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Patient safety from the perspective of family health strategy nurses

Segurança do paciente sob a ótica de enfermeiros da estratégia saúde da família

La seguridad del paciente en la perspectiva de los enfermeros de la estrategia de salud de la familia

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ABSTRACT

Objective: to identify the knowledge of nurses who work in the Family Health Strategy regarding patient safety. **Method:** exploratory, descriptive qualitative research, carried out with 20 nurses from the Family Health Strategy in a municipality in Paraná. Data collection was carried out from July to December 2021 with semi-structured interviews. Data was categorized and analyzed using the Iramuteq software. **Results:** nurses reported difficulties in the work process that potentially jeopardize patient safety. The following factors contribute to the patient safety concerns: shortage of professiomals, work overload, communication failures, teamwork and training process, impact of the pandemic against COVID-19, adverse events and reporting culture. **Final considerations:** the study demonstrated the fragility of nurses in relation to patient safety in Primary Health Care and the need for the topic to be widely discussed among all components of the Family Health Strategy teams.
Descriptors: Primary Health Care; National Health Strategies; Nurses; Patient Safety.

RESUMO

Objetivo: identificar o conhecimento dos enfermeiros que atuam na Estratégia Saúde da Família quanto à segurança do paciente. **Método:** estudo qualitativo exploratório, descritivo, realizado com 20 enfermeiros da Estratégia Saúde da Família de um município paranaense. A coleta de dados foi realizada entre julho e dezembro de 2021 com entrevistas semiestruturadas. Os dados foram categorizados e analisados com auxílio do *software Iramuteq.* **Resultados:** os enfermeiros relataram dificuldades no processo de trabalho e aspectos que influenciavam nas ações relacionadas à segurança do paciente: falta de profissionais, sobrecarga de trabalho, falhas na comunicação, trabalho em equipe e processo de formação, impacto da pandemia contra COVID-19, eventos adversos e cultura de notificação. **Considerações finais:** o estudo demonstrou a fragilidade dos enfermeiros em relação à segurança do paciente na Atenção Primária à Saúde e a necessidade de o tema ser amplamente discutido entre todos os componentes das equipes da Estratégia Saúde da Família.
Descritores: Atenção Primária à Saúde; Estratégia de Saúde da Família; Enfermeiras e Enfermeiros; Segurança do Paciente.

RESUMEN

Objetivo: identificar el conocimiento de los enfermeros que actúan en la Estrategia Salud de la Familia en cuanto a la seguridad del paciente. **Método:** Investigación cualitativa, descriptiva, exploratoria, realizada con 20 enfermeros de la Estrategia Salud de la Familia en un municipio de Paraná. La recolección de datos se realizó entre julio y diciembre de 2021 por medio de entrevistas semiestructuradas. Los datos fueron categorizados y analizados utilizando el software *Iramuteq*. **Resultados:** los enfermeros declararon dificultades en el proceso de trabajo y aspectos que influyeron en las acciones relacionadas con la seguridad del paciente: falta de profesionales, sobrecarga de trabajo, fallas en la comunicación, trabajo en equipo y proceso de capacitación, impacto de la pandemia frente a la COVID-19, eventos adversos y cultura de notificación. **Consideraciones finales:** el estudio demostró la fragilidad de los enfermeros respecto a la seguridad del paciente en la Atención Primaria de Salud y la necesidad de que el tema sea ampliamente discutido entre todos los componentes de los equipos de la Estrategia Salud de la Familia.
Descriptores: Atención Primaria de Salud; Estrategias de Salud Nacionales; Enfermeras y Enfermeros; Seguridad del Paciente.

INTRODUCTION

Patient Safety (PS) gained greater global visibility after the publication of the "To err is human" report, which evidenced a significant increase in Adverse Events (AEs) caused by medical errors in hospitals[1]. In Brazil, the National Patient Safety Program (*Programa Nacional de Segurança do Paciente*, PNSP) was established in 2013, defining PS as the reduction of unnecessary health risks to the minimum acceptable level[2].

