Perception of nursing students, professors and technicians regarding adverse events

Percepção de discentes, docentes e técnicos em enfermagem a respeito dos eventos adversos

Percepción de estudiantes, docentes y técnicos de enfermería sobre eventos adversos

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Abstract: Aim: To identify the perception of nursing students, professors and technicians regarding adverse events. Method: descriptive, exploratory, qualitative research, carried out at a primary, technical and technological educational institution located in northwest Rio Grande do Sul. The study participants were nursing students, professors and technicians. Data were collected with semi-structured interviews and analyzed through content analysis. Results: 25 nursing technicians, 24 students and four professors participated in the study. Work overload and demand for care contribute to the imminent occurrence of some adverse event. In addition, lack of attention and failures in the training process are mentioned as possible causes of this problem. Final thoughts: Understanding crucial differences between students and graduates regarding adverse events allows for essential communication to (re) discover ways to teach nursing safely and with quality. Descriptors: Professional training; Patient safety; Nursing care; Patient harm; Nursing.

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Resumo: **Objetivo:** identificar a percepção de discentes, docentes e técnicos em enfermagem a respeito dos eventos adversos. **Método:** pesquisa descritiva, exploratória, qualitativa, realizada em instituição de ensino básico, técnico e tecnológico localizada no noroeste do Rio Grande do Sul. Os participantes foram discentes, docentes e técnicos em enfermagem. Os dados foram coletados com entrevista semiestruturada e analisados pela análise de conteúdo. **Resultados:** participaram do estudo 25 técnicos em enfermagem, 24 discentes e quatro docentes. A sobrecarga de trabalho e a demanda de cuidados contribuem para que a ocorrência de algum evento adverso se torne iminente. Além disso, a falta de atenção e as falhas no processo de formação são citadas como possíveis condicionantes à essa problemática. **Considerações finais:** perceber diferenças cruciais entre discentes e profissionais formados no que se refere aos eventos adversos permite uma comunicação essencial para (re) descobrir formas de ensinar enfermagem de maneira segura e de qualidade. **Descritores:** Capacitação profissional; Segurança do paciente; Cuidados de enfermagem; Dano ao paciente; Enfermagem

Resumen: **Objetivo:** identificar la percepción de los estudiantes, docentes y técnicos de enfermería sobre los eventos adversos. **Método:** investigación descriptiva, exploratoria, cualitativa, realizada en una institución primaria, técnica y tecnológica ubicada en el noroeste de Rio Grande do Sul. Los participantes fueron estudiantes, profesores y técnicos de enfermería. Los datos fueron recolectados con entrevistas semiestructuradas y analizados por análisis de contenido. **Resultados:** 25 técnicos de enfermería, 24 estudiantes y cuatro profesores participaron en el estudio. La sobrecarga de trabajo y la demanda de atención contribuyen a la aparición de cualquier evento adverso inminente. Además, la falta de atención y las fallas en el proceso de capacitación se mencionan como posibles causas para este problema. **Consideraciones finales:** comprender las diferencias cruciales entre los estudiantes y los profesionales graduados con respecto a los eventos adversos permite una comunicación esencial para (re) descubrir formas de enseñar enfermería de manera segura y de calidad. **Descritores:** Capacitación profesional; Seguridad del paciente; Atención de enfermería; Daño del paciente; Enfermería.

