



Teaching patient safety in the COVID-19 pandemic: perception of nursing students

Ensino de segurança do paciente na pandemia da covid-19: percepção de estudantes de enfermagem

Enseñanza de la seguridad del paciente en la pandemia de COVID-19: percepción de los estudiantes de enfermería

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ABSTRACT

Objective: To apprehend the perception of technical and undergraduate nursing students about the teaching of patient safety competencies in the pandemic of COVID-19. **Method:** Qualitative study, conducted in 2021, with technical and undergraduate nursing students from Paraná, through individual interviews. The content analysis technique was used. **Results:** The following categories emerged: Understanding of the concept of patient safety enhanced by clinical practice; Attitudes and feelings towards near miss, adverse events and unsafe practice and; Negative reflexes of the COVID-19 pandemic on patient safety teaching.

Conclusion and implications for practice: The teaching of patient safety competencies was perceived by students with negative feelings due to the experience of near misses, adverse events and unsafe practices. Due to the pandemic of COVID-19, they reported fragmentation in the teaching of the subject under study, distance from practice and, consequently, academic and professional insecurity. Further discussion of the teaching of patient safety competencies during the pandemic is indispensable to the quality of training and professional performance.

Keywords: Cultural Competency; COVID-19; Nursing; Teaching; Patient safety.

RESUMO

Objetivo: Aprender a percepção de discentes de curso técnico e superior de Enfermagem sobre o ensino das competências de segurança do paciente na pandemia da COVID-19. **Método:** Estudo qualitativo, realizado em 2021, com estudantes de Enfermagem de nível técnico e superior do Paraná, por meio de entrevistas individuais. Utilizou-se técnica de análise de conteúdo.

Resultados: Emergiram as categorias: Compreensão do conceito segurança do paciente potencializada pela prática clínica; Atitudes e sentimentos frente ao *near miss*, evento adverso e prática insegura e; Reflexos negativos da pandemia da COVID-19 no ensino da segurança do paciente. **Conclusão e implicações para a prática:** O ensino das competências de segurança do paciente foi apreendido pelos estudantes com sentimentos negativos pela vivência de *near miss*, eventos adversos e práticas inseguras. Devido à pandemia da COVID-19, referiram fragmentação no ensino do tema em estudo, distanciamento da prática e; consequentemente, insegurança acadêmica e profissional. O aprofundamento da discussão do ensino das competências de segurança do paciente durante a pandemia é indispensável à qualidade de formação e atuação profissional.

Palavras-chave: Competência cultural; COVID-19; Enfermagem; Ensino; Segurança do paciente.

RESUMEN

Objetivo: Aprender la percepción de los estudiantes de curso técnico y superior de enfermería sobre la enseñanza de competencias en seguridad del paciente en la pandemia del COVID-19. **Método:** Estudio cualitativo, realizado en 2021, con estudiantes de Enfermería de nivel técnico y superior en Paraná, mediante entrevistas individuales. Se utilizó la técnica del análisis de contenido. **Resultados:** Surgieron las siguientes categorías: Comprensión del concepto de seguridad del paciente, reforzada por la práctica clínica; Actitudes y sentimientos hacia los cuasi accidentes, los acontecimientos adversos y la práctica insegura y; Reflejos negativos de la pandemia del COVID-19 sobre la educación en seguridad del paciente. **Conclusión e implicaciones para la práctica:** La enseñanza de competencias en seguridad del paciente fue percibida por los estudiantes con sentimientos negativos debido a la experiencia de cuasi accidentes, eventos adversos y prácticas inseguras. Debido a la pandemia del COVID-19, denunciaron fragmentación en la enseñanza de la materia objeto de estudio, alejamiento de la práctica y, en consecuencia, inseguridad académica y profesional. La profundización del debate sobre la enseñanza de competencias en materia de seguridad del paciente durante la pandemia es esencial para la calidad de la formación y el desempeño profesional.

Palabras clave: Competencia cultural; COVID-19; Enfermería; Enseñanza; Seguridad del paciente.

