A study on knowledge regarding first aid among undergraduate medical students

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Received: 15 May 2017
Revised: 10 June 2017
Accepted: 13 June 2017

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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 5th (2nd year), 7th (3rd year) and 9th terms (4th 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.¹

First aid is the immediate action taken to save a life and reduce the effects of injury and illness until medical help is obtained.² First aid provider should be able to handle the situation without panicking.³ 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 2nd, 3rd and 4th 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:

- ≥70% excellent
- 51% to 69% adequate
- 31% to 50% needs improvement
- ≤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 5th (2nd year), 7th (3rd year) and 9th terms (4th 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 5th term students were 56.77%, 7th term students were 59.68% and that of 9th term students were 67.16%. Only 18 out of the total 150 students answered 12 or more questions correctly. 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           | No. | %    | No. | %    | No. | %    |
|-------|---------------------|-----|------|-----|------|-----|------|
|       | Needs improvement   | 19  | 52.8 | 20  | 58.8 | 11  | 25.6 |
|       | Adequate            | 11  | 30.6 | 31  | 43.7 | 8   | 18.6 |
|       | Excellent           | 6   | 16.7 | 20  | 52.8 | 24  | 55.8 |
| Total |                     | 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 9th term students, whereas it was observed only among 11 (25.6%) of 5th term students. Majority of 5th term students 19 (52.8%) needed improvement in their knowledge. Adequate knowledge was observed among 31 (43.7%) 7th 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.⁴ In the Karachi study 7.7% students had excellent knowledge about first aid, in our study that was 28.7%.² 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%.⁵ According to a study by Dr. Shantha Chandrashekaran 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.⁶ A study done in UAE also concluded that there was lack of knowledge about first-aid among medical students.⁷ 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.⁸ Most studies recommend that first aid training should be included in the medical curriculum.⁹,¹⁰

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 9th term students was found to be better than those of 7th and 5th 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.

ACKNOWLEDGEMENTS

We thank the management of Vydehi Institute of Medical Science and Research Centre for all the facilities provided for this study and the students for participating in the study. We would also like to thank Tannmaya, Sumedh, Yosha, Sandhya, Shweta for their help in conducting the study.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. Zaheer H, Haque Z. Awareness about BLS (CPR) among medical students: status and requirements. J Pak Med Assoc. 2009;59(1):57-9.
2. Khan A, Shaikh S, Shuaib F, Sattar A, Samani SA, Shabbir Q, Rasheed AZ. Knowledge attitude and practices of undergraduate students regarding first aid measures. J Pak Med Assoc. 2010;60(1):68-72.
3. First Aid for Colleges and Universities. In: Karren KJ, Hafen BQ, Mistovich JJ, Limmer DJ, editors. 10th ed. Benjamin Cummings; 2011.
4. Joseph N, Kumar G, Babu Y, Nelliyanil M, Bhaskaran U. Knowledge of first aid skills among students of a medical college in mangalore city of South India. Ann Med Health Sci Res. 2014;4(2):162-6.
5. Singh A, Mansuri S, Chaudhari A, Brahmbhatt N, Bhabhor H, Talsania N. An Interventional Study on Awareness Regarding First Aid and Fire Safety Among the Second Year Undergraduate Medical Students of BJ Medical College, Ahmedabad. Int J Sci Study. 2015;3(4):94-7.
6. Chandrasekaran S, Kumar S, Bhat SA, Saravanakumar, Shabbir PM, Chandrasekaran VP. Awareness of basic life support among medical, dental, nursing students and doctors. Indian J Anaesthesia. 2010;54(2):121-6.
7. Mathew S, Salmon P, Khurshid S, Luke AM. Awareness of First Aid Among Undergraduate Students in Ajman, UAE. IOSR J Dental Med Sci. 2016;15(6):30-8.
8. Al-Musa HM, Bharti RK, Alsamghan AS, Asiri M, Alqahtani MS, Al-qahtani D, et al. Knowledge of First Aid Skills among Medical Students in King Khalid University, Abha, Saudi Arabia. People’s J Sci Res. 2017;10(1):1-6
9. Abbas A, Bukhari SI, Ahmad F. Knowledge of first aid and basic life support amongst medical students:a comparison between trained and untrained students. J Pak Med Assoc. 2011;61(6):613-6.
10. Tipa RO, Bobirnac G. Importance of basic life support training for first and second year medical students. J Med Life. 2010;3(4):465-7.