**Introduction**

The pedagogical act is extremely relevant for processing information worked in the classroom, once the professor’s explanations and actions not only inform but also provide data for reflections, which, harvested in experienced interactions, become moments of learning. Thus, gesture and speech provide significant messages to be decoded.¹

In this sense, promoting the learning requires from professors fundamental knowledge and ability to stimulate their own potential and the students' potential.² Throughout time, social demands have changed, as well as professional yearnings, making teaching focus on developing skills, for acceptance of diversity and development of critical sense, involving a reflexive knowledge.
Moreover, the theoretical renewal in professor’s education with a view to a moment of transformation regarding the curricular gaps requires reflection and action. There is need to develop a curriculum that meets professionals’ interests of learning, which works competences dialogically in a learning perspective, which does not disregard the student’s subjectivity and indicates action for learning based on professional practice and scientific evidence.³

In this context, nursing, as science, seeks, through the care, to protect human life in its fullness, facing a situation that requires qualification in the educational process of professionals in the category. The discussion about nursing adverse events and their multicausality occupies the center of the attention of a profession which, historically, has an important legacy in the care with individuals.⁴

Adverse event is the incident that results in harm to the patient, and this incident refers to an event or circumstance that could have resulted, or resulted in unnecessary damage to the patient.⁴ Therefore, it is essential to reflect on the excessive growth of this type of event in the performance of nursing professionals and its implications for society and for the credibility of the profession.

Review study that included national and international studies identified that the main events in nursing care are related to errors in the administration of medication, not execution of dressings and falls. It also highlighted the need for instruments for notification of adverse events in health care institutions; however, the professionals’ fear of a possible punishment may contribute to the underreporting.⁵

In this context, there emerges the need for discussing the determinants of such events and the debate in the classroom. Thus, it is possible to create, in professors and students, the reflection for a deep attention on these issues that put at risk the health and life of users of health services, aiming to prevent and/or minimize the incidence of adverse events.
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Nursing professors face the challenge of contributing to the education of a professional able to act with competence in the job market, with a critical behavior and capable of accessing and using knowledge as an agent of change, overcoming obstacles. This nursing profile demands, in addition to specific technical skills, management skills for its implementation in health organizations, namely: attention to health, decision-making, leadership, teamwork, communication, continuing education and management.6

It is valid to highlight that some studies suggest that the adverse events are related to the administration of medications.7-9 Nevertheless, according to a report of events notified to the National Sanitary Surveillance Agency (ANVISA) in the years 2014 through 2019, 21,759 notifications relate to loss of catheters or tubes, followed by phlebitis, diverse notifications, notifications involving peripheral catheters and, in 5th place, notifications involving medications.10 Therefore, the need for in-depth discussion about the safety of users of health services and the conditions of training and work of professionals involved in the care becomes relevant.7-9

Furthermore, the study question is: what is the perception of nursing students, professors and technicians regarding adverse events? Thus, the present study aims to identify the perception of nursing students, professors and technicians regarding adverse events.

Method

Exploratory and descriptive study with a qualitative approach, conducted from June to August 2016, at an institution of primary, technical and technological education located in northwest Rio Grande do Sul (RS). The population included was selected by means of non-probabilistic sampling by convenience, which covered professors and students of the nursing technical course of the institution and nursing technicians who worked in the morning and
afternoon shifts in a philanthropic hospital in that region, who worked in five hospital units of
of the service: surgery, medical clinic, surgical block, outpatient clinic and anesthetic recovery.

The inclusion criteria for participation in the study were: students of the nursing technical course,
regularly attending classes; nursing technicians working at hospital units; and professors, supervisors
of activities/curricular internship. The study excluded: students beginning the course (1st semester).

The sample was composed of 24 students, 25 nursing technicians and four professors. It
should be emphasized that there were no losses in the study, since it worked with all
participants. Data collection occurred through semi-structured interviews, carried out
individually and recorded according to the participants' consent, lasting approximately 30
minutes.

The instrument used in the interview was composed of two parts, one containing the
characterization of the interviewees with age, sex, marital status, number of children, reasons
for choosing the profession and place of activity; and another which questioned the occurrence
of adverse events and what factors contribute to such occurrences.

Data collection occurred in a room reserved for this purpose, at the educational institution
and at the hospital environment. With students, data were collected in the intervals between
classes, in order not to jeopardize them; in the same way, with professors, it occurred during the
period when they were directly acting in the classroom. With the professionals, it occurred during
the working day, at the time they reported being conducive to the interview and that would not
affect the care and their work routine.

