FIRST AID: INVESTIGATING THE TRAINING OF TEACHERS AT A PUBLIC SCHOOL IN CAMPO GRANDE

PRIMEIROS SOCORROS: INVESTIGAÇÃO DO TREINAMENTO DE PROFESSORES DE UMA ESCOLA DA REDE PÚBLICA DE CAMPO GRANDE

PRIMEROS AUXILIOS: ESTUDIAR LA CAPACITACION DE LOS PROFESORES EN UNA ESCUELA PÚBLICA EN CAMPO GRANDE

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ABSTRACT

Introduction: Anyone can go through urgent and emergency situations, anywhere. Thus, the first person to come across the scene must be the first to provide assistance. Objective: to identify first aid knowledge of teachers at a municipal school. Method: An exploratory, quantitative study carried out with teachers from a municipal school in Campo Grande - MS. The sample was composed of 43% (n = 30) of teachers. A questionnaire was administered after first aid training. Results and discussion: When asked about the emergency numbers, 43.4% (n = 13) knew about it. Regarding the opening of the airways, 46.6% (n = 14) responded correctly. Positioning the victim for cardiac compression was assertively reported by 53.4% (n = 16). Conclusion: Even after receiving training, most teachers have not yet shown themselves prepared to provide urgent or emergency assistance. The professional trained to answer this demand would be the nurse.

Descriptors: Emergency Relief; Health education; First aid.

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RESUMO
Introdução: Qualquer pessoa pode passar por situações de urgência e emergência, em qualquer lugar. Dessa forma, a primeira pessoa a se deparar com a cena deve ser o primeiro a prestar socorros. Objetivo: identificar o conhecimento em primeiros socorros de professores de uma escola municipal. Método: Estudo de caráter exploratório, quantitativo realizado com professores de uma escola municipal de Campo Grande. A amostra foi composta por 43% (n=30) dos professores. Foi realizado a aplicação de um questionário após treinamento de primeiros socorros. Resultados e discussão: Quando questionados sobre os números de emergência, 43,4% (n=13) conheciam. Em relação a abertura de vias aéreas, 46,6% (n=14) responderam corretamente. Posicionamento da vítima para compressão cardíaca foi assinalado assertivamente por 53,4% (n=16). Conclusão: Mesmo após receberem treinamentos, grande parte dos professores ainda não se demonstraram preparados a prestar assistência de urgência ou emergência. O profissional capacitado para responder esta demanda seria o enfermeiro. Descritores: Socorro de Urgência; Educação em Saúde; Primeiros Socorros.

RESUMEN
Introducción: Cualquiera puede pasar por situaciones urgentes y de emergencia, en cualquier lugar. Por lo tanto, la primera persona que se encuentre con la escena debe ser la primera en brindar asistencia. Objetivo: Identificar el conocimiento de primeros auxilios que tienen los maestros de una escuela municipal. Método: Estudio exploratorio cuantitativo realizado con docentes de una escuela municipal de Campo Grande, MS. La muestra estuvo compuesta por el 43% (n=30) de los docentes. Se administró un cuestionario después del entrenamiento de primeros auxilios. Resultados y discusión: Cuando se les preguntó los números de emergencia, el 43,4% (n = 13) los sabía. En cuanto a la apertura de las vías aéreas, el 46,6% (n=14) respondió correctamente. La posición de la víctima para la compresión cardíaca fue marcada asertivamente por el 53,4% (n=16). Conclusión: Incluso después de recibir la capacitación, la mayoría de los docentes aún no está preparado para brindar asistencia de urgencia o de emergencia. El profesional capacitado para responder a esta demanda sería el enfermero. Descriptores: Ayuda de emergencia; Educación para la Salud; Primeros Auxilios.

INTRODUCTION
Health education is directly linked to the individual's sense of citizenship, solidarity and responsibility within the environment to which he belongs, becoming a tool in health promotion and prevention in emergency events. The lack of preparation of the school group prevents help at the time of the incident, as the situation of panic when seeing the injured person can lead to incorrect handling of the victim and even excessive, sometimes unnecessary, request for specialized emergency assistance.¹

Health education for the population, despite being neglected in the current health model in Brazil, plays an extremely important role in reducing morbidity and mortality in the various cases of accidents and sudden illnesses that can be encountered in everyday life, facilitating the flow of pre-hospital care, as well as victim survival. In addition to this, a strategy for emergency care within the school would be

