

## Original Research Article

# A study on knowledge regarding first aid among undergraduate medical students

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## ABSTRACT

**Background:** Life is characterized by precarious twists and turns and risky conditions that emerge all the time. First aid is the immediate action taken to save a life and reduce the effects of injury and illness until medical help is obtained. This study aims at assessing the knowledge regarding first aid among undergraduate medical students and comparing the knowledge among different terms.

**Methods:** A cross-sectional study was done among 150 undergraduate medical students of Vydehi Medical College, Bangalore. A questionnaire with 15 questions regarding the awareness and skills involved in first aid were used to assess the levels of awareness among undergraduate medical students. Data was entered in Microsoft Excel Sheet. Analysis was done using Statistical Package for Social Sciences version 21. Data was analysed using percentages and Chi-square test.

**Results:** A total of 150 medical students filled the questionnaire, 50 each from 5<sup>th</sup> (2<sup>nd</sup> year), 7<sup>th</sup> (3<sup>rd</sup> year) and 9<sup>th</sup> terms (4<sup>th</sup> year). The overall scores were, 43 out of 150 students had excellent knowledge, 71 out of 150 needed improvement, 35 out of 150 had adequate knowledge and only 1 out of 150 had poor knowledge about First-Aid. The association between terms and level of knowledge was found to be statistically significant.

**Conclusions:** First Aid knowledge among medical students needs improvement. Level of knowledge improved with increasing term but this was not sufficient and more training should be given to all medical students on first aid and basic life support.

**Keywords:** Medical students, First aid, Knowledge

## INTRODUCTION

Life is characterized by precarious twists and turns and risky conditions that emerge all the time. All throughout the globe, people suffer from heart attacks, loss of consciousness, severe wounds, surface injuries, burns, strokes and many more. Along with this, drowning incidents are more common among children. The high mortality associated with them can be easily prevented

most of the times by some very simple maneuvers and skills like mouth to mouth and mouth to nose respirations which were among the earliest resuscitative efforts using artificial respiration.<sup>1</sup>

First aid is the immediate action taken to save a life and reduce the effects of injury and illness until medical help is obtained.<sup>2</sup> First aid provider should be able to handle the situation without panicking.<sup>3</sup> Since today's medical

students are tomorrow's doctors, it is of utmost importance that they are equipped with sufficient knowledge and skills to save a life in case of emergencies. In India, there is very little data regarding awareness of the medical personnel including students, doctors, and paramedical staff about first aid. Hence, this study was undertaken to assess the level of knowledge about first aid among undergraduate medical students and to compare the knowledge among different terms of undergraduate medical students.

## METHODS

A cross-sectional study was done among 150 undergraduate medical students of Vydehi Medical College, Bangalore. This included 50 students each from 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> years respectively, who were chosen by random selection method. Study period was from October to November 2017. Approval was obtained from the Ethical Committee. Informed consent was obtained from the students before the study and they were explained about the purpose of the study. Confidentiality and anonymity of the information was assured. Data collection was done on a predesigned, prestructured and pretested questionnaire. A questionnaire with 15 questions regarding the awareness and skills involved in first aid were used to assess the levels of awareness among undergraduate medical students. Knowledge of the following common first aid emergencies was assessed: drowning, diabetic emergencies, choking, electrocution, profuse external bleeding (including epistaxis), fractures and dislocations, poisoning,

unconsciousness, seizures and heat exhaustion. Each correct response was given one mark and wrong response zero. Scores were calculated out of 15.

The scoring was graded as follows:

- $\geq 70\%$  excellent
- 51% to 69% adequate
- 31% to 50% needs improvement
- $\leq 30\%$  poor

Data was entered in Microsoft excel sheet. Analysis was done using Statistical package for social sciences version 21. Data was analysed using percentages and Chi-square test.

## RESULTS

A total of 150 medical students filled the questionnaire, 50 each from 5<sup>th</sup> (2<sup>nd</sup> year), 7<sup>th</sup> (3<sup>rd</sup> year) and 9<sup>th</sup> terms (4<sup>th</sup> year). The overall scores were, 43 out of 150 students had excellent knowledge, 71 out of 150 needed improvements, 35 out of 150 had adequate knowledge and only 1 out of 150 had poor knowledge about first-aid as shown in Table 1.

The average score of 5<sup>th</sup> term students were 56.77%, 7<sup>th</sup> term students were 59.68% and that of 9<sup>th</sup> term students were 67.16%. Only 18 out of the total 150 students answered 12 or more questions correctly out of the 15 questions. None of the students were able to answer all questions correctly.

**Table 1: Knowledge of students about first-aid.**

Knowledge	No.	Percentage
Poor (<30%)	1	0.7
Adequate (31-50%)	35	23.3
Needs improvement (51-69%)	71	47.3
Excellent (>70%)	43	28.7

**Table 2: Distribution of students according to knowledge.**

Terms	Knowledge					
	Needs improvement		Adequate		Excellent	
	No.	%	No.	%	No.	%
5 <sup>th</sup>	19	52.8	20	28.2	11	25.6
7 <sup>th</sup>	11	30.6	31	43.7	8	18.6
9 <sup>th</sup>	6	16.7	20	28.2	24	55.8
<b>Total</b>	36	100	71	100	43	100

P value 0.00.

The knowledge of students improved with increase in their terms. Excellent knowledge was observed among 24 (55.8%) of 9<sup>th</sup> term students, whereas it was observed only among 11 (25.6%) of 5<sup>th</sup> term students. Majority of 5<sup>th</sup> term students 19 (52.8%) needed improvement in their knowledge. Adequate knowledge was observed among 31 (43.7%) 7<sup>th</sup> term students. The association between

terms and level of knowledge was found to be statistically significant as shown in Table 2.

## DISCUSSION

In a study done in Mangalore 13.8% students had good knowledge, 68.4% had moderate and 17.8% had poor

knowledge about first-aid. The level of knowledge improved with the term, which is similar to our study.<sup>4</sup> In the Karachi study 7.7% students had excellent knowledge about first aid, in our study that was 28.7%.<sup>2</sup> Another study conducted by department of community medicine in BJ Medical College, Ahmedabad on awareness regarding first aid and fire safety among the second year undergraduate medical students stated that knowledge regarding first aid among the medical student was 33.6%, whereas in our study it was 56.7%.<sup>5</sup> According to a study by Dr. Shantha Chandrashekharan on awareness of basic life support among medical providers, it was seen that awareness of Basic Life Support (BLS) among students, doctors and nurses of medical, dental, homeopathy and nursing colleges was very poor and needed improvement.<sup>6</sup> A study done in UAE also concluded that there was lack of knowledge about first-aid among medical students.<sup>7</sup> With the increase in the academic year the knowledge of the students improved in the study done in Saudi Arabia, which corroborates with our study.<sup>8</sup> Most studies recommend that first aid training should be included in the medical curriculum.<sup>9,10</sup>

## CONCLUSION

First Aid knowledge among medical students needs improvement. Out of 150 medical students who participated in the study only 28.7% of the students were able to score 70% and above. The knowledge of 9<sup>th</sup> term students was found to be better than those of 7<sup>th</sup> and 5<sup>th</sup> term students. Level of knowledge improved with the term but this was not sufficient and more training should be given to all medical students on first aid.

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