

ANALYSIS OF TEACHERS' UNDERSTANDING FROM MUNICIPAL ELEMENTARY SCHOOLS AND PUBLIC EARLY EDUCATION CENTERS ABOUT FIRST AID

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Abstract: In childhood, accidents are common, especially in the school environment, which justifies the need for knowledge about first aid by everyone, especially teachers, as they spend a large part of their time with children. Schools must inspire confidence in the parents who share the education of these students and, therefore, safety and care for them must be a daily objective for all pedagogical staff involved in the education of these children. This study aimed to evaluate the understanding of elementary school and early childhood education teachers about first aid and their actions in the face of possible accidents in the school environment. It was a study that was observational, descriptive, quantitative and with transversal approach. The data presented was collected using the Google Forms tool using a non-probabilistic sample using the snowball sampling technique. The field of study comprised 33 Elementary Schools and 21 Early Childhood Education Centers, located in the municipality of Colatina, in the northwest region of Espírito Santo. The sample consisted of 226 teachers from these institutions who agreed to participate in the study by electronically signing the Free and Informed Consent Form (TCLE). The results revealed that 61.1% of teachers had never taken any extracurricular courses in the area of first aid, 67.3% had already witnessed a situation that required basic knowledge of pre-hospital care and 71.2% of teachers would not be confident in provide first aid to a child. Therefore, it is enough to admit the evidence of teachers' difficulties in knowledge regarding first aid in school accidents, in this study scenario. Specific first aid training is recommended for elementary school and early childhood education teachers.

Keywords: First aid; School Teachers; Nursery Schools.

INTRODUCTION

First aid is the immediate care provided to a person whose physical condition puts their life or health at risk, with the aim of maintaining their vital functions and preventing the worsening of their conditions, until they receive specialized medical assistance (FERREIRA et al, 2017).

In childhood, accidents are common, especially in the school environment, which justifies the need for knowledge about first aid for the entire population, especially teachers, as they spend a large part of the time with children. Regarding the schools, they must inspire confidence in the parents who share the education of these students and, therefore, safety and care for them must be a daily objective for all pedagogical teams involved in education. Thus, the lack of knowledge on the part of these professionals regarding first aid procedures and maneuvers is notable, especially when these students are affected by choking, falls, convulsions, among others (COSTA et al, 2017).

In the school environment, countless types of accidents can occur with students, the teacher goes through the stress of being responsible for the child at that moment, being responsible for providing first aid and referring the child to the medical service. Such conditions can become a complicating factor when the teacher does not have the basics of first-time assistance to the victim, therefore justifying the need to investigate the knowledge of these professionals.

The lack of information and knowledge on the part of teachers can cause numerous problems, such as despair when seeing the injured person, stress, inducing additional injuries or worsening existing injuries; or even the excessive and sometimes unnecessary opening of specialized emergency help calls (NOGUEIRA et al, 2022).

From this perspective, Law number: 13,722, of October 4, 2018, was created, which makes training mandatory in basic first aid notions for teachers and employees of public and private educational establishments for basic education and children's recreation (BRAZIL, 2018).

It is clear that the school environment is a privileged place for health education, as teachers appear to be laymen in relation to the initial care of school accidents, even though they are interested in learning how to manage it. Teachers demonstrate willingness on the topic and know the importance of the victim receiving adequate initial care (ILHA et al., 2021).

This way, the study sought to evaluate the understanding of elementary school and early childhood education educators about first aid and their actions in the face of possible accidents in the school environment.

CONTEXTUALIZATION OF FIRST AID IN SCHOOLS

The daily scenario presents risks inherent to work actions, routines and experience. Historically, humans and other species of the animal kingdom evolve as they become capable of circumventing the risks to which they are exposed, thus ensuring the survival of the species. To this end, a series of strategies are adopted to avoid damage and develop actions aimed at alleviating injuries, must they occur (VIEIRA et al, 2017).

Those who think that criminal violence, traffic violence or diseases such as diabetes, cancer and cardiovascular diseases are the only risks to which we are exposed and can prevent and/or remedy when necessary. There are a range of situations beyond these, which can be potentially deadly if there is no knowledge of how to avoid them or the possible maneuvers when these cases occur (HAUBERT, 2018).

Choking and falls are clear examples of situations that are sometimes overlooked by the population, but which can be fatal if not handled correctly. To this end, it is essential that any citizen, regardless of the environment in which they are located, has minimum knowledge about maneuvers and first aid procedures ideal for resolving these adversities (MATOS et al, 2016).