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the presence of a nurse, a more qualified professional for this service. An example is that this already occurs in developed countries.¹

First aid refers to the first care given to a person who is injured or becomes ill suddenly. It is considered essential that everyone has access to information about the main accidents, how to prevent them and how to act in situations that require immediate care in order to minimize complications resulting from untimely and inappropriate measures.²

Teachers are potential witnesses, who need to perform first aid in cases of accidents at school; however, despite participating in courses on the subject, these professionals adopt incorrect behavior in the face of accident situations.³

Culturally, concerns about safety issues within the school environment are almost exclusively focused on violence. However, characteristics such as physical and mental immaturity, inexperience, curiosity, tendency to imitate adult behaviors, lack of bodily awareness or motor coordination, in addition to the existence of inadequate access ramps, exposed wiring, broken tiles, absence of signposts and escape routes and alarms, exposed or poorly installed gas cylinders, plumbing and outlets within reach of children promote more dangerous situations than the violence itself.⁴

According to some representative bodies, such as the American Heart Association, the main cause of pre-hospital death is lack of care and the second is inadequate assistance. If in an incident where the victim progresses to a cardiorespiratory arrest, if cardiopulmonary resuscitation (CPR) is performed within the first minute, the chances of success are up to 98%. From the fifth minute onwards, the chance of success drops to 25%, and if CPR is performed after ten minutes, the chance of the victim surviving drops to 1%.⁶

In this sense, it is worth emphasizing the commitment and responsibility that the institution has for what happens to students when they are in the school environment. It is essential that educators, who are the population that maintains contact with students, are able to act in situations that require immediate care, in order to avoid further complications to the health of their students and honor the commitment to parents.⁷

Based on the prerogatives of health education for lay people, this work aimed to identify the knowledge in first aid of teachers in a municipal school.

METHODS

An exploratory-quantitative study was carried out with teachers from a municipal school located in the city of Campo Grande - MS. It was chosen because
it is a poor and notoriously violent neighborhood. The school serves elementary school students. A questionnaire was applied after first aid training offered by the municipality, in order to identify whether the training carried out was effective in teaching and improving the prior or null knowledge of the target population on the proposed topic.

The collection instrument was adapted from a study carried out by Flávia Sell, which assesses the knowledge of physical education professionals in relation to first aid and urgent and emergency situations. The questions that best adapted to the research proposal were selected. The questionnaires were applied in 2019, with the proper authorizations issued by the Municipal Education Department and individual acceptance of each participant, where the research objectives and the terms of non-disclosure of the participants' identity in any part of the work were briefly explained.

The criteria for inclusion of participants were: having received or participated in any type of first aid training, being active at school, having agreed to participate in the research through the informed consent form (ICF). Teachers who were on sick leave, vacation or leave were excluded.

The present study was composed of 30 teachers, 10 men and 20 women, which corresponds to approximately 42.9% of the school's teachers. For the evaluation of behaviors in urgent and emergency situations, the questionnaire covers some of the most common complications related to the school environment. The answers were analyzed and classified as correct, incorrect and no answers.

Data were transcribed in an Excel® spreadsheet, described in number, in percentages and represented in graphs. The project was approved by the Research Ethics Committee of Universidade Católica Dom Bosco, under CAAE number: 09677319.4.0000.5162, in accordance with the requirements of Resolution N. 466/2012 of the National Health Council/MS, which deals with research involving human beings.

RESULTS

According to the Datasus platform, there were 594 deaths from preventable external causes in the municipality of Campo Grande - MS from 2010 to 2017 in the average school age group, from 5 to 19 years old, deaths that occurred on public roads, at home and others, excluding deaths that occurred in health facilities and/or hospitals.

According to Law No. 13,722 of October 4, 2018, “It becomes mandatory to train teachers and employees of public
and private basic education establishments and children's recreation establishments in basic notions of first aid”, as well as specified in articles 1 and 2 of this same law. Thus, placing the teaching of Basic Life Support and First Aid as mandatory in teaching for all professionals related to children's education. Based on these prerogatives, the proposed investigation was carried out, obtaining the following results:

Table 1. Teachers' knowledge about the amount of emergency numbers. (n=30).

