changes. Wrong medication I’ve never seen it, but I already took expired medication that was there to administer (E10).

Sometimes it’s the medical prescription... Sometimes the person doesn’t understand the doctor’s handwriting, reads something, thinks it is and does it. I have already taken prescriptions from patients at the unit... The patients leave with a medical prescription for several days, so they’re medicated both here and in the hospital and then I have already taken a patient who already had seven days, six days of wrong medication (NT2).

In the participants’ statements, it was observed that the error is hardly overcome by the person who was responsible for it.

To this day, it’s something I haven’t overcome because even though I wasn’t involved, it was something that, due to someone’s mistake, completely changed a person’s life, that’s why I said, safety in all aspects (E7).

[...] they called my attention obviously for me to have more attention and now it seems that it even becomes an OCD after it happens (NT4).

By listing the main causes of errors in health care, the participants addressed important issues that could be worked on in the daily service in order to minimize the possibility of harms to the patient and the professional.

Strategies for patient safety

This category brought up the behaviors that the participants considered as essential to improve patient safety in their work environment. Given the difficulties encountered in relation to infrastructure and the lack of supplies, the importance of planning was highlighted, given the routine of the service and the provision of quality materials to provide adequate conditions for the safety of patients and professionals alike.

Provide some structure. You’re seeing a patient, the other is already calling you, the other is already shouting at you from somewhere else. This distracts you and I think it gets in the way a lot. If the physical structure could be more reserved for the Nursing team, it would be better. I think it would help a lot (NT2).

I say: Some materials, resources, materials to work with the patient. I see that, at the unit, they assist in a more flexible way, from here, from there, we manage to assist (NT6).
There were many reports about the need for special care with the medication administration process, which could be related to the reports of errors experienced by these professionals during their daily practice.

We have to be always attentive to the issue of medication, issue of procedure to be performed, issue of patient positioning, for example, on the stretcher, in a chair, even helping that patient to walk. We have to be aware of this when performing the procedures (E4).

The medical prescription needs to be very readable, it also helps a lot (NT2).

One of the points most mentioned by the participants was the need for professional qualification, either through permanent or continuing education in Nursing, as they understand that professional updating, on patient safety, can offer them tools to plan and improve the care offered, minimizing the possibility of occurrence of errors in care.

Training right, always be informed. Like this security program I didn’t know it existed, in college I don’t remember seeing it. We need training improvements and updates (E5).

I think that we have to take more care, read, and seek more knowledge to be providing better quality care (E11).

Finally, the participants highlighted the need for communication between management and other health professionals, as they felt excluded from decisions related to the environment and the work process. Some nursing technicians reported that the entire communication from the senior management is primarily conducted with the nurses, and they pass on the information to the rest of the team.

Autonomy for management. Ask for it! Because it’s no use just training and then not being able to demand it. Sometimes the professionals are even trained, they receive training, but many times they avoid exercising that in the best way because there’s no right to ask for it (E9).

Usually the training sessions are only done with the nurses, so sometimes they can’t even convey to us what was given to them. So this issue of training for everyone, I think improvement should be for everyone (NT4).

DISCUSSION

More than one third of the participants had less than five years since training, the date on which the PNSP had already been published and which possibly indicates inclusion of the theme in the health professionals’ academic training4. Although the theme has a legal recommendation to be discussed in the curricula of technical, undergraduate and graduate Nursing courses, it is still flawed. A Brazilian study reports that the incorporation of patient safety in the courses’ Political Pedagogical Projects (PPPs) is implemented in a fragmented manner, lacking depth and breadth15.

Although the topic may not have been discussed and implemented during the participants’ academic training process, it is necessary to ponder on the role of the Nursing professional in the constant search for professional updating, regardless of whether it is offered by their employer. Nursing professionals must be responsible for the construction and continuous improvement of their knowledge in the daily work, and mainly, assume attitude and criticality about the impact of their performance in the environment in which they are inserted16. It is currently considered that patient safety is a widely discussed topic in the Brazilian scenario, through the Ministry of Health (Ministério da Saúde - MS) programs and regulations. However, health professionals must also seek knowledge and implementation of safety measures in the work environments.

Another important aspect to be highlighted is the mandatory existence of the NSPs in health services and their role in the training of professionals5. In the municipality where the study was carried out, until data collection was concluded, none of the participants received training on the subject matter or mention the existence of an NSP, which indicates that, even if this center exists, it has not worked as required by the MS norms, suggesting a failure in the management process.

Although the participants are unaware of the PNSP, they perceive patient safety as providing comprehensive and harm-free care. The professionals’ perception is in line with the description by the WHO1. It is also possible to identify in the speeches that there is an understanding that patient safety is multifactorial; therefore, it depends on several aspects and on the collective effort of those involved in the health care production process. The interdisciplinary team in PHC needs to act responsibly, aiming at safe care of the entire community17. This issue is evident when the participants identified elements that could compromise patient safety at the BHU.

One of the obstacles that can contribute to the occurrence of errors in PHC is the inadequate infrastructure for care, highlighted by the participants. Other studies also bring about structural issues as obstacles to providing safe care, hindering patient accessibility and making them more vulnerable to accidents. Problems such as the absence of ramps, uneven floors and lack of equipment maintenance are mentioned16,17.

Health services with poor accessibility can be a trigger for falls and injuries in patients18. Currently, one of the MS strategies is the Requalifica BHU, which proposes a physical structure with adequate conditions for work in health, promoting improved access and primary care quality19.

