THE IMPORTANCE OF INCLUDING FIRST AID COURSES WITHIN THE CURRICULUM OF FIRST-YEAR MEDICAL STUDENTS

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Abstract:

Background: Medical emergencies are a global issue, with individuals of all ages and genders at risk of encountering accidents, burns, heart attacks, strokes, and more. Essential life skills such as wound management and cardiovascular resuscitation play a crucial role in lowering the incidence of casualties. The ability to provide first aid is vital, as it not only saves lives but also allows individuals to effectively manage patients until medical assistance arrives. However, the current medical curriculum in RGUHS does not include first aid as a stand-alone topic, raising the need for its inclusion in medical education. **Methodology:** This study aimed to evaluate the knowledge and attitudes towards first aid among medical students, as well as the necessity for introducing a first aid course for first-year students. A cross-sectional survey was conducted involving medical students, faculty, and the general public at Gulbarga Institute of Medical Sciences. **Results:** Results indicated that while knowledge of first aid principles and basic life support techniques among students was poor, there was a willingness to learn and incorporate first aid training as a mandatory subject. Teachers recognized the importance of early first aid training for students, although time constraints were a limiting factor in curriculum inclusion. The general public also expressed support for first aid training among medical students and believed in their ability to handle emergencies effectively.

In conclusion, the findings of this study highlight the importance of incorporating first aid training in medical education to empower future healthcare providers with essential life-saving skills.

Keywords: Medical education, First aid training, Curriculum development, Medical student learning, Emergency care, Healthcare outcomes.

1. Introduction:

Medical emergencies are a global phenomenon that can occur unexpectedly to anyone, regardless of age or gender. Accidents, burns, heart attacks, loss of consciousness, strokes, and drowning are some of the major emergencies that can result in casualties. The incidence of these risks can be reduced through essential life skills such as wound management, cardiovascular resuscitation, and artificial respiration techniques[1]. In everyday life, medical emergencies are commonly encountered, and therefore competent individuals who can provide immediate first aid are essential. According to a study conducted in Chennai (India), fever and gastroenteritis, as well as cardiovascular diseases and trauma, are the most prevalent emergency cases seen in emergency departments [2].

Providing first aid is a fundamental life-saving skill that not only saves lives but also enables individuals to manage patients effectively until medical assistance arrives [3]. The person administering first aid should perform the actions calmly and take control of the situation without getting panicky[4]. Medical students are the future physicians who will be providing care to patients, and in Indian society, enrolling in a medical college implies that a student is no less than a doctor[1]. Therefore, it is critical to equip medical students with life-saving skills that not only save lives during emergencies but also increase the trust and esteem of the medical fraternity.

By assessing the infection control knowledge and practices among different groups within the institution, the study aimed to identify gaps in understanding and implementation of infection control measures. This information could be used to develop targeted educational interventions to improve infection control practices among medical students, faculty, and the general public.

In a similar study conducted in a healthcare setting, researchers found that educational interventions significantly improved infection control practices among healthcare workers [5]. By identifying and addressing knowledge gaps through educational initiatives, healthcare institutions can enhance infection control

measures and reduce the risk of healthcare-associated infections.

However, the present curriculum of RGUHS (Rajiv Gandhi University of Health Sciences) does not include first aid as a stand-alone topic in either Phase I or Phase II of the MBBS program [1]. With this background, the present study aims to evaluate the perspective of medical students, faculty, and the general public regarding the inclusion of first aid in the medical curriculum.

2. Objectives:

The objective of this study was to examine the current state of knowledge and attitudes towards first aid among medical students, as well as the effectiveness of their current practices during medical emergencies. The study aims to identify any gaps in their understanding and skills, and to determine whether introducing a first aid course for first-year medical students would improve their overall preparedness for medical emergencies. Additionally, the study will gather insights from teachers in the medical field regarding the importance of first aid training for medical students. Furthermore, the study will seek feedback from the general public on their confidence in the ability of medical students to handle medical emergencies. Based on the research findings, recommendations will be made to enhance first aid education for medical students.

3. Methodology:

In this section, we describe the sample selection and data collection process for our cross-sectional study, which aimed to evaluate the knowledge and practices related to infection control among medical students, faculty, and the general public at Gulbarga Institute of Medical Sciences. To achieve this, we employed a convenience sampling method, which allowed us to access a readily available and convenient population for the study.

