

# Understanding First Aid Skills in Emergency Situations: A Literature Review

Irfanita Nurhidayah<sup>1</sup>, Aklima<sup>1</sup>, Riski Amalia<sup>2</sup>, Mariatul Kiftia<sup>3</sup>

<sup>1</sup>Department of Emergency Nursing, Faculty of Nursing, Universitas Syiah Kuala, Banda Aceh, Indonesia,

<sup>2</sup>Department of Medical-Surgical Nursing, Faculty of Nursing, Universitas Syiah Kuala, Banda Aceh, Indonesia, <sup>3</sup>Department of Maternity Nursing, Faculty of Nursing, Universitas Syiah Kuala, Aceh, Indonesia.

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## Abstract

**Background:** Injuries can become emergencies and cause serious harm if not addressed properly. Understanding and readiness in early emergency handling skills are crucial to prevent the deterioration of the patient's condition. First aid is assistance provided to victims with the aim of preventing the situation from worsening before professional healthcare is available. This study aims to conduct a literature review to assess understanding of basic first aid in emergency cases.

**Materials and Methods:** This study uses a Literature Review method to collect and analyze data from previous researchers. Out of the total journals reviewed, 13 were selected based on the criteria of knowledge about first aid skills in emergency cases among laypersons.

**Results:** The review reveals that 2 articles indicate that the average respondent's knowledge and skills regarding first aid in emergency cases are categorized as poor. Five articles conclude that the average respondent has a good understanding of first aid in emergency cases, while 5 articles fall into the moderate or sufficient understanding category.

**Conclusion:** The literature study concludes that the basic understanding of first aid in emergency cases is generally still categorized as poor or weak and moderate or sufficient.

**Keywords:** First Aid, Understanding, Emergency Cases

## Introduction

We often encounter emergencies such as accidents, drowning victims, fires, crimes, and so on. According to the WHO Global Status Report on Road

Safety, around 12 of every 100,000 people die in traffic accidents in Indonesia daily. Approximately 74% of those victims are riders of two- or three-wheeled vehicles.<sup>1</sup>. Around 1.19 million people die each year

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**Corresponding Author:** Irfanita Nurhidayah, Department of Emergency Nursing, Faculty of Nursing, Universitas Syiah Kuala, Banda Aceh, Indonesia.

**E-mail:** irfanita.nurhidayah@usk.ac.id

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due to traffic accidents. Traffic injuries are the leading cause of death for children and young adults aged 5–29 years. 92% of road traffic deaths worldwide occur in low- and middle-income countries, even though these countries have about 60% of the world's vehicles. More than half of all traffic deaths occur among vulnerable road users, including pedestrians, cyclists, and motorcyclists. Traffic accidents consume 3% of the gross domestic product in most countries.<sup>2</sup>

Indonesia is one of the countries with a relatively high rate of traffic accidents. Data collected by Masyarakat Transportasi Indonesia also shows an One of the most common causes of death for traffic accident victims is a lack of oxygen supply due to blocked airways. On average, a blocked airway takes less than four minutes to have severe consequences.

Even in areas with highly structured emergency services, the standard ambulance response time to traffic accidents is ten minutes. It is known that unless timely first aid is administered within this timeframe, many severely injured individuals will not survive.<sup>4</sup>and are predicted to increase if road safety is not addressed adequately by Member States. The World Health Organization (WHO).

This aid is not intended as perfect treatment or care but as temporary assistance provided by First Aid responders (medical personnel or lay people) who are the first to see the victim. First Aid is considered a crucial part of everyone's life. Everyone needs to know the basic methods and procedures required in emergencies. Learning basic First Aid skills is essential for everyone, regardless of age.<sup>5</sup> Significant efforts have been made in education in recent years to understand the prevalence of various first-aid actions.<sup>6</sup> However, most research has focused on teachers' knowledge.<sup>7,8</sup>

Previous studies have found that increasing first-aid training reduces the rate of accidental injuries.<sup>9,10</sup>with particular interest in the expertise and training of teachers and coaches, was explored. Replies were received from 333 (74%). Every minute, from the application of first aid to advanced care, can make the difference between life and death when emergencies occur in the community.<sup>11</sup>. A good understanding of first aid in emergencies is essential for lay people. This research aims to review the literature to assess basic first-aid knowledge in emergency cases.

