ORIGINAL ARTICLE

ACCIDENT PREVENTION IN A DAY CARE CENTER: EXPERIENCE WITH PARENTS, TEACHERS AND PRE-SCHOOL CHILDREN

PREVENCIÓN DE ACCIDENTES EN UNA CRECHE: EXPERIENCIA CON PAÍSES, PROFESORES Y PRÉ-ESCOLARES

PREVENÇÃO DE ACIDENTES EM UMA GUARDERIA: EXPERIÊNCIA CON PADRES, PROFESSORES Y PRÉ-ESCOLARES

Aline Ramos Araújo¹, Fabiane do Amaral Gubert², Marcelo Ariade Braga Gomes Tomé³, Mariana Cavalcante Martins⁴, Nágila Lima Fontenele⁵, Émile Costa Barros⁶

ABSTRACT

Objective: to promote educational activities for the prevention of accidents with pre-school children, as well as to verify parents and teachers’ knowledge about accident prevention. Method: descriptive study, of a qualitative approach, carried out in a public day care center. Educational activities were carried out with the children and interviews were made with parents and educators. For the analysis, the method Interpretation of Meaning was used. Results: children showed greater knowledge regarding burns and little knowledge related to traffic. Most families have low income and low schooling. Parents and teachers recognized the importance of the work performed in the day care center, but they have knowledge gaps. Conclusion: the lack of familiarity with the day care center and with issues related to the learning of their children was verified on the parents. As for teachers, they need encouragement so that they can seek knowledge in this area of study. Nurses can contribute in this process through the implementation of health policies. Descriptors: Accidents, Home; Child Health; Risk Factors; Pediatric Nursing.

RESUMO

Objetivo: promover atividades educativas para a prevenção de acidentes com pré-escolares, bem como verificar com pais e professores o conhecimento acerca da prevenção de acidentes. Método: estudo descritivo, de abordagem qualitativa, realizado em uma creche pública. Foram realizadas atividades educativas com as crianças e entrevista com os pais e educadores. Para a análise, usou-se o Método de Interpretação dos sentidos. Resultados: as crianças mostraram maior conhecimento com relação às queimaduras e pouco relacionado ao trânsito. A maioria das famílias é de baixa renda e baixo grau de instrução. Os pais e professores reconheceram a importância do trabalho realizado na creche, mas possuem lacunas no conhecimento. Conclusão: sobre os pais, foi verificada a falta de familiaridade com a creche e com questões relacionadas à aprendizagem de seus filhos. Quanto aos professores, eles precisam de incentivo para que possam buscar conhecimentos nessa área de estudo e o enfermeiro pode contribuir nesse processo mediante concretização das políticas de saúde. Descritores: Acidentes Domésticos; Saúde da Criança; Fatores de Risco; Enfermagem Pediátrica.

RESUMEN

Objetivos: promover actividades educativas para la prevención de accidentes con preescolares, así como verificando con padres y profesores el conocimiento acerca de la prevención de accidentes. Método: estudio descriptivo, de enfoque cualitativo, realizado en una guardería pública. Fueron realizadas actividades educativas con los niños y entrevista con los padres y educadores. Para el análisis, se usó el Método de Interpretación de los sentidos. Resultados: los niños mostraron mayor conocimiento con relación a las quemaduras y poco relacionado al tránsito. La mayoría de las familias es de baja renta y bajo grado de instrucción. Los padres y profesores reconocieron la importancia del trabajo realizado en la guardería, pero poseen lagunas en el conocimiento. Conclusión: sobre los padres, fue verificada la falta de familiaridad con la guardería y con preguntas relacionadas al aprendizaje de sus hijos. Referente a los profesores, ellos precisan de incentivo para que puedan buscar conocimientos en esa área de estudio y el enfermero puede contribuir en ese proceso mediante concretización de las políticas de salud. Descriptores: Accidentes Domésticos; Salud del Niño; Factores de Riesgo; Enfermería Pediátrica.
INTRODUCTION

Data from the Brazilian Society of Pediatrics show that, in Brazil, mortality due to diarrhea, respiratory infections and immunopreventable diseases has decreased in recent years; however, diseases caused by external causes have increased.1 Thus, as children have this characteristic behavior of exploring the environment, they are subject to situations of risk and vulnerability related to their physical integrity. These risks are present throughout the development process, following the characteristics of each age group.2

The risk for childhood injury is high in developing countries in Latin America and characterizes mortality rates in these countries, which average 50.5 per 100,000 for boys and 43.5 per 100,000 for female children. The larger overall burden of childhood accidents in developing than developed countries is explained by the demographically much larger and younger populations.3

In Brazil4, the most common accidents are traffic accidents, drowning, suffocation, burns, falls, intoxications and accidents with firearms. Suffocation, caused by airway obstruction, is the first cause of death due to accidents involving infants up to one year of age; drowning represents the second largest cause of death and the seventh cause of hospitalizations among children up to four years old.