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INTRODUCTION

In the scenario of incidence of Adverse Events (AE), patient safety consists of a framework of organized activities, which through the creation of cultures, principles, processes, procedures, behaviors, technologies, and safe health environments, aims to reduce the risks of AEs and the occurrence of preventable harm.¹

In this regard, the Brazilian National Health Surveillance Agency's Health Surveillance Notification System, from June 2021 to May 2022, recorded more than 100,000 notifications of incidents, with about 900 deaths. In the context of health service qualification actions, there is an undeniable need to investigate the causes of errors in care, proposing measures for safe care.²

The Ministry of Health in Brazil, with a view to mitigating AEs, in 2013, launched the National Program for Patient Safety through Ordinance No. 529, aiming to promote and support the implementation of initiatives aimed at patient safety in different areas of care, organization, and management of health services. This Program exposed the need to include patient safety topics in healthcare courses.³

At the international level, the Patient safety curriculum guide: multi-professional edition, published by the World Health Organization in 2011, stands out to help health teaching institutions in patient safety. The document presents concepts and methods on the integration of patient safety in multi-professional education, techniques on how to address the topic in existing curricula, and assessment approaches in teaching.⁴

It is known that health students, as future providers of care, must be prepared to perform safe practices, through knowledge, skills, and attitudes, able to make them able to deal with the challenges encountered in the care experience.⁴ Currently, due to the difficulties imposed by the pandemic of COVID-19, the literature points out that nursing education has been insufficient for practical learning.⁵

Given the above, this study is justified by the need for patient safety to be addressed in depth in health courses.⁴ Its results may lead to new studies and contribute to the (re)planning of actions related to nursing education, especially in periods of social distance.

To explore issues related to teaching in Nursing, the question is: How is the teaching of patient safety in the pandemic of COVID-19 perceived by students of a technical and higher education course in Nursing? To this end, the objective of this study was to apprehend the perception of students from a technical and higher education course in Nursing about the teaching of patient safety competencies in the COVID-19 pandemic.

METHOD

This is a qualitative, exploratory, descriptive study conducted between April and July 2021. The criteria of the Consolidated criteria for reporting qualitative research (COREQ) checklist were followed.⁶ The study was approved by the Ethics Committee on Research Involving Human Beings (COPEP) of the Paranaíba State University (UNESPAR) under opinion number 4,640,682.

It was carried out in a technical school and a public institution of higher education in Paraná. Participants were students 18 years of age or older, enrolled in the penultimate and last semester of the Technical Course in Nursing and undergraduates in the third and fourth year of the Course in Nursing, which also corresponds to the penultimate and last year of training. Those who were absent from academic activities during data collection were excluded.

For the inclusion of the participants, the Snowball Sampling technique was applied, which consists of a non-probabilistic chain, in which one participant indicates another, and so on, successively, in a perspective of specific groups.⁷ In this aspect, the first was randomly approached through a contact list (telephone), made available by the respective teaching institutions.

Data collection occurred through individual interviews, audio recorded on the Google Meet platform, scheduled according to the availability of each participant. There were seventeen refusals, due to the difficulty of time to schedule an online interview. A Field Diary was also used to record perceptions after data collection.

The interviews were conducted by a third-year undergraduate nursing student, after training with a professor, and the recruitment continued until theoretical data saturation was reached, when no new meanings were found to the codes identified in the investigated field.⁷ Before the beginning of each interview, the objective of the study and how the data collection would be carried out were discussed, as well as the introduction of the undergraduate student. The average time of the interviews was 10min, with a minimum of 6min3s and a maximum of 30min20s.

The interview was anchored on a semi-structured script containing the guiding question: Tell me about patient safety teaching in your course during the COVID-19 pandemic. For the characterization of the participants, a sociodemographic questionnaire was applied, available in the Google Forms platform. The sociodemographic data underwent descriptive analysis, and the transcribed statements were analyzed according to the content analysis technique, in three stages: (1) Pre-analysis; (2) Exploration of the material and (3) treatment and inference/interpretation of results.⁸

In the presentation of the results, the excerpts/speeches of the participants were adapted to the common form of the Portuguese language, without altering the meaning. Terms in brackets were used to complement certain speeches and thus facilitate understanding. Anonymity was respected by using the mnemonics TEENF for Nursing Technicians, GENF for Third Year Students, and ESENF for Fourth Year Undergraduate Nursing Students, followed by ordinal numbers, in the order in which the interviews were conducted.

