



## SAVING LIVES: ASSESSING KNOWLEDGE OF ADOLESCENTS OF A PUBLIC SCHOOL ABOUT FIRST AID

### SALVANDO VIDAS: AVALIANDO O CONHECIMENTO DE ADOLESCENTES DE UMA ESCOLA PÚBLICA SOBRE PRIMEIROS SOCORROS

### SALVANDO VIDAS: EVALUANDO EL CONOCIMIENTO DE ADOLESCENTES DE UNA ESCUELA PÚBLICA SOBRE PRIMEROS SOCORROS

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#### ABSTRACT

**Objective:** to analyze the knowledge of adolescent students at a public school about first aid cases of: fever and convulsion; heatstroke and sunburn; electric shock; drowning; exogenous poisoning; accidents by poisonous animals (Scorpio and ophidian); fractures, sprains and dislocations; chokes and asphyxiation; foreign bodies (nose, eyes, throat and ears); cardiopulmonary resuscitation. **Method:** exploratory study, field study, quantitative approach, part of the Extension Project - PROBEX, from the Federal University of Campina Grande UFCG, Campus/Cuité, << Saving lives: training of youth and adolescents in the provision of first aids >>, with 63 students of the 8<sup>th</sup> and 9<sup>th</sup> grade of high school of a public school within the State of Paraíba. The data were collected with a questionnaire. The analysis was descriptive and made from tables with frequencies and percentages. The research project has been approved by the Ethics Committee in Research, CAE 04184812.0.0000.5182. **Results:** regarding to the contents of responses from students in the pre and post test, it was observed an increase of hits after execution of the workshops. **Conclusion:** it is considered relevant first aid education in schools. **Descriptors:** Knowledge; Nurse; Health Education; First Aids.

#### RESUMO

**Objetivo:** analisar o conhecimento dos adolescentes estudantes de uma escola pública sobre noções básicas de primeiros socorros aos casos de: febre e convulsão; insolação e queimadura; choque elétrico; afogamento; intoxicação exógena; acidentes por animais peçonhentos (escorpião e ofídico); fraturas, entorses e luxação; asfias e engasgos; corpos estranhos (nariz, olhos, garganta e ouvidos); reanimação cardiorrespiratória. **Método:** estudo exploratório, de campo, de abordagem quantitativa, parte do Projeto de Extensão - PROBEX, da Universidade Federal de Campina Grande/UFCG, Campus Cuité, << Salvando vidas: capacitação de jovens e adolescentes na prestação de primeiros socorros >>, com 63 estudantes do 8º e 9º ano do Ensino Médio de uma escola pública estadual no interior da Paraíba. Os dados foram coletados com um questionário. A análise foi descritiva e feita a partir de tabelas com frequências e percentuais. O projeto de pesquisa foi aprovado pelo Comitê de Ética em Pesquisa, CAE 04184812.0.0000.5182. **Resultados:** quanto aos índices de respostas dos estudantes no pré e pós-teste, observou-se um aumento dos acertos após execução das oficinas. **Conclusão:** considera-se relevante o ensino de primeiros socorros nas escolas. **Descritores:** Conhecimento, Enfermeiro, Educação em Saúde, Primeiros Socorros.

#### RESUMEN

**Objetivo:** analizar el conocimiento de los adolescentes estudiantes de una escuela pública sobre nociones básicas de primeros socorros em los casos de: fiebre y convulsión; insolación y quemadura; choque eléctrico; ahogo; intoxicación exógena; accidentes por animales venenoso (escorpión y ofídico); fracturas, torcidas y luxación; asfias y atragantar; cuerpos extraños (nariz, ojos, garganta y oídos); reanimación cardiorrespiratoria. **Método:** estudio exploratorio, de campo, de enfoque cuantitativo, parte del Proyecto de Extensión - PROBEX, de la Universidad Federal de Campina Grande/UFCG, Campus Cuité, << Salvando vidas: capacitación de jóvenes y adolescentes en la prestación de primeros socorros >>, con 63 estudiantes de 8º y 9º año de Secundaria de una escuela pública estadual en el interior de Paraíba. Los datos fueron recogidos con un cuestionario. El análisis fue descriptivo y hecho a partir de tablas con frecuencias y porcentajes. El proyecto de investigación fue aprobado por el Comité de Ética en Investigación, CAE 04184812.0.0000.5182. **Resultados:** de acuerdo con los índices de respuestas de los estudiantes en el pre y post-test, se observó un aumento de los aciertos después de la ejecución de los cursos. **Conclusión:** se considera relevante la enseñanza de primeros socorros en las escuelas. **Descritores:** Conocimiento; Enfermero; Educación en Salud; Primeros Socorros.

