Knowledge and Training of Primary School Teachers in First Aid - A Questionnaire Based Study

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Received 22 November 2018, accepted 8 April 2019
J-STAGE advance publication 15 January 2020
Edited by NORIO YAMASHITA

Summary: Background: Students at schools may need first aid due to illness or accident. Therefore, teachers at school should know first aid measures and be able to put them into practice. The aim of this study is to assess awareness regarding first aid training among primary school teachers.

Methods: Subjects were 150 primary school teachers from nine schools in the Udupi district of Karnataka. They were assessed by predesigned questionnaire proforma, after which each teacher was interviewed and responses were discussed separately in smaller groups.

Results: Of the subjects, 11.3% felt that first aid is important and 87.7% said that it is very important and wanted to learn first aid. About a third (30.2%) of the teachers knew some basic treatments for minor emergencies but they didn’t recognize such treatments were called first aid. Most of the subjects (69.8%) were unfamiliar with the expression “first aid”.

Conclusion: First aid training should be included in the teacher training curriculum, and such training should be updated regularly.

Key words first aid, medical emergencies, primary school teachers, accidents and injuries, medical facility

INTRODUCTION

First aid is providing preliminary care to a person with sickness or injury. It can be performed by anyone until definitive medical treatment can be obtained. Certain self-limiting illnesses or minor injuries do not require medical care or transport to a medical facility and can be addressed by first aid. First aid largely consists of a succession of uncomplicated and in some cases possibly life-saving procedures that an individual can be taught to perform with simple day to day practical equipment. [1]

The topmost cause worldwide of pediatric mortality is accidents and injuries. [2] (20-60%) Due to immaturity and playfulness children are susceptible to inadvertent injuries [3] and are at a greater risk of harm than adults. Children pass a substantial quantity of their time at day care centers or schools. Hence timely administration of first aid to children after an accident is of utmost importance and can be lifesaving. [4,5] Studies report that school based emergency medical service (EMS) incidents are more common than non-school-based EMS incidents. This is regularly credited to physical harm linked to a sports activity and usually results in transportation to a medical facility. [6] Most injuries in schools can be well managed with first aid, without requiring additional medical attention. [7] First aid is best given by individuals who are trained in first aid and closest to the scene of injury. [8] Therefore, it is important for schools to fo-
cus on management of injury before transfer to a medical facility. Care, treatment and management of medical emergencies is most effective when the caregiver has background knowledge of first aid. [9] In schools, teachers are often called upon and are required to handle crises. They are the only adults who are available to act responsibly in any given situation and make decisions. This shows the importance of first aid training among teachers. Teachers are required to take appropriate action and decide when a child has to be taken to a medical facility and implement the necessary steps to be taken to ensure a fast recovery with minimal discomfort and disturbance to student and school. The objective of this study is to assess the level of knowledge of first aid among primary school teachers, and to evaluate the effectiveness of first aid training among school staff first responders.

MATERIALS AND METHODS

This study was conducted on primary school teachers in the Udupi district. Kasturba Medical College Ethical Committee clearance was obtained for the study protocol. Approval from the District education office was acquired to approach the schools. Permission from the heads of all primary schools was attained. Nine schools were included in the study. About 150 teachers appeared for the program after receiving an explanation of the importance of study. Before starting the session written consent was obtained from the participating school teachers after explaining the nature and purpose of the study. Questionnaires were constructed in their preferred local language and were validated by medical and nursing staff. Pretest Questionnaire was given to the teachers to comprehend their understanding and awareness regarding first aid. After the pre-questionnaire a lecture was given by medical staff regarding first aid, covering topics such as management of nose bleed, shock, drowning, and asthma, which are commonly seen among schoolchildren. Nursing staff then explained about the mobilization of limb in trauma, dressing techniques in bleeding, how to put slings in fracture, how to clean a wound, etc. Another staff member then delivered a lecture on foreign body removal. After the lecture series participants were divided into 3 groups with 3 instructors to guide them. In each slot they were again given in depth training on first aid, including treatment for shock, trauma dressing techniques, foreign body airway obstruction management etc. To help us with this we included medicine postgraduates and nursing staff members. The teachers were given 20 mins in each slot for interaction with the group leader. During these sessions it was observed that it took a long time to explain the medical terminology to the school teachers, so we explained most things again in the local language. The teachers were very much interested in learning first aid methods. Basic life support was difficult for the teachers to learn, whereas other techniques were comparatively easy to follow.

At the end of the training a posttest was given to analyze the gain in knowledge regarding first aid. Pre and post-test data were analyzed using a paired sample t-test. For general questions the mean and standard deviation was tabulated. They are represented using bar graphs.

Each school was given pamphlets on medical emergency management, and a first aid kit was provided.

