

Knowledge of elementary school teachers about first aid in childhood*Conocimientos de docentes de primaria sobre primeros auxilios en la infancia**Conhecimento de professores do ensino fundamental sobre primeiros socorros na infância***Jusciele Carvalho Ribeiro¹**

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Ribeiro JC, Marui FRRH, Amaral JG, Belinelo RGS, Fortes TML, Vieira ECB, Carlin DS, Zunta RSB, Contrucci RFC, Lucas AJ. Knowledge of elementary school teachers about first aid in childhood. *Glob Acad Nurs.* 2022;3(2):e253.
<https://dx.doi.org/10.5935/2675-5602.20200253>

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Chief Editor: Caroliny dos Santos Guimaraes da Fonseca
Executive Editor: Kátia dos Santos Armada de Oliveira

Submission: 06-09-2022

Approval: 06-30-2022

Abstract

The aim was to identify the knowledge of elementary school teachers regarding first aid in childhood. Non-experimental, descriptive and exploratory field research, with a quantitative approach. A questionnaire with closed questions was elaborated, and this was sent to the target population in the model called "snowball", where, after identifying the target group of the research, they will indicate other possible interviewees, generating a connection network. It was found that the participants had considerable knowledge on the subject. Some participants report participating in annual lectures, courses, online classes and workshops. On the other hand, some participants declared that they had never participated in a first-aid activity. The research showed the need for the first-aid course in the higher education curriculum, since schools and children's recreation spaces need to have teachers prepared to guarantee students a safe environment. Therefore, through the Health at School Program, nursing can contribute to the training of these teachers through health education.

Descriptors: Health Education; Emergencies; Community Health Nursing; First Aid; School First Aid.**Resumén**

El objetivo fue identificar el conocimiento de los maestros de la escuela primaria sobre primeros auxilios en la infancia. Investigación de campo no experimental, descriptiva y exploratoria, con enfoque cuantitativo. Se elaboró un cuestionario con preguntas cerradas, el cual fue enviado a la población objetivo en el modelo denominado "bola de nieve", donde luego de identificar el grupo objetivo de la investigación, indicarán otros posibles entrevistados, generando una red de conexión. Se constató que los participantes tenían un conocimiento considerable sobre el tema. Algunos participantes informan participar en conferencias anuales, cursos, clases en línea y talleres. Por otro lado, algunos participantes declararon que nunca habían participado en una actividad de primeros auxilios. La investigación mostró la necesidad del curso de primeros auxilios en el currículo de la educación superior, ya que las escuelas y los espacios de recreación infantil necesitan contar con docentes preparados para garantizar a los alumnos un ambiente seguro. Por lo tanto, a través del Programa Salud en la Escuela, la enfermería puede contribuir a la formación de estos docentes a través de la educación en salud.

Descriptores: Educación para la Salud; Emergencias; Enfermería en Salud Comunitaria; Primeros Auxilios; Primeros Auxilios en las Escuelas.**Resumo**

Objetivou-se identificar o conhecimento de professores do ensino fundamental quanto aos primeiros socorros na infância. Pesquisa de campo de caráter não experimental, descritivo e exploratório, de abordagem quantitativa. Foi elaborado um questionário com perguntas fechadas, e este foi enviado para a população-alvo no modelo chamado "bola de neve", onde, após identificar o grupo alvo da pesquisa, estes indicarão outros possíveis entrevistados, gerando uma rede de conexão. Verificou-se que os participantes apresentaram conhecimento considerável quanto ao assunto. Alguns participantes declaram participar de palestras anualmente, cursos, aulas online e oficinas. Por outro lado, alguns participantes declararam nunca terem participado de atividade sobre primeiros-socorros. A pesquisa mostrou a necessidade do curso de primeiros-socorros no currículo do ensino superior, visto que as escolas e espaços de recreação infantil precisam ter professores preparados para garantir aos alunos um ambiente seguro. Diante disso, através do Programa Saúde na Escola, a enfermagem pode contribuir com a capacitação desses professores através da educação em saúde.

