Section: Community Medicine

Original Research Article

KNOWLEDGE, ATTITUDES, AND PRACTICES RELATED TO FIRST AID AMONG SECONDARY SCHOOL STUDENTS IN AN URBAN INDIAN SETTING

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ABSTRACT

Background: Injuries and sudden medical events among school‐aged children remain a significant yet preventable cause of morbidity. Immediate and appropriate first aid can reduce complications and improve outcomes, but the preparedness of adolescents to respond to emergencies is often inadequate. The objective is to assess knowledge, attitudes, and practices (KAP) related to first aid among secondary school students and to identify gaps that may inform school‐based training programs.

Materials and Methods: A community‐based cross‐sectional study was conducted among students of classes IX–XII in an urban field practice area. Data were collected using a pretested, semi‐structured questionnaire covering sociodemographic details and domains of knowledge, attitude, and practice related to first aid. Descriptive statistics were used for analysis.

Results: A total of 216 students participated (mean age 15.8 years), with a predominance of males. Overall awareness of first aid was satisfactory; however, misconceptions regarding emergency priorities and on‐site responses were common. Attitudes toward helping others were generally positive, though hesitancy related to personal safety and lack of confidence was evident. Actual first‐aid practice during witnessed emergencies was limited.

Conclusion: While students demonstrated favorable attitudes toward first aid, important gaps in practical knowledge and confidence persist. Integrating structured first‐aid education into school curricula could substantially strengthen emergency preparedness among adolescents.

Keywords: KAP, Community Medicine.

INTRODUCTION

First aid is defined as the immediate and temporary care provided to an injured or suddenly ill individual until appropriate professional medical services are available. It encompasses simple yet critical interventions aimed at preserving life, preventing further harm, and promoting recovery.[1,2] Globally, injuries account for a significant proportion of preventable morbidity and mortality, particularly among children and adolescents, who are frequently exposed to risks in school and community environments.[3]

According to the World Health Organization, unintentional injuries are among the leading causes of death in individuals aged 10–19 years

worldwide.[4] Schools represent a high-risk setting due to sports activities, playground injuries, road traffic incidents during commuting, and sudden medical emergencies such as bleeding, fractures, burns, or loss of consciousness.[5] Early and appropriate first aid during these events has been shown to substantially reduce complications, disability, and fatal outcomes.[6]

Several studies from low- and middle-income countries have reported inadequate first-aid knowledge among laypersons, contributing to delayed care and preventable adverse outcomes.[7,8] Adolescents are a particularly important target group for first-aid education, as they are often present at the scene of injuries involving peers and may act as the first responders before teachers, parents, or healthcare personnel arrive.[9]

Knowledge, attitude, and practice (KAP) studies conducted among school students consistently demonstrate a pattern of reasonable awareness and positive attitudes toward first aid, but poor practical skills and low confidence in providing assistance.[10–12] Indian studies have highlighted misconceptions related to emergency priorities, bleeding control, cardiopulmonary resuscitation, and scene safety, despite widespread awareness of emergency helpline numbers.[13,14] Similar gaps have been documented in international settings, underscoring the global relevance of structured first-aid education within school systems.[15,16]

Evidence suggests that integrating first-aid training into school curricula leads to significant improvements in students' knowledge, skill retention, confidence, and willingness to intervene during emergencies.[17–19] Such training not only benefits individual students but also contributes to broader community resilience and public health preparedness. In this context, the present study was undertaken to assess the knowledge, attitudes, and practices related to first aid among secondary school students in an urban Indian setting and to generate evidence to support the inclusion of structured first-aid training in school-based health programs.

MATERIALS AND METHODS

Study Design and Setting: A community‐based cross‐sectional study was conducted over a two‐month period in an urban field practice area affiliated with a tertiary care teaching institution in northern India.

Study Population: Students enrolled in classes IX to XII who were present on the day of data collection and who provided assent (with parental consent) were included. Students who were absent or declined participation were excluded.

Sample Size and Sampling: One secondary school was selected using simple random sampling from the list of eligible schools in the field practice area. All eligible students in the selected school were invited to participate, yielding a final sample of 216 students.

Data Collection Tool: Data were collected using a predesigned, pretested semi‐structured questionnaire administered through face‐to‐face interviews. The tool assessed: - Sociodemographic characteristics - Knowledge of first‐aid concepts and emergency procedures - Attitudes toward providing first aid - Self‐reported first‐aid practices during past emergencies

Data Analysis: Responses were entered into a spreadsheet and analyzed using descriptive statistics. Results are presented as frequencies and percentages.

RESULTS

Sociodemographic Profile: A total of 216 students participated in the study. The majority belonged to the 13–16-year age group, and male students constituted approximately three-fifths of the sample.

Table 1: Sociodemographic characteristics of study participants (N = 216)

Variable	Category	Number	Percentage
Age group (years)	13–16	127	58.8
	17–20	89	41.2
Gender	Male	131	60.6
	Female	85	39.4

Knowledge Related to First Aid: Most participants correctly identified first aid as the care provided before reaching a hospital. Awareness of emergency contact numbers was high. However, gaps were observed in understanding the correct sequence of emergency response and appropriate actions during specific situations such as road traffic accidents and severe bleeding.

Table 2: Knowledge regarding first aid among participants

Knowledge domain	Correct response (%)
Meaning of first aid	70.4
Correct emergency sequence	57.9
Knowledge of emergency numbers	95.4
Appropriate response to RTA	75.0

Attitudes Toward First Aid: Attitudes toward first aid were largely positive. A substantial proportion of students agreed that first-aid knowledge is essential and that helping others during emergencies is a social responsibility. At the same time, many emphasized the importance of personal safety before intervening.

