

# Awareness and Attitude Towards First Aid Management Among Pharmacy Students: A Cross-Sectional Study

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## ABSTRACT

**Background:** First aid is a critical skill for healthcare professionals, including pharmacy students, who often serve as the first point of contact in medical emergencies. Despite its importance, the extent of first aid knowledge and attitudes among pharmacy students remains underexplored. **Aim & Objectives:** To assess the level of knowledge, attitude, and perceived barriers related to first aid among pharmacy students, and to evaluate the need for integrating practical first aid training into the curriculum. **Materials and Methods:** A cross-sectional survey was conducted among 325 pharmacy students using a structured questionnaire covering demographic data, knowledge-based questions, and attitude-related items. Descriptive statistics were used to analyse the responses. **Results:** The majority of participants demonstrated high awareness of basic first aid concepts, with 81.8% agreeing that learning first aid is essential in daily life. However, only 35.5% correctly identified the first step in providing first aid, and scenario-based knowledge was generally low. Attitudes were largely positive, with 86.5% supporting the inclusion of first aid in the academic curriculum. Despite this, 52% found first aid learning complicated, and 33.8% admitted they might hesitate to act even with sufficient knowledge. **Conclusion:** Although pharmacy students display a strong awareness and positive attitude toward first aid, significant gaps in practical knowledge and confidence persist. These findings highlight the need for structured, hands-on first aid training within pharmacy education to enhance preparedness and emergency response capabilities.

**Keywords:** First Aid, Pharmacy Students, KAP, Emergency Response, Health Education.

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## INTRODUCTION

First aid is the immediate and temporary assistance given to an individual who is injured or suddenly ill, until professional medical care is available. It is a critical component in the chain of survival, aiming to preserve life, prevent further harm, and promote recovery.<sup>1</sup> In emergencies such as bleeding, burns, fractures, seizures, or cardiac arrest, rapid response within the first few minutes can significantly influence patient outcomes.<sup>2</sup>

Pharmacists are among the most accessible healthcare professionals in the community. As future pharmacists, pharmacy students are expected to acquire both pharmacological knowledge and essential first aid skills. These skills equip them not only to provide immediate care but also to educate patients and the public on health and safety measures.<sup>3</sup> In rural or resource-limited settings, pharmacists may be the only healthcare

providers available, further emphasizing their potential role in emergency care.

Despite this, studies have shown that awareness and preparedness in first aid among pharmacy students are often insufficient. For example, a study in Saudi Arabia revealed that only 45% of pharmacy students had formal training in first aid, and fewer than 40% felt confident in handling emergencies.<sup>4</sup> Similar findings from global studies suggest a pressing need to incorporate structured first aid training into healthcare curricula.<sup>5</sup>

Additionally, students' attitudes toward first aid are crucial, as a positive mindset influences their willingness to intervene during emergencies. Fear of making mistakes, lack of knowledge, or legal concerns can lead to inaction, potentially worsening outcomes.<sup>6</sup> Encouraging a proactive and responsible attitude is therefore essential in first aid education.

This cross-sectional study aims to assess the awareness and attitude of pharmacy students regarding first aid. The findings will help in evaluating the need for formal first aid training as part of the pharmacy education curriculum and in promoting a proactive approach to emergency care among future pharmacists.



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## MATERIALS AND METHODS

This was a cross-sectional survey conducted online among the Pharmacy students, from November 2024 to May 2025. The online survey was carried out by circulating online Google forms among pharmacy students. Convenient sampling method was used. With an error of  $\alpha=5\%$ , a population proportion of 70% from the literature survey, the sample size was estimated to be 323 and it was rounded to 325. The target population included undergraduate pharmacy students enrolled in [B.Pharm/Pharm.D/M.Pharm/D. Pharm] programs across all academic years.

The questionnaire consisted four sections designed to address demographic characteristics, knowledge, attitude and practices of participants towards first aid. The questionnaire was reviewed and validated by the experts from the Department of Pharmacy Practice at C.L. Baid Metha College of Pharmacy. After validation the questionnaire was circulate online to all the participants Data confidentiality and anonymity was maintained throughout the study.