RESULTS

Twenty-nine nursing students participated. Of these, six (20.6%) were from the technical course and 23 (79.3%) from the higher education course. All of them were in the last period of their training. Regarding graduation, eight (27.5%) were in their fourth year and 15 (51.7%) were in their third year. Of the total, 19 (65.5%) were female and 10 (34.4%) were male, with

a minimum age of 21 and a maximum age of 42. The categories emerged from the coding contained in the interview excerpts, according to Chart 1.

The thematic categories emerged from the speeches: Understanding of the concept patient safety enhanced by clinical practice; Attitudes and feelings facing near miss, adverse event and unsafe practice and Negative reflections of the COVID-19 pandemic on patient safety teaching.

Understanding the concept of patient safety enhanced by clinical practice

In this category, students talked about theoretical concepts and practices of safe care. Due to the period of the COVID-19 pandemic, the use of personal protective equipment (PPE) was mentioned as a safety strategy.

Patient safety for me is patient identification, hand hygiene, general care, safe surgery protocols, medication prescription, and [prevention]pressure injury (TENF3).

I understand [patient safety] as assistive and managerial measures aimed at reducing harm such as, risk of infection, falls, health maintenance for users [...]. (ESENF3).

[...] I think. I don't think so, I'm sure that the use of PPE in the situation we are living and even before the pandemic, also fit into patient safety (GENF2).

Regarding the sociocultural concepts of patient safety, the participants talked about the competencies of teamwork and effective communication.

In my reality, we usually go in two students on the ward, but you're not going to let the colleague do it alone [...]. When you have the support of someone who knows what they are doing, the care flows. So, teamwork is to have this perception that sometimes in the rush something is neglected, but someone helps you with a look or a sign for safe and effective assistance (GENF14).

It is also observed the expanded concept of the term with the co-participation of the patient and family in the care process, directed to the individual and his family.

[Patient safety] is you explain what you are going to do, how you are going to do it, what materials are going to be used, if it can cause any injury, if it can't, what is going to happen after [the procedure is over], if he is comfortable, if he wants someone to stay with him (GENF2).

It is to see if the patient needs help or not. If it is a patient that needs more intense care...let's say it is always [good] to have a [family member] with him, because there are

Chart 1. Presentation of the categorization list of the analysis codes.

Category	Grouped analysis codes
Understanding the concept of patient safety enhanced by clinical practice	Quality Dimension
	Patient and Family Involvement
	Nursing Care
	(Un)safe practices
	Uses of personal protective equipment
	Clinical skills
	Socio-cultural competencies
Attitudes and feelings towards near miss, adverse event and unsafe practice	Practical skills and levels of care
	(Un)safe practice
	Experience of the error
	Feelings about the error
	Attitudes towards the error
	Patient safety risks
Negative Reflections of the COVID-19 Pandemic on Patient Safety Education	Faculty, student, and professional relationships
	Pandemic and practical distancing
	Fragmented content
	(In)security
	Reduction of fields and workload

Source: Own elaboration, 2022.

patients that we turn our backs and he gets out of bed, falls, and hurts himself! (GENF1).

The theme was associated with care practice at the tertiary and secondary levels of health care. This is because, especially those who already worked in the area or did curricular and/or extracurricular internships, reported that they felt prepared.

Before doing my paid internship in the Emergency Care Unit, which has just ended, I felt unprepared in this issue [of patient safety]. [...] very afraid to perform any type of procedure, but after the internship, I improved a lot in this aspect (GENF3).

Because I am a [Nursing] technician I feel much safer, but if it were only from college, I wouldn't be like that. I think that this [being a Nursing Technician and studying for an undergraduate degree in Nursing] will help me not only in terms of safety, but also for having the look from both sides. When it comes time to lead the team and deal with safety issues, it will be easier (GENF10).