PS applies to all health services[2], as well as to Primary Health Care (PHC) articulated with the Health Care Network (HCN) and the National Primary Care Policy (*Política Nacional da Atenção Básica*, PNAB)[3], highlighting as a priority to consolidate and qualify the Family Health Strategy (FHS) as a basic care model and organizer of the HCN, thus seeking better results in reducing mortality, expanding access to treatments, controlling infectious diseases, increasing equality of access and reducing hospitalizations[4].

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Although it aims at reaching all health services, the hospital context stands out in terms of research. There is incipient scientific production on the theme within the PHC scope and in the FHS in particular, limited to aspects of the PS culture[5] and the management perspective[6], without deepening front-line nurses' knowledge on the PS precepts.

A study showed that errors in PHC can be caused by ineffective communication, inefficient management, problems in the physical structure and training of the professionals[7]. The most common errors are medication and diagnosis errors, showing that many complications that occur in the hospital environment had their origin in other health institutions, even in PHC[7].

In this sense, given the gaps in scientific publications, it is of utmost importance to carry out studies on the theme in this first care point, which may come to contribute to reflections and to constructing scientific knowledge, serving as a reference to assist in the search for better care quality.

Given this, and based on the following guiding question: *How do Family Health Strategy nurses understand Patient Safety?*, this study aimed at identifying the knowledge of nurses who work in the FHS regarding PS.

METHOD

An exploratory, descriptive and qualitative study, carried out in accordance with the recommendations set forth in the *Consolidated Criteria for Reporting Qualitative Research* (COREQ)[8].

The population consisted of 48 nurses working in Family Health Units (FHUs) from the municipality of Cascavel, located in the West region of the state of Paraná, which has 33 FHS units. Of these, 20 nurses comprised the sample, ten refused to participate and 18 were absent during the data collection period.

The participants were selected intentionally and for convenience. The inclusion criteria were as follows: being a nurse working in the FHS and working time of at least six months. The exclusion criteria were the following: being away from work (medical certificate or leave) during the data collection period, from July to December 2021.

Semi-structured interviews were used as data collection technique, carried out by one of the researchers, who worked as a resident nurse at FHS units in the municipality. Recruitment or the participants was via a messaging app to present the research proposal and invite them to participate. There were no conflicts of interests between the researcher and the participants.

After accepting and signing the Free and Informed Consent Form (FICF), the previously scheduled interviews with the professionals were carried out in the workplace in a private room, only with the researcher and the participant.

The script for the semi-structured interviews was prepared by the researchers and contained diverse information to characterize the participants with questions regarding sociodemographic data (age, gender, professional experience) and 10 open questions based on the *Hospital Patient Safety Questionnaire* (HSOPSC)[9]: “What do you understand by patient safety?”; “How do you consider teamwork in your unit? Are there enough professionals to meet the demand?”; “Are there healthcare-related errors in your unit? Have you ever witnessed an error situation?”; “If so, was it noticed before it reached the patient? Which was the error? Were you notified?”; “Were alternatives and/or measures discussed as a team to prevent the error from occurring again?”; “Do you usually notify incidents and/or adverse events? Do you use any instrument for notification (spreadsheet/form/computerized system)?”; “Do you consider that your errors can be used against you?”; “Are your suggestions for improvements well accepted by the unit coordination or management?”; “Regarding communication, do you think that your team maintains effective communication? Are there difficulties exchanging information? Which are the main reasons for communication failure in your unit?”; and “Do you and your team participate in meetings and/or training on patient safety topics?”.

A pilot test was carried out with three nurses to test the instrument and identify the need for adjustments to data collection, finding no need for changes.

The interviews were audio-recorded with a smartphone device and lasted a mean of 15 minutes. They were transcribed and forwarded to the participants via a text message app to validate the information, which remained in accordance with the transcripts sent.