The data were analyzed by means of content analysis, which is a technique for data
collection that uses texts, discourses, information already collected, in an extensive way. Its
proposal is to analyze in greater depth the relevance of the answers, the logic, consistency, the
reliability of the data informed, any voluntary distortions and omissions. The participants of the research study received fictitious names of flowers to ensure their anonymity.

The research began after approval by the Research Ethics Committee in March 2016, under opinion number 1.470.720 and was developed after the authorization of the managers of the fields where the data collection, with the signature of the consent and co-participation form. The study complied with the ethical aspects for researches involving human beings, established by Resolution n. 466 of 2012, using the Informed Consent Form with those who agreed to participate in the study, with two copies, one remained with the interviewee and the other, with the researcher.

**Results and discussion**

Of the 24 participating students, 71% (n=17) were between 21 and 50 years old, 79% (n=19) were female, 50% (n=12) with stable union and 58% (n=14) had one or more children. Regarding nursing technicians, 88% (n=21) were between 21 and 50 years old, 92% (n=22) were female, 63% (n=15) with stable union and 83% (n=20) had one or more children. Of professors, all (n=4) were between 21 and 50 years old, female and without children, and 75% (n=3) with stable union.

These data show that nursing is predominantly formed by female professionals. Historically, this reality is common at health services, realizing that the care is an element that is part of women’s lives and, thus, their high number in the area. In addition to the predominance of women, the data indicate that most students and professionals have one or more children, which can contribute to a greater overload at work, whose starting point is at home.

In relation to choosing the profession, when asked about the reason that led to nursing, the students reported:

*Qualification and easy insertion in the labor market.* (ROSE)
*I thought I could work only one shift a day.* (TULIP)
Working in more than one place and having higher income.
(CARNATION)

The choice of a profession affects the student’s life and is usually influenced by family, by the favorable expectations of insertion in the labor world and social ascent and identification with positive experiences of professionals in the area. These elements can be regarded as fundamental to the social identity of the profession.¹⁴

The nursing professionals active in the labor market perceive not only the importance of this area, but also how the profession is part of the lives of families and how this fact can be positive or negative for individual care, as they portray:

Enjoying looking after the other, being important to improve people’s quality of life. (ANISE)
Being able to meet people and being recognized by them is priceless. (PETUNIA)

Working in two jobs is a way to ensure greater income and to be able to provide my family better living. But never failing to work with quality. (DAISY)

While the student is concerned with the professional space they will occupy and the prospects for professionals who will be part of their future when nursing technician, the professional seeks to find the essence of the profession and appreciation by recognition of the assisted people. The speech and action for students and professionals differ in important aspects related to the condition of perceiving as agent of action and transformation in people’s lives. Establishing bond and becoming involved with the situation lived by the being receiving the care reveal conditions to establish processes of complicity and, in this way, they become even more closer to this individual.¹⁵

Concerning future aspirations on the professional work in single or multiple work day at health institutions, 67% (n=16) of students indicated they would like to work at a single
in institution, 29% (n=7) at two and 4% (n=1) as government worker. The professionals showed that 52% (n=13) work at a single institution while 48% (n=12), at two.

The high workday in nursing is a reality, highlighting that part of these professionals work more than 36 hours per week, up to 78 hours. As repercussions of this workload, there are frequent pain, fatigue/exhaustion, leading to physiological responses and stress. In this sense, also taking care of the professionals that work at health services can be a fundamental strategy, since the quality of care depends, mainly, on healthy teams.16

The interview revealed that the work overload can be a contributing factor to the occurrence of adverse events during the care process. Working at health services, in a network of attention to vulnerable people and with different types of needs, requires, from nursing professionals, in addition to scientific knowledge, attitudes, availability and quality assurance in the care provided.

