

Analysis of Community Knowledge, Attitudes, and Experiences toward Preparedness for Initial Emergency Response in Karya Murni Village, Paguyaman District, Boalemo Regency

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ABSTRACT

Emergency conditions can occur suddenly in the community and require prompt and appropriate initial management before victims receive assistance from health professionals. Community preparedness is influenced by several factors, including knowledge, attitudes, and experience in dealing with emergency situations. This study aimed to analyze the relationship between community knowledge, attitudes, experience, and preparedness for initial emergency response in Karya Murni Village, Paguyaman District, Boalemo Regency. This study used a quantitative method with a correlational analytic design and a cross-sectional approach. A total of 50 respondents were selected using purposive sampling based on predetermined inclusion criteria. Data were collected using a questionnaire covering knowledge, attitudes, experience, and preparedness. The data were analyzed using univariate analysis and bivariate analysis with the Chi-square test, while Fisher's Exact Test was used when the Chi-square assumptions were not met. The results showed that most respondents had moderate knowledge (40.0%), positive attitudes (62.0%), no prior experience in dealing with emergencies (56.0%), and were categorized as prepared (56.0%). Bivariate analysis showed that knowledge, attitudes, and experience were significantly associated with community preparedness for initial emergency response. This study concludes that community preparedness for initial emergency response is associated with knowledge, attitudes, and experience. Therefore, health education, first-aid training, Basic Life Support simulations, and community empowerment are needed to improve community readiness to provide initial assistance in emergency situations.

Keywords: *Emergency; Community Preparedness; Experience; Knowledge; Attitude*

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1. INTRODUCTION

An emergency is a condition that occurs suddenly and requires rapid, appropriate, and focused management to prevent further disability or death. These conditions include traffic accidents, bleeding, burns, fainting, choking, respiratory arrest, cardiac arrest, trauma, and disaster events. In these situations, community members near the victim are often the first to find the victim before health professionals arrive. Therefore, community preparedness to provide initial management is an important component of saving victims during the early phase of an emergency.

Emergency-related problems are an important public health issue. The World Health Organization (WHO, 2024) reported that injuries and violence cause approximately 4.4 million deaths annually worldwide, accounting for nearly 8% of all deaths. Among people aged 5–29 years, three of the five leading causes of death are related to injury, namely, road traffic injuries, homicide, and suicide. In addition, the WHO (2023), in the Global Status Report on Road Safety 2023, reported that deaths due to road traffic accidents still reach approximately 1.19 million annually worldwide. These data

indicate that emergency conditions, particularly those caused by injuries and accidents, require serious attention, including at the community level, as first responders.

Initial management by lay community members is crucial because assistance during the first few minutes can determine the victim's condition before receiving advanced health-care. Zideman et al. (2021) explained that first aid includes initial management for various medical and trauma conditions, such as shock, asthma, stroke, chest pain, hypoglycemia, severe bleeding, burns, bone injuries, and other injuries. In the context of cardiac and respiratory arrest, Olasveengen et al. (2021) emphasized the importance of early recognition of cardiac arrest, activation of emergency medical services, chest compressions, rescue breathing when able, use of an automated external defibrillator (AED) when available, and management of airway obstruction. This indicates that communities need to understand the basic actions that can be performed before victims receive assistance from health professionals.

In Indonesia, Basic Life Support (BLS) is an important skill in initial emergency management. Samawati (2024), through the Directorate General of Advanced Health Services of the Ministry of Health of the Republic of Indonesia, explained that BLS is a series of first-aid measures designed to save the life of someone experiencing a life-threatening condition such as cardiac arrest, respiratory arrest, or unconsciousness. BLS can be performed by laypersons as well as health professionals. Thus, community understanding of BLS and first aid is important for improving rapid response in emergency situations.

Community preparedness for initial emergency response is influenced by various factors, including knowledge, attitudes, experience, training, access to information, and confidence in providing help. Good knowledge can help community members recognize emergency warning signs, determine appropriate initial actions, and avoid actions that may worsen a victim's condition. Attitude also plays an important role because someone who knows how to help may not necessarily be willing to provide assistance if they feel afraid, hesitant, panicked, or worried about being blamed. This is consistent with the Theory of Planned Behavior, which explains that attitudes toward a behavior, subjective norms, and perceived behavioral control can influence a person's intention to perform an action (Ajzen, 1991).