For data analysis, the procedures recommended by Creswell[10] were developed, which consist in organizing, preparing, reading and coding the data. For data coding, the *Interface de R pour les Analyses Multidimensionnelles de Textes et de Questionnaires* (Iramuteq®) qualitative research software was used, with a total of 20 texts coded in a *txt* format document.

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The analysis performed was Descending Hierarchical Classification (DHC), described as a method of grouping identified segments of similar texts[11]. In each class of the dendrogram, the highest frequency of words and their association with the respective classes were analyzed[11,12]. Data saturation was reached after identifying the thematic categories considering coherence, consistency in the information collected and absence of new elements in the text segments[10].

The current study was approved in compliance with the ethical precepts for research with human beings. To ensure anonymity, the following identification code was used: P (Participant); X (Number in Arabic numerals in ascending participation order); F/M (Female or Male); and N (Age). Example: P1F32.

RESULTS

Regarding characterization, 19 of the 20 participants were female and one was male, with a mean age of 36.5 years old; mean time working in Nursing of 12.5 years and mean time working in the FHS of eight years. In addition, 13 worked in the hospital environment, two did so in rural units and six were clinical nurses and unit coordinators.

The Iramuteq® operationalization resulted in 622 text segments, with 94.96% leverage and divided into six classes, as shown in Figure 1.

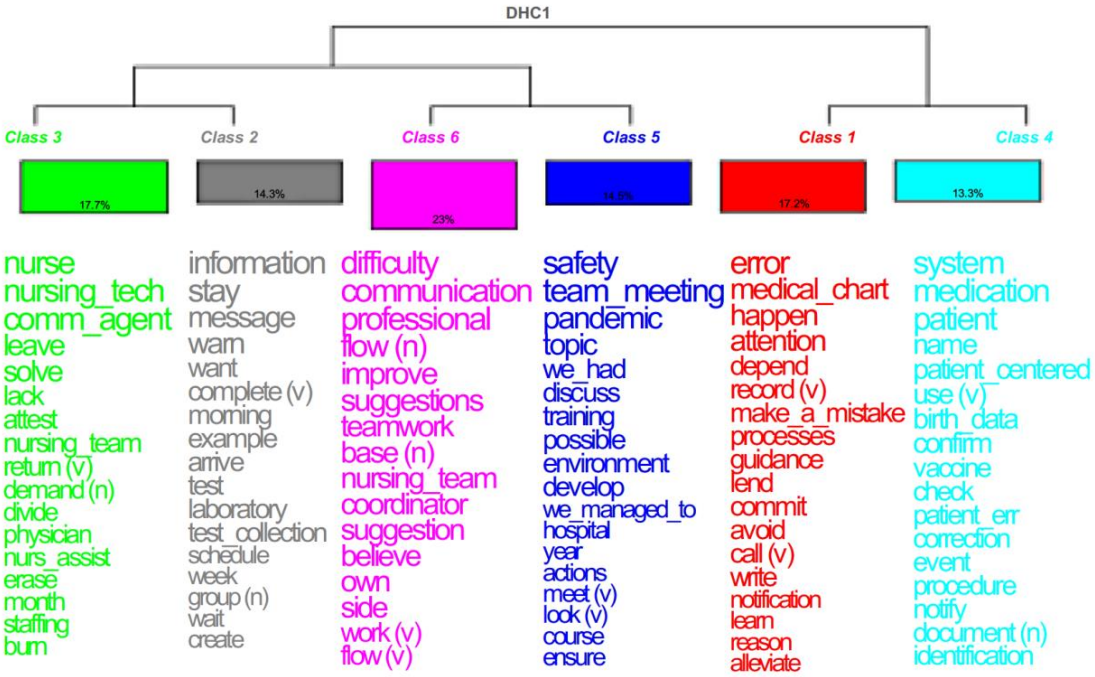

Figure 1: Class division performed in the Iramuteq® software. Cascavel, PR, Brazil, 2021.