The study site, Gulbarga Institute of Medical Sciences, is a government medical college known for its meritorious students and the highest number of medical students.. We selected this institution as it serves as a representative sample for medical education institutions across the country.

To gather data from medical students, we chose 150 first-year and 150 second-year students based on universal sampling, ensuring that our sample is representative of medical students from various regions of India. Additionally, we included 24 Medical Council of India recognized medical teachers, representing pre and paramedical staff who teach both first and second-year students.

For the general public component of our study, we selected 30 participants using a random number table. These individuals were visiting the government hospital and

represented a diverse range of backgrounds, further enhancing the generalizability of our findings.

By employing this diverse and representative sample, we aimed to obtain valuable insights into the knowledge and practices related to first aid among medical students, faculty, and the general public at Gulbarga Institute of Medical Sciences, and potentially across similar institutions in India. Written informed consent was obtained from each participant before they completed a self-administered questionnaire. Ethical approval was obtained from the institutional ethics committee. Data was collected using a pre-designed based on the literatures, [6-11] and questionnaire were pretested on 10% of the sample for validity and reliability, the questionnaire included demographic information and questions related to first aid knowledge and practices. The participants were given adequate time which is around 15 to 20 minutes to complete the questionnaire in a clear and understandable format.

To obtain the present results, the research team utilized a questionnaire that assessed the participants' knowledge of first aid and basic life support principles. The questionnaire included multiple-choice and some open-ended questions to gauge the students' understanding of various first aid topics, such as CPR, wound management, choking, and other emergency situations. Sections of the questionnaire were:

Demographic Information: This section collected information about the participants, such as age, gender, year of study, and any prior first aid training.

First Aid Knowledge Assessment: This section also included questions to evaluate the students' understanding of first aid principles and basic life support techniques. The questions were based on guidelines from World Health Organization and Indian Red Cross society.

Attitude Towards First Aid and Willingness to Learn: This section included questions to understand the participants' attitudes towards first aid and their willingness to learn more about it.

Open-ended Questions or Scenarios: These questions were designed to assess how the students would respond to various emergency situations, testing their ability to apply their knowledge in practical scenarios.

Additional Feedback: The questionnaire included space for participants to provide additional feedback or comments on their first aid knowledge, any barriers they faced in learning first aid, and suggestions for improving first aid education.

By analyzing the responses from this questionnaire, the research team was able to determine the extent of poor knowledge among university students regarding first

aid and basic life support principles, as well as their willingness to learn and the importance they place on first aid training. The study focused on Gulbarga Institute of Medical Sciences due to its high patient load and potential for exposure to infections.

4. Results:

The results of our survey reveal some insights regarding the knowledge and attitudes of medical students, teachers, and the general public towards first aid and basic life support techniques. While the majority of medical students acknowledge the importance of first aid and believe that professional training can make a difference in treating casualties, a significant proportion of them lack basic knowledge in this area.

The graph for the Medical Students section shows that only 25% of respondents reported being very knowledgeable about first aid and basic life support techniques, while 37% admitted to having little or no knowledge in this area. **(Figure 1)**

The majority of medical students (85%) reported being willing to call for help during emergencies, indicating a sense of responsibility and awareness about their limitations in certain situations.

The graph for the Teacher section reveals some insights into the attitudes of medical teachers towards first aid education. While the majority of teachers (90%) believe that

students require training in first aid early in their MBBS course, only 55% felt the need for incorporating a first aid course into the first year medical curriculum. **(Figure 2)**

Furthermore, only a small percentage (15%) of teachers believed that there is sufficient time for incorporating first aid into the existing curriculum.

The graph for the General Public section reveals some insights into the attitudes of the general public towards medical students and first aid education. The majority of respondents (90%) believed that medical students get training in first aid early in their MBBS, indicating a general awareness about the importance of this subject. Furthermore, most respondents (85%) felt safe if medical students were around them during emergencies. **(Figure 3)**

However, the majority of respondents (90%) also reported that they would refer relatives to a doctor who handles emergencies, indicating a preference for professional medical care in emergency situations. This finding highlights the need for continued education and training for medical students to ensure that they are equipped with the necessary skills and knowledge to provide effective emergency care.

5. Discussion:

The results obtained from this study emphasize the significance of first aid training for medical students and the

necessity to incorporate it into their curriculum at an early stage. This finding highlights a critical gap in medical education, as first aid skills are essential for medical professionals to provide immediate care and prevent further complications in emergency situations. It is concerning that such a large proportion of medical students lack basic knowledge in this area and raises questions about the effectiveness of current medical curricula in addressing this issue.