When we bring this problem to the child and youth population, it becomes even more worrying, given that this portion of the population is, invariably, devoid of knowledge about first aid and spend a large part of their time, around 4.7 hours in class elementary school students per day and 6.1 hours per day in early childhood education (INEP, 2021).

First aid refers to the temporary and immediate care of a person who is injured or suddenly ill. They also include recognizing life-threatening conditions and taking the necessary actions to keep the victim alive and in the best possible condition until medical attention is obtained (KARREN, 2013).

Colatina is a municipality in the interior of the state of Espírito Santo, located in the northwest region of the state. Its estimated population in 2021 was 124,283 inhabitants, making it the 9th most populous in the state. According to the 2020 school census, Colatina has almost 24 thousand children and adolescents of school age enrolled in schools in the municipality and just over 1,500 teachers for this amount distributed in around 165 school units of state, municipal and private public education (BRAZIL, 2021).

With these numbers, it is not strange to think that at some point, these students are exposed to the risk of choking and seizures. Therefore, it is important to assess whether the pedagogical team that spends a good part of the day accompanying these students is prepared for these adverse situations and the correct way to provide first aid. This

allows responsible authorities to understand the current panorama of knowledge of these professionals, as well as guide future training for this purpose, aiming to increasingly guarantee the safety and well-being of students within school units in the municipality and even in other states (CAMBOIN et al, 2016).

School is one of the main scenarios for childhood accidents, as children and adolescents, in addition to being more vulnerable, are unable to predict and avoid risky situations. In this sense, it is extremely important that there are people in schools capable of providing immediate assistance to students (BRITO et al, 2020).

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It is evident that the school environment is a privileged place for health education, as teachers appear to be laymen in relation to the initial care of school accidents, although they are interested in learning. Teachers demonstrate willingness on the topic and know the importance of the victim receiving adequate initial care (ILHA et al, 2021).

The articulation between education and health is necessary, it aims to contribute to the comprehensive training of students through promotion, prevention and health care actions, this way, it is understood that promoting health means thinking and executing in an educational way, enabling the right to health and life (OLIVEIRA, 2021).

SEIZURES

The seizure is easily recognized by anyone, as it has motor manifestations such as stiffening of the body (sudden muscle contractions), falling, loss of consciousness and involuntary elimination of feces and urine in some cases (BRAZIL, 2018).

Due to the growth and development phase associated with the maturation period of the nervous system, relating to the lack of inhibitory systems in the central nervous system, children are more prone, vulnerable and fragile to convulsive crises than adults (HAUBERT, 2018).

Children frequently experience seizures in schools, such as the case of little Arthur Miguel Motta Oliveira, aged 4, who died after suffering a seizure in a daycare center in Santa Carmem, a city 493 km from Cuiabá. According to Santa Carmem city hall, the boy was rescued by the director of the Municipal Early Childhood Education Center. However, the father who witnessed the fatality said that the daycare director did not help Arthur when he fainted, and the case was investigated (G1, 2022).

There is a disparity between the concepts of epilepsy and seizures. Epilepsy is a chronic disease, whoever has this pathology has brain malfunction, caused by the emission of incorrect signals, discharges or electrical impulses emitted by neurons. While a seizure is characterized by the involuntary contraction of muscles and can be caused by several reasons, one of them is epilepsy. (SILVA et al, 2013).

Children with epilepsy are at risk of having seizures at any time, especially when they are at school. If a seizure develops at school, educators are the first to respond and must be able to provide first aid, in addition to knowing when to transfer patients to a hospital (ALKHOTANI, 2022).

Teachers spend a good part of their time with these students, showing a need for knowledge about first aid. However, many teachers do not know how to proceed in a convulsive crisis, which can cause serious and fatal damage to the victim, such as opening the child's mouth and placing a cloth to prevent them from biting their tongue (CABRAL et al, 2019).

A witness must avoid opening the victim's mouth and holding him down, as these actions can result in secondary injuries. The patient must be kept in a safe position and time the duration of the seizure, after the episode must be placed in a recovery position (NOBLE, 2019).

CHOKING

Choking occurs due to total or partial blockage of the airways, compromising the passage of air to the lungs. Obstruction can be caused by objects, ingestion of food/liquids and trauma, which can cause asphyxiation or even progress to cardiorespiratory arrest and consequently lead to death. It is classified as mild when air passes with difficulty, however the person is still responsive and can cough. In severe cases, air cannot pass and the person cannot speak or cough (MACIEL et al, 2020).

Choking is a serious occurrence that can result from respiratory arrest and progress to cardiac arrest when left untreated, and can even lead to death in a short period. It is important to evaluate the signs of obstruction and identify whether there is any foreign body in the airways, making it possible to provide adequate assistance with this first aid knowledge. (MACIEL et al, 2020).