After analyzing the dendrogram, the words that stood out the most were observed according to their frequency. The first thematic category emerged from the text segments selected in classes two, three, five and six and portrayed the professionals' testimonies regarding nurses' understanding about PS and the work process in the FHS: PS, teamwork, communication, number of professionals and impacts caused by the pandemic. In turn, the second thematic category emerged from classes one and four and encompassed the Patient Safety culture and errors related to care and to notification (Figure 2).

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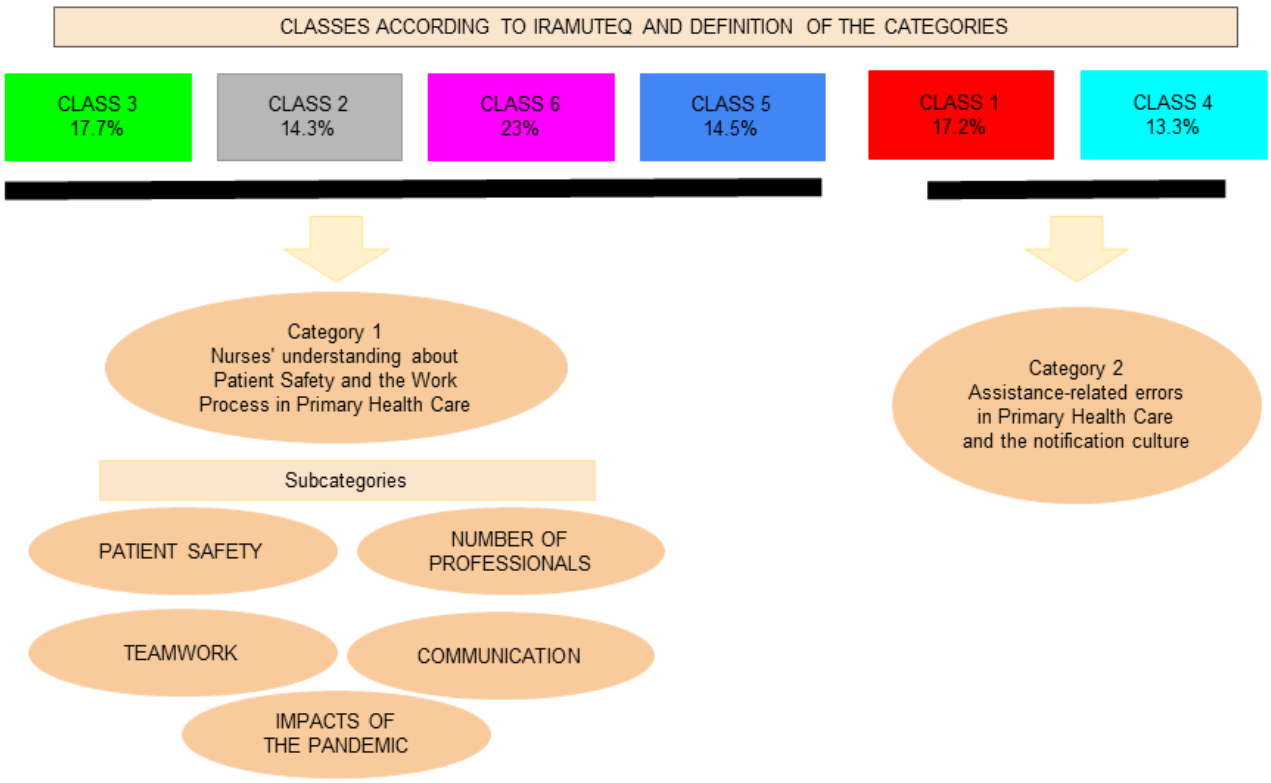

Figure 2: Division of classes according to Iramuteq® and definition of the categories. Cascavel, PR, Brazil, 2021.