The Bloom's taxonomy cut-off pattern was used to assess the participants responses. High Level (80-100%): Strong knowledge with a positive attitude towards the topic. Moderate Level (60-79%): Moderate knowledge with a neutral attitude towards the topic. Low Level (<60%): Limited knowledge with a negative attitude towards the topic. The data obtained were compiled in MS Excel and analyzed using SPSS version 25.0. Descriptive statistics (frequencies, percentages) were used to summarize data.

## RESULTS

A total of 325 responses from the study participants were collected and analyzed. The demographic characteristics such as gender distribution (Figure 1), age group category (Figure 2) and educational status (Table 1) of the participants are shown below.

First aid management is a common practice in the pharmacy population and having proper knowledge and attitude towards first aid is mandatory. As per Table 1, The majority of students are enrolled in the Pharm D program, accounting for approximately 45% (147) of the total students.

This study aimed to assess the level of knowledge about first aid among pharmacy students, with a total of 325 participants responding to 15 key questions covering a range of emergency scenarios. Table 2, reveals a mixed pattern of awareness, with high competency in some areas and notable deficiencies in others.

As per Table 2, the highest awareness was seen in fundamental first aid terminology, with 85.50% of students correctly identifying the abbreviation of CPR, followed by 67.28% correctly identifying the technique for administering CPR to an infant. This reflects positively on the students' theoretical familiarity with life-saving

procedures, possibly due to its inclusion in academic curricula, training workshops, or public health messaging. Similarly, over half of the students demonstrated adequate knowledge of managing foreign objects in the eye (56.80%), ankle sprains (56.40%), suspected neck or spinal injuries (54.00%), and severe asthma attacks (52.80%).

On the other hand, first aid for dislocated joints was correctly understood by 50.62%, while handling a minor burn without broken skin was answered correctly by 43.80%. These figures suggest a moderate level of understanding of certain common injuries that, while not immediately life-threatening, require correct intervention to prevent complications.

Areas of lower awareness included the correct procedure for seizures (40.40%), first aid for fainting (40.00%), initial response to heatstroke (37.30%), and first aid basics (35.50%). Particularly concerning is that only 32.00% of students knew how to properly treat a minor cut, a basic and frequently encountered situation. Even more troubling is the low knowledge in managing diabetic hypoglycemia in a conscious person, where only 26.80% of respondents answered correctly. Given the increasing prevalence of diabetes, this finding emphasizes a critical gap in practical first aid knowledge for chronic conditions.

Regarding attitude, as per Table 3, A significant majority of participants (81.8%) agreed that learning first aid is very important in daily life. This reflects a high level of awareness regarding the value of basic emergency response knowledge. Additionally, 86.5% of respondents supported the inclusion of first aid in the college curriculum, and an equal percentage emphasized the importance of keeping a first aid box in schools, colleges, or workplaces. These findings suggest widespread recognition of the role of first aid in promoting immediate care and safety in everyday environments.

When asked whether learning first aid is complicated and difficult, over half (52%) of respondents agreed, while 29.5% were undecided, and 18.5% disagreed. Also 52.9% believed that first aid should be administered only by experienced healthcare professionals. This implies that although participants value first aid, a significant portion perceives it as challenging, which may deter active learning or participation.

Most respondents (80.3%) agreed that first aid increases patient survival rates, and 62.8% believed it helps reduce the burden on hospitals, indicating recognition of its role in managing minor injuries and stabilizing patients before professional care is available. Emotional discomfort was reported by 58.8% of respondents who agreed, they feel uncomfortable seeing injuries or blood. In fact, 33.8% admitted they might hesitate to provide first aid even if they had the knowledge. Finally, 69.5% of participants acknowledged that social media plays a significant role in shaping their knowledge and practices regarding first aid.

Overall, the study findings regarding attitude towards first aid reveal a positive attitude toward the value and necessity of first aid. However, around 50-60% also experience barriers such as fear, hesitation, or misconceptions about capability. This dual pattern indicates high awareness but low readiness to act, revealing a gap between knowledge and implementation

## DISCUSSION

First aid refers to the care provided to a victim of an accident, injury, or unexpected sickness before delivering advanced medical care. Pharmacy students, as future healthcare professionals, occupy a critical interface between the medical community and the public. While traditionally associated with dispensing medications, pharmacists are now recognized as frontline health advisors in the community setting. This evolving role underscores the need for pharmacy students to be well-versed in basic first aid, enabling them to respond effectively in emergency situations before advanced medical care is available.<sup>7</sup>

In the present study, among 325 pharmacy students, 63.58% (207) were between the age group of 17-20 years, indicating that most respondents are likely undergraduate students in their early academic years. Their responses may reflect relatively limited exposure to clinical training or practical first aid education.