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## INTRODUCTION

First aid are initial and immediate measures dedicated to the victim, outside the hospital environment and carried out by any trained person to ensure the life, providing welfare and avoiding aggravation of existing injuries.<sup>1-2</sup> Urgent and emergency care requires knowledge and control, which encompasses requirements as thinking fast, having agility, competence and efficaciousness of capacity problems.<sup>3</sup>

External causes accidents occur daily and most of them are always unexpected, which reinforces the idea that there is a qualification of the population regarding first aid, noting that the first hours traumatic post-event have been considered as the period of highest mortality.<sup>4</sup> Accordingly, the Basic Life Support (BLS) and the training of the lay people in emergency situations, is essential to save lives and prevent sequels, since a guided community is also a safe community.<sup>5</sup> In this context, the school is highlighted as a favorable environment for the formation of the citizens, being adolescents students the target audience for the ability to change behavior and adherence to new practices of applicability in community health.<sup>6</sup>

It is evident the need of investments in the prevention of accidents in school and at home, as it is the early action that aims to intercept or annul the developments, preventing any damage, modifying the concept that the accidents are related to randomness and unpredictability. Better guidance on the prevention of accidents and a stricter supervision by those responsible may contribute to the index decreasing.<sup>7</sup>

The university extension is the educational process that articulates the teaching and research of integral form and enables the transformative relationship between university and society. Moreover, it is clear that an extension project can contribute to students with knowledge about the reality of the population, emphasizing the adolescents' students, where the university is located, therefore, providing services to this target audience, highlighting the theoretical and practical learning in the basics of first aid.<sup>8</sup>

Then, this study aims to:

- Analyze the knowledge of adolescent students at a public school about first aid cases of: fever and convulsion; heatstroke and sunburn; electric shock; drowning; exogenous poisoning; accidents by poisonous animals (Scorpio and ophidian); fractures, sprains and dislocations; chokes and asphyxiation; foreign

bodies (nose, eyes, throat and ears); cardiopulmonary resuscitation.

- Assess the knowledge of students about the themes proposed, before and after the workshops.

## METHOD

Exploratory study, field study, with a quantitative approach, part of the Extension Project - PROBEX, from the Federal University of Campina Grande (UFCG), Campus Cuité, << Saving Lives: training youth and adolescents in the provision of first aid >>, developed in the municipality of Cuité, Carimataú, Paraíba, from May to December 2012, with 63 high school students of the 8<sup>th</sup> and 9<sup>th</sup> grade of the public School Orlando Venâncio dos Santos, selected according to the criteria of inclusion: be over 18 years old; have authorization from the responsible through the signature of informed consent - FICS if less than 18 years old.

The preparation of the project consisted of five steps: 1<sup>st</sup> Team Training of students; 2<sup>nd</sup> Closer to the Target Audience (visit to the school and project presentation); 3<sup>rd</sup> Production and Making of Material (search for theoretical basis to support the training and educational activities proposals); 4<sup>th</sup> Health Education for a Proper Care: conducting workshops with themes: fever, convulsion; Heatstroke, Burns; Electric Shock; Exogenous Poisoning; Accidents by poisonous animals (Scorpio and Ophidian); Drowning; Fractures, Sprains, Dislocations; Asphyxiation and Chokes; Foreign bodies (nose, eyes, throat and ears); and cardiopulmonary resuscitation, in morning and afternoon shifts); and 5<sup>th</sup> Production of Knowledge (records of meetings and experiences in the project, with disclosure of the results in scientific articles, disseminating the knowledge acquired with the target audience).

The realization of workshops followed a schedule set by the project and authorized by the aforementioned school, in a conformation of a workshop per day, totaling 10 workshops lasting 50 minutes each, and contemplating the subjects separately. It is valid to note that the contribution of the students of the project was significant in times of demonstration of practical workshops. They were performed by the students of the course of Bachelor of Nursing, UFCG, through a lecture, theater and practices with simulation on mannequins, in order to facilitate the theoretical-practical support in the training of adolescents' students to correct an initiative first aid practices.

For data collection, a questionnaire containing information pertaining to the target audience profile (gender, age, class and shift) was used and the aforementioned 14 themed objective multiple-choice questions. The application of questionnaires took place in two phases, before the realization of each workshop, as a pre-test, and in the end being defined as a post-test for purposes of analyzing the acquired knowledge with the workshops presented in comparison with the pre-test. After examining the data, they were described in table form contemplating absolute values and percentages.