Several studies have shown that community knowledge and attitudes toward emergencies require improvement. Jayalie et al. (2020), in a multicenter study in Jakarta, Depok, Padang, and Makassar involving 570 respondents, found that most respondents had poor knowledge (56.1%) and poor attitudes (60.7%) toward disaster and emergency situations. The study also showed a significant relationship between knowledge and attitudes and indicated that age, education, and disaster training influenced community knowledge and attitudes toward disaster preparedness. These findings show that community preparedness for emergencies remains an important issue in Indonesia.

A study by Pranata et al. (2020) in Jakarta also showed that community members were interested in learning Basic Life Support, but their training experience remained limited. Of the 303 respondents, most stated that knowledge of BLS was important and expressed a desire to learn; however, only 39.6% had ever participated in BLS training. The study also showed low community knowledge regarding the use of AEDs. This indicates that the community's willingness to help needs to be supported by adequate education and training so that preparedness for emergency conditions can be improved.

A recent study by Windi et al. (2026) in Sidoarjo showed that lay rescuers play an important role in increasing the survival chances of victims of sudden cardiac arrest; however, hesitation and inaction are still common. The study found that many respondents preferred to seek medical assistance rather than immediately provide first aid. The main barriers identified were fear of being blamed, lack of knowledge, and feelings of incompetence. These findings reinforce that community preparedness should not only be viewed from the aspect of knowledge but should also consider community attitudes, courage, and experience in dealing with emergency situations.

More specific research on first aid for traffic accidents has also shown a relationship between knowledge and community readiness. Afandi et al. (2025), in a study conducted in the Kewapante District, Sikka Regency, found a relationship between knowledge and community readiness to provide first aid for traffic accidents. The study used a cross-sectional design with 86 respondents and showed that the better the community's knowledge, the higher their readiness to provide initial assistance. These findings support the importance of measuring knowledge as a factor associated with community preparedness.

At the local level, Karya Murni Village is located in the Paguyaman District of the Boalemo Regency. Based on data from Statistics Indonesia of Boalemo Regency (2024), Karya Murni Village had no hospital, maternity hospital, polyclinic/medical center, inpatient community health center, non-inpatient community health center, or pharmacy in 2023. The same data also recorded one landslide and one flood in Karya Murni Village in 2023. This condition indicates that the community of Karya Murni Village needs to be prepared to deal with emergency conditions, whether caused by accidents, sudden illness, or disaster events.

Although several studies have discussed community knowledge, attitudes, and readiness in first aid, studies specifically analyzing community knowledge, attitudes, and experience toward preparedness for initial emergency response in Karya Murni Village, Paguyaman District, Boalemo Regency remain limited. Local data are important for determining the extent to which community members understand emergency warning signs, how their attitudes influence the provision of assistance, and how their experiences affect their readiness to face emergency conditions.

2. METHOD

This study used a quantitative method with a correlational analytic design and cross-sectional approach. This study aimed to analyze the relationship between community knowledge, attitudes, experience, and preparedness for initial emergency response.

The study was conducted in Karya Murni Village, Paguyaman District, and Boalemo Regency. The sample consisted of 50 respondents selected using purposive sampling based on the following inclusion criteria: adult community members domiciled in Karya Murni Village, able to communicate well, and willing to participate as respondents.

The independent variables were community knowledge, attitudes, and experience. The dependent variable was community preparedness for the initial emergency response. Data were collected using a questionnaire that included questions on respondents' knowledge, attitudes, experiences, and preparedness.

The collected data were analyzed univariately to describe the respondent characteristics and distribution of each variable. Bivariate analysis was performed using the chi-square test to determine the relationship between knowledge, attitudes, and experience and community preparedness. If the assumptions for the chi-square test were not met, Fisher's Exact Test was used as an alternative.

This study followed research ethical principles, including respondent consent, confidentiality of identity, voluntary participation, and the use of data for scientific purposes.

3. RESULTS AND DISCUSSION

3.1. Results

3.1.1 Community Knowledge Level regarding Initial Emergency Response

Community knowledge was assessed based on respondents' understanding of emergency warning signs, first-aid measures, Basic Life Support, how to request medical assistance, and actions that should and should not be performed when encountering an emergency victim.

Table 1. Distribution of Community Knowledge Level regarding Initial Emergency Response

No.	Knowledge Level	Frequency (n)	Percentage (%)
1	Good	17	34.0
2	Moderate	20	40.0
3	Poor	13	26.0
	Total	50	100

Source: Primary Data; 2026

Based on Table 1, most respondents had a moderate level of knowledge (20 people, 40.0%). There were 17 respondents (34.0%) with good knowledge and 13 respondents (26.0%) with poor knowledge.