Regarding knowledge, the results of the current study highlight a significant disparity between general awareness and practical knowledge of first aid among the surveyed population. While a majority of participants could identify terms like "CPR" (85.5%) and had some awareness of its infant-specific technique (67.3%), the ability to correctly respond to scenario-based and clinical emergency questions was markedly lower. This inconsistency aligns with other research study, which suggests that while public health campaigns have increased first aid awareness, practical knowledge and readiness to act remain insufficient.<sup>8,9</sup> For instance, correct understanding of diabetic emergencies (26.8%) and

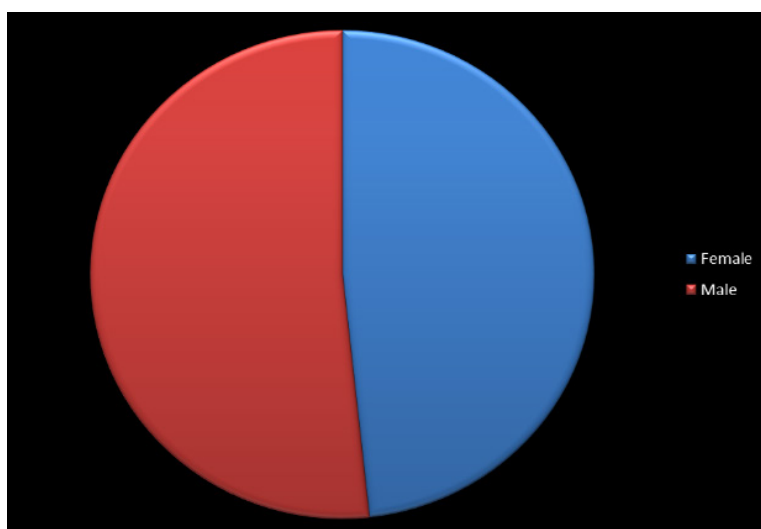
nosebleeds (44.0%) was low among the study participants, even though these are relatively common real-world situations. This may be due to insufficient practical exposure or the complexity of distinguishing between different medical emergencies.<sup>9</sup>

The limited correct response for the first step in first aid (35.5%) and fainting management (40.0%) reflects a lack of systematic training in emergency prioritization-particularly the DRABC (Danger, Response, Airway, Breathing, Circulation) approach, which is foundational in first aid instruction.<sup>10</sup> Misunderstanding or skipping this step can delay care and worsen outcomes. Additionally, the moderate knowledge in heatstroke (37.3%), burns (43.8%), and seizure management (40.4%) is concerning. These conditions are time-sensitive, and improper first aid may lead to serious complications or even fatalities. Similar deficits have been observed in studies across Europe and Asia, indicating a global need for more hands-on, simulation-based education.<sup>11,12</sup>

In our study, a higher rate of correct responses was seen in less invasive or lower-risk interventions such as ankle sprain (56.4%) and foreign object in the eye (56.8%). This may indicate greater comfort with low-risk situations and a lack of confidence or training in more severe emergencies.<sup>14</sup> Furthermore, the overall pattern suggests that participants may have a theoretical understanding but lack confidence in implementation. This gap between knowledge and practice is a well-documented challenge in first aid education and underscores the need for more