According to data from the Ministry of Health, published by the NGO: ``*Criança Segura*`` (Safe child), in 2018 the total number of deaths due to suffocation was 24% (from zero to 14 years old), representing more than 3,300 deaths of children and adolescents due

to an accident in 2018 and 90% of cases could have been avoided with simple prevention measures (BRAZIL, 2020).

Every day, we see news of children choking to death in schools, such as the case of a one-year-old child who died after choking on a piece of apple in a daycare center in Petrópolis, Rio de Janeiro. School professionals took the child to UPA, where he was revived, however, the following day he died (G1, 2022).

The teacher, faced with an emergency situation, is forced to help the child, often using empirical knowledge, which can be harmful to the victim, such as turning the child upside down or raising the child's arms (CABRAL et al., 2019).

Early diagnosis of choking is essential, as delays in its recognition can result in sequelae or definitive damage. The appropriate first aid intervention to clear the airways is the heimlich maneuver, but the maneuver varies depending on the size, weight of the person and the victim's state of consciousness (JONGE et al, 2020).

NASAL BLEEDING

Epistaxis can be caused by local trauma, foreign body, use of medication in the nose such as decongestants, antiallergics and corticosteroids, dryness of the mucous membranes due to an excessively dry climate, allergies, harsh winter, deviated septum, viral and bacterial infections, among other causes (MEIRELLES et al, 2012).

Nosebleeds occur more frequently in children under 10 years of age. The largest number of cases occurs in the anterior region of the septum that separates the nostrils and the most recommended approach is local vasoconstriction, firmly compressing the wings of the nose, using the thumb and index finger in the form of a pincer, for 15 minutes (BRAZIL, 2021).

Nose bleeding is one of the situations most experienced by teachers in schools, despite this, most do not know how to deal with this situation, often making use of popular knowledge, which can be harmful, such as encouraging blowing the nose and tilting the head. head back (CABRAL et al, 2019).

The therapeutic approach to epistaxis depends on the presence or absence of active bleeding and its severity. Most nosebleeds are self-limited, or disappear after performing simple maneuvers such as digital compression of the nose, in the cartilaginous portion and the head must be in a neutral position (BORDINO et al, 2020).

MATERIALS AND METHODS

This was an observational, descriptive study, with a quantitative approach, whose transversality occurred from October to November 2022. The sample consisted of educators linked to municipal elementary schools and children's educational centers (CEI), with the survey sampling based on the informant chain technique called snowball sampling. Data were collected using an electronic form from the Google forms tool (GOOGLE, 2022), structured into four sections, namely: a) Presentation of the study and acceptance of the electronic Informed Consent Form (TCLE); b) Sociodemographic data of the participants; c) Information related to First Aid at School. To analyze the results, the IBM SSP Statistics 20.0.0, 2011 software will be used.

The questionnaire was disseminated by communication groups from the municipal education department, organized in advance and coordinated with the municipal education management. The municipality has 33 elementary schools and 21 early childhood education centers. The sample consisted of 226 teachers who met all the inclusion criteria, teachers from the municipal education

network, with employment contracts with the municipal government of Colatina, who signed the Free and Informed Consent Form (TCLE).

The electronic research instrument covered information about research participants' understanding of first aid and possible care strategies or early preparations in case of incidents in the school environment.

The study was approved by the Human Research Ethics Committee – CEP/UNESC, with opinion number 5,697,394, respecting the ethical procedures established by the resolutions of the National Health Council CNS, number: 466/2012 and 510/2016.

RESULTS

The studied sample consisted of 226 teachers who work in Early Childhood Education and Elementary Education Centers, in the urban area of the municipality of Colatina – ES.

As for gender, there was a predominance of females among teachers, 92% (208) and 8% (18) men. Of the research participants, 62.4% (141) were married, 24.8% (56) were single, 11.1% (25) were separated/married/divorced and 1.8% (4) widowed. Most teachers were over 37 years old, 65.5% (148).

Of the teachers, 72.1% (163) had specialization as their highest degree, 25.7% (58) only had an under graduation degree, 2.2% (5) a master's degree and no participant had a doctorate.

In terms of professional experience, 70.8% (160) have more than five years of teaching, 17.3% (39) have 1 to 5 years, 6.6% (15) 7 to 11 months and 5.3% (12) up to 6 months of experience.

All participants have completed higher education, 66.4% (150) completed a pedagogy degree, 18.1% (41) completed another degree but the course was not declared, 7.5% (17) completed literature/Portuguese and 4% (9) did physical education and mathematics.

