

The participation of hospitalized students in the drug therapy process as a barrier to the prevention of adverse events

La participación de los estudiantes hospitalizados en el proceso de farmacoterapia como barrera para la prevención de eventos adversos

A participação do escolar hospitalizado no processo de terapia medicamentosa como barreira na prevenção de eventos adversos

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Abstract

The aim was to discuss the relevance of the student's participation in their drug therapy process to prevent adverse events. This is an integrative literature review study, carried out in the Scientific Electronic Library Online (SciELO) database and in the Virtual Health Library (VHL) database platform, with 12 articles selected after inclusion and exclusion criteria. As a result, 12 articles were selected for analysis, addressing the issue of communication between health professionals and clients during pediatric hospitalization, as no article directly addressed communication with the student. Therefore, it was understood that the communication between the health professional and their pediatric clientele and caregiver is quite outdated, making room for adverse events related to drug therapy to occur. Continuing education and team training can be a solution for improving effective communication. Thus, the need for future primary studies on the subject was made clear.

Descriptors: Medication Errors; Patient Safety; Pediatrics; Child, Hospitalized; Child.

Resumen

El objetivo fue discutir la relevancia de la participación del estudiante en su proceso de farmacoterapia para prevenir eventos adversos. Se trata de un estudio de revisión integradora de la literatura, realizado en la base de datos de la Biblioteca Electrónica Científica en Línea (SciELO) y en la plataforma de base de datos de la Biblioteca Virtual en Salud (BVS), con 12 artículos seleccionados después de los criterios de inclusión y exclusión. Como resultado, se seleccionaron 12 artículos para su análisis, abordando el tema de la comunicación entre los profesionales de la salud y los clientes durante la hospitalización pediátrica, ya que ningún artículo abordó directamente la comunicación con el estudiante. Por lo tanto, se entendió que la comunicación entre el profesional de la salud y su clientela pediátrica y su cuidador está bastante desactualizada, lo que deja espacio para que ocurran eventos adversos relacionados con la terapia con medicamentos. La educación continua y la formación en equipo pueden ser una solución para mejorar la comunicación eficaz. Así, quedó clara la necesidad de futuros estudios primarios sobre el tema.

Descriptorios: Errores de Medicación; Seguridad del Paciente; Pediatría; Niño Hospitalizado; Niño.

Resumo

Objetivou-se discutir a relevância da participação do escolar no seu processo de terapia medicamentosa visando prevenir eventos adversos. Trata-se de um estudo de revisão integrativa da literatura, realizado na base de dados *Scientific Electronic Library Online* (SciELO) e na plataforma de base de dados Biblioteca Virtual em Saúde (BVS) sendo selecionados 12 artigos após critérios de inclusão e exclusão. Como resultado, foram selecionados para análise 12 artigos, abordando a temática de comunicação entre profissional de saúde e clientela durante a internação pediátrica, visto que nenhum artigo abordava diretamente a comunicação com o escolar. Portanto ficou entendido que a comunicação entre o profissional de saúde e sua clientela pediátrica e acompanhante está bem defasada, abrindo espaço para eventos adversos relacionados a terapia medicamentosa acontecerem. A educação permanente e o treinamento de equipes podem ser uma solução para a melhora da comunicação efetiva. Sendo assim, ficou explícito a necessidade de futuros estudos primários sobre a temática.

Descriptorios: Erros de Medicação; Segurança do Paciente; Pediatria; Criança Hospitalizada; Criança.



Introduction

Patient Safety is one of the six attributes of quality of care and is of great importance to patients, families and healthcare professionals in order to provide safe care¹.

The pediatrics area deals with patients at one of the extremes of age and, therefore, attention must be redoubled in the medication process, knowing that children are especially more vulnerable, taking into account their metabolism, age, weight and height, causing serious damage faster, and sometimes even irreversible².

To ensure the safety of pediatric patients undergoing drug therapy, it is of great importance to highlight the continuing education of the nursing staff who will deal directly with these patients, taking into account the experience of professionals and the commitment of each team member in provide the best assistance and demonstrate factors that can reduce the occurrence of errors³.

In drug therapy, the nurse is responsible for planning, guiding and supervising these practices, and knowledge about the drug to be applied, its action, route of administration, interactions and adverse effects is essential, helping to prevent errors and clarify the patient about the procedure³.

In 2004, the Global Alliance for Patient Safety was launched by the initiative of the World Health Organization (WHO) with the objective of promoting the development of policies and practices in patient safety and reducing damage caused by adverse health events (AEs)⁴.

