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# Knowledge of the educators of the municipality centers child education on first aid

**ABSTRACT** | Objective: To understand the knowledge of teachers at the Early Childhood Education Centers on First Aid for children aged 3 to 5 years. Methods: This is an exploratory research, with a qualitative approach, developed with 18 teachers from nine Municipal Centers for Early Childhood Education in Divinópolis, located in the municipality of Divinópolis, Minas Gerais. Individual interviews were carried out from July to December 2018, using a semi-structured script, then the data were analyzed using Content Analysis. Results: Three thematic categories emerged: The CMEI teacher and his relationship with first aid: concepts and their insecurities; First aid during accidents at CMEI: correct and incorrect attitudes and Early Childhood Education: types of accidents and risk exposures. Conclusion: It is necessary that teachers have periodic training on the subject, as well as workplaces offer material and support for first aid.

**Keywords:** Health Education; Early Childhood Education; First Aid; Teachers, Children.

**RESUMEN** | Objetivo: Comprender el conocimiento de los maestros en los Centros de Educación Infantil sobre Primeros Auxilios para niños de 3 a 5 años. Métodos: Esta es una investigación exploratoria, con un enfoque cualitativo, desarrollada con 18 maestros de nueve Centros Municipales para la Educación de la Primera Infancia en Divinópolis, ubicada en el municipio de Divinópolis, Minas Gerais. Las entrevistas individuales se llevaron a cabo de julio a diciembre de 2018, utilizando un guión semiestructurado, luego los datos se analizaron mediante el Análisis de contenido. Resultados: surgieron tres categorías temáticas: el maestro CMEI y su relación con los primeros auxilios: conceptos y sus inseguridades; Primeros auxilios durante accidentes en CMEI: actitudes correctas e incorrectas y Educación de la primera infancia: tipos de accidentes y exposiciones al riesgo. Conclusión: es necesario que los maestros tengan capacitación periódica sobre el tema, así como que los lugares de trabajo ofrezcan material y apoyo para primeros auxilios.

**Palabras claves:** Educación en Salud; Educación Infantil; Primeros Auxilios; Profesores, Niños.

**RESUMO** | Objetivo: Compreender o conhecimento dos professores dos Centros de Educação Infantil sobre Primeiros Socorros referentes a crianças de 3 a 5 anos. Métodos: Trata-se de uma pesquisa de caráter exploratório, com abordagem qualitativa, desenvolvida com 18 professores de nove Centros Municipal de Educação Infantil de Divinópolis, localizado no município de Divinópolis, Minas Gerais. Foram realizadas entrevistas individuais no período de julho a dezembro de 2018, por meio de roteiro semiestructuro, posteriormente os dados foram analisados mediante a Análise de Conteúdo. Resultados: Emergiram três categorias temáticas: O professor do CMEI e sua relação com primeiros socorros: conceitos e suas inseguranças; Primeiros socorros durante acidentes no CMEI: atitudes corretas e incorretas e Educação Infantil: tipos de acidentes e exposições a riscos. Conclusão: É necessário que os professores tenham capacitações periódicas sobre o assunto, assim como os locais de trabalho ofertem material e suporte para os primeiros socorros.

**Palavras-chaves:** Educação em Saúde; Educação Infantil; Primeiros Socorros; Professores, Crianças.

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## INTRODUCTION

First Aid (FA) involves a set of immediate techniques that promote basic life support until the arrival of help, which must be immediate and determines the recovery of victims until medical care. Its procedures can be performed by ordinary people or health professionals as long as they are properly trained, as they should be able to recognize situations that promote risk to their lives

and that of the victim, requiring prior knowledge about issues of emergencies and urgencies. <sup>(1)</sup>

Among the various people who need training in the care of PS, we highlight teachers who work with children under five years of age, because in this age group, the child is in intense physical and motor development, with exploratory behavior, which exposes her to accidents, especially in places where they stay most of the time, such as schools. The school environment, although it seems safe, has places of risk, such as playgrounds and patios. <sup>(2)</sup>

In Brazil, morbidity and mortality rates due to external causes have taken on alarming proportions, becoming a public health problem, especially with regard to accidents and violence that

occurred in childhood.<sup>(3)</sup> According to the literature, schools and playgrounds are the main places where accidents occur, with 40,4% being falls and approximately 39% of the injuries reported in these environments involve bites from other children.<sup>(4)</sup>