Attitudes and feelings facing near miss, adverse event and unsafe practice

Feelings of concern, shame, fear and guilt when facing the near miss, adverse event and unsafe practice were mentioned. However, in the statements, it is possible to notice that the participants attribute importance to the immediate communication to the supervisor, the resolution of the patient's clinical case, and the AE notification.

Once a colleague was transferring an elderly patient from the shower chair to the bed and he [patient] slipped and fell [...] we told the teacher [...]. The attendant didn't mind, but we felt embarrassed. It was bad, we discussed it and learned our lesson (TENF2).

[...] I reported my mistake (administration of medication to the wrong patient), to the nurse, but

they didn't even make the AE notification. I found it very strange! I told the nurse and everything, I was scared, I got a scolding, but I did the right thing, because it was dipyrone and if the patient was allergic? (GENF6).

[...] if in fact the error occurred, I would immediately inform the supervisor, notify the AE and take the appropriate measures (GENF3).

The interviewees mentioned attitudes of insecurity in the experience of unsafe practices in health services and added that such attitudes tend to cause damage:

Unfortunately, I see many punctures that professionals do not pay attention [...]. The patient complains, refers pain [...] you look at the date [of the puncture] and realize that it's expired. We must be attentive to the little things that can worsen the patient's situation (GENF1).

As undergraduates, students reported the importance of faculty supervision when facing possible risks of care and mentioned feeling safe with the support of the teacher/supervisor:

No professor ever let me make a mistake or failed to charge something to ensure the effectiveness of the care that was being performed. So, I certainly experienced patient safety (GENF8).

[...] in every invasive procedure the teacher stays close. The error never happens because she [the teacher] is always attentive (GENF2).

Negative Reflections of the COVID-19 Pandemic on Patient Safety Education

The distance from academic practice due to remote teaching was highlighted as a condition that caused insecurity when returning to the performance of practical activities:

Now, after this remote teaching, in which we lost contact with the classes, teachers, patients and the practice itself, look, this leaves me a little bit behind [...] (GENF5).

Do I really feel prepared? I think about the period that we stayed away from college [...]. That is the biggest fear, even for the mandatory internship. It has been more than a year since I entered a hospital, how am I going to do a puncture? (GENF7).

[Our workload before [the pandemic] was higher and now it has been broken! The number of students was also reduced, and the units do not accept larger numbers. [...] if I enter [the internship] in a certain institution now, I will not have contact with the patient so soon [by the reduction of practice fields] (TENF4).

In addition to the pandemic of COVID-19 generating academic insecurity, participants reported that the teaching of patient safety was addressed over the years in a generalist way.

[...] we saw [the patient safety theme] going through several disciplines such as biosafety, in management and administration, in semitechnical, in internships, but in a general way (ESENF4).

Several disciplines encompass [the patient safety theme]. Elderly Health discussed falls and injuries, Fundamentals I and II, and Adult Health II too, but everything in general (GENF14).

DISCUSSION

In the first category, the academics identified cross-cutting aspects of the concept of patient safety and the enhancement of safety when applied to clinical practice.

The focus on clinical aspects observed is corroborated by another survey of undergraduate nursing students at a University

in Brazil, which found that the category of care most often cited referred to medication safety, directly associated with patient safety practice in hospital care.⁹ The evidence in the literature points out that learning in clinical practice is enhanced as students experience and become familiar with the care offered and the universe of the work environment.⁴ However, it is inferred that the use and application of protocols beyond hospital spaces can contribute to the teaching of safety in the various settings in which health care is offered, such as homes and primary health care.