The research had the project approved by the Ethics Committee and Research of the University Hospital Alcides Carneiro of UFCG, CAAE: 04184812.0.0000.5182, and was signed

the term of commitment for the use of the data.

## RESULTS AND DISCUSSION

As shown in table 1, during the eight months of the extension project, ten workshops were conducted in the mentioned public school. As a result, it was observed that the target audience profile obtained as predominance of adolescents' students of the 9<sup>th</sup> grade, with 39 (61.9%), the most female, 40 (63.49%), and the age group between 15 to 13 years old with 40 (63.5%) between both classes. All students who participated in this research have never had contact with first aids, in the school or out of it.

**Table 1.** Characterization of the adolescents' students of 8<sup>th</sup> and 9<sup>th</sup> grade of the public school. Cuité - Paraíba, Brazil, 2012.

Variables	N = 63		N = 63	
	n°	%	n°	%
<b>Class</b>				
8 <sup>th</sup>				
9 <sup>th</sup>	24	38,1	39	61,9
<b>Gender</b>				
Female	13	20,6	27	43,0
Male	11	17,4	12	19,0
<b>Age Group</b>				
13 years old	14	22,2	07	11,1
14 years old	09	14,3	26	41,3
15 years old	00	00	07	11,1

A recent research demonstrates that the level of first-aid knowledge of schoolchildren from 13 to 15 years old is down allowing them to act in emergency situations. In this sense, these results demonstrate the necessity of this topic be included in schools.<sup>9</sup>

Current studies address the relevance of the role of the nurse in school education, teaching first aid as prevention and health promotion, being highlighted the expansion of degree of knowledge of the elementary

students about appropriate first aid, after the inclusion of these classes in elementary and high schools.<sup>10</sup>

In the data presented in table 2, concerning the distribution of topics in workshops and attendance of 8<sup>th</sup> and 9<sup>th</sup> grades adolescents' students, it is observed a higher attendance (100%) in workshops about hemorrhage, shock and cardiopulmonary arrest, and the other with percentages between 70 and 90%.

**Table 2.** Distribution of topics in workshops and attendance of 8th and 9th grades adolescents' students from the public school. Cuité - Paraíba, Brazil, 2012 (N = 63).

Workshops	n = 63			
	8 <sup>th</sup>		9 <sup>th</sup>	
	Grade	Grade	Grade	%
	n <sup>o</sup>	n <sup>o</sup>	n <sup>o</sup>	%
Fever and Convulsion	24	30	54	85,7
Heatstroke and sunburn	24	35	59	93,6
Electric Shock	24	33	57	90,5
Exogenous Poisoning	24	37	61	96,8
Poisonous Animals	24	29	53	84,1
Fracture, Sprain and Dislocation	24	26	50	79,4
Asphyxiation and Choking	24	36	50	79,4
Foreign Bodies (eye, ear, nose and throat)	24	28	52	82,5
Bleeding and Shock	24	39	63	100,0
Cardiopulmonary Arrest	24	39	63	100,0

It is important to highlight that studies in this perspective indicate similarity with the current study concerning following subjects: Fever and Convulsion; Burns; Electric Shock; Exogenous Poisoning; Accidents by Poisonous Animals (Scorpio and Ofídico); Drowning; Fractures, Sprains and Dislocations; Foreign bodies (nose, eyes, throat and ears); and cardiopulmonary resuscitation, which were developed by workshops.<sup>11-14</sup> However, this study added heatstroke, asphyxiation and choking as topics of great relevance in the target audience of the search.

The data in table 3 refer to responses submitted to the application of pre-test and

post-test. As expressive in the pre-test, it appears that only one question obtained 100% hit, which refers to electric shock, while the other had indexes less than 90%, highlighting the questions 2, 6 and 7, with less than 50.0% in its entirety, relating to foreign bodies inside the ear, bleeding and insolation, respectively. In relation to the post-test, the index was hit 100% for the questions alluding to convulsion, fracture and electric shock, and with smaller index of hits to question 6, about nose bleeding, with just 50.8%.

**Table 3.** Knowledge of adolescent students in 8<sup>th</sup> and 9<sup>th</sup> grade of public school pre-test and post-test about first aid. Cuité - Paraíba, Brasil, 2012.

