

Knowledge of First Aid Among Undergraduate Medical Students in Wayanad, Kerala

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Abstract

Background: First aid is the immediate care given to an injured or ill person before professional medical help arrives. It aims to preserve life, prevent further harm, and promote recovery. Despite its importance, first aid training is often underemphasized in medical education. This study aimed to assess the level of knowledge regarding first aid among undergraduate medical students in Wayanad, Kerala, and to determine its association with their academic year. **Material and Methods:** A Cross-sectional study conducted in a Tertiary in Wayanad, Kerala among Undergraduate medical students. The study was conducted using a pretested structured self-administered questionnaire. Data was entered in SPSS version 21 and data was summarized using frequencies and percentages. Chi-square test was used to assess the association between other variables and knowledge of first aid. **Results:** This study demonstrates that more than half of the medical students possess inadequate knowledge of first aid. Given the essential nature of first aid proficiency for medical professionals, these findings underscore the critical need to integrate comprehensive first aid training into the curriculum. **Conclusion:** Most students showed inadequate knowledge of first aid. Incorporating structured first aid training into the medical curriculum is necessary to improve emergency preparedness.

Keywords: First aid, medical students, Knowledge, Kerala, Cross-sectional stud.

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INTRODUCTION

First aid is the first medical treatment given to a seriously sick or wounded person at the site of an accident by a medical professional or by a regular person before an ambulance or other medical assistance arrives. In addition to promoting a quicker recovery for those who get first aid as opposed to those who do not, the goal of first aid is to save lives and prevent a patient's condition from becoming worse until expert medical assistance is available. During an emergency, anybody may provide first aid with little to no equipment. In order to reduce patient suffering and the risk of impairment and early death, healthcare professionals like paramedics and emergency medical technicians have a duty to provide the appropriate first aid for the given circumstance. Bystanders may also be crucial since they are expected to call for aid and take basic steps using the resources around. In rare cases, they may even be able to save the life of the wounded person. Furthermore, by avoiding infections, minimizing injuries, saving lives, enhancing chronic illnesses, and empowering marginalized populations, first aid is an essential skill that may improve public health. By practicing behaviors like hand washing, mask wearing, and physical distance, first aid teaches individuals how to protect both themselves and others from dangerous illnesses. Before medical assistance comes, first aid offers prompt, appropriate treatment for wounds and diseases such as bleeding, burns, fractures, and poisoning. By enabling members of underprivileged, rural, or disadvantaged groups to take control of their health and

well-being, first aid may help to lessen health disparities. Even though first aid knowledge is crucial, it is seen that individuals everywhere, whether they are medical students or not, lack the skills necessary to save lives. It was discovered that both medical and non-medical students are ignorant of how to handle situations such as administering first aid for burns. However, since they have a professional and ethical obligation to serve society with timely and effective treatment, future healthcare personnel are expected to possess greater levels of first aid knowledge and practice. In medical education programs, first aid instruction is often disregarded. Unsatisfactory results regarding medical students' and trainees' readiness in the field have been noted by several research. Previous research findings have shown that medical professionals have little knowledge and skills about administering first aid.^[1-3]

MATERIALS AND METHODS

The study aimed to determine the knowledge regarding first aid

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among undergraduate medical students. It was a cross-sectional study conducted in a Tertiary in Wayanad, Kerala among Undergraduate medical students. Students were selected by simple random sampling using lottery method. Taking prevalence from a study in South India conducted in 2014 by Sonavane R where the prevalence of knowledge regarding first aid was 77.1%, the sample size was found to be 441. But we included 478 students in this study. The study was conducted using a pretested structured self-administered questionnaire. First part of the questionnaire contains sociodemographic characteristics. Second part contains the 20 close ended questions pertaining to first aid. After explaining the purpose of the study data was collected using the questionnaire. The questions numbered from 11 to 20 was awarded 10 points each so total score is 100. Adequate Knowledge - > 70% of the total score. Data was entered in SPSS version 21 and data were summarized using frequencies and percentages. Chi-square test was used to assess the association between other variables and knowledge of first aid. All data was collected only after taking consent and data was kept confidential.