In the field of care, it is possible to notice the citation of patient safety goals, such as: correct patient identification, hand washing, safe surgery and medication, prevention of pressure injuries and falls. This demonstrates knowledge about the international patient safety goals, listed as Basic Patient Safety Protocols, which are instruments based on scientific evidence that contribute to making the care process safe.¹⁰

The use of PPE in the pandemic of COVID-19 was also associated with patient safety. Corroborating this, scientific reflection points to the need for connection between professional and patient safety, especially in a period of collapse of the health system, where this link becomes indispensable for safe care. Moreover, patient safety is directly influenced by the qualification of professionals and the availability of adequate resources,¹¹ which can make the separation of these safety dimensions inseparable.

Regarding sociocultural concepts, it is noted that actions such as teamwork and effective communication were cited as fundamental to safe care. In this scenario, cultural competence is understood as the knowledge, skills, and attitudes that a health professional needs to provide adequate health services.⁴

In South Korea, a study examined the perceptions and intentions regarding patient safety in clinical training and indicated that 78% of the evaluations indicated that the quality of the service offered to patients was influenced by teamwork relationships.¹² A bibliometric study identified the panorama of scientific production related to teaching the patient safety theme in undergraduate health courses and found little focus on teaching teamwork associated with patient safety.¹³ In this sense, it is understood that the teaching of managerial skills in nursing can favor the achievement of safety of care, in a cycle of continuous improvement in search of quality care.

In India, a study found the need for the application of human factors, complexity of the health system and its effects on safety, effective communication, and quality of care for the effectiveness of patient safety.¹⁴ Although the literature shows weaknesses in the teaching of this topic, the participants of this study relate that sociocultural competencies can be leveraged through experiences in clinical practice.

Another point analyzed is the importance of including the family and the patient in the health-disease process as one of the assumptions of safe care. Therefore, the Patient- and Family-Centered Care advocates the presence of the family with the patient in a situation of illness, offering adequate support for care. In this approach, the proximity of nursing care favors patient safety.¹⁵

It was found that the perception of patient safety is associated with academic and professional practice in secondary and tertiary levels of health care, since students who performed internship or work in health care reported feeling more prepared. However, patient safety must be disseminated in all levels of care and areas of the Unified Health System, together with primary health care, which involves actions of promotion, prevention, protection, diagnosis, treatment, rehabilitation, and harm reduction, directly linked to patient safety practices.¹⁶

International models corroborate the assertion of the essentiality of students' practical learning in the health field.^{4,17} The Quality and Safety Education for Nurses Project, a plan recognized in the United States of America and in other countries, focuses on patient-centered care, teamwork and collaboration, evidence-based practice, improvement of quality and safety, so that nurses can lead and make changes in care practice for the effectiveness of quality and patient safety.¹⁷

Regarding the second category, students reported feelings of guilt, shame and fear when facing the near miss, the adverse event, and the unsafe practice. Faced with these feelings, they emphasized the importance of faculty supervision and warned about a culture of not reporting errors/AE, which can also reflect in the training of these professionals. Similarly, a study analyzed reports of a Brazilian television media about medication errors in nursing, and pointed out insufficient professional training in nursing, with a predominance of blaming professionals in a punitive culture, without concern for the systemic processes by which errors are triggered.¹⁸

It is conjectured that error communication is a coherent and responsible attitude, and that this should be addressed during training so that students can develop communication and resolution skills. Throughout their training, future professionals need to understand the different types of errors and contributing factors, in the scope of planning mitigation and learning strategies.⁴

The feeling of greater safety in clinical practice was associated with faculty supervision, and its presence contributes to the teaching-learning process, in the articulation between theory and practice, and strengthens the relationships between the academy and the supervising nurses.¹⁹ On the other hand, it was observed that anxiety is a common feeling when faced with the responsibility of human care, inherent to professional practice, and during the pandemic, this feeling was heightened with remote teaching. A survey conducted in Israel with undergraduate nursing students found moderate anxiety disorder in 42.8% of students.²⁰

It was observed among students in Spain the weight of the distance from clinical practice, with a feeling of insecurity when they return in person.⁵ In Brazil, among the challenges to remote teaching are discussions about the quality of education, socioeconomic inequalities in access to technological resources and teachers' lack of preparation. It is worth reflecting that although several problems are exposed in remote teaching in the health area, given that teaching-learning in nursing is theoretical and practical, the pandemic of COVID-19 brought a legacy that exposed

the potentiality of the use of technology in health incorporated into educational practices.²¹

In the context of patient safety competencies, the literature points out gaps and weaknesses in the view of nursing students, as observed in a study conducted in Brazil, which showed insecurity when performing the procedures and a lagging perception of the students' knowledge on the subject.²² In this study, the results agree with the findings of the aforementioned research, because although the participants reported theoretical knowledge, the skills were not fully developed during the academic/professional training in this period of pandemic, resulting in insecurity for the practice and weakening of the skills learned.