Among the places of education in Brazil, there are the Municipal Centers for Early Childhood Education (Centros Municipais de Educação Infantil - CMEI), which serve children from 3 to 5 years old who are integrating themselves into the education system and starting the first stage of basic education. The CMEI have the purpose of establishing conditions so that learning and development are pleasant and effective, preparing them to enter Elementary School.<sup>(5)</sup>

Children in the age group served by CMEI are more susceptible to emergency situations. They have behavioral characteristics that make them more prone to accidents involving the airways, greater risk of abrasions and cuts, due to less body mass and thin skin.<sup>(6)</sup>

Since accidents occur in the school environment, it is necessary for teachers to know the PS techniques. Studies report that many accidents in schools could be avoided if teachers identified objects and situations of risk, such as chairs next to windows. Also, the injuries resulting from these accidents would be avoided with the correct and quick care after the accident.<sup>(7,9)</sup>

One way to prevent these accidents and provide the teacher with a way to meet the FA is through training. A study carried out in the country shows that trained teachers were able to point out risky situations and how to act in such circumstances. Training leads the individual through common sense to modify knowledge and incorporate new experiences and interpretations.<sup>(6)</sup>

Thus, it is believed that CMEI teachers should be trained in PS, aiming at prevention and appropriate support in case of accidents, however, what is found in the literature is the unpreparedness of

these professionals to assist children who are victims of accidents. (7,1,11) Thus, we ask: "What is the knowledge of CMEI teachers about first aid related to the care of children in early childhood?". The aim of the study was to understand the knowledge of CMEI teachers about First Aid for children aged 3 to 5 years.

## METHODS

This is an exploratory research, with a qualitative approach, developed with 18 teachers from nine CMEI childhood education intuitions, located in the municipality of Divinópolis, Minas Gerais.

Divinópolis has 23 CMEI, so the selection of places was made by simple random drawing, with nine CMEI initially drawn. Subsequently, each director of the institution appointed two teachers for the interviews, covering the following inclusion criteria: teachers who had direct contact with children aged 3-5 years old and at least one year of teaching in early childhood education. It is understood that these criteria enabled the information collected to be more reliable. The exclusion criterion was professionals who were on vacation at the time of data collection. To perform the sample closure, data saturation was used. It is understood that these criteria enabled the information collected to be more reliable. The exclusion criterion was professionals who were on vacation at the time of data collection. To perform the sample closure, data saturation was used.

The data were collected through interviews with a semi-structured script, starting with questions regarding social and professional data and later with questions about the teachers' understanding of First Aid, carrying out procedures in the face of an accident and asking about the risks that children and teachers were exposed.

Data collection was performed by two nursing students from the 9th period, previously trained by the responsible re-

searcher. The period of data collection was from August to September 2018. It should be noted that all interviews took place at the workplace, in a private room.

The interviews were recorded and transcribed in full, with an average duration of 15 minutes. All received an alphanumeric code, using the letter E (Educators), followed by the interview number. After transcribing the data in full, the content analysis proposed by Bardin was used.<sup>(10)</sup> Through the analysis, three thematic categories emerged, which will be described below.

It is reported that before the beginning of data collection with the study participants, three pilot interviews were conducted with teachers of early childhood education who were in a similar municipality, in order to verify the assertiveness of the interview script. Thus, two changes were made to the interview script, first related to the order of questions and later with the inclusion of more direct questions about first aid. All data from the pilot interview were discarded, thus not composing the study database.

The project was approved by the Research Ethics Committee of the University of the State of Minas Gerais - UEMG, Divinópolis Unit with the opinion number 2,787,634, CAAE: 85013818.0.0000.5115. Participants signed the Free and Informed Consent Form (ICF).

## RESULTS

The research involved 18 teachers from nine CMEI, all participants were female. The predominant age group was 40 to 49 years (50%). As for marital status, 14 (83,33%) of the interviewees were married.

Regarding complementary training, 14 (88,33%) had postgraduate degrees. Regarding the professional situation, nine (50%) of the teachers work in the morning shift and had been in teaching activity for about 15 years. As for the number of students per teacher, this was 15,9.