The occurrence of adverse events relates to work overload, which entails an increased number of days of hospitalization and risk of death of patients. In this way, considering the influence of work overload on the processes of illness, it is important to improve the working conditions of nursing technicians.17-18

When developing nursing activities at inpatient and/or critical units, the care becomes essentially conditioned by the time used for each activity, as well as the procedures that must be executed. Thus, work overload and the demand for simultaneous care can contribute to the risk of an imminent adverse event, according to the statements below:

Profession that requires attention, agility in care, responsibility in the acts. (TOUCH-ME-NOT)

I am very afraid to do something wrong, especially when I am tired and already in the second working day. (PETUNIA)
Therefore, the analysis of the workday allows for identifying the weight family responsibilities have for women, because, while men's workdays are higher than those of women in all types of families, for women, these vary according to the presence or not of dependents and relatives who assist looking after the children. In families in which women have dependent children and relatives in the same household, the journey of paid work increases one hour compared to those who do not have this support.

The statements of nursing technicians on the workday indicate the need for double shifts to supplement the family income, even if in different working environments.

*The workload of this profession allows us work at two institutions. It improves the wage too.* (BROMELIAD)

*I work in as many institutions as I can and I work privately in the care with people at home and or hospitalized.* (PINK AZALEA)

Added to this, the nurse's poor performance in the management of teamwork in some wards destabilize the safe care process. The nurse, as a manager of a health unit, becomes fundamental in the care process, once their training develops the expertise to identify risk situations and influence activities and behaviors of the health team to provide a safe care. Nevertheless, the study participants reported that the supervision and guidance of this professional should be fully assumed, as a mediator of knowledge and manager of work processes:

*There is a lack of follow-up, dialogue between nursing professionals in the team, lack of humanization with the patient and omission in the management by nurses.* (DAISY)

*I wish a nurse was always present at the unit and participating in the important decisions.* (BROMELIAD)

The communication examined by the exposed in the context of the nurse's leadership outlines the size of the nurse's role as a leader and central source of communication in the systems of organization of nursing assistance. The nursing team expects from the nurse the
position of coordinator of the work process and professional present at the unit and active in all care dimensions, contributing to the identification of risks and their prevention. In this sense, the knowledge about the adverse events in the scenario of students and nursing technicians is similar. The perception that this event can affect the life of a person and their family, concerns the future professionals, as well as who works in daily care. The lack of attention and the failures in the process of training are cited as possible causes:

*Adverse effects or complication resulting from medical treatment or care performed by other health professionals often unprepared for care.* (CALLA LILY)

*Unfortunately this still happens. Lack of attention? Overloaded professionals? Psychological pressure on professionals? Unprepared professionals.* (TOADFLAX)

*These are errors in the execution of procedures that cause or aggravate irreversible damage to the patient’s health.* (FREESIA)

During the course, the safe practice is essential for the safety of patients and health professionals. The students also claim that, during the course, they often lack the maturity necessary to understand the hazards of the profession and ways to ensure a safe behavior:

*Lack of attention, lack of professional training and even immaturity of ours to approach the subject.* (LILY)

*We aren’t able to see, during the course, how serious it is, even though it’s always been talked about.* (CARNATION)

The training prepares the health care professional not to practice unsafe acts in the care with people, and recognizing the professor’s importance in the education of this professional affects the patient safety, since this topic is one of the greatest challenges for the excellence of quality in the health service. The working conditions are factors that jeopardize the care, and nursing has fundamental participation in processes that aim to ensure the assistance provided. Within this perspective, the occurrence of adverse events in the course of assistance may put at risk the life of the individual under care. Furthermore, the knowledge about
professionals’ working conditions, as well as the activities developed in double workdays and health conditions deserve attention, since they can affect the assistance.

The care process involves adding the knowledge learned during the course to the practice. Being able to work in the care with people means having clarity of one’s responsibilities, rights and duties inherent to this care.