Descriptores: Educação em Saúde; Emergências; Enfermagem em Saúde Comunitária; Primeiros Socorros; Primeiros Socorros nas Escolas.

Introduction

Emergency situations require assessment of the victim and immediate and effective care, so that it makes it possible to reduce sequelae, favoring increased survival. However, for this, it is necessary to train lay people in the school environment as well as in society. It is worth mentioning the knowledge and clarification of people, providing care to victims correctly, since the main cause of death outside hospitals is the deficiency in care and inadequate assistance, the first contact that the person makes with the victim at the time of the accident. It is usually performed by a layperson who, when finding the injured victim, offers some kind of help such as calling for help, calming the victim and/or trying to keep the situation under control while the emergency service does not arrive¹⁻³.

The Art. 135 of the Penal Code - Decree Law No. 2480/40, makes it clear that refusing to provide assistance, when possible to do so without jeopardizing their own safety, the person is disabled, injured or in imminent danger, in these cases the health service or assistance from public authorities: Penalty – detention, from one to six months, or fine⁴.

Accidents at school can occur more frequently for a variety of reasons such as age, playtime during recess. The practice of sports activities during the physical education class, in one of these moments the child can fall and develop an injury, requiring emergency care and consequently will need the Mobile Emergency Care Service (SAMU) and volunteers, who although they may be lay people, they will be able to give first aid until specialized help arrives⁵.

Currently, there is not much talk about first aid and so little about the frequency that accidents happen daily in school environments. Despite being unpredictable situations that can happen to anyone, children are more predictable because they are always running and due to some carelessness they end up falling and getting hurt⁵.

Injuries from external causes that could be avoided are among the main causes of death in the age group from 0 to 19 years old, corresponding to 45.7% according to the Ministry of Health (MS). Other Brazilian studies correspond to the fact that most emergency pediatric visits were related to falls in school environments. However, over the years, projects have been developed to prevent accidents, it is known that many of these accidents are harmful and can leave physical or mental sequelae^{6,7}.

Estudos realizados nas capitais brasileiras evidenciam que a Lei n.º 13.722/2019, conhecida como Lei Lucas exige que professores e funcionários de escolas infantis tenham no mínimo noções de primeiros socorros, essa lei tem como foco principal proteger crianças alertando sobre prevenção em situações de emergência, mostrando a importância de profissionais estarem devidamente preparados para agir quando necessário⁸.

Nursing has a primary and indispensable role in health prevention and education, focusing on health promotion and protection, aiming to prevent school accidents, but for that, preparation must be developed in advance, so the importance of health promoting nurses and of teaching. The lack of preparation and knowledge in the

school environment directly interferes with the help at the time of the accident, situations of panic and anguish when faced with the accident or even the excessive request for specialized help. Teachers recognize the importance of nursing work within the school environment, they understand that nursing work is part of the integral formation of students and of all who make up the school environment, showing a critical and conscious look at health^{2,9}.

The School Health Program (PSE) was created with the objective of contributing to the integral formation of students through actions of promotion, prevention and health care, aiming to face the vulnerabilities that compromise the full development of children and young people in the public network. In addition to education and health managers and professionals, the school community and, more broadly, students from the Federal Network of Vocational and Technological Education and Youth and Adult Education (EJA). The program's actions include some activities that are already quite commonplace, such as: analyzing the students' vaccination schedule, organizing lectures on oral hygiene, personal hygiene, ophthalmologist, social assistance, prevention of Sexually Transmitted Infections (STIs), contraceptive methods, among other actions developed by the Brasil^{10,11}.

The Samuzinho project is usually coordinated by a professional nurse and has spread to some municipalities in the country. The initiative comes from SAMU 192 in conjunction with schools; in the Federal District, the project began with the aim of raising children's awareness of the problems caused by improper calls (hazing) to the emergency number 192, since its implementation the project has already instructed more than 14 thousand people in public and private institutions, mainly schools, this initiative has brought the community and the health service closer¹².