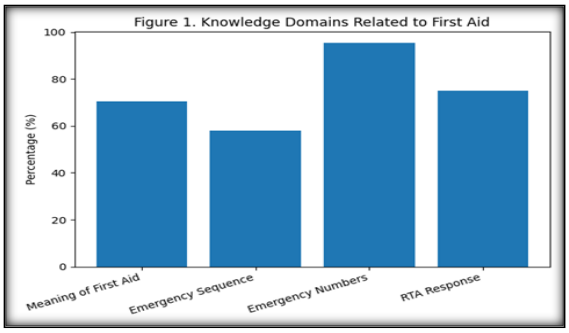
Table 3: Attitudes toward first aid among participants

Statement	Agree (%)	Disagree (%)
First-aid knowledge is essential	88.0	12.0
Everyone has a responsibility to help	81.0	19.0
Personal safety comes first	91.7	8.3

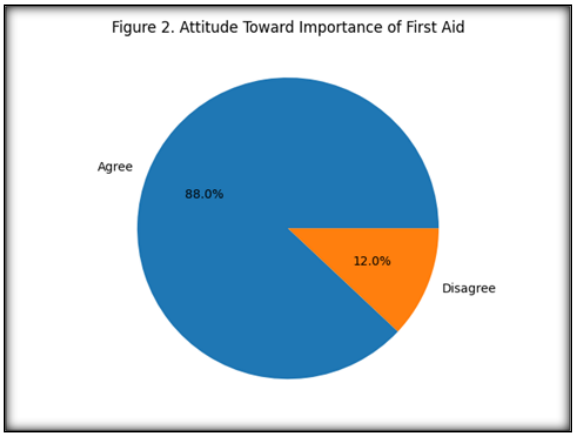
Practices Related to First Aid: Less than half of the participants reported witnessing a medical emergency. Among those who had encountered an emergency, only a minority actively provided first-aid assistance. Lack of confidence and insufficient knowledge were commonly cited barriers.

Table 4: First-aid practices reported by participants

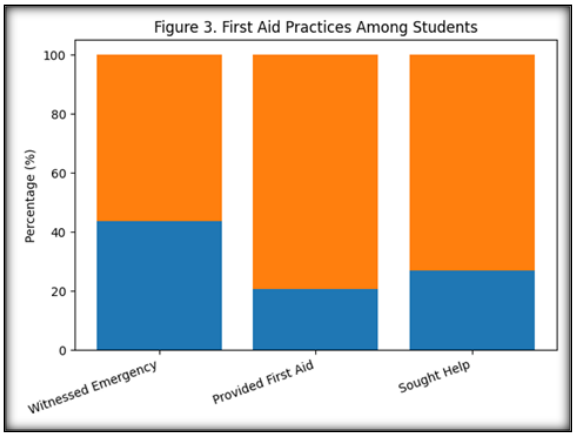
Practice variable	Yes (%)	No (%)
Witnessed an emergency	43.5	56.5
Provided first aid	20.8	79.2
Sought external help	26.8	73.2



A bar graph [Figure 1] illustrates domain-wise knowledge scores among participants.



A pie chart [Figure 2] depicts the distribution of responses related to attitudes toward first aid.



A clustered bar graph [Figure 3] compares witnessed emergencies and actual first-aid practices.

DISCUSSION

The present study demonstrates that secondary school students possess basic awareness and generally favorable attitudes toward first aid; however, their practical preparedness to respond to real-life emergencies remains limited. This finding mirrors results from several KAP studies conducted among school students and young adults in India and other developing countries.[10,13,20]

High awareness of emergency helpline numbers observed in this study is consistent with earlier research and likely reflects effective dissemination through mass media and school-level awareness initiatives.[14,21] Nevertheless, correct knowledge regarding the sequence of emergency response and appropriate first-aid measures for specific conditions—such as road traffic injuries, severe bleeding, and fractures—was inconsistent. Similar deficiencies have been reported in studies from Kerala, Uttarakhand, and other regions of India.[11,22]

Encouragingly, attitudes toward helping others during emergencies were largely positive, with most students recognizing first aid as a social responsibility. However, the low proportion of participants who actually provided first aid when witnessing an emergency highlights the persistent gap between attitude and practice. Fear of causing harm, lack of confidence, and inadequate hands-on training have been identified as key barriers in multiple studies.[12,23,24]

Evidence from interventional studies suggests that skill-based, practical first-aid training programs significantly improve both competence and willingness to act during emergencies.[17,18] School-based programs incorporating simulations, demonstrations, and periodic refresher sessions have been shown to enhance long-term retention and real-world application of first-aid skills.[19,25]

From a public health perspective, adolescents trained in first aid can serve as effective first responders within schools and communities, thereby reducing delays in care and improving outcomes following

injuries.[6,26] The findings of this study reinforce the need for policy-level action to integrate structured first-aid education into secondary school curricula as part of comprehensive school health programs.

CONCLUSION

Secondary school students demonstrated encouraging attitudes toward first aid but showed important gaps in knowledge and real‑world application. Incorporating structured first‑aid training into school curricula, supported by periodic refresher sessions, is strongly recommended. Such initiatives could significantly improve immediate responses to emergencies and contribute to safer school and community environments.

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