In 2017, WHO, recognizing the risks of harm associated with the use of medications, launched the third Global Patient Safety Challenge with the theme "Harmless Medication". The goal of this challenge is to reduce serious and preventable drug-related harm by 50%. One of the goals of the challenge is to empower patients to actively and actively participate in decisions related to their drug therapy, identifying possible errors⁴.

The Global Patient Safety Challenge aims to identify areas of significant risk to patient safety and foster the development of harm prevention tools and strategies⁴.

In the field of pediatrics, there is a shortage of clinical studies related to drug therapy, there is a lack of information such as pharmaceutical forms, dosages and adequate concentrations for administration, and therefore there is a need for calculations and individualization of doses according to age, weight, area of body surface area and the clinical condition of the pediatric patient, putting the patient at increased risk of AE⁵.

In patient safety, strategies are generally aimed at changing the medication system and practices and changing the professional's technique, so the patient's empowerment so that they participate in an engaged way in their medication processes must become relevant, as well as patients should be seen as the center of health practices and become an important barrier to the prevention of errors in the medication process⁶.

Studies on the subject are of great importance for nursing practice and are relevant to patient safety,

contributing to the scientific area and being able to inspire and collaborate in future studies.

The present study is relevant to science, as it aims to identify the importance of engaging students in their drug therapy, aiming to reduce adverse events during the medication administration process. For health professionals, it seeks to observe whether the communication between the nursing team and the school is effective, bringing improvements in the quality of patient safety at school. For the clientele (school children), it seeks to clarify how the student's involvement can positively influence their medication process, through their understanding and experiences during hospitalization.

Throughout the Nursing graduation, the need for effective communication between health professionals and patients was clear. Communication when it is clear can prevent errors in drug administration. We know that adults can more easily identify possible errors and the following guiding questions emerged that guided the integrative literature review: Does the student participate in your drug therapy process? Does the health team involve the student in their drug therapy process? Is there an effective communication between the professional and the patient in the drug therapy process?

Given the above, this research aimed to discuss the relevance of the student's participation in their drug therapy process to prevent adverse events.

Methodology

This is an integrative review research that took place following the steps: elaboration of the guiding question; literature search; data collect; critical analysis of studies; discussion of results and presentation of the integrative review. The integrative review provides the synthesis of knowledge and the incorporation of applicability of results of significant studies in practice⁷.

Integrative literature review research plays an important role in evidence-based nursing practice (EBP), which is characterized by its approach to clinical care and teaching based on knowledge and quality of evidence⁷.

In the first stage, the PICO strategy was used to elaborate the research question (P = population; I = interest; Co = context that shaped the question: what is the participation of hospitalized students in the drug therapy process, aiming at the prevention of adverse events⁸?

In the second stage, to carry out the electronic bibliographic survey, the search was carried out in the following database Scientific Electronic Library Online (SciELO) and in the Virtual Health Library (VHL) database platform.