In addition to the project carried out with children, there are also others being carried out with adults in which they teach the main concepts and techniques of first aid so that in a possible emergency situation these lay people have autonomy and intimacy with the situation, knowing how to identify the possible situation of the disease. Injured person and what attitude to take in a sensible and assertive way, in the lectures a dummy simulating real situations is used¹².

In this way, the study asks the following question: What is the knowledge of public education teachers about first aid involving children?

Professionals who work directly with children need to have basic first aid knowledge to be able to act safely in the face of accidents that may occur in the school environment.

According to data made available by the Ministry of Health - MS, through the safe child website, in 2018 4.9% of deaths of children between 0 and 14 years old were due to falls and 46.1% of hospitalizations were also due to this same reason¹³.

The Nurse as a health educator has the responsibility to spread knowledge to the population, especially to elementary school teachers, since the age



group that is at this educational level has a great possibility of suffering accidents related to age-appropriate games.

The knowledge of public school teachers about first aid is minimal or null, since this content is not part of the pedagogical training.

“First Aid” can be defined as immediate/imminent help provided to a victim of an accident or sudden illness at the scene, it is important and its main objective is to preserve life and reduce injuries until the arrival of specialized help. The first contact with the victim, if done effectively, can be a differential in the health situation when arriving at the hospital, studies emphasize that health education has saved lives and may be related to the reduction of morbidity and mortality¹⁴.

In this way, it is speculated that knowledge about first aid is necessary in different age groups and for individuals from different social and professional segments, since the use of these procedures may be necessary for the most varied groups of a population. However, despite the explicit exposition of such content, this knowledge still needs to be taught and in fact absorbed by the population, aiming at an efficient use when necessary, in different risk situations of daily life and by the different social groups involved¹⁴.

The person who has the first contact with the injured person can be from any profession, but if they have basic knowledge of first aid and knowledge of techniques, it will be a differential, to keep the situation under control until the arrival of help. Currently, several institutions have motivated the dissemination of this practice, in order to reach the general public, the more people know about the subject, the more lives can be saved and thus reducing the rate of morbidity and mortality from external causes¹⁴.

The regional heterogeneity of the Brazilian territory persisted over decades raises a differentiated profile of accidental causes in children and adolescents, data from DATASUS can show that in 2019 there were 117,592 hospitalizations on an emergency basis, aged 0 to 14 years, and the range The most prevalent age group is between 5 and 9 years old, in which 19,840 cases were registered⁷. The NGO Criança Segura website shows that from January 2008 to March 2017 there were 2,092 cases of hospitalizations and of these hospitalizations 46% were due to falls, 18% burns, and 21% registered as others^{13,15}.

The data show how much this age group suffers from the lack of prevention. Accidents in childhood are responsible for a large part of non-fatal injuries and deaths, as well as physical and psychological sequelae, which represent great damages in the family and in society compromising childhood, the growth and development of children and adolescents. It is estimated that childhood accidents cause 10 to 30% of hospital beds¹⁶.

Prevalent accidents in childhood are falls, fractures, abrasions, cuts with glass and electric shock. Possible causes of accidents in the school environment are stairs; ramp slippery floors; physical education classes on the sports court; channels without protection; windows without bars; electrical network. Injuries caused by accidents among children and adolescents are among the main causes of

death in Brazil where the cases are traffic, falls, burns, among other causes¹⁶.

About 90% of injuries from unintentional causes can be avoided with preventive attitudes, research shows that the reduction in the percentage of accidents after insertion of educational, legislative and environmental prevention strategies. These activities, when elaborated according to the local reality, the chances of working out are considerable prevention can be optimized if elaborated based on aspects of the local reality, considering the main risk factors and the daily situations related to the occurrence of accidents¹⁷.