**Table 1: Descriptive analysis of educational qualification of the respondents (n=325).**

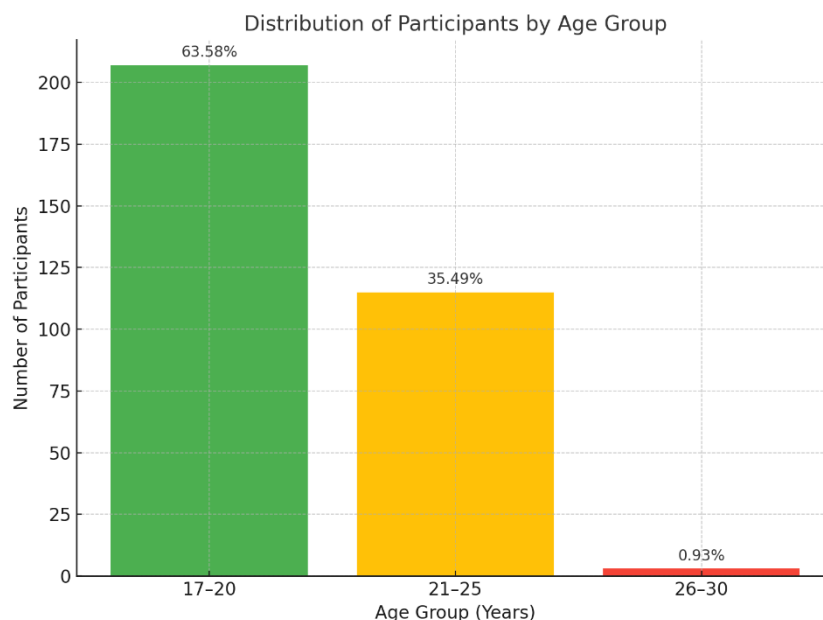
| Program | Number of Students | Percentage (%) |
|---------|--------------------|----------------|
| Pharm D | 147                | 45             |
| B Pharm | 97                 | 30             |
| D Pharm | 58                 | 18             |
| M Pharm | 23                 | 7              |



**Figure 1:** The pie chart illustrates the gender distribution of participants (n=325).

experiential learning opportunities.<sup>13,14</sup> These findings support recommendations from the World Health Organization (WHO) and American Heart Association (AHA), which emphasize the importance of incorporating first aid training in academics and in workplace safety protocols to improve public readiness.<sup>15</sup>

The present study demonstrates a generally high awareness and positive attitude toward first aid among respondents. Most of the participants (81.8%), acknowledged the importance of learning first aid in daily life. This finding aligns with studies by Patidar *et al.*, (2021), who found that 79% of medical and non-medical students considered first aid essential in their routine lives.<sup>16</sup> Early



**Figure 2:** Descriptive analysis of age group category (n=325).

**Table 2: Knowledge about First-Aid among Pharmacy Students.**

| Sl. No. | Questions  | Correct answer (n=325) | Percentage |
|---------|--|------------------------|------------|
| 1.      | What is the first step in providing first aid?   | 115                    | 35.50%     |
| 2.      | A nosebleed can be stopped by  | 144                    | 44.00%     |
| 3.      | What should you do if someone is experiencing a severe asthma attack?                        | 171                    | 52.80%     |
| 4.      | What is the correct procedure for helping someone who is having a seizure?                   | 131                    | 40.40%     |
| 5.      | What is the first step in treating a patient who has fainted?                                | 129                    | 40.00%     |
| 6.      | How should you care for a person with a suspected neck or spinal injury?                     | 175                    | 54.00%     |
| 7.      | What should you do if someone is having a diabetic emergency and is conscious(hypoglycemic)? | 87                     | 26.80%     |
| 8.      | What is the recommended first aid, for a foreign object in the eye?                          | 184                    | 56.80%     |
| 9.      | How should you care for a minor cut?   | 104                    | 32.00%     |
| 10.     | What is the recommended first aid for minor burn that does not involve broken skin?          | 142                    | 43.80%     |
| 11.     | What is the recommended first aid for a dislocated joint?                                    | 164                    | 50.62%     |
| 12.     | What should you do if someone is experiencing a heatstroke?                                  | 121                    | 37.30%     |
| 13.     | What is the correct technique for administering CPR to an infant?                            | 218                    | 67.28%     |
| 14.     | What is the abbreviation of CPR?   | 277                    | 85.50%     |
| 15.     | An ankle sprain is treated by.   | 183                    | 56.40%     |