The majority, 90.7% (205), have a teaching specialty and only 9.3% (21) and the ones who do not: 46.5% (105) teach in elementary schools, 40.7% (92) work only in early childhood education centers and 12.8% (29) work at both levels of education.

Table 1 shows the sociodemographic profile of all education professionals who responded to the form.

Variables		Number (%)
Gender	Masculine	18 (8)
	Feminine	208 (92)
Age years)	From 18 to 22	6 (2.7)
	From 23 to 27	19 (8.4)
	From 28 to 32	26 (11.5)
	From 32 to 36	27 (11.9)
	Over 37	148 (65.5)
Marital status	Single	56 (24.8)
	Married	141 (62.4)
	Separated/divorced	25 (11.1)
	Widower	4 (1.8)
Length of professional experience	Up to 6 months	12 (5.3)
	From 7 to 11 months	15 (6.6)
	From 01 to 05 years	39 (17.3)
	Over 5 years	160 (70.8)

Source: Data from the survey itself.

During graduation, only 21.7% (49) participated in a subject corresponding to first aid and the majority 78.3% (177) did not have any content corresponding to this subject. When asked if they had already taken any training or extra-curricular course in the area of first aid, the majority 61.1% (138) had never taken it and 39.9% (88) had already had the opportunity to take a course.

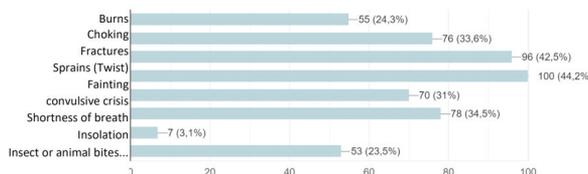


Figure1: Prevalence of possible accidents in the school environment, in the Early Childhood Education and Elementary Education Centers of Colatina – ES.

Source: Data from the survey itself.

The majority of research participants, 67.3% (152), have already witnessed a situation that required basic knowledge about first aid in the school environment and 32.7% (74) have never witnessed it.

When asked about the unforeseen events that they witnessed most in the school environment, there was a predominance of fainting 44.2% (100), as the biggest incident that occurs in schools in Colatina, just below sprains with 42.5% (96), 34.5% (78) witnessed shortness of breath, fractures 33.6% (76), seizures 31% (70), choking 24.3% (55), 23.5% (53) have witnessed insect or venomous animal bites, burns 6.2% (14) and only 3.1% (7) witnessed heatstroke.

In figure 1 we can observe all this data, referring to the unforeseen events that were most witnessed in the school environment.

Of these items, they were asked which ones were most confident in providing care, 39.4% (89) indicated that sprains were the situation they had the most ability to deal with. On the other hand, 11.1% (25) indicated heatstroke as the accident in which they would least know how to provide first aid.

Most teachers, 71.2% (161) would not be confident in providing any first care to a child and 28.8% (65) responded that they would be able to provide care to the victim. When asked about offering a specific first aid course for teachers, most participants, 95.1% (215), responded that they were interested in taking it and 4.9% (11) said they would refuse to participate.

DISCUSSION

The results presented reflect the standard of society we live in today. Educational institutions that constitute a market mainly occupied by women over 37 years of age and who have started a family. This way, it is not strange to imagine that many of these professionals have, in addition to their dedication to their employment, a second day of work dedicated to their family, thus leaving little or no time for updates relevant to their profession and especially with regard to learning the practices of first aid for children and adolescents in basic education. This scenario becomes even more intriguing when we observe that most education professionals already have extensive professional experience, while degrees have not kept up with the evolution of this experience (VICENTE, 2018).

The profile of basic education teachers marks the presence of women in classrooms, the female profile is greater the lower the level of education. This means, the predominance profile changes as the teaching stages progress, with a significant increase in males in the final stages, such as graduation, master's and doctorate (CARVALHO, 2018).

After knowing about the professional and social context in which most of these professionals are inserted, it is also necessary to think about the focus of teachers' work, the students. The data shows that although there is a numerical similarity of professionals working in either early childhood education or primary education, few works at both educational levels, which is most likely a reflection of the policies for organizing the staff. The highest degree held by basic education and elementary education teachers is specialization, with higher education teachers holding a master's degree and doctorate, showing a discrepancy between education levels (ROSA, 2021).

It is already well known that this age group of children requires a special level of attention when it comes to preventing and managing problems with potential health risks. This is because these children spend a large part of their daily routine in schools under the supervision of education professionals. In addition, during this period they also receive nutritional and food support, putting them at risk of choking, for example, or bruises and fractures during school activities. Added to this is the fact that most of these students are still in the period of developing central nervous system activities, making them also prone to the appearance of convulsive crises due to anomalous discharges of action potentials in the neurons that make up certain regions of the circuit. brain (DAMASCENO et al, 2016).