<table>
<thead>
<tr>
<th>ANSWERS</th>
<th>PUBLIC NETWORK TEACHERS% (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ALL</td>
</tr>
<tr>
<td>Knowledge of Emergency Numbers (SAMU, FIRE AND POLICE)</td>
<td>43.4% (13)</td>
</tr>
</tbody>
</table>

Source: authors

One can observe the number of teachers who do not know correctly the help numbers for victims of any nature, which is worrying, because even without training, it would be interesting to have knowledge of these phones to call the help if by chance, witness an occurrence that requires a health transport team. In table 2, we can see the correct answers obtained in the study questions, as below. Survey participants fall into three options: those who answered correctly, those who answered incorrectly, and those who did not respond to the multiple-choice questionnaire.


<table>
<thead>
<tr>
<th>ANSWERS</th>
<th>PUBLIC NETWORK TEACHERS% (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ANSWERED CORRECTLY</td>
</tr>
<tr>
<td>Judgment of the need to perform First Aid?</td>
<td>53.4% (16)</td>
</tr>
<tr>
<td>What are the most important details to note?</td>
<td>66.7% (20)</td>
</tr>
<tr>
<td>When a person is having a seizure, what should I do?</td>
<td>60% (18)</td>
</tr>
<tr>
<td>How to check if the victim is breathing?</td>
<td>83.3% (25)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question</th>
<th>46.6% (14)</th>
<th>53.4% (16)</th>
<th>0</th>
</tr>
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<tbody>
<tr>
<td>How to perform an airway opening maneuver?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>What position to perform cardiac massage?</td>
<td>53.4% (16)</td>
<td>43.3% (13)</td>
<td>3.3% (1)</td>
</tr>
<tr>
<td>What is the proper place on the body to perform cardiac massage?</td>
<td>43.3% (13)</td>
<td>56.7% (17)</td>
<td>0</td>
</tr>
<tr>
<td>How to proceed in case of suspected fracture?</td>
<td>50% (15)</td>
<td>50% (15)</td>
<td>0</td>
</tr>
<tr>
<td>What to do if you suspect a cervical spine fracture?</td>
<td>70% (21)</td>
<td>30 (9)</td>
<td>0</td>
</tr>
<tr>
<td>How to deal with bleeding?</td>
<td>53.4% (16)</td>
<td>46.6% (14)</td>
<td>0</td>
</tr>
</tbody>
</table>

Source: authors

It was observed in this table 2 the number of teachers who do not know the importance of performing first aid, which is worrying, even after performing first aid training. It was also noted regarding how to open the airways in victims without suspected cervical injury, 14 (47%) participants answered correctly, 12 (40%) answered incorrectly and 4 (13%) did not answer or did not know. Concerning the positioning of the victim to perform cardiac massage, 15 (50%) participants answered correctly, 11 (37%) answered incorrectly and 4 (13%) did not answer or did not know.

**DISCUSSION**

In this study, it was identified that even after training received, a large part of the participating population does not have minimal knowledge to be considered able to act in a beneficial way in emergencies. From the data acquired, it can be noted that only 43.4% of the participants correctly know all the emergency numbers, a result that proved to be unsatisfactory, since requesting specialized assistance communicating the probable cause of the situation witnessed, the number of victims, the severity and other relevant information, is one of the most important phases during the care of the injured, since the activation of the emergency services in a timely manner guarantees early professional care, increasing the chances of the victim survival and reducing the chances of sequel.

The early childhood education teacher is an agent of change who, when trained, can give an opinion on first aid, which is perhaps a main issue in nursing. It is extremely important that he has knowledge about the main accidents that
occur in the educational institution when there is not the presence of a nurse or civil firefighter to be providing specialized care, as well as he must be safe and feel prepared to know how to deal with emergency situations, being the main link between students.11

About the seizure, 60% of the teachers knew the correct answer in what attitude to take when witnessing it. Convulsive crises resulting from epileptic people or not, are still not well clarified, in relation to which behaviors should be taken, with the population still presenting beliefs and myths that are widely repeated in society. In Brazil, there are few data referring to epilepsy and convulsive crises, but a survey carried out in the cities of Campinas and São José dos Campos, in the state of São Paulo, according to which the prevalence of active epilepsy - with some episode of crisis in the last 24 months – by age group it was 2.3/1,000 for children up to 4 years old, 4.3/1,000 for children between 5 and 9 years old, 3.8/1,000 for those between 10 and 19 years old, 5.8/1,000 for people between 20 and 59 years old and 8.5/1 for people aged 60 or over, demonstrating the need for demystification and elucidation of the correct conduct on this subject.