Burns are a global public health problem, with an estimate of 265,000 deaths annually. Most of these cases occur in countries with low and medium economic power.5 In Brazil, they are also a serious problem in public health. In the city of Fortaleza, the proportion of burns divided by the total number of care provided to accidents was 4.8%, and in the population from zero to nine years old, Fortaleza was one of the most prevalent cities, with 7.8% of cases 6. Most cases of childhood burn are by scalding and the second largest cause is alcohol.7

Another common childhood accident is traffic accident. In 2011, 28,754 children and adolescents (zero to 19 years old) were hospitalized in Brazil victims of this type of accident. Road crashes and bicycle accidents were the main causes of hospitalizations in the age group from zero to 14 years. In addition to death and hospitalization data available from the Mortality Information System (SIM) and the Hospital Information System (SIH), data on minor injuries, which do not imply hospitalization or death, but require high demand for emergency services also need to be considered.8, 9

Falls also happen frequently. A fall can have variable degrees of repercussion, from minor injuries to death. Children between 1 and 4 years old are very likely to suffer falls, injuries and lesions, since they have a strong characteristic of running and climbing in dangerous places.10

Given the magnitude of accidents in Brazil, the nurse can act in several preventive scenarios, especially, in day care centers. The right to early childhood education is supported by the Brazilian Constitution of 1988, in the Child and Adolescent Statute and in the Law on Guidelines and Bases of Education, which provides as a State’s duty to provide care in day care centers and in preschools to children aged between zero and six years. The age range can vary in each municipality, but the purpose is the same, providing care, considering the importance of the first years of life for the development of the human being.11

The lack of public policies involving this scenario helps increasing statistics in this area. Thus, as an alternative to this problem, in 2013, the Ministries of Health and Education, jointly, launched the Health in School Program (PSE), which expanded throughout Brazil and included day care and pre-school as spaces to be encompassed. However, studies are still scarce on this theme.12

In this context, the nurse has acted in a significant way in the pre-school setting through health promotion actions involving children’s growth and development, as well as guidance to the caregivers with the purpose of guiding them regarding the phases in which the child is and thus promoting appropriate knowledge.13

Considering the relevance of the day care center in gathering children in an age group with a greater risk of accidents, nurses can promote, in this place, educational activities aimed at improving the quality of life and knowledge about the subject. Therefore, the study aimed:

● To promote educational activities for the prevention of accidents with pre-school children;
● To verify parents and teachers’ knowledge on accident prevention.

METHOD

This is a descriptive, qualitative study developed in the period from August to October 2014 in a public day care center in
the city of Fortaleza, Ceará State. Fortaleza has a population of about 2,452,185 inhabitants, with a population of 168,814 children under five years old, corresponding to 6.88% of the population of the municipality.

The collection began with participant observation of the children in the day care center during a period of three months. This experience was described in a field diary, and this moment made it possible for the researcher to approach the research participants. After the approach with the children, parents and teachers, the stage of the educative sessions was accomplished, totalizing four meetings. The first meeting aimed to know about the prior knowledge of the pre-school children about the types of accidents to be addressed, and the others meetings sought to deepen the prevention thereof. Topics covered were prevention of burns, prevention of traffic accidents and prevention of falls and drownings. Researchers used games and playful activities, such as painting, memory game, role play and collage, to help children to assimilate information. Some strategies were adapted from other studies.

During the activities, observation was used as evaluation method. In order to better analyze the data, meetings with the children and interviews were video recorded, being previously authorized by the parents and teachers.

Then, data were collected through a semi-structured interview, in which teachers and parents’ knowledge about domestic accidents were approached, as well as the profile of professionals, situations already experienced of accidents at home, and the importance of addressing the theme in the nursery environment. Speeches will be identified by the letter R (researcher) and C1 to C9 (child).

The method of Interpretation of Meanings was used to analyze the images produced by the children, as well as the reports made during the educational activities and the speeches of parents and teachers. Thus, in a first moment, a comprehensive reading of the selected material was carried out aiming to absorb the content of the material, have an overview and apprehend the particularities present in the partial totality. Next, researchers sought the ideas behind the texts through the construction of inferences made on prevention of accidents and study participants’ perception.

Data collection was only initiated after approval of the Research Ethics Committee of the Federal University of Ceará, with the opinion number 751,129; as well as after approval and authorization of parents and/or legal guardians through terms of free and informed commitment.