This finding suggests that medical students are aware of the importance of seeking professional help in emergency situations and highlights the need for continued education and training in this area.

This finding suggests that while teachers recognize the importance of first aid education, they may be hesitant to disrupt the existing curriculum to accommodate this subject.

This finding highlights the need for a re-evaluation of the medical curriculum to ensure that first aid education is given the necessary time and resources it requires.

Furthermore, most respondents (85%) felt safe if medical students were around them during emergencies, highlighting the potential benefits of trained medical students in emergency situations

Previous research has consistently highlighted the role of first aid training in enhancing patient outcomes and reducing mortality rates [6,8]. The findings of this study are in line with these studies, as the majority of medical students surveyed expressed their willingness to provide first aid during emergencies and believed that professional first aid training could make a difference in treating casualties.

The positive attitudes of medical students towards first aid training are encouraging, as early intervention and prompt medical attention can significantly improve patient outcomes [8]. Moreover, the belief that first aid should be included as a mandatory subject in the medical curriculum is supported by several studies that have shown improved knowledge and skills among students who received formal first aid training [6].

However, the perceived lack of time for incorporating first aid into the existing curriculum suggests the need for innovative approaches and better time management strategies. This finding is in line with previous research that has highlighted the need for collaboration between medical schools and healthcare providers to improve clinical outcomes [8]. The findings also suggest the need for better communication and coordination between teachers and administrators to ensure the implementation of first aid training in the curriculum.

The trust of the general public in medical students and their willingness to refer relatives to doctors trained in emergency

medicine highlights the potential benefits of first aid training in increasing community confidence in the healthcare system [6-12]. These findings support the idea that first aid training should be a core component of medical education, to improve student competency and community health outcomes.

In conclusion, the results obtained from this study suggest that first aid training should be an integral component of the medical curriculum, with priority given to early integration and better time management strategies. Further research should focus on evaluating the effectiveness of first aid training programs for medical students in improving patient outcomes and reducing mortality rates. The findings of this study can be used to inform policy decisions and curriculum development in medical education, to ensure that first aid training is provided to medical students at an early stage.

6. Limitation:

The current pilot study focuses on the inclusion of a first aid course in the curriculum of first-year medical students. The research is limited to a single institution and a relatively small sample size of participants. The scope of the study does not encompass the entire medical curriculum or include students from various years or other healthcare disciplines. Additionally, the evaluation of the effectiveness of the first aid course is based on self-reported data and may not fully capture the long-term impact of the course on students' practical skills and knowledge. Further research with larger sample sizes, multi-institutional studies, and long-term follow-ups are necessary to provide more comprehensive insights into the benefits of incorporating first aid courses in medical education.

7. Conclusion:

In conclusion, the study underscores the urgency of incorporating professional first aid training into the early years of medical education. The results reveal a lack of preparedness among MBBS students in managing medical emergencies and willingness to seek help rather than take on the situation themselves. By including first aid courses in the curriculum, medical professionals can develop the necessary skills and confidence to handle emergencies effectively, ultimately leading to improved patient care outcomes.

In conclusion, our survey results reveal some concerning gaps in knowledge and attitudes towards first aid education among medical students, teachers, and the general public. While the majority of medical students recognize the importance of first aid education, a significant proportion lacks basic knowledge in this area. Medical teachers also acknowledge the importance of first aid education but may be hesitant to

disrupt the existing curriculum to accommodate this subject. The general public is generally aware of the importance of first aid education but still prefers professional medical care in emergency situations.

To address these gaps, there is a need for a re-evaluation of the medical curriculum to ensure that first aid education is given the necessary time and resources it requires. This may involve the incorporation of first aid courses into the first year medical curriculum, as well as the provision of ongoing training and education throughout the medical program. Furthermore, there is a need for increased awareness and education about first aid and basic life support techniques among the general public to ensure that they are equipped with the necessary skills and knowledge to provide effective emergency care.