Through the interviews, it was possible to understand the relationship of teachers with First Aid. Emerging from the analysis of the interviews, three thematic categories, namely: "The CMEI teacher and his relationship with first aid: concepts and his insecurities"; "First aid during accidents at CMEI: correct and incorrect attitudes" and "Early childhood education: types of accidents and risk exposures".

### The CMEI teacher and his relationship with first aid: concepts and his insecurities

The category presents the teachers' knowledge about the theme and their concerns regarding the execution of the service. In this category, the need for a greater approach to the topic in early childhood education was clear.

When asked about what FA would be, most expressed themselves with confidence about the concept, demonstrating that they understood, in theory, its meaning.

I think first aid is the first step. That we have to take in relation to something that happens there at the moment, something unexpected (E2).

They are the first precautions when an accident happens [...]. That immediate help (E6).

Well, they are the necessary care when an accident happens, the first contact you will have. How will you help in the first moments, I think that's it (E14).

Some teachers understand the concept and stressed the importance of having practical knowledge, which would provide the correct procedures.

First aid is that moment that the child [...]. She has some [...] develops some reaction in the body, which can be a foreign body or the body itself, and we

have to try to do something, as much as possible, from the moment we have the knowledge about that over there (E5).

And what I can do! It is like a palliative, until it is taken to the professional, if necessary. It's what I'm helping, what I can be preventing it from getting worse (E13).

Despite demonstrating a certain theoretical knowledge on the subject, when asked about the procedures to be performed in the event of an accident, many reported insecurity.

I don't know if I could do it, I think that in the face of an accident I don't know if I would have emotional control for this, especially children [...] (E8).

[...] I am not a person able to do any kind of help. I'm not ... I'm sorry, but I can't stay calm! Have that tranquility, that calm ... no! Just by looking at me you can see I'm scared to death (E14).

It is noticed that theoretical knowledge exists, however, for the performance of the procedures, practice and training would be necessary, which proved to be insufficient in the present research. Teachers are prone to incorrect care at the time of the accident.

### First aid during accidents at CMEI: correct and incorrect attitudes

In CMEI, accidents occur mainly when the children are in collective activities, in the schoolyards and playgrounds. This category reports the actions taken by teachers when an accident occurs.

The following statements demonstrate correct actions taken during accidents.

[...] When the child happens to hit the head, there is the observation of the pupil, we have

to observe if there was dilation, drowsiness, vomiting, headache and also trigger the family or the SAMU if necessary, if there is a faint, some thing like that (E5).

Uai, I don't even know if this is it, right? But we watch to see if the child is getting soft, sleepy, if there was no cut, because if there was a cut, we have to refer him to the medical service (E12).

The incorrect attitudes in the attempt to provide some type of help were the most reported among teachers. Even knowing that the procedure is incorrect, they perform it, as it is the only knowledge available at the moment.

She was eating meat, you know? It was pot meat, then she choked, in fact I even tried to do it behind (gesture pointing to the back), from the back, I couldn't do it, I didn't have any results, so I stuck my finger in, I know I can't, which isn't right, but what worked was to stick your finger in and pull (take the piece of meat with your fingers) (E1).

I really follow my instinct! If it's serious, I see. If I happen to see that you need stitching, I don't think twice, I call the child's mother, if I can't, I already put it in the car and take it to the hospital, even at some risk. We treat like a son (E17).

The first thing was to catch the child, because I noticed that she was sitting and started to shake her little hand and I called and she didn't respond, immediately I took her in her lap and she was already turning her body, I saw that she turned her eye, lowered the little head and started to foam the mouth and turned purple. Then, I went

down the ramp with her, I already took her to the bathroom, turned her to the left and splashed her face with water (E18).

The attitudes, even if incorrect, are perceived by the teachers as necessary to avoid injuries. It is noticed that the professionals want to provide care, but they lack adequate training. Only one participant (E17), reported that it would not be her responsibility to provide the first service.

Look, I think this issue, it really is very serious and I think so, that in each school there should be a team, I don't know if it is a team, but at least a nurse (E17).

Even in the actions performed correctly, the fear of teachers in the practice of FA is noted. It is identified that they do not know the correct action, acting in the urge to help the children and avoid some type of worsening of the situation.

