



Emergency Medicine and Trauma Care Journal

Research Article

Germini F, et al. Emerg Med Trauma. EMTCJ-100056

"I Can Save a Life, Too": The Nurse in School Education for Adolescents

Germini F¹, Della Pietà C², Cassano F³ and Vitale E^{4*}

¹Manager of Health Professions, Local Health Authority Bari, Italy

²Manager of Health Professions, Local Health Authority Bari, Italy

³Nursing student at the University of Bari, Italy

⁴Department of Mental Health, Local Health Authority Bari, Italy

*Corresponding Author: Vitale Elsa, Department of Mental Health, Italy, Tel: 3339910154; Email: vitaleelsa@libero.it

Citation: Germini F, Della Pietà C, Cassano F, Vitale E (2021) "I Can Save a Life, Too": The Nurse in School Education for Adolescents. Emerg Med Trauma. EMTCJ-100056

Received date: 19 January, 2021; Accepted date: 29 January, 2021; Published date: 05 February, 2021

Abstract

Background: The work was born to increase the awareness among young students that they could do something important to save a life.

Methods: To assess the effectiveness of the training the questionnaire was based on 15 multiple choice questions on the topics of the course. Questionnaire was administered at the beginning of the course, at the end and one month after.

Results: 221 students aged 13 years were involved. Emergency knowledge increased significantly after the end of the course and after 1 month.

Conclusion: Data collected show a significant increase in the knowledge learned even after one month. Nurses can promote emergency education in school among students: the proposed project was effective because the set objectives were achieved.

Keywords: Knowledge acquisition; Nursing Education; Survey and Questionnaire

Introduction

Professional experience has amply demonstrated how the right behaviors and the speed of intervention in emergency/urgency situations can determine the survival or death of the affected person. Young people are increasingly faced with situations which, if properly managed, can show the success of life-saving maneuvers. As reported by the newspaper of the Red Cross of Cervia, in April 2013, a 12-year-old student from Saint-Saturnin, France, practiced on her father a first aid maneuver learned during the last school year. After finding him on the ground, he started the massage, calling his mother. The girl waited for help to arrive, continuing the heart massage [1]. The perception that children can have of an emergency situation is certainly different from that presented by an adult, often we tend to minimize and underestimate an accident,

almost seeing everything as a game [2]. In the rest of the world, first aid programs are implemented annually in schools since they are included in a ministerial program, in Italy this does not happen and the ability of a boy to activate emergency services and save a life is underestimated. The training would allow the learning and application of certain concepts by adults and children. The intent of the project is to introduce emergency issues close to everyone to schools, issues that have certainly touched the person at least once in their lives and that often have not been able to deal with them because they are waiting for advanced help. Certainly acting without knowledge of the facts brings more harm than good, but knowing what to do allows those who are merely spectators, to become protagonists of the situation and to improve the outcome of the person affected by an emergency [3,4]. On average, an ambulance arrives at the accident site in about 4 minutes, but 4 minutes of waiting can be life-threatening. The project aims to illustrate everyday life situations to students and teachers.



Approaching these situations and managing them in the best way would produce significant benefits and feedback and in those 4 minutes of waiting for help, a person's life could be saved. Specific learning objectives relate to three areas of knowledge [5,6], as:

- knowledge: acquisition of the necessary theoretical knowledge;
- know how to be: acquisition of an appropriate behavioral approach to manage the main First Aid procedures;
- know-how: acquisition of manual skills and operating schemes.

These were three cornerstones followed to implement the project and show the effectiveness of emergency-urgency training for teenagers in the third year of middle school to make sure, as:

- Recognize emergency and urgency situations.
- Assess the seriousness of the case.
- Alerting the territorial Health Emergency System 118.
- Provide adequate First Aid.

An example is the project "Primary school children are able to perform basic life-saving first aid measures" [7] implemented in Norway which was intended for pupils of 9 schools of a range between 6 and 7 years of age, divided into two groups, one subjected to the course, the other not. The aim was to evaluate the effectiveness of a theoretical practical first aid course and the ability to retain information after 6 months. The theoretical test showed 68% of correct answers, the practical test instead an insufficient competence (10%) depending on the age of the pupils undergoing the course.

Materials and Methods

The project was born in the third classes of the First Grade Secondary School, sited in Bari, in the Southern of Italy. The project was developed in January 2018, by a working group made up of 4 nurses who are experts in critical areas, with at least 5 years of experience in the sector and BLSD-PTC certification. The project was approved by the School Director of the Institute and the Council of the Institute and presented to the teachers of all the latest year classes of the Institute. For each class, a reference teacher was appointed, who was to administer and collect the parental consent forms at the frequency of their child's training

course. Teachers also participated in the drafting of the course program, for suggestions on how to present the contents in order to capture the attention of their students. The main topics addressed, with learning methodologies such as simulation, brainstorming were: general notions about emergencies and emergency response, bleeding, allergies, lipotymic crises and syncope, drug and alcohol intoxications, traumatism, epileptic seizures, burns, foreign bodies from suffocation, cardiopulmonary resuscitation. In addition, to assess the starting knowledge level on the recognition of emergency situations, an "ad hoc" multiple choice questionnaire was created which was delivered to the reference teachers, who administered it and subsequently collected it from students before the course (T_a) . The same questionnaire was administered at the end of the course (T_1) and after one month (T_2) to evaluate the knowledge acquired during the course. t-Student test was performed to evaluate the effectiveness of the training course and if the number of correct answers had significantly increased immediately after the course and one month after execution.