In conclusion, our survey results highlight the need for continued education and training in first aid and basic life support techniques among medical students, teachers, and the general public. By addressing these gaps, we can ensure that medical students are equipped with the necessary skills and knowledge to provide effective emergency care, and that the general public is equipped with the necessary skills and knowledge to provide effective emergency care in situations where medical professionals are not immediately available.
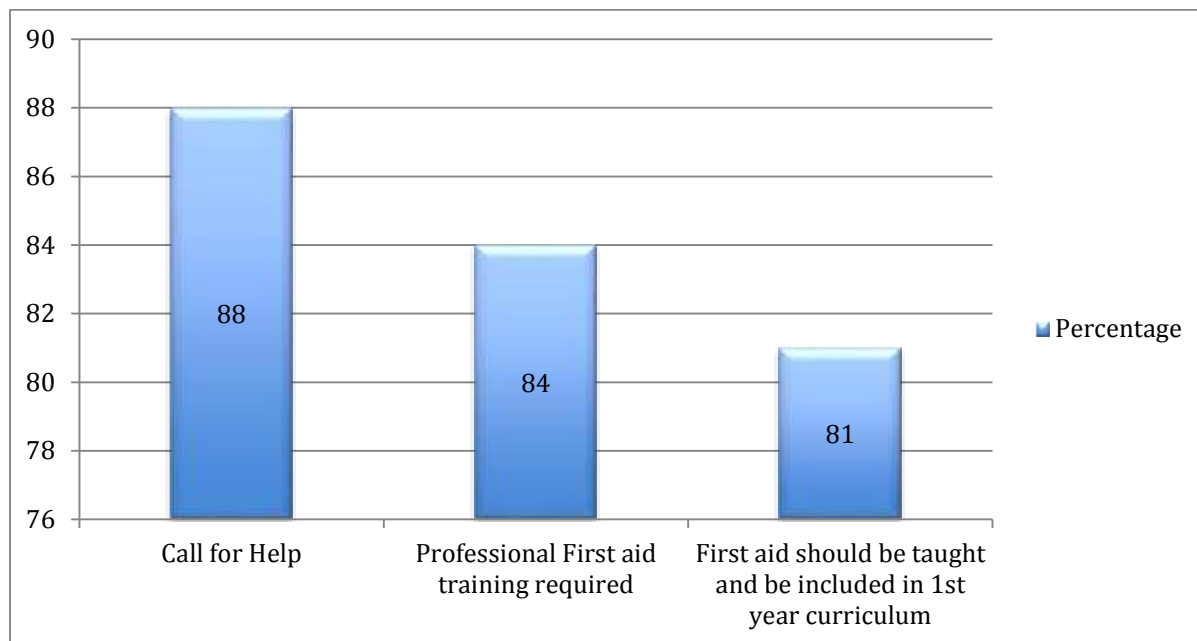
Conflict of interest: None declared

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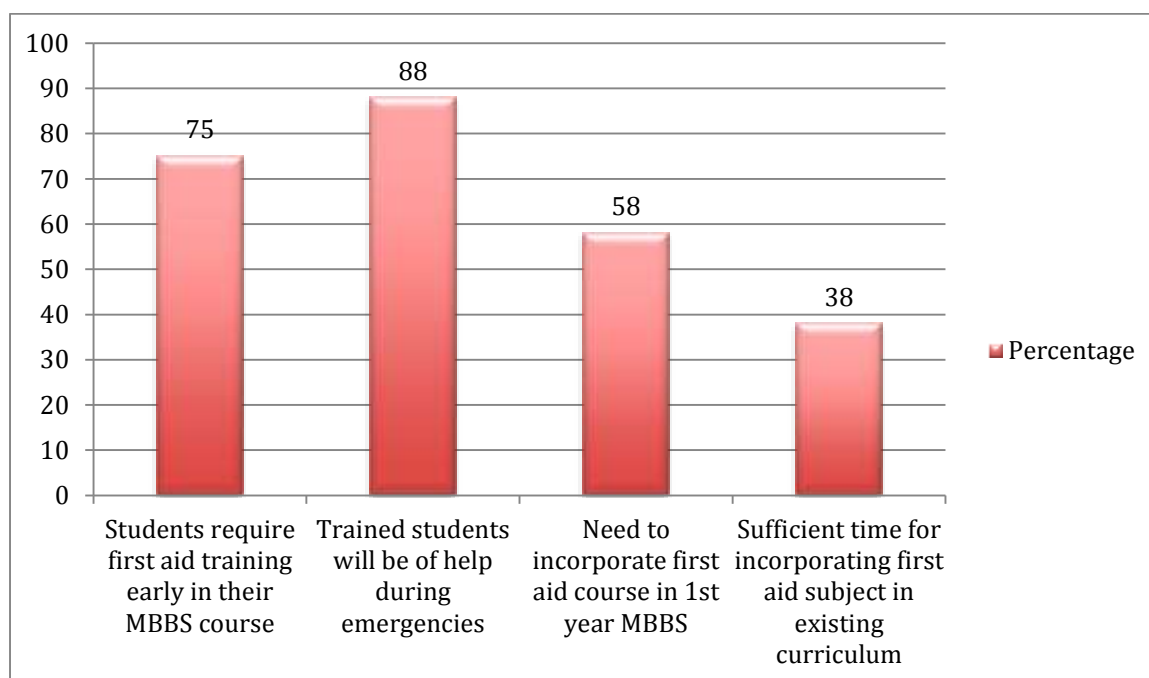5. Khan, M., Khan, A., & Khan, M. (2019). First aid training for medical students: A