In the group of teachers studied, the need for knowledge on the part of education professionals about the correct way to proceed in special situations applying first aid is evident.

However, at the same time as we see a larger female audience in this group of professionals, many of whom work double shifts and have little time for professional development, we also have an extensive group of educators with a degree in literature or pedagogy; under graduation courses that traditionally do not address pathophysiological or first aid concepts in their curriculum. It is obvious to think that if we have Law number: 13,722, of October 4, 2018, which requires the training of professionals in first aid, a facilitator in the face of the social setbacks that educators face, it is obtaining this knowledge already during graduation with subjects or mini courses aimed at practicing first aid. It is also necessary to be rational that the law that deals with the provisions is still new and has been in force for less than 4 years, while many professionals have market experience of more than 5 years and, therefore, have hardly had the law in use

during their graduation. force. However, it is thought that this practice will, in the future, be ideal for training educators and also a way of applying the law in question (BRAZIL, 2018).

The research shows that the vast majority of Colatina professionals have already witnessed some type of need for first aid intervention and consider sprains, which are relatively simple situations to deal with, as the situation in which they present greater safety when driving. What draws attention is that although injuries, fractures or sprains are the most common, additional conditions include seizures and choking with a high incidence. Knowing that the maneuvers, correct positioning and relative tranquility to deal with such situations are extremely important for patient care, it is thought that in Colatina, children affected by choking or convulsive crises will need to rely on the agility of professionals of the mobile emergency service as they will not find the correct help in a school environment in a timely manner. Added to this is the fact that there is a demand from family members for the correct management of students in the face of these conditions and it is obvious to think that the first attitude of professionals will be to call emergency services, often without the real need, generating an overload. of the system (FARIA et al, 2021).

It is also worth noting that in the city of Colatina, many education professionals witnessed students being attacked by venomous animals, which is beyond the responsibility of educators who do not have the power to remove these venomous species from the school environment.

Such data must be brought to the attention of the public administration so that preventive measures can be taken regarding student contact with venomous animals in a school environment, such as pest control and/or correct cleaning of the school area (ALVES et al, 2021).

Thus, it is evident that the assistance provided to basic education students by educators in the face of potentially dangerous situations such as choking and seizures in the city of Colatina is outdated and requires urgent attention from the education department in order to promote access to qualifications of first aid professionals guaranteed the provisions of the law, a fact that the category itself already longs for, as demonstrated in our research. However, it is also necessary to raise awareness of that part of the category that was indifferent and not receptive to an update in first aid (CABRAL et al, 2019).

Far beyond policies and public attitudes, it is necessary to think about the problem from the ground up. Many of the professionals working in Colatina graduated from educational institutions in the city itself or neighboring cities. Likewise, many under graduation students currently will potentially be part of Colatina's staff in the future working in basic education. Therefore, a partnership can be proposed between the public administration and higher education institutions in the city to together promote training for active professionals, as well as future professionals. It is necessary to think that, given the knowledge acquired by nursing graduates about first aid, cooperation between nursing graduates, pedagogy, literature, mathematics, etc. could be signed so that, under the guidance of teachers, this knowledge in first aid is provided to public education employees already working and also to those who will be part of the category in the future, remedying this gap demonstrated by our research (CARDOSO et al, 2017).

CONCLUSION

Given the data presented and discussed, it is clear that, with regard to the practice of first aid in basic education, there is a need for training of teachers in the network.

The school environment presents itself as a safe environment for several dimensions, however, when it comes to first aid, the need for training teachers in the area of care provision was assessed, especially among teachers in early childhood education centers, seeing that this population demands greater attention, as the highest rates of potentially dangerous situations, such as choking and convulsions, occur with schoolchildren in this classification range. The professionals who are directly linked to these students do not have knowledge about first aid in the sample studied and many reported an interest in learning how to practice first aid.

It is therefore necessary for the public administration to realize the weaknesses revealed and provide urgent updates to these professionals, guaranteeing legal security for both educators and the city hall in the express form of the law, given that many families of students/patients may allege omission by both parties in the face of a potential health hazard. A simple, quick and low-cost way to solve the problem in the short, medium and long term is to promote a partnership between higher education institutions and the city council so that, under correct guidance, graduates in the health area, especially nursing, can provide this update both for education professionals linked to the city hall, and for future education professionals trained by the institution in pedagogy courses, adding value to the curriculum.

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