Regarding the questions on the identification of vital signs, 66.7% of the participants know what are the main points to be identified and passed on to the emergency services, when faced with an unconscious victim, while 83.3% know the techniques basic steps to identify whether the injured person maintains respiratory capacity. Identifying whether an unconscious individual is breathing is essential to recognize the possibility of a cardiorespiratory arrest (CA)13, being one of the fundamental information to be passed on to urgency and emergency services.

In relation to maintaining the opening of the airways in victims who do not have a suspicion of spinal injury, only 46.6% of the teachers demonstrated knowledge of the correct technique. It should be noted that tongue drop is one of the most common causes of airway obstruction in unconscious victims, and that the chin lift technique allows opening these airways.14 However, according to the data, most participants did not know how to specify the correct execution of this technique.

Regarding the correct positioning of the victim to perform the cardiopulmonary resuscitation technique, 53.4% of the teachers responded adequately, as for the appropriate anatomical position for performing CPR, only 43.3% responded that this should be performed in the central region of the sternum “at the level of the nipples”, that is, two fingers above the xiphoid process.
Performing CPR on a victim undergoing cardiac arrest, even if only for chest compressions in pre-hospital care, significantly contributes to increased survival rates.\(^\text{15}\)

Regarding minimal care for victims of possible trauma or spinal injury, only 47% of the participants responded correctly, while 40% had inadequate responses that could be fatal to the traumatic victim. When observing the origin of accidents in a school environment, the lack of knowledge of the minimum techniques for immobilizing victims of possible trauma, associated with lack of knowledge or emotional preparation for care, makes the lay rescuer a risk factor for the victim.

In Brazil, hospitalizations due to spinal injuries correspond to 0.2% of traumas (SIH/SUS). The cervical spine is the second most commonly injured (28%), preceded by the lumbosacral junction (60%). Trauma at the cervical level, however, is the most responsible for spinal cord injury (45.8%).\(^\text{16}\) Observing the divided rate of correct answers in relation to this subject, there is a lack of grounded knowledge to guarantee adequate care in the assistance, which ends up violating the principle of non-maleficence, advocated by bioethics when providing care to victims.

Regarding the conduct in case of suspected fractures, 50% of the participants responded adequately to the care provided. Most laypeople do not know the basic procedures for patient care in case or suspected fracture, such as removing rings, bracelets, watches or anything else that may interfere with the circulation of the affected limb, and immediately after proceeding with the immobilization of the limb, respecting the kinematics of the fracture, not pulling, pushing or even trying to put it “in the right place”.\(^\text{17}\)

As for hemorrhages, 53.4% of the participants correctly answered the minimum procedures. Among the actions to be performed in case of hemorrhage, which are highlighted for use even by laypeople, in case of injury to the upper or lower limbs, are direct compression of the wound with the use of gauze or clean cloth, keeping the child calm and awake and contact the parents. In nosebleeds, the child's head should be lowered with the trunk leaning forward; compress the bleeding nostril with the fingers; apply ice or cold compresses; do not blow. If the bleeding does not stop, a cotton or gauze pad should be placed in order to fill the nasal cavity well.\(^\text{18}\)

The current health model has as one of its action strategies the dissemination of health knowledge in society. When observing this strategy in the school environment, in a question of exposure to risks, it becomes necessary together with the regular teaching of first aid, the establishment of strategies to guarantee not
only the fixation of this knowledge, but also the safety and skills necessary to react appropriately to a rescuer, even if a lay person, but holder of knowledge and support for emergency scenes that he may come to meet.

The guarantee in the quality of assimilation of the knowledge taught ensures that the teacher, in the face of an emergency situation, has autonomy and support to act safely and guarantee quality first aid care, capable of generating the victim's survival and minimizing possible sequelae.

Thus, there is a clear need for the dissemination of health knowledge as a determining factor in improving care in general, reaffirmed in early care and monitoring of the victim's clinical condition from the first moments of the occurrence.

CONCLUSION

From the results obtained, it was possible to suggest that even after receiving training in first aid, most of the teachers are still not able to provide assistance in cases of urgency or emergency, not demonstrating minimal knowledge about victim care, vital signs and basic techniques of cardiopulmonary resuscitation or even knowledge of emergency numbers.

It is necessary to change the view of mandatory knowledge in health, focusing on the importance and impact that this knowledge has in emergency situations and in people's daily lives. It is necessary a professional nurse in the school environment, prepared to act in any case of emergency; in developed countries, this already occurs.

Regarding the limitations found by the study, it refers to the fact that only one school participated in the study as well as the short time for application of pre and post test.

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