

Assessment of Knowledge Regarding First Aid Measures for Common Injuries Among Students in Pathanamthitta District, Kerala

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Abstract

First aid plays an important role in reducing the severity of injuries and preventing complications before professional medical help arrives. This study was conducted to assess the level of knowledge regarding selected first aid measures for common injuries among students in Pathanamthitta district, Kerala. A cross-sectional descriptive study was carried out among 500 students between the ages of 15-24 from high schools, higher secondary schools, arts and science colleges, engineering colleges, and pharmacy institutions. Data were gathered through a structured self-administered questionnaire that assessed first aid management knowledge for electric shock, burns, snake bite, choking, heart attack, and fractures. The findings showed a noticeable difference in knowledge across injury types. Students demonstrated better understanding of first aid for snake bite and burns, whereas their knowledge regarding choking, Heart attack and fracture management was relatively low. Overall, most students had a moderate level of knowledge, while only a small proportion showed good knowledge.

The findings highlight the need for structured and injury-specific first aid education programs to enhance students' preparedness and confidence in handling common emergencies.

Keywords: First Aid; Knowledge; Common Injuries; Students; Awareness

1. Introduction

Public health is severely challenged by injuries and acute illness, which frequently occur suddenly and interfere with everyday functioning. School children's injuries account for a significant percentage of these incidents. ^[1] The vital, prompt care given to a sick or injured person before professional medical assistance arrives is known as first aid. It acts as an essential lifeline, which is a prompt intervention intended to save a life, stop the victim's condition from getting worse, and aid in their recovery. ^{[2][3]} A first aid provider is an individual trained to recognise, assess, and prioritise the need for first aid and to deliver appropriate care within their competence while seeking additional assistance when required. ^[4] Students are a particularly critical demographic for first aid education because they spend a significant portion of their time in high-risk environment for accidents, such as laboratories and sports fields. ^[5]

This study was therefore conducted to assess the current level of first aid knowledge regarding selected common injuries among students in the Pathanamthitta district of Kerala.

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Objective

To assess the level of knowledge on selected first aid measures of common injuries among students.

2. Materials and methodology

A prospective cross-sectional study was conducted to assess the level of first aid knowledge among 500 students (100 each from High School, Higher Secondary School, Arts and Science, Engineering and Pharmacy colleges) in Pathanamthitta district, Kerala. The study, approved by the Institutional Review Board of Nazareth College of Pharmacy, was conducted between December 2024 and May 2025. Participants were students aged 15-24, excluding those who were unwilling to participate and those with incomplete responses. After obtaining the consent, students completed the questionnaire. Data were collected using a self-administered questionnaire [Questionnaire included demographic details and multiple-choice knowledge-based questions related to selected common emergencies such as electric shock, burns, snakebite, heart attack, choking and fractures]. Each emergency section contained six multiple-choice questions. Each correct response was awarded one mark, and an incorrect response was given zero marks. Based on the total score, the level of knowledge was categorised as poor knowledge (0-2), moderate knowledge (3-4) and good knowledge (5-6). Data were analysed using Microsoft Excel.

3. Results

Table 1 Distribution of subjects having first aid knowledge on selected common injuries

Sl.no.	Injuries	Knowledge					
		Poor (0-2)		Moderate (3-4)		Good (5-6)	
		Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
1	Electric shock	191	38.2	231	46.2	78	15.6
2	Burns	169	33.8	183	36.6	148	29.6
3	Snake bite	82	16.4	227	45.4	191	38.2
4	Heart attack	288	57.6	187	37.4	25	5
5	Choking	301	60.2	170	34	29	5.8
6	Fracture	255	51	195	39	50	10