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Figure 1 : Knowledge and Attitudes towards First Aid among Medical Students
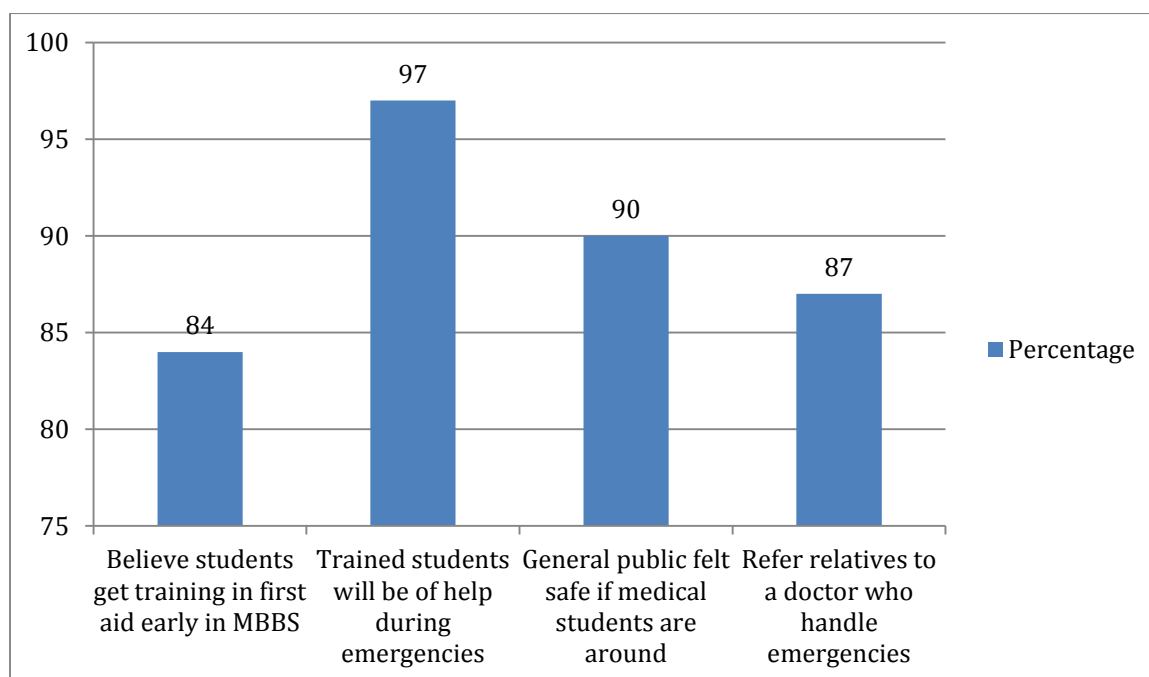

The study revealed poor knowledge of the principle of first aid and basic life support among university students, with a high percentage reporting inaccuracies in this area (poor knowledge). These findings suggest that while there is room for improvement in students' knowledge of first aid principles, there is a strong willingness to learn and a recognition of the importance of first aid training.

Figure 2: Attitudes of Medical Teachers towards Incorporating First Aid Training in MBBS Curriculum

These findings suggest that while there is a general consensus among medical teachers regarding the importance of first aid training for MBBS students, there are challenges related to time constraints that need to be addressed for effective implementation of first aid training in the curriculum at an early stage of medical education

Figure 3: Public Perception of Medical Students' First Aid Training and Safety during Emergencies

The figure highlights the significant role medical students play in emergency situations and the importance of their first aid training. It also underscores the trust and confidence the general public has in medical students' abilities during emergencies.