RESULTS AND DISCUSSION

Educational activities and children’s perception

In the first educational activity, images were presented and discussed with the children about the main accidents occurred in childhood so that the group had an overview of the subject that would be approached and demonstrated previous knowledge and experiences. At this moment, the most frequent theme was burns, which guided the following session.

Activities showed that, in spite of the various types of burns, the most raised by the children were those involving pans, stoves and electric shock. This is probably because these are objects and situations that are experienced more frequently and are more often presented and alerted by parents.

R - Do you remember what we have talked about last time?
C4 - That we should not play around the stove.
C2 - And that we should not to touch the pans.
C7 - If we do it, it will burn and blood will come out.
C5 - We cannot touch the outlet.
C2 - Because we will go to the doctor, right?
R - What happens if you touch it?
C2 - It will hurt us.

A study conducted in a hospital in the city of São Paulo showed that most children was victim of scalding burn, mainly by hot water and oil. On the other hand, shock burns were one of the causes with fewer victims. According to the Brazilian Ministry of Health, Fortaleza is the city with the highest prevalence of burns among children from zero
to nine years. These situations occur mainly due to a cultural factor, since parents allow children to stay in the kitchen during preparing the meals, and due to the carelessness of the parents.19

The topic of traffic accident prevention was started by talking about traffic light, its operation and the meaning of its colors, as well as the pedestrian crossing. In the educational session, the researcher elaborated a situation involving cars and pedestrians, in which boys represented the cars and girls the pedestrians; then, roles were reversed, as shown in Figure 1.

![Figure 1. Prevention of traffic accidents. Fortaleza, CE, Brazil, 2014.](image)

During the activity and simulation of traffic, lack of information about the theme and difficulty of assimilating the dynamics was evidenced, according to reports:

R - Do you know how to identify traffic signs? How to cross the street carefully?
C6 - I do not know.
C9 - My mother never explained to me about the signs.
C4 - I am afraid of getting hit by a motorcycle.

The fact that children do not know about traffic issues is worrying, because in this age group traffic accidents involving pedestrians increase due to activities such as playing in the parking lot, in driveways or in streets, riding tricycles, bicycles and others toy vehicles, chasing after balls or forgetting safety rules when crossing streets.10 Preschool children are impulsive and have little ability to see danger on certain occasions, so the prevention of traffic accidents at this stage of life is still under the control of family members, who should always supervise the child so that nothing bad happens to them.

The last activity performed with the preschoolers was about falls and drowning. In the first moment, pictures were shown to the children portraying the act of simply playing, with various toys scattered on the floor. For children, leaving toys scattered around the house did not awaken their association with falling; however, when asked what might happen, children were able to associate cause and effect, as observed in the following statements:

C2 - I do not organize my toys. [...] R - What could happen if you leave your toys scattered?
C2 - Slide. R - So what should you do after you are done playing?
C2 - 5 - Gather and store.

When talking about climbing in high places, a picture of a child rising in furniture was shown. The participants were able to understand the consequence of this act. When talking about how to use stairs safely, they did not know how to relate the situation of walking up the steps with the need for prevention. The fall of furniture/sofa and stairs appeared among the first five causes of falls in a survey made in Paraná, a Brazilian city.9 The fact that they do not know how to use stairs safely can be explained by the fact that this is not a common activity of daily life or simply because of lack of warning from parents. Also on this topic, the children were able to identify safety equipment for bicycle use.

The drowning issue was discussed through images. When showing pictures of swimming pools and floats, the following lines appeared:

R - Can you see this child? What is she using?
C1, 4, 8 - Floats.
R - Why is she using these floats?
C1 - Not to drown.
C6 - I have a float.
C5 - The float protects from water.
C9 - I once fell into my uncle's pool.
Drowning is a more serious accident as it easily becomes fatal. In Brazil, it is the second leading cause of death in the age group from one to nine years and one of its most common causes is falling into a swimming pool. The infants demonstrated knowledge about the subject and even cited a situation in which one of them fell into a swimming pool in a relative's house. Most of these episodes are associated with leisure time, so it is more common for parents to be unconcerned at these moments and, consequently, have lack of attention, which may have been the cause of these incidents.20

**Parents and teachers: together for the prevention of domestic accidents**

Historically, the institution of early childhood education appears as an extension of the family, and one of its functions was to boost and complement the educational role. The family-institution relationship of early childhood education is a reality existing in all institutions, but the effectiveness of this relationship becomes more possible in early childhood education.21,22

Some parents have transferred their educational responsibility to day care centers and or schools, believing that this role is not exercised by them, since their children will spend most of the day under the care of the institution's employees. However, the educational base of the day care center and/or school and the parents' educational base must be developed together, requiring specific responsibilities, but not excluding from each of the parties. The intention of this joint effort is to enable the child to have a more effective education.22