Thus, the students, in their statements, express fragility and fear in the process of recovery of the patient exposed to an adverse event:

*I would assume the mistake, but afraid to do so, who knows "I would quit the profession".* (CAMELLIA)

*I’d get nervous and scared, but would tell the nurse to analyze my mistake.* (TULIP)

The recovery of the patient, victim of some adverse event committed by the health team in the care process is part of a context in which the immediate attitude can result positively in this outcome.

Concerning the nursing professionals who work in the integral care with patients, they demonstrate maturity and involvement with the care in all aspects, especially in the identification of their role in the work team and the attitude facing the unexpected:

*Observe if there are any complications, check vital signs and quickly communicate the nurse.* (ORCHID)

*Communicate immediately so that the patient has no risk to die, as the nurse will communicate the doctor to mitigate the error.* (TOUCH-ME-NOT)

The perception about the adverse event that cause irreversible damage or death to the patient implies rethinking the modes of attention and strategies for preventing this problem. The statements about the error and its perception in the life of students and professionals have similar trends:
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It’s an unacceptable mistake, we shouldn’t make mistakes, when committed it must be investigated. (GARDENIA)

It’s very sad, because it’s a long-lasting consequence. (TULIP)

Very complicated, because you playing with one’s life. (WHITE AZALEA)

I find it sad, a situation that causes psychological damage for both the patient as the professional. (ACACIA)

I think it should be better investigated and published for better conditions for professional’s work, if it’s physically and psychologically appropriate. (ANISE)

Realizing that the occurrence of adverse events is part of the work organization can contribute to the discussion and permanent education of the team work in providing care with patients. This approach involves the recognition of the person that erred, seeking to identify any gap that contributed to this adverse event, according to the students’ statements:

The professional that made the mistake is responsible for it. (GARDENIA)

There’s no one, because we’re all human and no one escapes from making mistakes. But we need to do what we do as carefully as possible to avoid mistakes, since, depending on the mistake, it can even cost a life. (CALLA LILY)

The professionals see the adverse event as a transverse process, which affects the whole team, including the nurse who supervises and guides their work team:

Everyone is a bit guilty in a mistake, as a team, everyone has to be responsible. (MAGNOLIA)

In this context, the professors have a fundamental role in professional training and the ability to make the student seize knowledge, enabling discussions and reflections essential to the work process of future professionals. With this, the professor needs to help the student understand their importance in the care process, with their constant presence in practical activities, provoking, in the students, a keen sense to risk situations that can occur:
Failures in professional training can contribute to errors, that’s why the student should always be alerted. (VIOLET)

You have to be very close to the student. (CHrysanthemum)

There are individual factors that can aggravate risk situations for nursing error. (ROSE)

Thinking about the formation of subjects, still immature, for situations involving people's life and health can be an aggravating factor, which deserves special attention from professors, once knowledge reaches differently each person. In this sense, guiding the training for a process of attention to prevent and identify adverse events in care becomes essential.

**Final Considerations**

Adverse events represent a concern in the health scenario and involve the various professionals. The discussion about adverse events in nursing determines a behaviors of preventive action with the approach of educational institutions to health services.

The results allow for highlighting that the work overload and the demand for care may contribute to the occurrence of an adverse event. Moreover, the lack of attention and the failures in the educational process are cited as possible causes of this problem.

The identification of possible failures in the training process and permanent health education contributes to the teaching practice and to nurse’s management of their team work. The present study implies to widen and deepen the studies that address the performance of the nursing technician, since most studies highlight only nurses' practice.

For education, the crucial differences between students and professionals concerning adverse events establish a communication port essential to (re) discover ways to teach nursing in safely and with quality. Therefore, one contributes to improving the education of this
professional class, reflecting on their actions, with a view to minimize or annul the occurrence of adverse events.

A limitation of the study involved the difficulty to approach nursing technicians in daily work, due to the high number of assignments at hospital units. There is need to develop new studies that expand the fields of data collection to other levels of health care and educational institutions, including other professionals who make up the health team.

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