## Material and Methods

This research used a Literature Review method to collect and analyze data from previous researchers.<sup>12</sup> This literature review used a search strategy for this study in English and Indonesian, utilizing databases such as ProQuest, Google Scholar, and P.N.R.I. The keywords used were 'first aid,' 'knowledge,' 'adolescent,' and 'accident.' Out of all the journals, 12 were selected based on the criteria of knowledge about first aid skills in emergency cases among laypeople.

The next stage involves grouping articles on basic first aid understanding in emergencies. These articles are tabulated with explanations provided in the selected articles. The data collection technique involves gathering materials such as articles related to the research and summarising them about the subject under study. Subsequently, the researcher will review these articles in depth, mainly focusing on the results discussed in the discussion section. The steps in data analysis include using the PRISM.A. diagram.

## Results

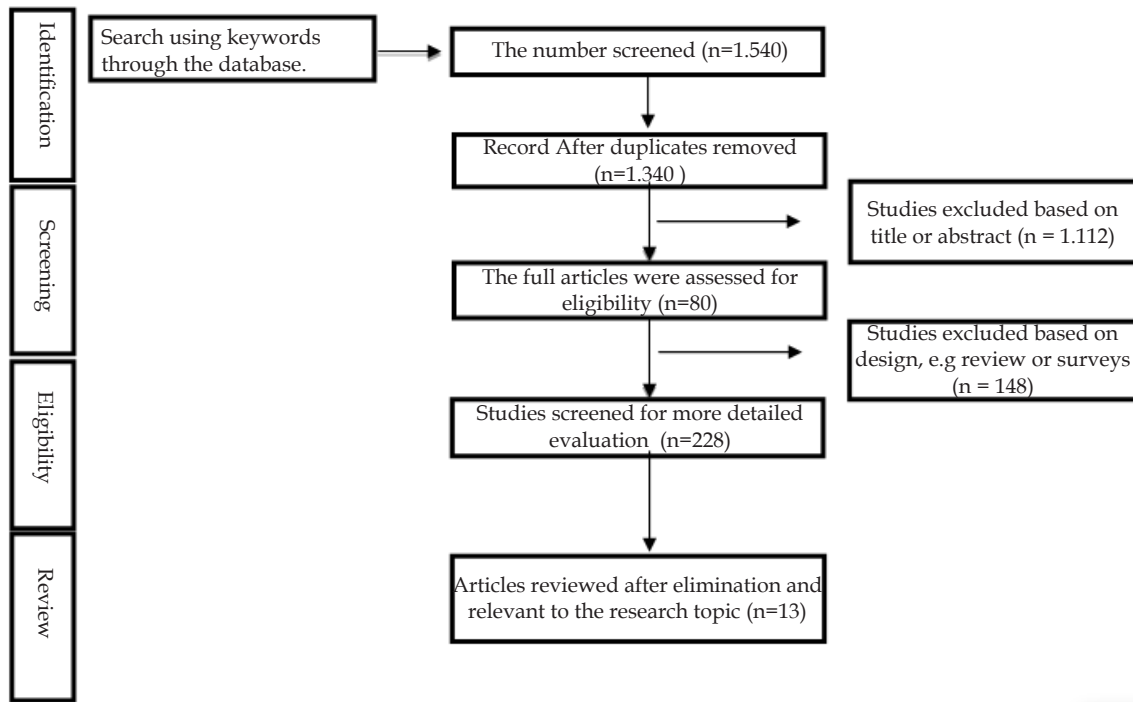
**Table 1: Literature Review**

Author	Journal Title	Year of Publication	Research Method
Pratiksha Wasanka <i>et al.</i>	Assessment of Knowledge, Awareness, and Practices of First Aid Skills among the Society	2020	Quantitative Method

Continue.....