Nurses' understanding about Patient Safety and the Work Process in Primary Health Care

Patient safety

> *Patient safety is a set of actions aimed at reducing harm, which is not harm that we should cause. (P01F36)*

As Patient Safety I understand that we have to make the environment more open, safer for patients to be able to move around the unit, to get there, the handrail there, because here we don't have one because everything is flat, but if we need to have the handrail, the entrance there, but also patient safety with documentation at the entrance. (P14F30)

Teamwork

> *I think that it works well, because all teams have interpersonal problems. (P18F43)*

Number of professionals

> *The way that it's recommended for us to comply with the protocols, [...] in Primary Care we're very far from that, we need more nursing technicians. (P02F36)*
>
> *As a nurse I handle Nursing and Coordination. (P15F25)*

Communication

> *In the team meetings, I always reinforced the importance of communication, the importance of correctly identifying the patient. (P02F36)*

Impacts of the pandemic

> *With the pandemic, honestly it was very difficult, because we had to adapt, and there was a huge lack of employees, a lot of shortages, even of nurses, who are responsible for this training. (P11F41)*
>
> *Now everything is online and we don't have time to watch, it's difficult for anyone to block their schedule to watch. (P18F43)*

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The management usually sends information after working hours, [...] it's important that the information arrives in a timely way. (P05F51)

Assistance-related errors in Primary Health Care and the notification culture

I started prenatal care, did a quick test on the pregnant woman and her syphilis test was positive, so I needed to start the treatment immediately, due to lack of professionals and/or protocol, I wasn't able to do that. I made several attempts to get her to return to the unit and I was unable to do so. (P03F40)

Several errors in the technique itself, the Nursing technique, mainly incorrect checking of vital signs, incorrect administration of injectables, it happens. (P02F36)

A nursing technician that works at the pharmacy dispensed the wrong medication to the patient, the patient didn't know how to read, and the person who saw it was a family member at home. (P15F25)

No, we only notify (at least from what I know) through our own reports. (P12M44)

Vaccination errors must be reported immediately to PMI, notifying the error that exists in the system and warning the professional who was in charge. Then this warning to the professional is called a guidance record and the professional has his defense alibi. (P06F36)

There isn't much time left to keep making notifications, but we always try to talk to the team. (P09F35)

DISCUSSION

It is known that it is up to the team members to institute actions for PS, strengthening the practices related to the identification, prevention, detection and reduction of risks[13]. As reported by the nurses, PS meets the PS concept described in ordinance No. 529 of 2013[2].

Two recent studies on the topic described PS as reducing unnecessary care-associated harms to the minimum acceptable level[7,14]. With regard to the Nursing team's knowledge about PS, the first survey considered that the team's understanding corresponds to harm-free care and to a holistic view of the patients; despite lack of knowledge of protocols and operational standards, PS is associated with safe care, reporting that this reflects the safety of professionals and patients alike[7].

The second study portrayed nurses' specific understanding about PS and showed that they also related it to attitudes that do not cause harms to the users, specifying the need to perform the techniques appropriately for safe care. They also reported the PS difficulties in the PHC scenario but that, in general, nurses sought to develop strategies to ensure safety[14].

However, a study pointed out that PS is little addressed by PHC nurses because they are not familiar with the theme, referring to classic topics such as precaution in patient identification and risk of falls[15]. On the other hand, another study showed that Nursing professionals play a fundamental role in risk management, making it possible to observe the care dimensions and construction, comparing PS goals and protocols to the concept of reducing harms[16].

PHC is currently advancing in organization of the work and the FHS has been strengthening multiprofessional teamwork, seeking interaction among professionals to increase team results[17].

In view of the findings of this research regarding teamwork, it is suggested that, for effective work, collaboration from all workers is necessary to deal with different points of view, beliefs and personalities, aiming to contribute to good performance, in addition to seeking to understand the users' characteristics and the working conditions[18].