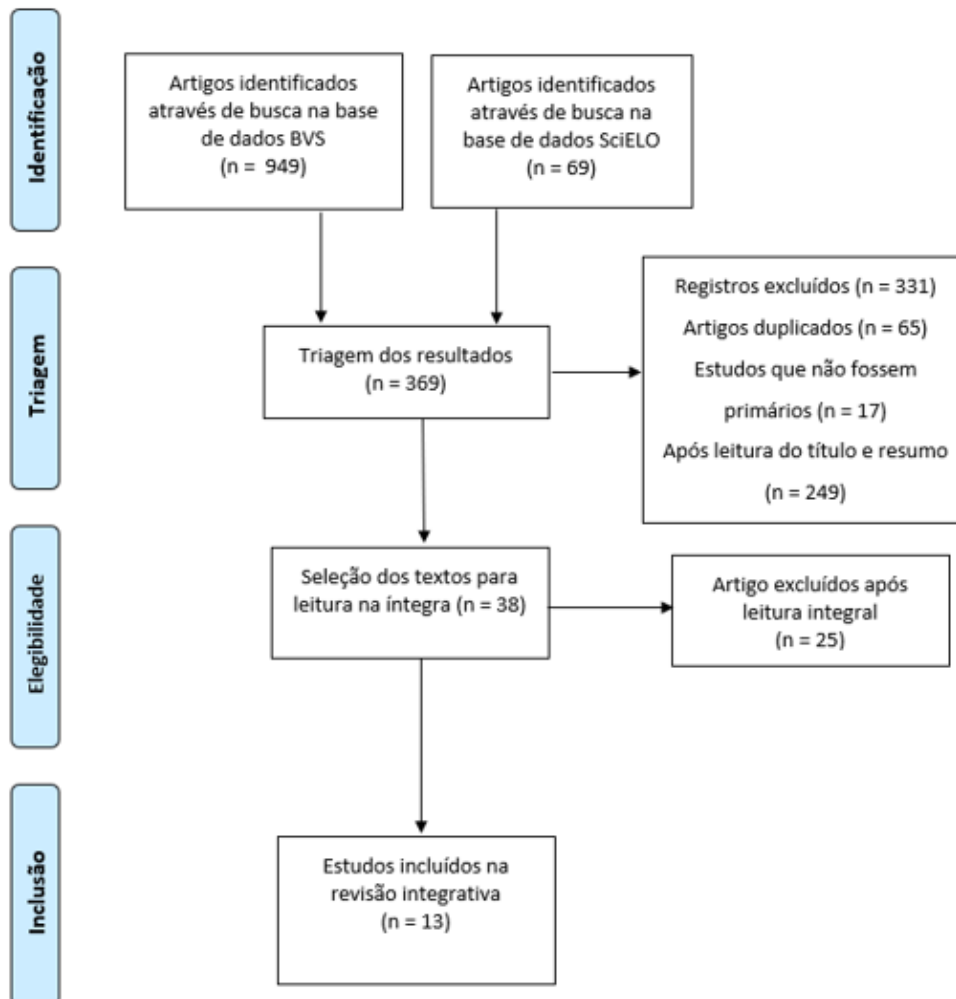
The third stage consisted of searching the databases for studies, which took place between August and September, and sought to answer the following guiding questions: Does the student participate in your drug therapy process? Does the health team involve the student in their drug therapy process? Is there an effective communication between the professional and the patient in the drug therapy process?



The descriptors used were determined using the DeCS tool (Descriptors in Health Sciences), with four descriptors being chosen, namely: 'medication errors'; 'patient safety'; 'pediatrics'; 'hospitalized child', and the

Boolean "AND" operator was used to cross the descriptors. The crossing and alignment of descriptors and search results was done according to PRISMA standards (Figure 1).

Figure 1. Study selection flowchart according to Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA)⁹. Rio de Janeiro, RJ, Brazil, 2020



Inclusion criteria were articles in Portuguese, English or Spanish; complete articles that fully portrayed the theme of the work; and articles published in the last five years (2015 – 2020) and that were primary studies.

The exclusion criteria were articles that after being read in full did not answer the guiding questions; that were not primary studies (integrative review, case reports, dissertations, essays, opinion articles, thesis).

In the fourth stage, critical analysis of the studies was performed by tabulating in the Microsoft Excel[®] software to organize and summarize the main information collected in the databases, so that the review could be applied and had as variables: number of articles (N), year, journal, article title, objective, methodology, data collection method, data analysis method, results, and conclusions. Thematic/categorical analysis was used to systematize the research analysis and make the reading less exhaustive and of better understanding. Thus, we divided into two categories: category I - Client participation during

hospitalization and category II - Communication as a barrier to the prevention of adverse events¹⁰.

After defining the final number of articles to compose the review, the fifth and sixth stages were carried out, which allowed the extracted and synthesized data to be presented in the results (Table 1) for the characterization of the studies and after, the discussion of the results found.

Results

Thirteen (13) articles were selected for analysis that addressed communication with the clientele during pediatric hospitalization, eight (8) of these articles from the BVS database platform and five (5) from SciELO. No direct research was found with school-age patients, further corroborating the need for research within the pediatric area.

The 13 selected articles are organized (Chart 1), featuring: level of evidence, authors, title, country and year of study, objectives and results. With the results, two categories emerged for discussion⁹, namely: Category I- The

participation of the client during their hospitalization and Category II- Communication as a barrier to the prevention of adverse events.

Chart 1. Summary of selected articles. Rio de Janeiro, RJ, Brazil, 2020¹¹.