We had planned to follow up the school teachers every two months, but in the end this could not be done because of time constraints.

RESULTS

In the present study about 150 teachers from 9 different schools were assessed; 30.2% of school teachers were from government schools and 69.8% from private schools. (Figure 1)

Regarding age, 62.3% were below the age of 40 and 37.7% were above 40. As for sex distribution, 9.4% were males and 90.4% were females. A total of 5.7% of the population had heard of first aid while 94.3% were unfamiliar with the concept of first aid. (Figure 2)

Of the teachers, 11.3% felt that first aid is important and 87.7% said that it is very important and wanted to learn first aid. Many teachers (30.2%) knew some of the basic treatments for minor emergencies but they didn’t know that such treatment is called first

![Fig. 1. Showing the type of school](image-url)
Most (69.8%) had never heard the term “first aid”. (Figure 3). There was no positive correlation between male and female or private or government college. Posttest was given to analyze the gain in knowledge regarding first aid. Significant improvement in knowledge was seen among participants after analyzing the answers to the questionnaire (p value < 0.05).

DISCUSSION

First aid awareness and preparedness varies among school teachers throughout the world. Primary schools in developed countries are better equipped with first aid facilities and also have trained medical personnel on the school campus, whereas in developing countries of Asia primary school staff tends to have a poor understanding of the basic concepts of first aid.

Feng Li surveyed 1067 playschool staff in Shanghai, China. Many faculty members answered all questions correctly and they replied that learning first aid is very beneficial. A majority felt that learning pediatric first aid care was more important than adult first aid. Most of the participants were from public schools (66.7%), 21.8% were from private schools, and the rest (10.5%) were from other types of schools. [10]

Muruvvt Baser conducted a study to assess knowledge regarding first aid among primary school teachers in a Turkish population and found that 45.5% had prior knowledge in first aid. The teachers had heard and learnt about first aid from different sources, such as driving test training, from physicians and from nurses. The teachers wanted to know more about how to deal with accidental poisoning, joint dislocations and sprains, hemorrhage, and injuries. He concluded that since most teachers are in constant contact with children, ensuring that they are proficient in first aid is a priority. [8] We recommended that teachers receive training in first aid and pediatric basic life support.

Yossra K conducted training for 100 Bangladeshi primary school teachers on first aid. He reported that 77% had poor knowledge, 19% had fair knowledge, and 4% had good knowledge of the subject. He concluded that it would be beneficial if first aid techniques were included in the teachers training curricula. The teachers’ lack of knowledge was attributed to the absence of first aid training in the educational curriculum. [1]

Devashish AR measured practice of first aid among school teachers, and discovered that 2.96% had experienced first-aid training. Some 14.83% scored less than 70%. He reported that age, sex, teaching experience, medium and level of school first aid training had a significant association with knowledge score. [11]

Bildik et al assessed the awareness of first aid among teachers in Turkey. Of the participants in the training programme, 51.1% were females and 48.9% were males. Pretest score was 47.89 ±11.29 whereas the posttest score was 75.28±12.62. This result shows the important of first aid training. Hence he decided that it was essential to include first aid training in the curriculum. [12]

Joseph et al did a survey on 146 teachers which showed that they had poor knowledge in first aid. About half (47%) had received first aid training beforehand. First aid knowledge in first aid was evaluated as poor in 13% and moderate in 87%. Few staff were familiar with cardiopulmonary resuscitation and the correct procedure for treating it. Among the teachers, 66% were willing to learn about first aid training.
in depth, and 74% had come across scenarios in their schools which required first aid knowledge. Wounds and syncopal attack were commonly encountered, and the teachers wanted to know about these conditions in depth. In some schools first aid kits were available but the teachers hadn’t been trained in how to use them. This study also concluded that confidence of teachers in giving first aid also depended on prior knowledge and previous training in first aid. [13]

In 2007 a study to determine the knowledge and attitudes of a sample of Turkish teachers regarding the administration of first aid was conducted, and it showed that most of the teachers do not have correct knowledge and attitudes about first aid. [14]

In the present study a comparison was made between pretest and posttest scores. The posttest scores showed a significant gain in knowledge regarding first aid (p<0.05). The results of our study show that first aid training is associated with a significant improvement in first aid knowledge within the study population.

Limitation of our study: We had originally planned to perform a follow up of school teachers every 2 months, but this proved to be impossible due to time constraints. We could have demonstrated the techniques by means of videos, or we could have provided videos so that they could have done self-study. Some teachers were transferred to other schools and were lost to follow up. Because of funding problems we were not able to continue the project at other schools.