These results indicate that the Karya Murni Village community's knowledge of initial emergency response needs to be improved. Although some respondents already had good knowledge, several respondents still did not adequately understand first-aid steps, recognition of danger signs, and how to quickly request medical assistance.

3.1.2 Community Attitudes in Facing Emergency Conditions

Community attitudes were assessed based on concern, courage, willingness to help, social responsibility, and mental readiness when facing victims in emergencies.

Table 2. Distribution of Community Attitudes in Facing Emergency Conditions

No.	Community Attitude	Frequency (n)	Percentage (%)
1	Positive	31	62.0
2	Negative	19	38.0
	Total	50	100

Source: Primary Data; 2026

Based on Table 2, most respondents had a positive attitude toward facing emergency conditions, namely 31 (62.0%). Meanwhile, 19 respondents (38.0%) had negative attitudes.

These results show that most community members are concerned about and willing to help victims in emergencies. However, some respondents still had negative attitudes, such as fear, hesitation, panic, or concern about making mistakes while providing initial assistance.

3.1.3 Community Experience in Facing or Managing Emergencies

Community experience was assessed based on whether the respondents had ever witnessed, experienced, assisted a victim, transported a victim to a health facility, or participated in emergency-related training activities.

Table 3. Distribution of Community Experience in Facing or Managing Emergencies

No.	Community Experience	Frequency (n)	Percentage (%)
1	Ever experienced	22	44.0
2	Never experienced	28	56.0
	Total	50	100

Source: Primary Data; 2026

Based on Table 3, most respondents had never experienced or managed emergency events (28 people, 56.0%). Meanwhile, 22 respondents (44.0%) had such experiences.

The respondents' experiences included witnessing accidents, helping victims who fainted, taking family members or neighbors to health facilities, and assisting victims with wounds or bleeding injuries. Respondents who had faced emergency events tended to have greater courage and preparedness than those who had never experienced similar events.

3.1.4 Community Preparedness Level for Initial Emergency Response

Community preparedness was assessed based on respondents' ability to recognize emergency conditions, make decisions, provide initial assistance, contact health professionals or emergency services, and use resources available in their surrounding environment.

Table 4. Distribution of Community Preparedness Level for Initial Emergency Response

No.	Preparedness Level	Frequency (n)	Percentage (%)
1	Prepared	28	56.0
2	Not prepared	22	44.0
	Total	50	100

Source: Primary Data; 2026

Based on Table 4, most respondents were in the prepared category for initial emergency response, namely, 28 (56.0%). Meanwhile, 22 respondents (44.0%) were in the not-prepared category.

These results indicate that more than half of the respondents were prepared to face emergency conditions. However, nearly half of the respondents were still unprepared. This finding highlights the need to improve first-aid education and training in the community.

3.1.5 Relationship between Knowledge and Preparedness for Initial Emergency Response

The relationship between knowledge and community preparedness was analyzed using the chi-square test. Knowledge level was categorized as good/moderate or poor.

Table 5. Relationship between Knowledge and Preparedness for Initial Emergency Response

Knowledge	Prepared n (%)	Not Prepared n (%)	Total	p-value
Good/moderate	25 (67.6)	12 (32.4)	37	0.005
Poor	3 (23.1)	10 (76.9)	13	
Total	28 (56.0)	22 (44.0)	50	

Source: Primary Data; 2026

Based on Table 5, of the 37 respondents with good/moderate knowledge, 25 (67.6%) were prepared for an initial emergency response. Meanwhile, of the 13 respondents with poor knowledge, only three (23.1%) were prepared, while 10 (76.9%) were not.

The Chi-square test showed a p-value of 0.005. Since the p-value was less than 0.05, it can be concluded that there was a significant relationship between knowledge and community preparedness for initial emergency response in Karya Murni Village, Paguyaman District, Boalemo Regency.

3.1.6 Relationship between Attitude and Preparedness for Initial Emergency Response

The relationship between attitude and community preparedness was analyzed to determine whether a positive attitude was associated with community readiness to provide the initial assistance.

Table 6. Relationship between Attitude and Preparedness for Initial Emergency Response

Attitude	Prepared n (%)	Not Prepared n (%)	Total	p-value
Positive	23 (74.2)	8 (25.8)	31	0.001
Negative	5 (26.3)	14 (73.7)	19	
Total	28 (56.0)	22 (44.0)	50	

Source: Primary Data; 2026

Based on Table 6, of the 31 respondents with positive attitudes, 23 (74.2%) were prepared for an initial emergency response. Meanwhile, of the 19 respondents with negative attitudes, only five (26.3%) were prepared, while 14 (73.7%) were not prepared.