In general, stairs and falls are the main causes of accidents in schools, according to the results obtained. The unpreparedness and lack of training can further worsen the results, the school environment can become highly dangerous since 63% of education professionals consider themselves incapable of acting correctly in the face of an occurrence. Despite this high rate, it only reflects the situation that 59% report never having received any kind of preparation on this subject. But 64% expressed interest in taking first aid training courses¹⁸.

Ordinance No. 413, of June 8, 1999, defines school accidents as all events that occur at the place and time of school activity, which causes a fatal illness to the student. It includes any accident that occurs during the school journey from home to school and vice versa and in activities organized by the school, even those that occur in its space¹⁹.

Health promotion in schools carries the mission of preparing environments capable of helping people in situations of risk and for that, the school is the best environment for training citizens with a critical spirit and for the good exercise of citizenship. This knowledge is applicable in the curriculum of elementary, secondary and higher education, the more popular it is, the better, to reach the majority of the population in a way that the majority knows at least the minimum of the subject. It is important to say that first aid must be popular knowledge and not only health professionals and students are knowledge multipliers, among their colleagues, family and friends²⁰.

The lack of knowledge of the subject can generate numerous consequences for people, such as failure to provide assistance, incorrect handling of the victim, which can further aggravate the victim's situation, or even call the emergency service without need²¹.

Studies have already shown that educational activities for teachers have generated positive results not only in Brazil but also in other countries where the practice is more advanced and guidance for teachers within schools is well accepted. However, researchers report that, in some cases, they may find it difficult to carry out the research in the long term, because institutions have difficulty in having dates in the annual calendar so that employees can follow up on learning²¹.

It is important to emphasize that training must occur periodically, as the courses have an expiration date and over time, learning becomes outdated and, therefore, the ideal is to have this content mandatory within schools for all professionals. Numerous studies have shown the lack of



preparation of multiprofessionals who work in schools and children's recreation institutions²¹.

A closer look on the part of the institution's multidisciplinary team becomes a differential in the statistics that record accidents and their causes, in this sense it is important to emphasize the training of school employees, including teachers who spend most of their time with these children²¹.

Teachers and employees of educational institutions attended by children and adolescents have an educational and pedagogical commitment, must be willing to fully participate in training and well-being. It is possible to consider the study of preventive behavior, initiated in the family and extended at school with the participation of children and parents or guardians, valuing the safety of all¹⁸.

Currently, safety and protection measures for children and adolescents are aimed at violence; however, there are other factors that must also be taken into account when it comes to prevention, childhood accidents have worsened due to the lack of prevention and maintenance within the environment school: broken ramps, lack of signposts has promoted more dangerous situations than violence itself¹⁸.

Given the above, the objective was to identify the knowledge of elementary school teachers regarding first aid in childhood.

Methodology

A non-experimental, descriptive and exploratory field research was developed, with a quantitative approach, on the assessment of teachers' knowledge of first aid in childhood, using the snowball research, also known as snowball, as a methodological basis. This is a research that tests hypotheses about the situation of interest, contributing with instructions and modifying the current scenario of the research participants through an educational booklet addressing the main themes according to the difficulties presented by the participants through the closed answers of the questionnaire^{22,23}.

A questionnaire was prepared using the Google Doc© application software, which was made available and sent by Facebook© and WhatsApp© groups to the population studied through the "Snowball" approach.

The research participants were early childhood and elementary education teachers 1 and 2, over 18 years old, who were working in day care centers, schools and NGOs.

This research relies on a data collection model called "snowball" or snowball. This model has a non-probability sampling execution, which uses reference chains, that is, from this specific type of sampling it is not possible to determine the probability of selection of each participant in the research, but it becomes useful to access certain groups, facilitating access. A different research construction is then used, so that the first sending of the link to social network groups has its subjects named as seeds, so that we can identify and locate people with the necessary profile for the research, within a specific population. The next step relies on the collaboration of the participants found with the disclosure of the link, indicating new contacts, who also fit

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the pattern requested in the survey, and so on. In this way, the sampling frame can grow with each interview, if it is in the interest of the interviewer^{22,23}.