Ni Kadek Pon Widiastuti <i>et al.</i>	Overview of Students' Knowledge Level on First Aid for Accidents in High School	2022	Quantitative Method
Putri Wulandini <i>et al.</i>	Students' Knowledge of First Aid for Sports Injuries at Rumbai Sports High School, Pekanbaru, Riau Province, 2019	2019	Quantitative Method
Belayneh Shetie Workneh <i>et al.</i>	Determinants of Knowledge, attitude, and practice towards First Aid among kindergarten and Elementary School Teachers in Gondar City, Northwest Ethiopia	2021	Quantitative Method
Joseph N, Kumar GS <i>et al.</i>	Knowledge of First Aid Skills Among Students of a Medical College in Mangalore City, South India	2014	Quantitative Method
Kadeja A. Bashekah <i>et al.</i>	The Knowledge, Attitudes, and Associated Factors Regarding First Aid Among the General Public in Saudi Arabia	2023	Quantitative Method
Raneem Moutlaq Alsayali <i>et al.</i>	Awareness, knowledge, attitude and practices of first aid skills among medical and non-medical students at Taif University	2019	Quantitative Method
A' Aisyah Nur Farihah Binti Paharudin <i>et al.</i>	First aid knowledge, attitude and awareness among nursing students: Relevance to nursing education	2022	Quantitative Method
Ibrahim Adel AlYahya <i>et al.</i>	Assessment of knowledge, attitude, and practice about first aid among male school teachers and administrators in Riyadh, Saudi Arabia	2019	Quantitative Method
Muhammad Shalihuddin Mas'ud and Rini Ernawati	Overview of the Knowledge Level of 10th and 11th Grade Students on First Aid for Accidents at Samarinda Islamic High School	2019	Quantitative Method
Asy'ari and Jefri Amin	Identification of High School Students' Knowledge and Attitudes Regarding First Aid for Accidents at Muhammadiyah 7 High School Surabaya	2020	Quantitative Method
Herlinawati and Taufan Azhari	The Relationship Between Knowledge and Attitude with First Aid (P3K) Behavior Among Yarn Section Building Employees	2023	Quantitative Method

Figure 1. Figure Prisma



## Discussion

This research aims to conduct a literature review to understand basic first-aid knowledge in the context of accidents. Accidents often happen to individuals or groups of people. Such events can occur anywhere, anytime, and affect anyone, including at schools. In Indonesia, common school accidents include injuries, lacerations, broken bones, and bruises. First aid is performed to prevent more severe injuries, serving as initial care before the victim receives treatment from a hospital.<sup>13</sup> Knowledge is a crucial component in forming first aid actions/skills. The better someone's knowledge of first aid, the more effectively they can perform it in the field. One way to improve first aid knowledge is through health education or joining health-based organisations like the Red Cross.<sup>14</sup>

According to an analysis by Wasankar et al., overall, only 40% of individuals had complete knowledge of first aid for emergencies such as burns, 20% had complete knowledge for emergencies like heart attacks, 25% had a full understanding of animal bites, 35% had complete knowledge for shock, and 60% did not know about Cardiopulmonary Resuscitation (C.P.R.). The study concluded that the level of participants' knowledge about first aid was not good.<sup>15</sup>

In contrast, research by Widiastuti and Adiputra found that most respondents had good knowledge. Specifically, 151 respondents (78.2%) had good knowledge, 42 respondents (21.8%) had adequate knowledge, and no students had poor knowledge. This was influenced by the sources of information and previous experiences related to first aid.<sup>16</sup> Similarly, research by Wulandini et al. at S.M.A. Olahraga Rumbai Pekanbaru in Riau Province showed that most students had good knowledge about first aid in sports and accidents, with 69 students (86.25%) being well-informed, primarily due to information from health professionals.<sup>17</sup> Another study concluded that students' knowledge and attitudes towards first aid at S.M.A. Muhammadiyah 7 Surabaya were good. Future research should identify the application of first aid in accidents among high school students.<sup>18</sup> Experience is a way to acquire knowledge by revisiting previously learned knowledge to solve problems encountered in the past. Information media also significantly impacts the level of expertise. Access to information can help speed up the acquisition of new knowledge. Various mass media are available with advancing technology, which can influence public knowledge about new innovations.