Results

The average of the correct answers at T_0 was 10.06 ± 2.19 and at T_1 was 13.57 \pm 1.73. Table 1 shows the results of the exact responses obtained at T_0 , T_1 and T_2 . Students show that they have a fairly advanced basic knowledge in an emergency situation. However, considering the comparisons between the answers obtained at T₀ and at T₁, as shown in Table 1, for some questions there have been no significant changes, while for others, the situation has changed totally as we have acquired notions that have determined an increase in knowledge. Furthermore, t-test between values collected at T_0 and T_1 shows a value equal to 18.67 with a value of p < 0.001. This means that the difference in the number of correct answers between T_0 and T_1 is statistically significant: the course has brought about a significant increase in basic knowledge. On the other hand, by evaluating the number of correct answers to the questionnaire at T_2 (after one month from the execution of the course), although the average of the correct answers has undergone a decrease of 5%, the statistical significance between T, and T_2 remains high (p=0.0003). This means that after one month the knowledge related to the course remained alive in the students. Significant differences between all the third classes involved in this study were not shown, let alone between the two sexes. Basically, the significance was found only between the three different test administration times.





Questions/Answers	T0 (n=221)	T1 (n=221)	T2 (n=221)
General notions on emergency and first aid:1. The purpose of the emergency room is: "Do what is necessary when help cannot arrive on time"	91%	92%	91%
Situations deemed of low gravity:			89%
2. In case of blood leakage from the nose it is necessary to: "Squeeze the upper part of the nose with 2 fingers"	61%	91%	94%
3. The leakage of blood from the ear: "Put the person in a safe lateral position"	66%	94%	81%
4.In front of a shoulder dislocation: "Make maneuvers to put the affected part back in the correct position"	39%	81%	
5. If a person has a leg fracture it is important: "Do not touch the leg and wait for the person in charge"	68%	75%	70%
Situations deemed of medium severity:	80%	90%	
6.In case of burn: "Medicate and apply clean gauze"	91%	92%	90%
7. Burns: "They are tissue injuries caused by contact with chemical or physical agents"	84%	92%	89%
8. Cannabis abuse: "It can lead to anxiety crisis, headache and difficulty concentrating"	62%	88%	90%
9. What must be done in front of an unconscious person: "Check if the heart beats"	85%	90%	89%
10. Allergies: "They are an abnormal response of the organism towards particular substances, not harmful to other individuals"	46%	94%	88%
11. Giving help to a person with epileptic seizures means: "Staying close and protecting the person from injury and trauma"			91%
Notions of cardiac arrest and suffocation:			
12. The purpose of cardiac massage and artificial respiration: "Keep the brain oxygenated"	87%	90%	88%
13.If the person is not breathing and is not conscious: "Start the heart massage"	71%	79%	79%
14.In cardiac massage the ratio between compressions and ventilations is: "In adults 30 compressions and 2 ventilations"	22%	94%	93%
15. I understand that a person is suffocating because: "He does not respond and puts his hands on his neck"	69%	92%	91%

Table 1: Questionnaire administered on emergency knowledge and number of exact answers before the course (T_0) , immediately after the course (T_1) , six months from the course (T_2) .

Discussion

Students have shown interest and desire to learn from the beginning of the project. The desire to test himself has been shown by the students since the team showed up. The predisposition to interact, the collaborative attitude, the continuous questions, the curiosities that wanted to find an answer, the participation and the interested looks while the speaker spoke, allowed to understand that, in addition to the statistical level, the course has seen its effectiveness on a human, personal and educational level. In the literature, there are several initiatives to promote emergency management among students, in order to increase its management skills [8,9]. One example is the German study published in April of this year in which 460 pupils aged 10 to 17 were recruited and trained for cardio-pulmonary maneuvers [10,11]. Again, an emergency knowledge assessment questionnaire was administered





before the course, immediately after the course and nine months after the life-saving course. These data were in accordance with our results: even in this study, in fact, there was a significant increase in knowledge immediately after the course and even after 9 months, even if 9 months later the increase was less.

Our data reflect the same trend showed in the Results section. Except that at T_2 our results are more significant than the study considered. This aspect may depend on the time factor, given that in our study one month is considered, while in the German one it is considered 9 months. In any case, the slight decrease recorded through the test administered after only one month is an indication of the need for continuity, that is, it is necessary to strengthen the knowledge and continuously arouse the curiosity of the students, placing them in front of new situations and notions about the Emergency Response. Interest and curiosity are the basic attitudes on which to insist in order to induce a person to approach a discipline, an educational action.