The Chi-square test showed a p-value of 0.001. Because the p-value was less than 0.05, it can be concluded that there was a significant relationship between attitude and community preparedness for the initial emergency response.

This finding indicates that community members with positive attitudes, such as concern, courage to help, and willingness to assist victims, tend to be more prepared to face emergency conditions.

3.1.7 Relationship between Experience and Preparedness for Initial Emergency Response

The relationship between experience and community preparedness was analyzed to determine whether experience in facing or managing emergency events was associated with community readiness to respond.

Table 7. Relationship between Experience and Preparedness for Initial Emergency Response

Experience	Prepared n (%)	Not Prepared n (%)	Total	p-value
Ever experienced	17 (77.3)	5 (22.7)	22	0.007
Never experienced	11 (39.3)	17 (60.7)	28	
Total	28 (56.0)	22 (44.0)	50	

Source: Primary Data; 2026

Based on Table 7, of the 22 respondents who had experience in facing or managing emergency events, 17 (77.3%) were prepared for an initial emergency response. Meanwhile, of the 28 respondents who had no experience, 11 (39.3%) were prepared and 17 (60.7%) were not.

The Chi-square test showed a p-value of 0.007. Because the p-value was less than 0.05, it can be concluded that there was a significant relationship between experience and community preparedness for the initial emergency response.

These results indicate that experience in facing emergency events can increase community courage, confidence, and readiness to provide initial assistance in the future.

3.1.8 Dominant Factors Associated with Community Preparedness

Multivariate analysis was performed using logistic regression to identify the most dominant variables associated with community preparedness. The variables included in the multivariate analysis were knowledge, attitude, and experience, because all three had significant relationships in the bivariate analysis.

Table 8. Multivariate Analysis of Factors Associated with Community Preparedness

Variable	p-value	OR	95% CI
Good/moderate knowledge	0.042	3.92	1.05–14.65
Positive attitude	0.016	5.48	1.37–21.95
Ever had experience	0.036	4.21	1.10–16.12

Source: Primary Data; 2026

Based on Table 8, knowledge, attitude, and experience remained associated with community preparedness after multivariate analysis. The most dominant variable associated with community preparedness was attitude, with a p-value of 0.016 and an OR of 5.48.

These results indicate that respondents with positive attitudes were 5.48 times more likely to be prepared to perform initial emergency responses than those with negative attitudes. Thus, a positive attitude is an important factor influencing community preparedness to provide initial assistance.

3.2. Discussion

The results showed that most respondents had a moderate level of knowledge regarding initial emergency response, with 20 people (40.0%). This finding indicates that the Karya Murni Village community already has a basic understanding of emergency conditions, but not all community members understand the correct initial assistance measures. Community knowledge of emergency warning signs, how to request help, first aid, and Basic Life Support is essential because community members often become the first responders before health professionals arrive. According to Zideman et al. (2021), first aid is the initial action given to a person experiencing an injury or sudden illness before receiving further medical services. Therefore, moderate knowledge must be improved to good knowledge through community-based first-aid education and training.

The results also showed that most respondents (31 people, 62.0%) had positive attitudes toward facing emergency conditions. This positive attitude reflects the concern, willingness to help, and courage of community members in assisting victims. However, 19 respondents (38.0%) still had negative attitudes toward the elderly. Negative attitudes may arise from fear, panic, hesitation, or concerns about making mistakes while providing assistance. This is consistent with Ajzen (1991), who explained that a person's attitude toward an action can influence their intention and readiness to perform that action. Thus, community preparedness is determined not only by knowledge but also by attitudes and the courage to act in emergency situations.

Regarding experience, most respondents had never faced or handled emergency events (28 people, 56.0%). This indicates that community experience in providing initial assistance remains limited. Experience plays an important role because individuals who have witnessed or helped victims in emergencies usually have a more concrete understanding of the actions that should be taken. Pranata et al. (2020) stated that community members generally have an interest in learning Basic Life Support, but their experience and training remain limited. Therefore, limited community experience needs to be addressed through training, simulation, and health education so that community members become more confident in facing emergency conditions.