The researcher prepared a questionnaire and included it in the Google DOCS platform, generating an access link that was sent to the participants. The Free and Informed Consent Term (ICF) was also included in the link, which was presented to the participant before he/she had access to the research questionnaire. After reading the informed consent and accepting to participate in the research, he was directed to the specific questionnaire for this research.

The information obtained was stored in the Microsoft Excel® software and analyzed in a descriptive way, calculating the absolute and relative frequencies for all variables and with measures of central tendency for the quantitative variables. Quantitative data will be presented in the form of graphs and tables.

For the development of the study, the guidelines and regulatory standards for research involving human beings, approved by the National Health Council, under Resolution No. 466/2012 based on opinion 4,247,375 of Universidade Paulista, São Paulo.

Results and Discussion

Analyzing the 52 research participants, it was found that they are between 24 and 59 years old, 37 (71.2%) female and 15 (28.8%) male. It was possible to observe that about 25 (48.1%) participants are Catholics, 9 (17.3%) participants are Evangelicals, while 5 (9.6%) indicated others and 6 (11.5%) people claim not to have religion, 1 (1.9%) is Protestant, 2 (3.8%) practice Candomblé, 2 (3.8%) declared to be spiritualists and 2 (3.8%) Adventists.

As for the time working with children aged 4 to 12 years, it was observed that of the 52 participants, 1 had never worked with children, 27 (51.9%) worked with this age group between 1 and 10 years, 18 (34.2%) participants work between 11 and 20 years, 6 (22.8) between 21 and 30 years and 1 (1.9%) for 40 years. Of these, 32 (60.8%) had already participated in some activity focused on first aid, such as lectures, courses or classes during graduation and 20 (38.2%) declared they had never participated in any activity focused on this topic.

Regarding questions about first aid, the participants demonstrated knowledge on the subject. There were 11 questions and, in most cases, the correct answers were between 80 and 100%. Only in questions 2, 3 and 6 did the teachers show little knowledge about the subject, with an average correct answer margin of 46%.

In our study, the teachers had a higher number of hits than expected, showing knowledge about first aid, some participants who work in a certain municipality reported that annually the city hall gives lectures on first aid, and this was a differential in the final result of the research, different from other studies, in this case, 60.8% of the participants participate or have already participated in activities on first aid through courses, lectures or online classes and only 39.2% have never participated in any type of activity with this theme.



In line with this, in a survey carried out with 117 early childhood teachers from 23 municipal schools in 2013, it was evident that teachers were unprepared to intervene in urgent and emergency situations, also showing that 53.84% of these participants did not have classes in first aid at graduation.

Dada is a failure that follows during the exercise of the profession, where the participants themselves recognize that they are not apt for situations like this and that they need preparation for accident prevention, since they will have a more critical and attentive look at situations that may offer some risk in the school environment and/or children's recreation²⁴.

In question number 7 of the survey, the following question was asked: "What is an urgency? Of the alternatives below, which three mentioned signs indicate an urgency", in this question there was 100% of correct answers, and the correct alternative was: "A) burns, fall, bleeding", in which it confirms that the participants would be able to recognize a situation of urgency and could offer some kind of help according to their previous knowledge.

According to a study, an accident is any event of intentional external origin that results in physical and/or psychological injury in the home and school environment, which is also included in this concept. It is also understood that the child spends more than a third of their day at school, it is common for accidents to occur in school environments due to several factors. However, the school has trained professionals to know how to recognize and act in situations that need to provide first aid is a differential. The teachers themselves feel this need; claim that they feel unprepared and insecure with this type of situation, in addition to having only empirical knowledge about first aid²⁵.

A survey, when evaluating the teaching of first aid for teachers, defines it as "immediate care provided to the victim of an accident or sudden illness", in this case, it is essential that the victim receives first care as soon as possible. Ideally, it should be provided by someone who is already at the location or as close as possible. Therefore, the help must be provided by a layperson in order to maintain stable vital signs and prevent the situation from getting worse. This first contact with the victim can be made by anyone who has some level of knowledge²⁶.