| Authors | Title | Year | Objective |
|---|---|------|---|
| Rocha CM da, Gomes GC, Ribeiro JP et al. | Administração Segura De Medicamentos Em Neonatologia E Pediatria: Cuidados De Enfermagem ³ | 2018 | Objective: to know the Nursing care related to the safe administration of medications in Neonatology and Pediatrics. |
| Lima JC de, Silva AEBC, Sousa MRG de et al. | Avaliação Da Qualidade E Segurança Da Assistência De Enfermagem À Criança Hospitalizada: Percepção Do Acompanhante ¹² | 2017 | Objective: to know the opinion of the hospitalized child's companion regarding the quality and safety of nursing care. |
| Biasibetti C, Hoffmann LM, Rodrigues FA, et al. | Comunicação para a segurança do paciente em internações pediátricas ¹³ | 2019 | Objective: to analyze the perception of health professionals and caregivers/family members regarding the development of communication for patient safety in pediatric hospitalizations. |
| Romero-Massa E, Carrera-Hooker a, García-Martínez D | Condiciones de seguridad percibidas por cuidadores familiares en atención pediátrica ¹⁴ | 2019 | Objective: to identify the perception of caregivers about the safety conditions in care at a pediatric hospital. |
| Bandeira LE, Wegner W, Gerhardt LM, | Condutas De Educação Ao Familiar Para Promoção Da Segurança Da Criança Hospitalizada: Registros Da Equipe Multiprofissional ¹⁵ | 2017 | Objective: to analyze the records of the multidisciplinary team on family education conducts to promote the safety of hospitalized children. |
| Hoffman MR, Wegner W, Biasibetti C, | Identificação de incidentes de segurança do paciente pelos acompanhantes de crianças hospitalizadas ¹⁶ | 2019 | Objective: to analyze patient safety incidents identified by caregivers of hospitalized children. |
| Hoffmann LM, Rodrigues FA, Biasibetti C, et al. | Incidentes de segurança com crianças hospitalizadas reportados por seus familiares ¹⁷ | 2020 | Objective: to know the main safety incidents reported by family members of patients admitted to pediatric units. |
| Khan A, Furtak LS, Melvin P et al. | Parent Reported errors and Adverse Events in Hospitalized Children ¹⁸ | 2016 | Objective: To determine how often caregivers experience incidents related to patient safety and the proportion of reported incidents they meet with standard definitions of medical errors and predictable adverse events. |
| Peres MA, Wegner W, Cantarelli-Kantorski KJ, et al. | Percepção de familiares e cuidadores quanto à segurança do paciente em unidades de internação pediátrica ¹⁹ | 2018 | Objective: to know the perception of family members and caregivers regarding Patient Safety in pediatric inpatient units. |
| Rosenberg ER, Williams E, Ramchandani N, et al. | Provider Perspectives on Partnering With Parents of Hospitalized Children to Improve Safety ²⁰ | 2018 | Objective: The aim of this study was to understand the perspective of the healthcare team on the partnership in the care of parents of hospitalized children in the USA to complement a parallel study on the perspective of guardians. |

| | | | |
|--|--|------|--|
| De Souza TLV, Mota RO, Brito EAWS et al. | Segurança do paciente na administração de medicamento intramuscular em pediatria: avaliação da prática de enfermagem ²¹ | 2018 | Objective: To evaluate nursing practice regarding intramuscular drug administration in pediatrics. |
| Franco LF, Bonelli MA, Wernet M, et al. | Segurança do paciente: percepção da família da criança hospitalizada ²² | 2020 | Objective: to know the meaning attributed by family members to pediatric patient safety, with attention to the possibilities of their collaboration. |
| Santos JM, Hipólito MZ, Rosa T | A in-visibilidade da iatrogenia na enfermagem na administração de medicamentos ²³ | 2020 | Objective: to identify the most frequent failures in the medication administration process according to the experience of the nursing staff. |

The results of data collection were very unsatisfactory, as it was evident that schoolchildren, or pediatric patients in general are not included in their own hospitalization, let alone in their drug therapy, demonstrating that only those responsible, most of the time, they end up playing the role of "barrier" between hospitalization and the occurrence of AE.

One of the justifications for this event would be the immaturity of the children in the face of hospital adversities, having their guardians as barriers and being totally dependent on them to make decisions^{18,19}.

Discussion

Considering a total of 13 articles found, related to our guiding questions, none addressed the importance of the student's participation in their medication process. Most studies reported on communication between health professionals and caregivers, which is ineffective and flawed communication. The articles also address errors during the medication process, most of which are caused by lack of communication and caregivers notice errors in care, but do not feel welcomed or involved in the care to actively participate.

Nursing is at the forefront of medication administration in the hospital environment, and we can consider that there is an overload of responsibility on the nursing team, making the medication process prone to errors due to various factors in the environment. One of the ways to avoid this type of error is communication between teams and between team and patient²³.

Even though guardians are one of the main barriers in pediatric hospitalization in the face of possible adverse events, studies corroborate the fact that guardians face difficulties with decisions and procedures performed during hospitalization, which may be related to education level, culture and willingness to participate in the child's hospitalization¹⁸.