According to the reports made the nurses in the study, it was observed that the FHS teams are made up of professionals as required in the 2017 PNAB[13]; however, they reported insufficient staffing for the demand, with lack of professionals from all categories.

In this sense, staffing should be duly defined, seeking innovation in the ways of producing care, analyzing and organizing based on demographic, epidemiological planning and the needs of the enrolled population[19]. Lack of professionals in the unit's team requires concern given the consequences that can result. In line with this, a study identified that the Nursing workload in the FHS, with staff deficits, resulted in administrative problems, excessive working hours, high demand for service, insufficient number of workers and physical exhaustion[20].

With regard to the rural units, in addition to their geographical particularities, difficulties receiving inputs and distancing of professionals, which end up causing an increase in working hours; in addition to that, nurses

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are responsible for the administrative coordination of the unit and Nursing care, carrying out multitasking[21], which corroborates the findings of this study.

Nursing should respond to the need to develop strategies articulated with managers considering that the deficit in the number of professionals affects PS and workers alike[22]. The following strategies can be mentioned for reducing work overload: accepting suggestions to reduce the workday; developing activities aimed at valuing the professionals; as well as developing and implementing job and wage plans[23].

In relation to health communication, it is worth noting that it is considered a strategy that enables quality in team decision-making and the development of actions to promote health[24].

Referring to communication, the nurses interviewed pointed out the importance of team meetings to identify strategies regarding PS. A study asserted that the communication process is essential for the performance of the professionals involved and that communication deficits can increase risks for users/patients and families, professionals and teams[25].

It is noted that, within the FHS scope, an important communication moment between professionals is the team meeting, which constitutes an essential instance for planning the unit's activities, contributing to experience exchanges between health professionals aiming to solve problems, in addition to assisting in the development of strategies for the work environment[26].

Emerged from the context experienced during the data collection period of the current study, the manifestation of the participants' reports was also related to the impacts caused by the COVID-19 pandemic on the work process. With the pandemic, meetings were suspended, in addition to other obstacles like difficulties in training processes in PHC, such as high turnover of nurses, lack of face-to-face training moments and difficulties in online training sessions.

Given the importance of team meetings in the PHC scenario, which were hampered during the pandemic period, a study verified the professionals' opinion about team meetings in PHC and they unanimously pointed out that this multiprofessional interaction moment is extremely important for the smooth operation of the service and for the professionals' satisfaction[27]. In addition to this, permanent education actions were also indicated as important and should be constant in health services, as this process provides opportunities for changes in organization and qualification of the work team[28].

Although with weaknesses, using technologies was an important support during the pandemic: training processes became more frequent in the distance or remote modality, as it was currently considered an important alternative to enable accessibility and the exchange of theoretical and scientific knowledge. Considering the importance of remote learning, a study also pointed out the difficulties faced by the professionals in managing to attend courses/training online due to access barriers and lack of resources in the workplace[29].

With the pandemic, the nurses reported that there were constant changes in the information and that guidance sometimes was not provided in a timely manner, impacting the health units' work process and, consequently, PS. Similar realities were described in the literature[30], which pointed out changes in the PHC routine during the pandemic period.

In relation to the main errors that occur in this scenario there are failures in patient identification and anamnesis, medication and immunization errors, diagnosis failures, lack of guidelines from the professionals, inadequate dressing techniques, lack of information in electronic medical records and ineffective communication between team members[14,30-32]. In this case, the findings prevailed in identifying the patients and errors in the administration of immunobiologicals.

A study carried out in Manaus indicated that 70.5% of the incidents reached the users and that 37.5% caused harms; in addition, it highlights that, as care in PHC is centered on the user and the family, PS must be a priority, as well as portraying the importance of developing protocols, strategies and actions that contribute to PS in the general PHC context[33].