Difficulties related to work overload also emerged in this research, being considered a predisposing factor for the occurrence of errors. A Brazilian study involving nurses in PHC identified that work overload, reduced staff and scarce or inappropriate material are factors that can exert an impact on the quality of care provided to the users in Family Health Strategy (FHS) units. In addition
to that, tiredness and development of diseases can increase turnover and the absenteeism rate of these professionals, resulting in unsafe care\textsuperscript{17}.

The health services must have human resources in adequate numbers and trained to monitor and improve safety in care\textsuperscript{8,20}. The PNAB states that distribution of the professionals’ workload is up to the manager, and that the demographic and epidemiological profile of the population should be considered to avoid unequal work distribution among the teams\textsuperscript{10}.

Some common errors in patient care in PHC were pointed out, with emphasis on medication errors, which are generally related to the administration of immunobiologics\textsuperscript{21}. Errors in the vaccination room can exert a very negative impact on the users involved, even generating serious adverse events such as death. Therefore, it is important that the health professionals involved in the process have sufficient knowledge and dexterity to develop work with immunobiologics\textsuperscript{25}.

A systematic review identified that the frequency of incidents in PHC is associated with the following: the medication system, especially prescription error, diagnosis identification, delay in providing information, interpretation of laboratory results, identification of complications, and lack of knowledge in the professionals\textsuperscript{23}.

Among the strategies that can be used to prevent medication errors, the implementation of electronic prescriptions, the development of a safety culture and the improvement in the communication process stand out\textsuperscript{24}. The good safety practices in the vaccination process should consider the use of clinical simulations with working professionals and in the academic training of students who will be part of the Nursing team\textsuperscript{27}.

It is noticed that, when there is an error in care, the health professional is also affected. These situations can impact and interfere in professional and personal life, even leading to mental illness\textsuperscript{25}.

To err is human, but the influence of work flows and processes on the occurrence of errors is highlighted. The health services need to be organized with well-defined work processes in order to act as a barrier to the occurrence of incidents. Construction of a patient safety culture depends on the senior management and on the conditions offered by it for its incorporation in the work environment\textsuperscript{26}.

Through the necessary instruments to advance with patient safety in PHC, in-service education is highlighted, which can sensitize health professionals, especially the Nursing team, to implement safety actions in the work environment. Permanent education allows workers to share their daily experiences and can contribute to reducing errors. Conducting training sessions and periodic meetings among the teams is one of the possible tools to enhance in-service education\textsuperscript{6,27}.

The issues raised by the research participants refer to the need to develop management strategies that are capable of mitigating weaknesses and proposing advances for the effectiveness of patient safety actions. The capacity for dialog and involvement of the professionals in the strategic planning of the BHUs may be able to reduce the gaps between the scientific theories and the workers’ practical experiences. There needs to be alignment between the management’s actions and the professionals’ values\textsuperscript{6,28}.

It is clear that one of the management strategies that can enhance prevention of errors in PHC is the development of a Patient Safety Plan (PSP). The participants did not talk about PSP, but it is a mandatory tool that allows identifying risk situations in health care and proposing coping strategies through detailed actions\textsuperscript{6}. It is also worth highlighting, despite not having been mentioned, the need to include the patients in the elaboration of safety strategies, considering that conscious patients are able to act more effectively in their own treatment.

As explained so far, it is evident that patient safety in PHC permeates several work fronts and that, for its effectiveness, a joint effort by the management and health professionals involved in the assistance is necessary.

**FINAL CONSIDERATIONS AND IMPLICATIONS FOR THE PRACTICE**

The study identified that, despite the fact that the Nursing team working in PHC was not formally aware of the PNSP, patient safety was perceived as essential to user assistance. However, it is important that Nursing professionals understand that they are responsible for improving knowledge, skills and abilities to provide evidence-based care, according to the context in which they are inserted. Thus, the Nursing team needs to be heard and trained on the subject matter. In addition to that, the study pointed out some factors for the occurrence of errors in health care in this scenario: inadequate physical structure, deficiency or lack of material resources and professional overload. Therefore, PHC managers are suggested to implement important actions to improve patient safety and, consequently, reduce the occurrence of incidents, such as: permanent and continuing education in nursing, effective communication between different levels of management, restructuring of the environment and acquisition of adequate inputs.

It is believed that this study can instigate future reflections for the development of new research studies, within the academic and administrative training process of nurses and in the practice of managers in the context of patient safety in PHC. The study limitations refer to conducting interviews with Nursing professionals from a specific context and region; the data analyzed need to be interpreted considering their singularities.

It is noteworthy that, although patient safety is under responsibility of the multidisciplinary team, this research assessed the perception of only one professional category.

**AUTHOR’S CONTRIBUTIONS**


Interpretation of the results. Liliane de Lourdes Teixeira Silva. Felicia Cristina de Souza Dias. Naiara Tauane Pires Mafto. Aline Carrilho Menezes

Writing and critical review of the manuscript. Liliane de Lourdes Teixeira Silva. Felicia Cristina de Souza Dias. Naiara Tauane Pires Mafto. Aline Carrilho Menezes

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Responsibility for all aspects of the content and integrity of the published article. Liliane de Lourdes Teixeira Silva. Felicia Cristina de Souza Dias. Naiara Tauane Pires Mafto. Aline Carrilho Menezes

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