**Early childhood education: types of accidents and risk exposures**

Among the situations in which children are at greater risk exposure, the time they are out of the classroom, in the schoolyard and / or in the playground where the control by the teachers is less, stands out.

In the playground, in the schoolyard ... These are the places where children play freely, so it often happens that they run into another child (E2).

[...] Inevitable things happen! On the swing, hitting the swing on another child's head. But like this, our CMEI, this year and in previous years, did not have a lot of accidents, it is sporadic, it happens to fall and hit the mouth and the children headbutt each other (E4).

I think that there are several moments, for example, at the entrance and at the exit (from classes) and at Recreio time, which is the time for recreation. I think it's the most propitious time for accidents to happen (E16).

The CMEI infrastructure can facilitate the occurrence of more serious accidents, as reported in the statement below:

[...] a child knocked on the door of the room (she cut her arm, a deep cut due to the glass that fell on her arm), and the doors here have glass, I said that I never saw a school focused on early childhood education, because here is for-childhood, with so much glass (E9).

Many of the CMEI have adapted infrastructure, with glass doors, unprotected stairs and steep ramps, which can lead to accidents. But, even if the most accident-prone environments are outdoors, the teachers stress that anywhere there is a risk for the age group they serve, making them constantly vigilant.

I think the child is exposed at any time. Anywhere, at any time, it's not a robot that keeps quiet. He is always walking, he is playing, so I think that anywhere or at any time, the child is exposed (to accidents) (E10).

The teachers also reported the main types of accidents that occur at the site. Highlighting the falls that happen to children during play, as shown below.

Run, then it crashes. Hit the head, something like that .... It's on a toy, on the slide and falls. The balance comes back to the child [...] (E3).

Bump! Because they are in the stage of running a lot, so in Recreio they end up colliding with each other and in the playground it can happen to pass in front of the swing, these are the questions (E12).

In addition to children, teachers are also exposed to physical and biological risks, as reported by participant E14 when asked about how to clean places where accidents occur with children.

We took the toilet paper and had no alcohol, I used Veja (Brazilian brand of cleaning product) [...] (E14).

Although most teachers are unaware or do not realize the importance of using Personal Protective Equipment, only one participant (E16), reports the importance of using procedure gloves and other materials, as expressed in the statement below.

[...] at first, you wash the wound using gloves to avoid direct contact with the blood. Wash the wound with soap and water, put gauze in order to stop it, which is a clean and sanitized material so as not to have any other problem with the child (E16).

The school environment itself has its share of influence in the accidents that happen in the CMEI, because its infrastructure brings risks to children, since the playgrounds have toys that allow them to fall, such as seesaws, swings and a slide. For teachers, the risks are present at the time of service, since, when helping the child, they act in the way they deem appropriate, being exposed to fluids and falls at the time of locomotion.

## DISCUSSION

The present study demonstrates that the practice of FA is still difficult to handle for early childhood education professionals in view of reports of unpreparedness. It is observed in the speeches that there is a concern on the topic, although the teachers demonstrate to know the concept of FA, the practice is inadequate and ineffective because there is no training and qualification. This training, when carried out, is carried out by health professionals in Primary Health Care, mainly by nurses.<sup>(6)</sup> In most cases, educational institutions do not promote these training programs themselves.

Another factor revealed by the speeches of the teachers is the lack of preparation, among the reasons is the scarcity of content in the curriculum of humanities courses, such as the pedagogy whose content is directed towards the educational development and the child's psychomotricity. Not paying attention to possible accidents, resulting in a lack of adequate knowledge on the subject. In this sense, it is the responsibility of the teacher to take courses on the subject and the workplace to offer training on the subject.<sup>(12-13)</sup>

The results of this study corroborate a study carried out in the Municipality of Cruzeiro in São Paulo, in which the researchers demonstrated that the actions taken at the time of the FA by the teachers are inadequate, confirming a lack of practice and theoretical knowledge.<sup>(7)</sup> This reality is not only national, a study conducted in Egypt, shows that approximately 60% of teachers do not have knowledge about FA, in addition, the study reveals the teachers' unpreparedness, creating a shock in relation to theory and practical knowledge.<sup>(14)</sup>

The knowledge demonstrated by the teachers in relation to some basic life support procedures is derived from the protective instinct. It can be

inferred that the instinct comes from the maternal experience, collaborating to perform certain procedures correctly. In addition, the empirical knowledge learned through the observation of other professionals and the media.<sup>(15)</sup> The procedures performed in an empirical way can put the lives of children and even teachers at risk, as reported by those who do not use PPE during consultations, being in direct contact with body fluids and even risk of falls.