RESULTS

The results show that majority of the participants are between the age 21 to 23. The study had equal representation from all batches. Almost all of the participants consider basic first aid knowledge as very important. More than half of the participants have received formal first aid knowledge. 77% of them are not confident in administering first aid. Almost 99% of the participants are interested in learning about first aid. 67.8% consider their accessibility to first aid as good. 72% of the participants has no previous experience in administering first aid. 98% of participants believe that first aid should be taught in school, and the same participants consider that first aid knowledge should also be continued in colleges.

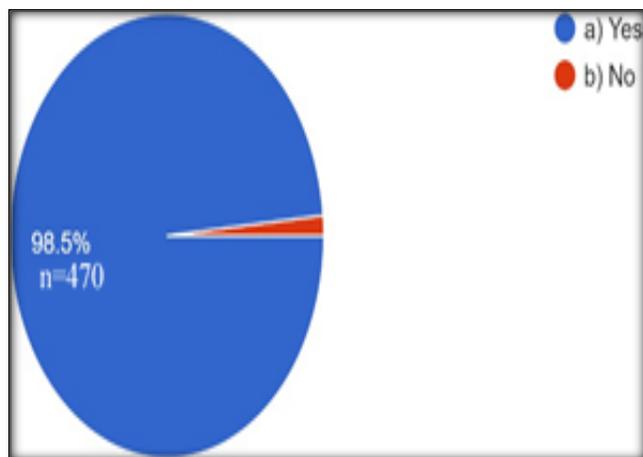


Figure 1: First Aid Education in Higher Education Continuation of First Aid Training in Colleges (N=478).

98.5 % of the participants considered first aid education

should be continued in colleges.

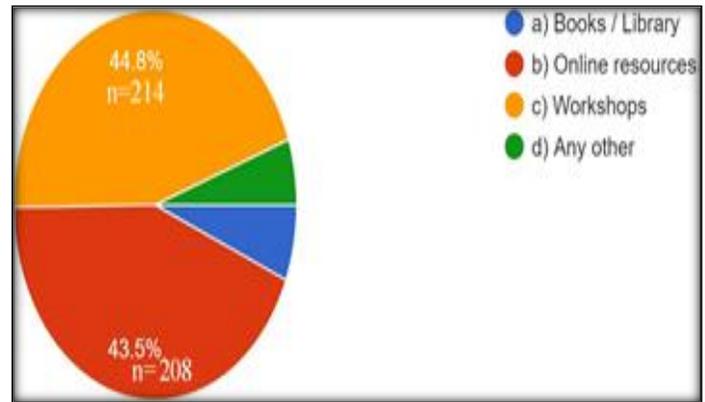


Figure 2: Methods of First Aid Knowledge Maintenance Strategies for Staying Updated on First Aid Protocols (N=478)

Majority of the participants used workshops and online resources for first aid knowledge.

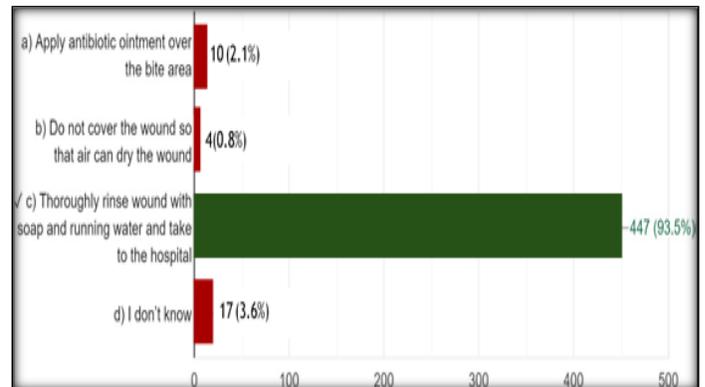


Figure 3: Distribution of participants by their response to the question related to "Immediate Actions for Dog Bite Victims" (N=478)

93.5 % of the participants responded correctly to the above question. Almost all the students had good knowledge regarding management of dog bite. Majority of the students also had sufficient first aid knowledge on treatment of choking. Poor knowledge was observed on the treatment of nosebleed among students. Insufficient knowledge regarding the first aid measures of ankle sprain was also noticed among students.