Regarding the notifications, it was observed that the nurses did not use the National Health Surveillance Notification System (*Sistema Nacional de Notificações para a Vigilância Sanitária*, NOTIVISA) and were unaware of the standard instrument prepared by the municipality's Patient Safety Center. Furthermore, it was evidenced that each FHS unit had its own routine for reporting incidents, which were recorded in electronic medical charts, incidence books and guidance records in accordance with the standardization proposed by the Health Department and which were filed in the server's functional form in the Human Resources Sector.

A study showed that there are several barriers to reporting AEs, such as lack of confidence in notifications, lack of feedback, non-standardization, difficulty recognizing errors related to care and insufficient time[34]. Another point

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mentioned in the literature is the difficulty making notifications due to work overload, as professionals end up considering this practice unnecessary or irrelevant and not communicating errors appropriately[35]. Therefore, the studies assert the need for rapprochement between the Patient Safety Center and the FHS to implement permanent education actions targeted at PS themes and to encourage AE notifications[34,35].

It was observed that FHS nurses believed that errors might be used against them. A study pointed out that tying an error to blame is a common situation in this scenario, believing that errors are only due to carelessness and inattention of those involved; in addition, the fear of punishment constitutes one of the main factors for underreporting AEs, linked to fears of losing their job and blocking the possibility of learning from mistakes[35.36].

The Safety Culture in the study scenario presents several weaknesses considering the work process, ineffective communication between professionals and managers, punitive culture, unawareness about the form for notifying AEs, deficit in terms of permanent and continuing education and difficulty learning from mistakes, showing that it is fundamental to hold discussions on the topic of PS in the FHS environment in different contexts.

Study limitations

The limitations of the current study lie in the fact that data collection was carried out during the COVID-19 pandemic, due to the nurses' lack of time and availability and absence of theoretical references related to PS in PHC. In addition to that, the findings refer to a specific location, and caution should be exercised when generalizing the results.

FINAL CONSIDERATIONS

PS in the FHS is a topic that requires a broad debate to the detriment of the weakness of nurses' knowledge about the theme herein presented. In this study it is concluded that nurses relate PS to strategies to reduce harms to the patients.

Staffing proved to be ineffective in meeting the FHS requirements, reinforcing that this overload exerts impacts on the work process. The fact that no team meetings were held during the pandemic affected the training processes inside and outside the service; in addition, the FHS routine underwent changes very frequently, as the information changed constantly. It was observed that the difficulties faced in the work process worsened in the pandemic context, showing that this process needs to be improved in the PHC scenario in that reality.

In relation to the assistance-related errors, several incidents occurred and thus barriers become pertinent. In addition, it is necessary to encourage a fair culture where it is possible to learn from mistakes, encouraging the notification of AEs to develop actions and strategies that contribute to safe care.

It is understood that the findings may help improve the Nursing care quality in the PHC environment, in addition to providing service management with a perspective towards the organizational culture implemented in the institution. The importance of bringing the Patient Safety Center closer to FHS nurses to carry out permanent education actions and seek alternatives to transform the culture “implanted” in the institution is emphasized.

Finally, the impact of the pandemic on the FHS was notable. However, the work process should be worked on regardless of the epidemiological context. In fact, offering care along the PS lines leads to assertive processes by anticipating potential risks in health services and working towards continuous improvement.

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Conceptualization, F.C.M. e L.A.G.P.S.; methodology, F.C.M. e L.A.G.P.S.; software, F.C.M. e L.A.G.P.S. e F.B; validation, F.C.M. e L.A.G.P.S; formal analysis F.C.M. e L.A.G.P.S.; investigation, F.C.M. e L.A.G.P.S.; resources, F.C.M.; data curation, F.C.M; manuscript writing, F.C.M.; manuscript review and editing, F.C.M. e L.A.G.P.S e F.B e G.C.G e H.L.F.G e I.M.; visualization, F.C.M.; supervision, L.A.G.P.S.; project administration, L.A.G.P.S. e F.C.M. All authors have read and agreed to the published version of the manuscript.