Questions	Pre-Test (N = 63)						Post-Test (N = 63)					
	Hits		Mistakes		Do not know		Hits		Mistakes		Do not know	
	n <sup>o</sup>	%	n <sup>o</sup>	%	n <sup>o</sup>	%	n <sup>o</sup>	%	n <sup>o</sup>	%	n <sup>o</sup>	%
1. Only people trained in the area of health are able to provide first aid to victims of accidents.	52	83,5	09	14,3	02	3,2	59	93,6	03	4,8	01	1,6
2. An effective way of removing an insect of the ear is to focus light from a flashlight, causing the insect is attracted to it and leave.	26	41,3	24	38,1	13	20,6	58	92,1	04	6,3	01	1,6
3. What to do in snake bite?	55	87,3	07	11,1	01	1,6	53	84,1	10	15,9	00	00
4. If you witness a convulsion crisis (seizure), what do you do?	59	93,6	04	6,4	00	00	63	100	00	00	00	00
5. When someone close to you suffer an accident and the arm or leg is out of place, what to do?	61	96,8	01	1,6	01	1,6	63	100	00	00	00	00
6. When someone close to you, drain blood through his nose, what to do?	26	41,3	28	44,4	09	14,3	32	50,8	28	44,4	03	4,8
7. When you spend a lot of time in the sun, and your body is burned, what to do?	25	39,7	33	44,4	05	14,3	50	79,4	13	20,6	00	00
8. When you cut (knife, scissors, knife, stiletto ...), what should be done?	51	80,9	07	11,1	05	7,9	60	95,2	03	4,8	00	00
9. If you or your partner suffer a burn (fireworks, fire, water or hot milk), what should you do?	60	95,2	02	3,7	01	1,6	62	98,4	01	1,6	00	00
10. In cases of high fever, what should be done?	39	61,9	13	20,6	11	17,4	47	74,6	15	23,8	01	1,6
11. In situations of choking by any	53	84,1	05	7,9	05	7,9	56	88,9	06	9,5	01	1,6

object (Fishbone, needle, coin...), what needs to be done immediately?

12. If a child swallows any toxic substance (detergent, bleach, lye), what should you do? 55 87,3 07 11,1 01 1,6 57 90,5 06 9,5 00 00

13. When a person is bitten by a Scorpion, what to do? 48 76,2 05 7,9 10 15,9 48 76,2 13 20,6 02 3,1

14. If a person is taking an electric shock and you arrive on time, what should you do? 63 100 00 00 00 00 63 100 00 00 00 00

The training process has achieved positive impact when carried out with children audience<sup>15</sup> and adolescents<sup>16-7</sup>, as well as among young adults.<sup>18.19</sup> However, in studies conducted with the children<sup>15</sup> and adolescents<sup>16</sup>, authors emphasize that interventions require practical activities, methodology that the distance courses do not allow to enable the completion of the procedures in first aid, despite further increase the theoretical knowledge.

It is essential to start with adolescents' students the means to prevent and meet victims of accidents, as a purposeful strategy between simulation and reality, which facilitates both understanding of the implementation of this practice by the need presented in the school, home and social life. From this understanding, this practice of first aid needs to cover other institutions<sup>11.13</sup> of elementary school and basic services, considering the high rates of morbidity and mortality by external causes among children, adolescents and young people, in order to reverse this scenario by health education as a pedagogical strategy to minimize damage.<sup>14</sup> Therefore, it is reinforced the importance of first aid in the school context so that it becomes more safe and reliable.<sup>20</sup>

A educação constitui um meio para reorganizar as práticas e ações de saúde preventiva, curativa e de promoção. Através da iniciativa da educação em saúde, pode-se favorecer a criação de ambiente saudáveis, transformando, construindo e trocando saberes científicos e populares, além de refletir sobre meios de fortalecimento da cidadania junto às comunidades.<sup>21</sup>

Education is a means to rearrange the practice and preventive, curative health actions and promotion. Through the initiative of health education, you can encourage the creation of healthy environment, transforming, building and exchanging scientific knowledge and popular, in addition to reflect on means of strengthening citizenship communities. 21

## CONCLUSION

We consider the project of great importance in its pioneering spirit and

initiative in front of the audience of Carimataú, Paraíba, Brazil, adolescents' students of the 8<sup>th</sup> and 9<sup>th</sup> grade of the public school Orlando Venâncio dos Santos, being significant differences with respect to knowledge about the topics discussed in relation to the pre and post test during application of the questionnaire. In this regard, it is stressed the need of health education to the evaluation and behavior adopted in first aid within schools. Therefore, this target audience can propagate theoretical and practical knowledge of first aid so that present and future can SAVE LIVES.

First-aid training to adolescents' students was of great value. It is also emphasized the importance of continuing performing training on basic principles of first aid in schools, thereby encouraging the health education.

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