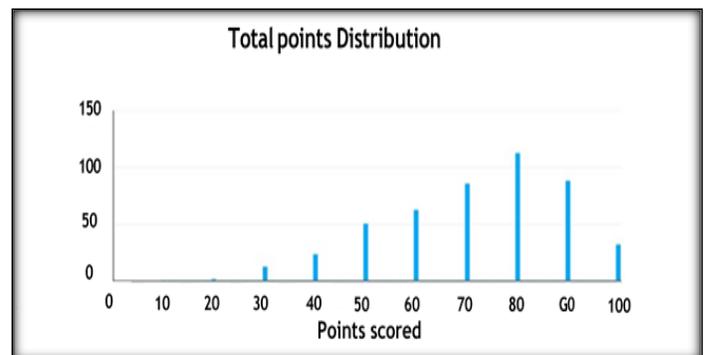


Figure 4: Assessment of Overall Understanding (N=478)

Distribution of Participants based on their scores. Most of the points scored were between 70 to 90. More than half of

the participants have inadequate knowledge.

Table 1: Distribution of participants by their knowledge category (N=478)

Sl. No	Range	Number of participants	Percentage	Grade
1.	≤70	243	50.8%	Inadequate knowledge
2.	>70	235	49.2%	Adequate knowledge

Table 2: Association between first aid knowledge and academic year

Association between first aid knowledge and academic year			
Academic Year	Knowledge on First Aid		p - value
	Adequate	Inadequate	
First year	26 (11.1%)	87 (35.8%)	< 0.001
Second year	60 (25.5%)	71 (29.2%)	
Third year	47 (20.0%)	61 (25.1%)	
Final year	102 (43.4%)	24 (9.9%)	

There is a significant association between Academic year and First Aid knowledge. Knowledge increases with rise in academic year.

DISCUSSION

In addition to promoting a quicker recovery for those who get first aid as opposed to those who do not, the goal of first aid is to save lives and prevent a patient's condition from becoming worse until expert medical assistance is available. In the event of an emergency, anybody may provide first aid with little or no equipment.^[4]

In a similar study conducted in Telangana, Hyderabad out of 150 medical students 17% has excellent first aid knowledge. Out of the 478 responses collected in our study, 49.2% has adequate first aid knowledge. In the question regarding burns, 61.7% gave correct response in our study while 10.67% gave correct response in their study. In the question regarding treatment of bleeding wounds, 82.6% gave correct response in our study while 14% gave correct response in their study. In the question regarding choking, 87% gave correct response in our study while 9.3% gave correct response in their study. In the question regarding treatment of fracture, 77.8% gave correct response in our study while 12% gave correct response in their study. In the question regarding nasal bleeding 33.1% gave correct response in our study while 16% gave correct response in their study. In the question regarding seizure, 72.8% gave correct response in our study while 8.6% gave correct response in their study. In the question regarding treatment of hypoglycemia, 81.6% gave correct response in our study while 10% gave correct response in their study. In the question regarding treatment of poisoning, 65.9% gave correct response in our study while 11.3% gave correct response in their study.^[5]

In another study conducted among schoolteachers in Mangalore, out of 146 schoolteachers about 47.2% received formal first aid training compared to 34.7% in our study conducted among 478 medical students. 28.7% teachers were confident in administration of first aid compared to 23% in our study. About 66% were interested in participating in future first aid training compared to 99% in our study. In the question regarding seizures 58.2% had the

knowledge of correct treatment compared to 72.8% in our study. About 52.8% knew the management of nosebleed compared to 33.1% in our study. About 78.8% knew the management of wound compared to 82.6% in our study. About 80.8% knew the management of burns compared to 61.7% in our study.^[6]

In the Mangalore city of South India, a similar study was conducted. Out of 152 medical students 13.8% had good knowledge about first aid. Out of 478 responses collected in our study 49.2% had adequate knowledge. About 11.2% participants had previous exposure to first aid training compared to 65.3% in our study. In the question regarding epistaxis 79.6% had good knowledge compared to 33.1% in our study 13.8% had good knowledge about first during burns compared to 61.7% in our study.^[7]

First aid is a critical skill that empowers individuals to respond effectively to medical emergencies. Its importance lies in several key areas which include immediate response, community safety, promotion of awareness etc. Therefore, first aid is vital not only for individual safety but also for enhancing community resilience and health outcomes.^[8]

CONCLUSION

In conclusion, the study demonstrates that more than half of the medical students possess inadequate knowledge of first aid. Given the essential nature of first aid proficiency for medical professionals, these findings underscore the critical need to integrate comprehensive first aid training into the curriculum.

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Nil.

Conflicts of interest

There are no conflicts of interest.

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