

**Original article:**

**Knowledge of high School students in Pune about first aid and the effect of training on them**

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**Abstract:**

**Introduction:** First aid is the helping behavior and initial care provided for an acute illness or injury . The goals of a first aid provider include preserving life, alleviating suffering, preventing further illness or injury, and promoting recovery. Students have the potential for changing the health scenario of the society if properly groomed and educated for healthful living. The aim of the study is to evaluate attitude and practices of high school students about first aid.

**Materials and Methods:** 158 students from class VIII and IX were selected for the study. Their knowledge was tested using pretested multiple choice questionnaire. They were taught about first aid with power point presentation, demonstration and videos. Students were re-assessed using the same questionnaire.

**Results:** Pretest knowledge about first aid services was average among 107(67.7%), good 47(29.7%), and best among 4(2.5%). It was observed that there was statistically significant difference between

**Conclusion:** There is need for adoption of first aid programmes to meet needs in community and specific areas like schools. overall observed knowledge after intervention.

**Key words:** First aid, High school students, knowledge

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**Introduction**

First aid is defined as helping behaviors and initial care provided for an acute illness or injury. The goals of a first aid provider include preserving life, alleviating suffering, preventing further illness or injury, and promoting recovery. First aid can be initiated by anyone in any situation and includes self-care. First aid assessments and interventions should be medically sound and based on scientific evidence or, in the absence of such evidence, on expert consensus. First aid competencies include, at any level of training, recognizing, assessing, and prioritizing the need for first aid providing care by using appropriate knowledge, skills, and behaviors ,

recognizing limitations and seeking additional care when needed. The First Aider should have adequate knowledge and skills about what he is doing, and be encouraging and reassuring to the victims<sup>2</sup>. Students have the potential for changing the health scenario of the society if properly groomed and educated for healthful living.

**Aims and Objectives**

The aim of the study is to evaluate knowledge of high school students about first aid, to help build safe and healthy community. To provide practical measures and skills of first aid about commonly occurring medical emergencies and re-assess the effect of training.

**Materials and Methods**

After the local ethical committee clearance, the investigators sought the consent of the school principal and explained about the nature and purpose of the study. Her approval of date and time for conducting the study was obtained.

158 students of class VIII and IX were selected for the present study. Their participation was voluntary and written consent was obtained from each student.

Data is collected using a self-administered questionnaire to assess their baseline knowledge. The questions are addressed about first aid management of life threatening medical emergencies, wound management, fracture management, animal bites, snake bite, poisoning, heat emergencies, seizures, allergies, and epistaxis. The participants are then trained about the management of these conditions with power point presentation, audiovisual presentations and practical demonstration. Following which they are re-assessed.

**Data Analysis**

Students from both pre and post test groups were categorized as average, good and best on marks scored >40%, 41-60% and >60% respectively. Data was entered in MS Excel. EPI INFO-7 and Primer package was used for statistical analysis. Appropriate statistical tests of significance like paired t test, Mc Nemar test and Chi square test were used. P value of <0.05 was considered as statistically significant finding.

**Results**

158 students from class VIII and IX from Dr.D.Y. Patil Public School, Pimpri ,Pune were selected for the present study. Age group of study population was in the range of 12-15 years, with mean age of 13.48 years. Out of 158 , females were 72 (45.6%) and males were 86 (54.4%). Pretest knowledge about first aid services was average among 107(67.7%), good 47(29.7%), and best among 4(2.5%).[ Table 1]

Table 1 showing Knowledge about first aid pre and posttest.

	Average	Good	Best
Pretest	107	47	4
Posttest	1	36	121

Chi Square =215.007 Difference=2, p<0.001

Table 2 shows comparison of mean group score for knowledge regarding first aid before and after intervention. It was observed that there was statistically significant difference between overall observed knowledge after intervention.

Table 2 – Pre and posttest score about first aid knowledge

	Mean score	Standard Deviation
Pretest	5.728	1.79
Posttest	12.06	2.035

Difference =6.329, p<0.001

Statistical test applied – paired t test.

Table 3 – Topic wise assessment of knowledge

Knowledge Assessed about	Pretest Right	Pretest Wrong	Post test Right	Post test Wrong	P Value
Seizure	32(20.3%)	126(79.7%)	116(73.4%)	42(26.6%)	<0.001
Injury	62(39.2%)	96(60.8%)	96(60.8%)	62(39.2%)	<0.001
Burns	28(17.7%)	130(82.3%)	83(52.4%)	75(47.5%)	<0.001
Heat Related illness	115 (72.8%)	43 (27.2%)	132 (83.5%)	26 (16.5%)	=0.07
Bleeding Wound	27(17.1%)	131(82.9%)	128(81%)	30(19%)	<0.001
Allergy	50(31.6%)	108(68.4%)	96(60.8%)	62(39.2%)	<0.001
Snake Bite	28(17.7%)	130(68.4%)	103(62.2%)	55(34.8%)	<0.001
Epistaxis	21(13.3%)	157(86.7%)	156(98.7%)	2(1.3%)	<0.001

Statistical Test applied – Mc Nemar test

Pretest knowledge of students was poor about various emergencies. It was observed that there was significant improvement in knowledge about various emergency conditions after intervention as shown in table 3, in almost all conditions except heat related illnesses as the pretest knowledge in this topic was good in 72% students.

### Discussion

Provision of knowledge about correct management of injuries and illnesses to students is a sound and logical investment. First, it will improve their health knowledge which in turn may lead to healthy life. Second, they may be used as a change agent in the family and community. Providing immediate first aid to someone requires knowledge on what should or should not be done in each situation<sup>3</sup>.

The knowledge of students regarding management of emergencies like poisoning, epileptic fit, burns and allergy were very poor in this study. Similar results have been in study done by Sonu Goel et al<sup>3</sup>. Various studies conducted in different parts of world have also reported similar findings.

A study by Zielinska et al<sup>4</sup> in 181 students of two secondary schools of Poland also shows that only 2% of the students knew how to provide first aid during an epileptic fit. Ghosh et al<sup>5</sup> in a group of school children of Jamshedpur, India also quoted poor knowledge regarding management of burns. A possible explanation being that students considered management of emergencies as the sole responsibility of the physicians and thus do not want to take a risk in playing with life of someone. In this study, students knew about management of accidents, snake bite. In the study by Sonu Goel et al, only one third of the students knew about correct management of injuries such as road side accidents, dog-bite and snake-bites. Studies have documented that the response of students is usually enthusiastic for any training programme organized for them in first aid and basic life support system<sup>6</sup>.

### Conclusion

There is need for adoption of first aid programmes to meet needs in community and specific areas like schools. Empowerment of people is needed with first

aid skills so that they help themselves and their community in event of injury / disease to decrease morbidity<sup>7</sup>.

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