Another study reported in the literature and published in 2018 assessed pre- and post-education knowledge in emergency training in a group of 1.196 students [12]. Also in this study, the method of administering a questionnaire was used to evaluate students' knowledge of the emergency. The results report a statistically significant increase in knowledge. This study, however, despite the large sample size, limits itself to assessing the increase in knowledge only at T_1 , as immediately after the emergency training course.

An important aspect to consider in our sample is the high degree of basic knowledge possessed at T_0 , far greater than the data reported in the literature. However, this aspect reduces our statistical significance compared to the studies presented. In fact, while in our sample at T_0 the basic knowledge presented values of 10.06 ± 2.19 , in the study conducted in Singapore on 1.196 students only 13% of them correctly answered the questionnaire administered at T0, therefore the increase of the notions on the emergency at T_1 was 63%. Our data, on the other hand, report less significant increases due also to a good level of preparation of the students on the notions of emergency.

Furthermore, during the conduct of our project, a new vision of the figure of the Nurse emerged, too often associated with patients bedridden in hospital. The nurse also becomes an educator, a trainer. The nurse has the task of making the patients, or the people to whom his / her work is addressed, able to preserve their health, to avoid behaviors that could put them at risk, to pursue a healthy lifestyle and to know the approach that should be taken in the face of emergency or danger. And when you turn to kids, the task is even more difficult [13].

Students demonstrate a high sensitivity, different from that of adults, filtering the experiences that present themselves in a deeper way and taking them with them for the rest of life. It was gratifying for the team to note how the contents explained and demonstrated were practically well received and how interest increased as they progressed.

Conflict of interest

All authors have participated in: conception and design, analysis and interpretation of the data; drafting the article or revising it critically for important intellectual content; and approval of the final version.

The authors have no affiliation with any organization with a direct or indirect financial interest in the subject matter discussed in the manuscript

The following authors have affiliations with organizations with direct or indirect financial interest in the subject matter discussed in the manuscript.

The manuscript has been read and approved by all the authors, that the requirements for authorship as stated earlier in this document have been met, and that each author believes that the manuscript represents honest work.

Acknowledgement

The author would like to acknowledge students and their teachers of the First Grade Secondary School, sited in Bari, in the Southern of Italy, who accepted to participate in this study.

Implication for nursing practice

Nurses can promote emergency education in school among students: the proposed project was effective because the set objectives were achieved. Students recognize emergency and urgency situations, correctly assess the severity of different cases presented and have made their own simple and fundamental notions to carry out a good first aid.

References

- 1. Le Maine (2018) La dodicenne che pratica il massaggio cardiaco e salva la vita al papà.
- Petris AO, Tatu-Chitoiu G, Cimpoesu D, Ionescu DF, Pop C, et al. (2017) You can also save a life!: children's drawings as a non-verbal assessment of the impact of cardiopulmonary resuscitation training. Intern Emerg Med 12: 365-369.
- Tanaka H, Nakao A, Mizumoto H, Kinoshi T, Nakayama Y, et al. (2011) CPR education in japan-past, present and future". Nihon Rinsho. Japanese Journal of Clinical Medicine 69: 658-669.
- Lubrano R, Romero S, Scoppi P, Cocchi G, Barboncini S, et al. (2005) How to become an under 11 rescuer: a practical method to teach first aid to primary schoolchildren. Resuscitation.
- 5. La Nuova Italia (1969) Dal bambino all'adolescente. La costruzione del pensiero Firenze.
- 6. Bärbel I(1970) La psicologia del bambino. Torino, Einaudi.
- Bollig G, Myklebust AG, Østringen K (2011) Effects of first aid training in the kindergarten a pilot study. Scand J Trauma Resusc Emerg Med 19: 13.
- Petric J, Malicki M, Markovic D, Mestrovic J (2013) Students' and parents' attitudes toward basic life support training in primary schools. Croatian Medical Journal 54: 376-380.





- 9. Better schools through health (2018) The third European Conference on Health, promoting schools. Lituania, Risoluzione di Vilnius.
- Böttiger BW and Van Aken H (2015) Kids save lives: Training school children in cardiopulmonary resuscitation worldwide is now endorsed by the World Health Organization (WHO). Resuscitation 94: A5-7.
- 11. Bottiger B (2018) Gender aspects in cardiopulmonary resuscitation by schoolchildren: A systematic review. Resuscitation 125: 70-78.
- 12. Plant N and Taylor K (2013) How to best teach CPR to schoolchildren: a systematic review. Resuscitation 84: 415-421.
- 13. Vitale E (2014) Clinical teaching models for nursing practice: a review of literature. Professioni Infermieristiche 67: 117-125.