CONCLUSION

This study was carried out to create mindfulness and to assess the knowledge of first aid among primary school teachers in the Udupi district. The existing aptitude level in faculty in Udupi to oversee first aid is insufficient. The problem needs to be addressed and the addition of first aid education in the teachers training curriculum is recommended. Periodic updating and revision of the techniques need to be done by organizing seminars and workshops for teachers. The majority of school teachers had a low knowledge about first aid management but their enthusiasm to go through training and then to teach others and administer first aid services in real-life circumstances was readily apparent. The present study suggests that the teachers have the time, aptitude and inclination to undergo training in first aid, but they don’t have access to a training facility or resource persons.

The schools which were visited during the time of study were not equipped with any first aid facility or sick room to take care of students during medical emergencies. It is also important to have first-aid kits in vehicles, offices, schools and trained personnel who can provide first aid in case of an accident. Empowered teachers can teach students, parents and other members of society, making our communities safer places for all.

ACKNOWLEDGMENTS: I am very thankful to all the staff members of MAHE FAIMER.

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AWARENESS OF FIRST AID

Appendix

Questionnaire

Note: Please tick the appropriate box

1. Type of school: Government [ ] Private [ ]
2. Age group: <40 years [ ] >40 years [ ]
3. Gender: male [ ] Female [ ]
4. Do you understand what is meant by “first aid”: Yes [ ] No [ ]
5. “First aid” means immediately following any accident one should -
   Give basic support [ ]
   Call a doctor immediately [ ]
   Call the student’s parents [ ]
6. What is your opinion about need for first aid -
   Important [ ] Very important [ ] Not important [ ]
7. Have you received first aid training before?
   Yes [ ] No [ ]
   If yes, give details
8. Do you have previous experience providing a child with first aid? Yes [ ] No [ ]
   When?
   Where?
9. At what point during the process of first aid would you inform a doctor?
10. Would you inform child’s parents before providing first aid?

Following are a few accidents/injuries you come across in children at school. What actions would you take? Give one BEST response

1. During play a student bruised (hurt) his hand. What first aid will you give?
   A. Wash the wound with plenty of good water [ ]
   B. Cover the wounded area with tight cloth [ ]
   C. Send that child to hospital immediately [ ]
   If there are any other methods you might use, please describe them:

2. A boy fell on the playground and has a minor cut with bleeding from the toe. What would you do at this point?
   A. Send him immediately to the hospital [ ]
   B. Apply pressure over the bleeding area with bare hands [ ]
   C. Apply pressure over the bleeding area with cloth [ ]
   If there are any other methods you might use, please describe them:

3. You suspect a fracture of the leg bone. What would you do as first aid?
   A. Ask the child to walk slowly to take rest [ ]
   B. Avoid moving the limb and support the leg [ ]
   C. Try to align the fractured segment by traction [ ]
   If there are any other methods you might use, please describe them:

4. In your class, suddenly a student complains of nose bleeding. What is your first response?
   A. Tell the student to go to the hospital [ ]
   B. Pinch the soft part of the nose till the bleeding stops [ ]
   C. Wash the blood from the nose first [ ]
   If there are any other methods you might use, please describe them:

5. During a school assembly a student fell down unconscious. What would you do as a first aid?
   A. Make him stand immediately [ ]
   B. Give him plenty of water to drink [ ]
   C. Bring the student to lie down on his back and raise his leg [ ]
   If there are any other methods you might use, please describe them:

6. A student fell down unconscious, with shaking hands and legs (fits). What would you do as first aid measure?
   A. Give metal/ key into student hand [ ]
   B. Give him plenty of water to drink [ ]
   C. Clear away any potentially dangerous objects and put him to one side. [ ]
   If there are any other methods you might use, please describe them:

7. A student accidentally spills boiling milk on his hand. What is your immediate response?
   A. Immerse the hand in cool water [ ]
   B. Wrap the hand with cloth after applying honey [ ]
   C. Wash the hand thoroughly with hot water [ ]
   If there are any other methods you might use, please describe them:

8. A child with known past history of asthma complains of difficulty in breathing. What first aid measures you want to give?
   A. Call his parents immediately [ ]
   B. Reassure the child and ask him to breathe slowly and deeply [ ]
   C. Ask the child to lie down [ ]
   If there are any other methods you might use, please describe them:

9. A child has fallen down and has had a tooth knocked out, with bleeding from the socket. What would you do as a first aid measure?
   A. Throw that tooth away and ask him to meet dentist [ ]
   B. Keep a clean piece of gauze in the area of the fallen tooth till bleeding stops [ ]
   C. Ask the child to continue play [ ]
   If there are any other methods you might use, please describe them:

10. A child puts a pin in the electric socket in his class room while the switch is on and he suffers electric shock. What would you do immediately?
    A. Switch off the main power supply to the class [ ]
    B. Check his pulse [ ]
    C. Immediately call an ambulance [ ]
    If there are any other methods you might use, please describe them: