

Life-saving skills in the community: An assessment of basic life support and first aid knowledge in a selected barangay in the Philippines

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Abstract

This study assessed the knowledge of basic life support (BLS) and emergency first aid among officials, staff, *tanods*, and residents of a selected barangay in Baguio City, Philippines. It specifically examined their level of knowledge, challenges in applying BLS and emergency first aid, and the development of a proposed three-year training plan to enhance community preparedness. Using a mixed-methods approach, data were collected from 292 respondents through a structured, locally adapted survey. Results revealed that residents had insufficient knowledge in both BLS (mean = 1.99) and emergency first aid (mean = 1.82), indicating uncertainty or a lack of confidence in applying these life-saving procedures. Although respondents were generally familiar with essential emergency procedures, they lacked the confidence and training to perform them effectively. Key challenges included limited knowledge, fear and panic during emergencies, lack of equipment, and dependence on emergency responders. Despite these issues, the community showed a strong willingness to learn, although limited access to training programs posed a barrier. In response, the study proposed a three-year training plan focusing on structured education, hands-on practice, and improved access to emergency tools. Strengthening emergency preparedness at the barangay level is vital for ensuring an effective first response to emergencies. This study highlights the urgent need for targeted, community-based programs to improve BLS and emergency first aid competency and build a more resilient and responsive local population.

Keywords: *familiarity, emergency, training, response, awareness, basic life support*

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1. Introduction

In the Philippines, accidents and cardiovascular disease remain the leading causes of death, with nearly 120,000 annual fatalities, many occurring before patients reach a hospital (Department of Health [DOH], 2023; World Health Organization [WHO], 2023). A significant proportion of these deaths are linked to out-of-hospital cardiac arrest (OHCA), where immediate Basic Life Support (BLS) and first aid by bystanders could improve survival outcomes. The American Heart Association (AHA, 2020) and the International Liaison Committee on Resuscitation (ILCOR, 2021) emphasize that early recognition, high-quality chest compressions, and timely defibrillation are critical to increasing survival rates. Despite this, bystander intervention in low- and middle-income countries, including the Philippines, remains low due to inadequate training, limited confidence, and systemic barriers (Althobaiti et al., 2024).

The research problem lies in the gap between the recognized importance of bystander BLS and first aid and the actual preparedness of communities to deliver these interventions. Community members such as barangay health workers (BHWs), teachers, and local volunteers often serve as first responders, yet their training and confidence remain inconsistent and often insufficient. Without adequate skills and resources, delays in initiating care critically reduce survival rates.

This study is timely given recent policy directions. The DOH, through the Universal Health Care (UHC) Act of 2019, prioritizes community health preparedness by mandating stronger primary and emergency care linkages at the barangay level. Globally, the WHO's Emergency Care System Framework urges member states to strengthen pre-hospital and community-based response systems as a cost-effective strategy to reduce preventable mortality (WHO, 2019). Locally, initiatives such as the "Filipino CPR 2015" program sought to train ordinary citizens, yet evidence shows persistent gaps in community knowledge and confidence.

Against this backdrop, the present study assesses the knowledge of residents of Barangay Proper Pinsao in Baguio City, Philippines, on BLS and emergency first aid and identifies the challenges they face in applying these skills. By establishing baseline knowledge and barriers, the findings aim to inform targeted interventions aligned with local health system goals and global frameworks for strengthening emergency care.

2. Literature Review

2.1. Community Impact of Bystander BLS and Organised Interventions

Recent evidence confirms that strengthening community capacity for BLS improves survival following out-of-hospital cardiac arrest. A multi-site review of community interventions reported measurable survival gains in settings where training, public awareness, and system linkages were implemented (Simmons et al., 2023). Similarly, the 2023 international consensus on resuscitation systems highlights community readiness, public access defibrillation, and integration with emergency medical services (EMS) as key levers to improve outcomes (International Liaison Committee on Resuscitation, 2023). While it is well established that community programs enhance outcomes when supported by broader systems, it remains unclear how these effects translate in small, decentralized localities with limited resources, such as many Philippine barangays. To address this gap, the present study generates barangay-level baseline data on resident knowledge and barriers, serving as a foundation for developing locally tailored community–system strategies.

2.2. Training Modalities and Skill Retention

Technology-enhanced and blended BLS training methods, including video-based instruction, mobile applications, real-time feedback, and manikin feedback devices, have demonstrated non-inferior or improved knowledge outcomes and, in some cases, superior retention of objective compression metrics compared with traditional training (Lim et al., 2022; Nicolau et al., 2024). Evidence consistently shows that blended approaches integrating hands-on practice with feedback improve skill acquisition and retention. However, the feasibility, acceptability, and cost-effectiveness of these training modalities in low-resource barangays remain uncertain. To fill this gap, the present study documents residents' baseline knowledge and perceived training needs, thereby guiding the selection of feasible training modalities for Pinsao Proper.

2.3. Psychosocial and Structural Barriers to Acting

Systematic reviews and primary studies have identified recurring barriers, such as fear of harming victims, concerns about disease transmission, low self-efficacy, and legal or social anxieties, that reduce bystander CPR rates despite adequate awareness (Daud et al., 2023; Jaskiewicz et al., 2024). While psychosocial fears and confidence deficits are recognized as

major obstacles worldwide, it remains unclear which barriers predominate in specific Philippine community contexts and how these interact with local governance and social norms. To address this gap, the present assessment identifies the most salient psychosocial and contextual barriers in Pinsao Proper, thereby informing targeted behavioral and policy interventions.

In the Philippine context, community health actors, system constraints, and lessons from the COVID-19 pandemic further shape local emergency response capacity. Recent studies underscore the central role of barangay health workers (BHWs) and primary care infrastructure, while also highlighting persistent limitations, including insufficient training, variable supply availability, workforce strain, and decentralized funding mechanisms that restrict community preparedness and responsiveness (Reyes et al., 2023; Maravilla et al., 2023; Ocampo et al., 2024). Although the barangay system positions BHWs as natural first responders, gaps in resources and training hinder their effectiveness. What remains unknown is the level of resident knowledge of BLS and first aid, as well as the practical challenges encountered at the micro-barangay level, such as in Pinsao Proper. By measuring residents' knowledge and reported challenges, this study aims to generate actionable, locally specific evidence to guide barangay training, resource allocation, and community advocacy.

3. Methodology

3.1. Research Design

This study employed a mixed-methods approach using a sequential explanatory design to assess residents' knowledge and identify challenges in applying BLS and emergency first aid in Barangay Pinsao Proper. This design was appropriate for addressing both factual knowledge (quantitative) and lived experiences or perceptions (qualitative). The quantitative component measured residents' level of knowledge through a structured questionnaire, while the qualitative component explored challenges in applying BLS and first aid through open-ended survey items and key informant interviews. Together, these components provided both objective measurement and contextual insights into community preparedness.

3.2. Participants of the Study

The study involved 292 residents and officials from Barangay Pinsao Pilot Proper, Baguio City, including the barangay captain, councilors, and appointed health officers directly

engaged in community welfare and emergency response. For the quantitative component, total population sampling was used, inviting all 292 officials to participate to eliminate sampling bias and ensure comprehensive coverage of knowledge and preparedness levels. For the qualitative component, purposive sampling identified 25 key informants (barangay captains, health officers, and senior council members) with direct experience in implementing health programs, managing emergencies, and formulating health policies. Their inclusion was justified by their leadership roles and practical insights into barriers and challenges in BLS and first aid delivery at the community level.

3.3. Instrumentation and Data Gathering Process

Two instruments were used: (1) a structured survey questionnaire measuring knowledge and awareness of BLS and first aid, and (2) a semi-structured interview guide designed to explore lived experiences, preparedness, operational challenges, and recommendations for improving training and response.

Instrument development followed a rigorous validation process. Content validity was established through expert review by three professionals in emergency medicine, public health, and education. A pilot test with 30 participants from a neighboring barangay assessed reliability, yielding a Cronbach's alpha of 0.82, indicating high internal consistency. Minor revisions were made for clarity and comprehensiveness.

Data collection was carried out in two phases. In the first (quantitative) phase, the structured survey was personally administered after obtaining informed consent. The survey covered knowledge of CPR, wound care, recognition of emergencies, and perceived barriers. In the second (qualitative) phase, semi-structured interviews with 25 key informants were conducted face-to-face in private settings to encourage candid responses. Each session lasted 30–45 minutes, was audio-recorded with permission, and supported by field notes. Transcripts and notes were anonymized and securely stored.

3.4. Data Analysis

Quantitative data from the surveys were encoded and analyzed using SPSS version 26, applying descriptive statistics (weighted mean) to assess knowledge levels. The Likert scale enabled categorization of responses, providing systematic measures of preparedness. On the other hand, qualitative data were analyzed through thematic analysis following Braun and

Clarke's (2006) six-phase framework: familiarization, initial coding, theme development, review, definition, and reporting. Codes were grouped into broader themes such as insufficient training, fear of application, inadequate resources, delayed emergency response, cultural barriers, and environmental constraints. Triangulation was achieved by cross-checking survey and interview data to strengthen credibility. Integration of quantitative and qualitative findings allowed for a comprehensive understanding of knowledge levels and contextual challenges.

3.5. Research Ethics

The study adhered to established ethical standards. Informed consent was obtained through signed forms outlining objectives, procedures, risks, benefits, and the voluntary nature of participation. Participants were assured of confidentiality, anonymity, and the right to withdraw at any stage without penalty. Data were secured in password-protected files and reported in aggregate form to avoid identification. Ethical clearance was obtained from the institutional research ethics committee, ensuring compliance with the principles of autonomy, beneficence, and justice.

4. Findings and Discussion

4.1. Level of Residents' Knowledge on the Application of Basic Life Support

Findings in table 1 indicate that the residents of Barangay Proper Pinsao have low or insufficient level of knowledge in BLS and emergency first aid, as evidenced by an overall mean score of 1.99 (SD=0.88) interpreted as "low knowledge." The results suggest that most residents have low knowledge and lack confidence in performing life-saving techniques, underscoring a critical gap in community emergency preparedness. Many expressed uncertainties about their understanding of BLS and emergency first aid. While some were familiar with essential procedures, they required additional instruction and practice to perform them effectively. Khan et al. (2024) similarly reported that public awareness of BLS remains low, with many individuals unaware of proper emergency response procedures. Although respondents in their study recognized the importance of calling emergency services, they lacked the hands-on skills necessary to administer immediate care. These findings highlight the urgent need for structured training programs, practical demonstrations, and periodic refresher courses to strengthen community preparedness.

Table 1*Level of residents' knowledge on the application of basic life support (N=292)*

Indicators	Mean	Std. Deviation	% of Scale	Interpretation
1. I know the steps of performing Cardiopulmonary Resuscitation (CPR).	2.10	0.93	42%	Low Knowledge
2. I know how to correctly perform CPR in an emergency (adults, children, infants).	1.95	0.93	39%	Low Knowledge
3. I can determine responsiveness in an unresponsive person.	2.15	0.96	43%	Low Knowledge
4. I am knowledgeable about the primary assessment (Airway, Breathing, Circulation).	1.96	0.89	39%	Low Knowledge
5. I am aware of the initial steps when I encounter an unresponsive person.	1.93	0.91	39%	Low Knowledge
6. I know how to open the airway of an unresponsive person.	1.90	0.87	38%	Low Knowledge
7. I know the importance of calling emergency services immediately.	2.49	1.07	50%	Low Knowledge
8. I know how to perform chest compressions at the correct rate and depth.	1.82	0.89	36%	Low Knowledge
9. I know the steps to take if a person is choking and cannot breathe.	2.08	0.93	42%	Low Knowledge
10. I know the proper technique for providing rescue breaths.	1.82	0.88	36%	Low Knowledge
11. I know the steps of performing CPR.	1.90	0.91	38%	Low Knowledge
12. I know the correct hand placement for performing chest compressions.	1.97	0.95	39%	Low Knowledge
13. I know the correct ratio for performing chest compressions.	1.80	0.88	36%	Low Knowledge
Overall Basic Life Support Knowledge	1.99	0.79	40%	Low Knowledge

Legend: Strongly Agree: High Knowledge; Agree: Moderate Knowledge; Disagree: Low Knowledge; Strongly Disagree: No Knowledge.

The lowest-rated indicator in the present assessment was knowledge of the correct compression-to-ventilation ratio in CPR, with a mean score of 1.80 (SD = 0.79), indicating low knowledge. This reflects a serious gap in understanding one of the most basic yet vital components of CPR. The American Heart Association prescribes a 30:2 ratio for adult CPR, a standard widely taught in both professional and layperson training. Lack of awareness of this ratio among residents demonstrates deficiencies in theoretical knowledge and preparedness for cardiac emergencies. Incorrect ratios, whether too few compressions or excessive ventilations, can compromise circulation and oxygen delivery. Anggraini et al. (2020) noted that deviations from the recommended ratio are linked to lower survival rates and poorer neurological outcomes in out-of-hospital cardiac arrests.

This gap also raises concerns about knowledge retention and training accessibility. Any past exposure to CPR principles in the community may have been limited, outdated, or lacking emphasis on key standards such as the 30:2 ratio. Stress during emergencies further impairs recall, making frequent reinforcement essential. Abelairas-Gómez et al. (2020) emphasized that regular, hands-on training is crucial to ensure retention and execution under pressure. In

cardiac arrest, seconds are critical, and a responder uncertain of the correct ratio may delay or misapply CPR, leading to preventable deaths. Training should therefore emphasize core procedures through scenario-based simulations and real-time feedback, which have been shown to significantly improve skill acquisition and retention (Ng et al., 2023).

Another low-rated indicator was the ability to perform chest compressions correctly, with a mean of 1.82 (SD = 0.88), also interpreted as “low knowledge.” This deficiency reflects insufficient competence in a fundamental life-saving skill. Chest compressions are the primary component of CPR, essential for maintaining blood flow to the brain and heart. Low competency suggests residents may be unable to respond effectively in emergencies, lowering survival chances for cardiac arrest victims. This gap is largely attributable to insufficient or absent CPR training programs, particularly those offering hands-on practice. Deegan et al. (2025) emphasized that high-quality chest compressions are strongly correlated with improved survival, yet lay responders often struggle with the required depth, speed, and consistency. Similarly, Al-Dosary et al. (2022) stressed the importance of feedback tools, such as manikins, to internalize proper technique and build muscle memory. Without training and confidence, bystanders may also hesitate to act due to fear of causing harm. Thus, regular simulation-based drills, community CPR workshops, and refresher sessions are vital, especially where access to professional emergency services is limited. Local governments and barangay health offices should prioritize BLS training within health promotion activities, collaborating with health institutions, the Red Cross, or academic partners to deliver accessible and community-appropriate training.

The ability to perform rescue breaths effectively was also among the lowest-rated indicators, with a mean of 1.82 (SD = 0.89). This reflects inadequate knowledge of airway management and ventilation techniques. Many residents struggled with achieving an effective seal and delivering adequate breaths, which compromises oxygenation during CPR. Lack of training in the head-tilt, chin-lift maneuver and proper ventilation techniques likely contributed to this gap. Efendi et al. (2023) and Jarrah et al. (2018) emphasized that effective ventilation significantly improves survival, particularly in pediatric cases, underscoring the need for practical training.

These findings reveal substantial deficiencies in BLS and emergency first aid knowledge among residents of Barangay Pinsao Proper. While they recognize the importance of emergency response, gaps remain in CPR technique, airway management, and chest

compressions. Addressing these through formal training, community-based interventions, and hands-on practice sessions will enhance residents' ability to respond effectively in life-threatening situations. Qian et al. (2021) and Qian et al. (2022) further noted that BLS training is most effective when combined with scenario-based learning and continuous practice, as skills deteriorate without reinforcement. This supports the need for periodic refresher courses and drills to ensure long-term competency.