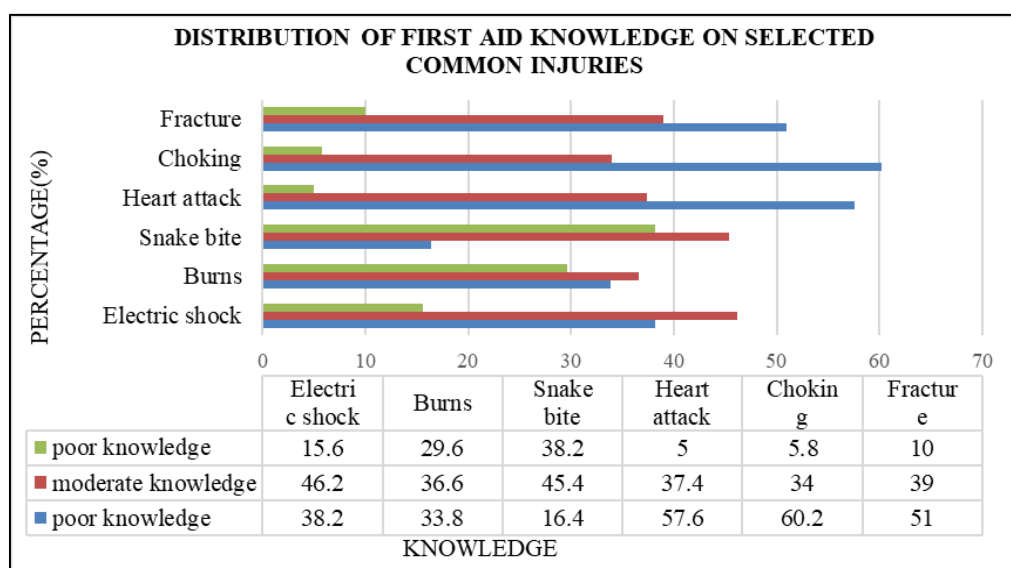


Figure 1 Distribution of first aid knowledge on selected common injuries

The above data represent the distribution of students' knowledge levels regarding first aid management of selected common injuries. The level of first aid knowledge varied across different injury types. Knowledge related to snake bite was comparatively higher, with 38.2 % of students demonstrating good knowledge and only 16.4% exhibiting poor knowledge. Burns also showed relatively better awareness, with 29.6% of students having good knowledge. In contrast, poor knowledge predominated for choking (60.2%) and heart attack (57.6%), where only 5.8% and 5% of students, respectively, demonstrated good knowledge. Knowledge regarding fracture management was also inadequate, with 51% of students exhibiting poor knowledge. For electric shock, most students demonstrated moderate knowledge (46.2%), while only 15.6% showed good knowledge.

4. Discussion

The current study evaluated students in the Pathanamthitta district of Kerala, aged 15 to 24, on their knowledge of a few selected first aid procedures. The results showed that while only a small percentage of students showed good knowledge, the majority had a moderate level of knowledge. Significant variation was found among the various injury types, suggesting that students' knowledge and readiness varied. The results align with previous research indicating that baseline knowledge was inadequate among students; only a small percentage of students possessed good knowledge regarding first aid measures.^{[6] [7]}

In comparison to other injury categories, knowledge about burns and snake bites was relatively higher.^[8] Relatively fewer students have been identified as having poor knowledge of snake bite management, while a higher proportion of students showed good knowledge.

Knowledge about heart attacks and choking, on the other hand, was significantly deficient. Only a small percentage of students showed good knowledge in these areas, while the majority showed poor knowledge.^[9] These results are concerning because heart attacks and choking are both potentially fatal situations that require immediate and appropriate intervention. Lack of awareness regarding early recognition of symptoms and timely first aid measures, such as airway clearance techniques and prompt medical referral, may increase the risk of preventable complications and mortality. Comparably, it turned out that over half of the students lacked adequate knowledge of fracture management. Since safe handling and proper immobilisation are crucial for preventing additional injuries, the identified knowledge gap emphasises the necessity of better training. Although electric shock management showed a relatively higher proportion of moderate knowledge, good knowledge was still limited, suggesting partial awareness without comprehensive understanding.

Overall, the study shows that students still lack sufficient first aid knowledge, especially when it comes to handling life-threatening situations. To enhance preparedness and improve community health outcomes, first aid education must be strengthened using structured and beneficial approaches.

5. Conclusion

This study assessed the level of knowledge on selected first aid measures of common injuries among students. The study emphasises the need for structured and regular first aid education programmes to improve students' knowledge and preparedness in managing common injuries. Training in first aid regarding the management of common illnesses and injuries should be incorporated as a part of the school and college curriculum. Strengthening first aid awareness among students may contribute to timely intervention during emergencies and to help prevent injury-related complications.

Compliance with ethical standards

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Disclosure of conflict of interest

No conflict of interest to be disclosed.

Statement of informed consent

The authors certify that they have obtained consent from the participants in this study, and their details will be kept confidential with due diligence.

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