The level of community preparedness in this study showed that 28 respondents (56.0%) were in the prepared category, while 22 respondents (44.0%) were in the unprepared category. This result indicates that most community members were prepared to face emergency conditions, but the proportion of those who were not prepared remained relatively large. Community preparedness is important because conditions such as accidents, fainting, bleeding, choking, respiratory arrest, and cardiac arrest can occur suddenly. Olasveengen et al. (2021) emphasized that early recognition of emergency conditions, activation of medical assistance, and provision of initial aid, such as chest compressions, are important components of Basic Life Support. Therefore, communities need to be equipped with basic skills to provide an initial response before victims are taken to health facilities.

The bivariate analysis showed a significant relationship between knowledge and community preparedness for initial emergency response ($p = 0.005$). Respondents with good or moderate knowledge were more frequently in the prepared category than those with poor knowledge. This finding shows that the better the community's knowledge, the higher their readiness to provide initial assistance is. This is consistent with the study by Afandi et al. (2025), who found a relationship between knowledge and community readiness to provide first aid in traffic accidents. Good knowledge helps community members recognize danger signs, determine the correct actions, and avoid actions that may worsen the victim's condition.

The study also showed a significant relationship between attitude and community preparedness ($p = 0.001$). Respondents with positive attitudes were more often in the prepared category than those with negative attitudes. This finding indicates that a positive attitude is important in shaping community preparedness. Community members with

concerns, courage, and willingness to help tend to be more prepared to provide initial assistance. Jayalie et al. (2018) also found that community knowledge and attitudes were associated with readiness to face disasters and emergency situations. Therefore, efforts to improve preparedness should not only be carried out through the provision of information but should also foster caring, responsive, and courageous attitudes toward helping others in need.

The analysis of the relationship between experience and preparedness showed a p-value of 0.007, indicating a significant relationship between the two. Respondents with experience in facing or managing emergency events were more frequently in the prepared category than those with no experience. Experience can increase courage, self-confidence, and decision-making ability when faced with emergency situations. Community members who have seen or helped victims tend to better understand the real conditions in the field, making them more prepared to act when similar events occur. These findings reinforce the importance of first-aid simulations and exercises so that community members without direct emergency experience can gain learning experiences similar to real conditions.

Multivariate analysis showed that attitude was the most dominant factor associated with community preparedness, with an OR of 5.48. This means that respondents with positive attitudes were 5.48 times more likely to be prepared to perform initial emergency responses than those with negative attitudes. This finding shows that courage and willingness to help are important aspects of community preparedness. A person with sufficient knowledge may still not be ready to help if they remain afraid or are hesitant. Therefore, community preparedness improvement programs should emphasize the development of positive attitudes, self-confidence, and practical skills through education and direct training to improve disaster preparedness.

Overall, the study results showed that knowledge, attitudes, and experience were associated with community preparedness for initial emergency response in Karya Murni Village, Paguyaman District, and Boalemo Regency. Community members with good knowledge, positive attitudes, and experience facing emergency conditions tended to be more prepared to provide initial assistance. Therefore, health education programs, first-aid training, Basic Life Support socialization, and emergency simulations involving village government, community health centers, nurses, health cadres, and community leaders are needed. These programs are expected to improve the community's ability to provide a rapid, appropriate, and safe response before victims receive assistance from health professionals.

4. CONCLUSION

Based on the results of the study involving 50 respondents in Karya Murni Village, Paguyaman District, Boalemo Regency, it can be concluded that most community members had moderate knowledge, positive attitudes, and fairly good preparedness for initial emergency responses. However, most respondents did not have direct experience in managing emergency events.

The results showed that knowledge, attitudes, and experience were associated with community preparedness for initial emergency response. The most dominant factor was attitude; therefore, improving community preparedness should be carried out through education, first-aid training, Basic Life Support simulations, and community empowerment so that community members are able to provide initial assistance quickly and appropriately.

STUDY LIMITATIONS

This study had several limitations. First, the cross-sectional design limited the ability to establish causal relationships between knowledge, attitudes, experience, and community preparedness, as all variables were measured at a single point in time. Second, the relatively small sample size of 50 respondents from a single village may limit the generalizability of the findings to broader populations or different community settings in the future. Third, data collection using self-reported questionnaires may introduce response bias, as respondents' answers could be influenced by personal perceptions, recall bias or social desirability. Therefore, future studies should involve larger sample sizes, include multiple villages or study sites, and apply longitudinal or mixed-method designs to provide a more comprehensive understanding of the factors influencing community preparedness in initial emergency management.

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