**Table 3: Attitude towards first aid among Pharmacy students.**

| Sl. No. | Questions  | Agree<br>(n=325) | Undecided<br>(n=325) | Disagree<br>(n=325) |
|---------|--|------------------|----------------------|---------------------|
| 1.      | Do you think it is very important to learn first aid in daily life?                            | 266<br>(81.8%)   | 48<br>(14.8%)        | 11<br>(3.4%)        |
| 2.      | Do you think, learning first aid is so complicated and difficult?                              | 169<br>(52%)     | 96<br>(29.5%)        | 60<br>(18.5%)       |
| 3.      | Do you believe, first aid action should be done only by experienced health care professionals? | 172<br>(52.9%)   | 58<br>(17.8%)        | 95<br>(29.2%)       |
| 4.      | Do you think, it is very important to keep first aid box in the school/college/workplaces?     | 281<br>(86.5%)   | 31<br>(9.5%)         | 13<br>(4.0%)        |
| 5.      | Do you think first aid increases patient's survival rate?                                      | 261<br>(80.3%)   | 47<br>(14.5%)        | 17<br>(5.2%)        |
| 6.      | Do you support including first aid in the college curriculum?                                  | 281<br>(86.5%)   | 30<br>(9.2%)         | 14<br>(4.3%)        |
| 7.      | Do you feel uncomfortable to see injuries or bloods?   | 191<br>(58.8)    | 58<br>(17.8%)        | 76 (23.4%)          |
| 8.      | If you have good knowledge on first aid, do you hesitate to use it when needed?                | 185<br>(56.9%)   | 30<br>(9.2%)         | 110<br>(33.8%)      |
| 9.      | Do you think first aid decreases the burden of hospital?                                       | 204<br>(62.8%)   | 74<br>(22.8%)        | 47<br>(14.4%)       |
| 10.     | Do you think social media highly influences knowledge on practice of first aid?                | 226<br>(69.5%)   | 48<br>(14.8%)        | 51<br>(15.7%)       |

first aid has been shown to significantly reduce the severity of injuries and improve survival outcomes, justifying its perceived importance among the public.<sup>17</sup> Despite this awareness, over half (52%) of participants agreed that learning first aid is complicated and difficult. Similar results have been observed in prior research studies, where students and laypersons expressed a lack of confidence in their ability to learn and apply first aid due to perceived complexity.<sup>18</sup> This highlights the need for user-friendly and accessible training programs that simplify first aid procedures for the general population.

Among the study participants, 52.9% believed that first aid should be administered only by experienced health care professionals. This finding is due to the fear of making mistakes or legal repercussions.<sup>19</sup> A strong consensus (86.5%) supported the inclusion of first aid education in college curricula. This is justified by studies demonstrating that formal training improves both knowledge and willingness to act during emergencies.<sup>20</sup> Institutions that integrate first aid into their curriculum often report better preparedness among students for real-world scenarios.<sup>21</sup>

A majority (80.3%) believed that first aid improves patient survival, and 62.8% felt it reduces hospital burden. These perceptions are supported by literature suggesting that early intervention not only stabilizes patients but also prevents complications that might require intensive hospital resources.<sup>22</sup>

In terms of emotional response, 58.8% of participants reported discomfort at the sight of injuries or blood. Such emotional barriers can hinder effective response, as noted in a study by Banfai *et al.* (2017), where even trained individuals expressed hesitation due to fear or anxiety.<sup>23</sup> Moreover, 33.8% of participants admitted they might hesitate to act despite having first aid knowledge. This underscores the importance of not only theoretical education but also hands-on simulations that build confidence and psychological readiness.<sup>24</sup>

The role of social media in first aid awareness was acknowledged by 69.5% of respondents. Social media has emerged as a powerful tool in disseminating health information and promoting health-related behaviours, especially among youth.<sup>25</sup>

## CONCLUSION

This study conclude that pharmacy students possess a strong awareness of first aid and a positive attitude toward its importance. However, their ability to apply this knowledge in practical scenarios remains limited. Nearly half of the students experience barriers such as fear, hesitation, or misconceptions about capability. Many students lack the confidence and hands-on skills needed to respond effectively in real emergencies. This finding highlights the necessity of integrating practical first aid training into pharmacy education.

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## CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

## ABBREVIATIONS

**CPR:** Cardiopulmonary resuscitation; **DRABC:** Danger, Response, Airway, Breathing, Circulation; **WHO:** World Health Organization; **AHA:** American Heart Association.

## SUMMARY

This cross-sectional survey conducted online among the 325 pharmacy students, from November 2024 to May 2025 to determine the awareness and attitude of pharmacy students regarding first aid and its management. Majority of the participants demonstrated high awareness of basic first aid concepts and regarding attitude, the study findings revealed a positive attitude toward the value and necessity of first aid. Around 50–60% of the students experience barriers such as fear, hesitation, or misconceptions and lack of confidence in handling real emergencies. This gap between knowledge and implementation recommends necessity of integrating practical first aid training into pharmacy education.

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