Regarding the student's participation, a study justifies that pediatric patients do not participate in their care because they are not mature in the face of hospital adversities^{18,19}. Schoolchildren, in their development, have a significant learning process, after all, this is when they start going to school and exploring new skills. The guidance of professionals in a clear and easy-to-understand manner, with the help of didactic instruments, would facilitate the student's engagement in their therapy²¹.

In pediatrics, communication between the nursing staff and the patient becomes very important before, during and after procedures to try to reduce anxiety and increase the patient's trust with the team providing care, which can help in collaboration and avoid complications during drug administration²¹. Placing the child as the center of care can avoid frustration and stress, which can be triggered during a procedure that has not been clarified.

The stress related to the student's hospitalization may be related to the loss of their autonomy and the loss of the power to express their will, being unable to control the events around them. The loss of routine and family environment are also stressful factors for hospitalized students. It is understandable that the student does not adapt to the hospital environment due to painful procedures and fear of abandonment²³.

Letting the student participate in the decisions of the hospital routine and include their wishes in care planning, giving freedom of autonomy in their self-care can be measures that minimize the student's stress, making them not feel so limited and incapacitated, and may improve their acceptance of procedures, making the student more cooperative when participating in activities. The stress of the hospital environment can result in security risks for the student, such as simply transporting a stretcher. Just as stress can lead to delays in cognitive development, by interrupting the continuity of learning²³.

In the analysis of the content from the selected articles, two categories emerged, which will be presented below:

Customer participation during their hospitalization

It was evident that those responsible for pediatric patients perceive errors in the administration of medications that occur during hospitalization. Some family members report not feeling welcomed and listened to by professionals. The caregivers of pediatric patients highlight the importance of valuing their opinions by health professionals, thus increasing trust among those involved^{16,22}.

Family members report that they do not feel valued within the hospital in the role of accompanying the child, being invisible to the team, which makes them feel excluded from the care of their family member and providing a climate of mistrust between the health team and the caregiver and possibly with the school client^{12,18}.



Communication between nursing and school clients is of great importance, as it will clarify the child's curiosity about the procedures and administration of medications, aids physical and emotional preparation, creating a climate of trust and may have the collaboration of the school to carry out the necessary procedures²⁰.

Communication as a barrier to the prevention of adverse events

Research shows that lack of communication can lead to errors, as the deficit even implies the identification of the patient, taking as an example pediatric patient who, during hospitalization, can change beds with another patient without the nursing team noticing. The same medication can be administered more than once or even the wrong medication²⁰.

It was exposed that many medication errors occur due to communication failure, which can be with the team or with the client, and these errors are avoidable. The lack of communication between the professional and the patient, such as not clarifying the procedure to be performed, can generate anxiety and stress during the procedure, which can make the professional's work difficult and generate unsatisfactory outcomes, such as discomfort in the patient and so on. adverse events^{3,16-18,21,22}.

It is known that the event of AE related to drug therapy within a hospital environment can generate serious consequences, from an increase in the length of hospital stay or even the death of the patient, therefore, the methods to ensure safety must be constantly updated of the patients^{13,14,19}.

Ineffective communication between the nursing staff and hospitalized students can bring unsatisfactory results in recovery due to the stress that can be triggered by not participating in their care. You can use verbal, non-verbal and playful language to explain procedures and include the

student in care planning, thus making the student more understandable about the events around him and about his illness^{13,21}.

Conclusion

The results showed a scarcity of studies related to the participation of pediatric patients, mainly related to drug therapy. They emphasize more the participation of caregivers as a barrier to incidents, but what if the caregiver cannot stay with the child all the time? This research shows the importance of carrying out more studies related to this theme.

Self-care, even if limited due to the student's age, should be encouraged, and included in care planning, as they are extremely important for the maintenance of well-being and humanization of care while this child is hospitalized, reducing stress levels, and helping your recovery.

Continuing education can be of great importance to train professionals prepared for dialogue and effective communication, as well as the training of health teams portraying the theme of patient safety and inclusion of students in their care and drug therapy.

This study is important for evidence-based nursing, as we seek to clarify how effective communication between nursing professionals and pediatric patients (school) can bring improvements in care with the inclusion of this clientele in their care and avoid errors in the process. medicated.

Finally, this study indicates the scarcity of works on the subject, making it necessary to produce original studies on the subject to identify the importance of the participation of students in their drug therapy to avoid AE.

We identified as limitations for this study the choice of only two databases and the scarcity of studies that addressed the theme of this research, which may have limited the number of articles found.

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