Health education is a strong tool for learning, thinking about it, a first aid booklet was developed to contribute to these lay teachers. It aims to talk about the main situations that happen on a daily basis within the school environment, which are fainting, bleeding, falls, convulsion, among others.

A study says that taking care of human beings in their individuality, complexity and integrality is the main competence of nursing and that its knowledge allows human beings to be cared for in three basic dimensions: care, research and/or continuing education and in managerial administration²⁷.

Nurses working in a school outpatient clinic can exercise their autonomy in several ways. As an example we can mention, transmitting knowledge to students and school employees through campaigns, lectures, nursing

consultations, in addition to being able to work on the control of infectious diseases, keep the vaccination calendar up to date, act in the prevention of accidents and provide first aid in case be necessary.

In the survey, the following question was asked: "What is the telephone number of the service specialized in urgency and emergency?" and, 9.6% of the participants marked the wrong answer, this indicates that in an urgent or emergency situation these people would not call the specialized help first, attitudes like this can reflect negatively on the victim's health condition.

Study considers that first aid is not restricted to health professionals, this is an erroneous belief that people have, lay people need to know at least the basics of how to help a person and know when to call for specialized help. Helping a person is not only a matter of solidarity or ethics, but also a legal issue as stated in Art. 135 of the Brazilian Penal Code. Castro highlights in his study that failure to provide assistance and inefficient care for accident victims are the main causes of irreversible damage and death²⁸.

Research highlighted the positive results of an intervention made by Indian researchers who observed a series of workshops on first aid management, where the satisfactory result of the pre-intervention was 37.26% and after the intervention the satisfactory results rose to 83, 31%. Research has shown how much a lecture can generate positive results for learning first aid. The author also highlights that there are several methodologies that can be used, but it is up to the professional to define the best method to be used, remembering that the public profile must be taken into account and the objective of causing reflection on the subject, in addition to the content be assimilated clearly and objectively²⁶.

This research was carried out with preschool and elementary school teachers; therefore, one hypothesis is that in other areas such as day care, high school and private schools, it is also possible to compare the knowledge of teachers in different municipalities. For future studies, it is recommended that they be carried out in environments such as those already mentioned.

In addition, including the current transpandemic context of COVID-19, knowledge and dissemination of scientific information to assisting professionals and the general population is a major challenge in the midst of a pandemic of misinformation²⁹, which was already a reality and worsened with the pandemic situation, reaffirming the purpose and relevance of the study on screen.

It is noteworthy that the integration between school units and local public health units is one of the strategies to be used to ensure accessibility to the user, either through health care or through the source of correct information given by qualified and trained professionals, in addition to valuing of the Brazilian public health system, which needs to be included both for teachers, school coordinators, but mainly for students³⁰.

Final Considerations

The research showed how important and necessary the insertion of the first aid course is in the curriculum of



higher education students, since schools and children's recreation spaces need to have teachers prepared to serve these students, ensuring that they can develop in safe environments.

It is also remarkable how much nursing can contribute to the development of these teachers through health education, who can have easy access to through the School Health Program.

Accidents at school are more common than one might imagine, highlighting the need for teachers prepared for this type of situation. The lack of mastery on the subject among teachers in certain situations can lead to a wrong decision-making in a moment of despair and end up compromising even more the health status of a child who

was no longer so well and compromising even more, leaving sequels or in extreme cases, it can lead to death.

Nursing plays a fundamental role in this learning process, as the continued practice of health education in schools through the PSE is a very strong form of prevention. Nursing is as important in prevention and health education work as it is in care.

Thus, this study emphasizes the importance of developing activities such as lectures, courses and workshops for this population, aiming at the universalization of knowledge among teachers on the subject, contributing to their empowerment in the face of this theme, bringing more security to students in the school environment and making parents more confident in class schedules.

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