Research by Workneh et al. showed that only 41.1% of respondents had good knowledge of first aid, while nearly two-thirds (64.8%) of teachers had a positive attitude towards first aid. The majority (85.8%) of teachers who faced students needing first aid at their school provided it<sup>19</sup>

Research by Kumar et al. indicated that only 11.2% (17/152) of participants had previously received first-aid training. Good knowledge of first aid was found in 13.8% (21/152) of participants, moderate knowledge in 68.4% (104/152), and poor knowledge in 17.8% (27/152). Analysis revealed that 21% (32/152) had inadequate knowledge of first aid management for shock and gastroesophageal reflux and 20.4% (31/152) for epistaxis and foreign objects in the eye. All students felt that first-aid skills should be taught from the school level onward and were willing to participate in formal first-aid training sessions. The study concluded that the overall level of first-aid knowledge among students was poor compared to awareness levels in other studies. It also highlighted the need for first aid training as a perceived need among medical students, with regular refresher training needed, as knowledge levels did not significantly differ between those who had received previous training and those who had not.<sup>10</sup>

Research by Bashekah et al. included 1135 participants. Nearly a third (36.0%) reported receiving first aid training, and most (94.5%) had heard of first aid before. The most common sources of information about first aid were media (37.6%). Choking (63.2%), breathing difficulties (61.7%), and fainting (56.7%) were the most frequently reported first aid scenarios. The average knowledge score among participants was 4.4 (SD: 2.8) out of 8 (55.0%), indicating moderate knowledge of first aid. The study emphasised the need to educate the public about first aid and emergency treatments, noting that while a third of participants had received first aid training, continuous training was necessary. Information from social media about first aid was often unreliable. Choking, breathing difficulties, and syncope are common first aid conditions, and awareness to handle choking is required. Gender, socioeconomic status, and education influence first aid knowledge and attitudes. Women, medical

students, and healthcare workers know more about first aid. Most participants supported providing first aid. The study strongly recommended increasing awareness, offering affordable first-aid training, and targeting specific populations to improve first-aid knowledge and attitudes.<sup>20</sup>

Research by Alsayali et al. aimed to assess the knowledge and attitudes towards first aid skills among medical and non-medical students at Taif University. The study concluded that half of the participants had good knowledge of first aid and Basic Life Support, but their practical skills were very poor.<sup>21</sup> This finding aligns with research by Ahmad et al., which concluded that most respondents had moderate knowledge of first aid.<sup>22</sup> These findings may be due to respondents being students from health-related fields. To enhance students' knowledge entering the healthcare field, their learning should be reinforced annually. Existing first aid knowledge should be improved so that students and adolescents can competently administer first aid independently. Similarly, research by Mas'ud and Ernawati found that among 65 respondents from S.M.A. Islam Samarida, the average knowledge about first aid for accidents was "adequate."<sup>23</sup>

Research by AlYahya et al. concluded that most respondents demonstrated weak knowledge of first aid and inappropriate responses to common emergency scenarios. However, respondents who received first aid training were more likely to respond better to given scenarios, though most had not received any training. The study recommended that respondents undergo first-aid training programs.<sup>24</sup> This is consistent with research by Herlinawati and Azhari, which showed that respondents with high knowledge of first aid numbered 37 (55.2%), compared to 30 respondents (44.8%) with low knowledge.<sup>25</sup>

## Conclusion

Based on the results of the literature study conducted, it can be concluded that a systematic literature review is a process of collecting and evaluating research related to a specific topic of focus. Out of 1,540 articles, a selection was made, resulting in 13 journals that met the research criteria. The findings encouraged the researchers to choose this



title. According to the literature review conducted from 2014-2024, the dominant method used by other researchers is the service method. Additionally, based on the literature study, researchers can conclude that the basic understanding of first aid in **emergencies** is generally still **categorised** as poor or weak and moderate or sufficient. Limited knowledge and experience make it difficult for individuals to handle emergencies effectively. However, quick and precise action in first aid (P3K) can prevent worse conditions and even save lives. Knowledge and understanding of various ways to handle basic emergencies are essential. Yet, very few people still have this knowledge, experience, and skill. Therefore, many parties, including the government, independent organisations, activists, and even private companies, are working to address this issue. One approach is to **utilise** the rapidly developing technology of mobile learning.

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