When seeking the training of professionals and the type of knowledge they must acquire for planning the FA, one must think about what types of accidents are the most common in the age group in which they are working. In the present study there were accidents involving falls, cuts, seizures, fractures, fainting, crashes involving head collisions and nosebleeds. These accidents are also the most mentioned in the literature.<sup>(8,16)</sup> Based on this knowledge, it would be possible to promote more specific training focused on the risks faced by teachers and students.

The knowledge of the main types of accidents can also help in the structuring of physical spaces, as the type of construction and materials available in the school environment acts directly in the occurrences of accidents.<sup>(9,13,15)</sup> In this study, it was found that the majority of cases that generate urgency occur, mainly, during recreation hours, when the child is free to perform his activities and play outside the classroom.

The physical infrastructure of the school environment should be standardized, the Ministry of Education (MEC), through the National Education Development Fund (FNDE), which is part of the National Equipment Restructuring and Purchase Program for the Public School Education Network Children (Pro childhood) have guiding manuals for building a healthy and quality scho-

ol environment, which are not always followed or monitored.<sup>(16)</sup>

The main accident pointed out by the teachers is the fall, followed by injuries from the head hit, fainting, cutting and bleeding, confirming what literature on this theme brings. (4) The 3-5 year old child enters a period in which his psychomotricity begins to develop, making him more exposed to falls and cuts in the school environment.<sup>(17-18-19)</sup>

Many teachers stressed the importance of training for better care for children, but they do not mention how important this training would be for their own safety, because during FA they are exposed to body fluids and falls. At the time of the accident, the teachers do not worry about using protective material or realize that they are exposed to falls.<sup>(20)</sup>

One way to improve the knowledge of teachers is through health education, which should be partly the responsibility of the municipality, with the search for partnership and networking, between education and health. It is understood that health education is an instrument for promoting quality of life, relating popular knowledge to scientific knowledge, making these professionals able to incorporate knowledge restricted to the academic environment in their daily practice.<sup>(21)</sup>

Research carried out in São Paulo shows that training in FA, through health education is positive, especially in the area of early childhood education. The research carried out a pre-test before the training and a post-test after the training, with teachers from a school, which demonstrated deficient knowledge before training and more improved knowledge after training. (6) A bibliographic review also reports the importance and effectiveness of health education on the topic.<sup>(21)</sup> In the case of FA, it is of great value, since there is a lack of knowledge on the part of the population on the subject, which may

lead to unnecessary procedures or that aggravate the victim's situation. <sup>(8)</sup>

In the case of FA, it is of great value, since there is a lack of knowledge on the part of the population on the subject, which may lead to unnecessary procedures or that aggravate the victim's situation <sup>(22)</sup>, being another opportunity for health education with teachers. In this context, the nurse is the articulator of the health network, being able to promote training and partnerships with schools <sup>(23)</sup>, moreover, it is the health professional who is at the frontline of care, having in his training the tools to carry out health education. <sup>(22)</sup>

Regarding the limitations of the study, it is important to highlight that the interviews took place during the teachers' break time, which caused some interruptions during the interviews. It was also difficult to find a private place in the CMEI, but the privacy and anonymity of all interviews was preserved.

#### CONCLUSION

The present study demonstrated that the teachers of child education interviewed do not have enough knowledge about to apply in their daily practices with the children of CMEI. This practical-theoretical gap puts at risk

not only the children, but the teachers themselves who are exposed to risks of falls and body fluids.

Despite the recognition of the importance of the topic, professionals are not trained by those responsible for CMEIs, and there are no partnerships between Primary Health Care and Education. Thus, in view of the above, it is noted that there is an urgent need for training in the area of FA. Being that the nurse professional who works in Primary Health Care could be an important articulator between health and education, for being at the forefront of care and having in its formation tools for health education. 🐦

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