It is observed that the theme patient safety was approached during the technical course and during graduation in a generalist way. This view was also presented in a study conducted with undergraduate nursing students at a University in Brazil, which showed that the training process of health professionals focuses on the competencies restricted to the individual disciplines of the course, without multi-professional and transdisciplinary training.⁹

In the scope of patient safety, international recommendations indicate the subject as an essential discipline for health students, who integrate the multi-professional team and need to be well informed and trained to exercise their professional skills, combined with theory and practice⁴

A survey conducted with teachers of an undergraduate nursing course in Brazil found that the topic of Patient Safety was presented in a generalist way, with evidence of the need to re-evaluate the pedagogical curriculum.²³ In the perception of students who participated in this study, the content has been addressed in a timely manner throughout some subjects, and they suggested a specific subject with more in-depth content.

In the teaching of patient safety, among the challenges for the integration of the topic are difficulties in including it in the curricula.²⁴ As recommended by the WHO, because it is a relatively new topic, it is essential to analyze the existing curriculum, seeking to address the subject in the most appropriate way, such as by addressing aspects related to human factors individually, including more general issues that permeate various subjects throughout the course, and essentially in the final years, before entering the field of practice in traditional curricula. In the same way, it can be used as an autonomous discipline over the years in integrated curricula, or also in pre-existing disciplines.⁴

In the context of pedagogical tools, diversified strategies can be employed, such as case studies, clinical skills activities, such as simulations, as well as theoretical aspects using expository/interactive classes, prioritizing the development of knowledge concomitant to performance, since the student is motivated to solve problems of practical reality from the insight of the content just learned.⁴

CONCLUSION AND IMPLICATIONS FOR PRACTICE

The teaching of patient safety competencies during the pandemic of COVID-19 was perceived by students with an expanded conception of safety, while feelings of concern, shame,

and fear remained, in face of the experience of near misses, adverse events, and unsafe practices. Regarding the pandemic of COVID-19, the learning of patient safety, as a transversal content, suffered negative reflections, as they mentioned fragmentation in teaching, sometimes remote, and distancing from clinical practice that culminated in insecurity.

The results give scientific advance, as they bring the perception and experience in a period of pedagogical changes, ignorance of the pandemic, and challenges in care practice, which need to be discussed for the construction of patient safety competencies in theoretical/practical teaching.

As a limitation, at this moment only the perspectives of technical and undergraduate nursing students during the pandemic of COVID-19 were addressed, referring to a specific context. New studies related to the theme are recommended, with other categories of the multi-professional health team.

AUTHOR'S CONTRIBUTIONS

Study design. Ana Carolina Simões Pereira. Laura Misue Matsuda. Maria Antonia Ramos Costa.

Data collection. Ana Carolina Simões Pereira. Taynara de Oliveira Farias Batista.

Data analysis. Ana Carolina Simões Pereira. Laura Misue Matsuda. Taynara de Oliveira Farias Batista, Maria Antonia Ramos Costa. Dandara Novakowshi Spigolon. Verusca Soares de Souza.

Interpretation of results. Ana Carolina Simões Pereira. Laura Misue Matsuda. Taynara de Oliveira Farias Batista. Maria Antonia Ramos Costa.

Writing and critical revision of the manuscript. Ana Carolina Simões Pereira. Taynara de Oliveira Farias Batista. Maria Antonia Ramos Costa. Laura Misue Matsuda. Dandara Novakowshi Spigolon. Verusca Soares de Souza.

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