The results of the interviews with the parents showed most families with which children live was of low income, with earnings of up to two minimum wages, equivalent to 400 dollars, and with education degree of up to five years of study. This profile is typical of the outer areas of Brazilian cities. The socioeconomic status of individuals influences health status and determines health behaviors, but when the family is stimulated to participate in the school life of their children, being sensitized about the need for safety in the home environment, the family makes relevant reflections, shares knowledge, builds new conceptions, regardless of economic and social condition, especially when engaged in an educational process in health.23-4

Among the questions about accident history, parents were asked whether any of their children, even those who did not attend the day care, had already suffered any accident, and if so, what type, the age at which it occurred and in what environment. There were seven positive answers on this question. Of these, four were falls; two were burns; and one was a cut injury. With regard to age, five children were three years old when the accident occurred, one was two years old, and one only one year old. The environments in which the accidents occurred were varied, being cited bedroom, yard, porch and street. The two episodes of burn were caused by contact with the motorcycle exhaust. The opinion of parents about the importance of discussing the theme of accident prevention in day care was also raised. The responses were unanimous in supporting this initiative and the relevance of this theme.

I think it is important for them to learn to have greater attention, because sometimes as a parent we cannot approach all dangerous situations. (Father 1)

[...] So that mothers know how to take better care of their children. (Father 4)

[...] They learn here and come home talking to us. (Mother 2)

Regarding the profile of the nursery teachers, all of them had completed higher education, with an average of six years since graduation. When asked about the relevance of the discussion of the topic of accident prevention in day care, all answered that they considered essential for the education of children and family:

Yes, because it helps parents raise awareness through the children, who transmit the information. (Teacher 3)

Yes, childhood accidents often happen due to the age of children who have not yet matured about risks such as shock, intoxication, falls. Increased attention needs to be paid to avoid such damages. (Teacher 4)

I think it is important, because since we deal with people in our profession, it is important that we take a general knowledge to better serve them and take care of them. (Teacher 1)

When asked if they feel able to approach this topic with students, only one professional said no, that she would need training.

I try to teach them not to climb in high places without my supervision, not to put the finger in the socket and not to run, to avoid falls. And I am always paying attention to avoid physical damage. (Teacher 5)

No. Only with training. And I also think it is not my department. (Assistant 2)

When teachers and assistants were asked
whether they felt prepared to give guidance on this topic, only one answered negatively, which differentiates from other experiences in the area, in which teachers say they feel unable to approach the theme and ask basic guidelines to better exercise the role of educator.

In view of the above and the experience with the children, their parents and educators, the nurse has been identified as an essential professional that can unite knowledge and carry out health education work in different groups and situations, meeting specific needs. The objective of the nurse’s role is to promote responsibility and independence for self-care. In nursery, nurses combine health with education by sharing their knowledge with children, educators and parents in order to effectively promote health promotion and disease prevention, in this case, with a focus on the prevention of accidents.16,23-4

Nurses can make use of music, games, theater and puppets in order to streamline the teaching-learning process and provide better understanding since they catch the attention and arouse curiosity and interest in learning what is being transmitted in educational activities. Association between games and health education on topics such as personal hygiene, healthy eating and prevention of domestic accidents is very significant, since this unification facilitates the process of understanding and adherence to healthy habits. Moreover, it is a strategy to reduce health care costs by preventing disease, avoiding costly medical treatments, reducing periods of hospitalization and facilitating early discharge, because through this prevention one can also promote health for children.22

CONCLUSION

The setting for this study was a space in which children begin to interact with other children, in which various aspects of development such as cognition, social interaction, motor system, and others are improved. It is a very rich environment of learning and ideal to work on certain typical subjects of early childhood so that infants begin to have contact with health education.

Primary health care is the main strategy to work in this scenario; however, the nurse’s performance is still reduced in this space when referring to preschool. It is important and feasible to exercise their role as a health educator, based on public policies such as the School Health Program (PSE), working directly with the children or providing training for day care professionals to work with this topic more confidence and support.

About parents, the lack of familiarity with the day care center and with questions related to the learning of their children was verified. As for teachers, they need encouragement so that they can seek knowledge in this area of study and the nurse can contribute in this process through the implementation of health policies already in force. In addition, the nurse must work by providing training for educational professionals so that they know how to promote adequate knowledge, taking into account the needs of each age group of children. For parents and caregivers, it is through the nursing appointments to the child that professionals should pay more attention to the prevention of accidents, from the first consultation of childcare until the last one before adolescence.

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