In contrast, the highest-rated indicator was recognizing the importance of calling emergency services immediately, with a mean of 2.49. Although still interpreted as "low knowledge," this reflects relatively higher awareness compared to technical skills. Residents understood the importance of seeking professional help but were unable to provide immediate care while awaiting responders. Variability in responses, reflected in the relatively high standard deviation, suggests uneven awareness within the community. This gap is crucial, as timely intervention significantly increases survival in emergencies such as cardiac arrest, choking, and respiratory failure. Abelairas-Gómez et al. (2020) confirmed that early EMS activation improves survival in out-of-hospital cardiac arrests, while Míguez-Navarro et al. (2018) showed that community education programs can enhance response times and reduce mortality. These findings highlight the need to strengthen public awareness campaigns while simultaneously building practical response capacity at the barangay level.

4.2. Level of Residents' Knowledge on the Application of Emergency First Aid

Table 2 presents the residents' level of knowledge on the application of emergency first aid. The findings indicate a generally low knowledge level, reflected by an overall mean score of 1.82 (SD = 0.72). This means most residents lack sufficient awareness and practical skills to administer immediate medical assistance during emergencies. Critical gaps were noted in managing life-threatening situations such as shock, fractures, poisoning, and seizures, highlighting the urgent need for community-based first aid education and training programs.

The results are consistent with studies conducted in other Philippine communities, which also report insufficient preparedness for emergency response. Míguez-Navarro et al. (2018) found that while respondents recognized the importance of BLS and emergency first aid, knowledge and readiness remained inadequate. Similarly, Asferie et al. (2024) noted moderate self-efficacy among youth respondents but low willingness to administer first aid due to limited training. Tadesse et al. (2022) emphasized that sustained community education

is necessary to strengthen awareness and practical skills. Collectively, these findings underscore the critical importance of structured first aid training at the community level.

Table 2

Level of Residents' Knowledge on the application of emergency first aid (N=292)

Indicators	Mean	SD	% of scale	Interpretation
1. I know how to assess the scene for safety before administering first aid.	1.97	0.89	49.25%	Low Knowledge
2. I am capable of controlling bleeding using direct pressure and elevation.	1.94	0.84	48.50%	Low Knowledge
3. I can identify and respond to signs of shock.	1.73	0.76	43.25%	No Knowledge
4. I know how to place an unconscious but breathing person in the recovery position.	1.80	0.81	45.00%	Low Knowledge
5. I know the steps to take in the event of a burn injury.	1.82	0.77	45.50%	Low Knowledge
6. I can properly bandage fractures and sprains.	1.80	0.81	45.00%	Low Knowledge
7. I can identify the symptoms of fractures and sprains.	1.74	0.80	43.50%	No Knowledge
8. I know how to provide first aid for fractures and sprains.	1.76	0.76	44.00%	Low Knowledge
9. I know how to assist someone experiencing a seizure.	1.74	0.77	43.50%	No Knowledge
10. I am knowledgeable about first aid procedures for poisoning or ingestion of harmful substances.	1.71	0.76	42.75%	No Knowledge
11. I know the actions to take if someone is choking.	1.98	0.92	49.50%	Low Knowledge
Overall Mean (Emergency First Aid)	1.82	0.72	45.50%	Low Knowledge

Legend: Strongly Agree: High Knowledge; Agree: Moderate Knowledge; Disagree: Low Knowledge; Strongly Disagree: No Knowledge

Among the indicators, the lowest-rated was knowledge of first aid for poisoning or ingestion of harmful substances, with a mean score of 1.71 (SD = 0.76). This reflects a serious knowledge deficit in responding to poisoning emergencies. Residents' lack of awareness about appropriate steps may lead to harmful or delayed responses. Lima et al. (2025) reported that inadequate knowledge often results in incorrect practices that worsen victims' conditions, while Munot et al. (2025) stressed that public education campaigns specifically targeting poisoning can improve outcomes significantly. Two other low-scoring indicators were the ability to identify symptoms of fractures and sprains (M = 1.74, SD = 0.80) and the ability to assist someone experiencing a seizure (M = 1.74, SD = 0.77). The inability to distinguish between minor and severe musculoskeletal injuries could lead to inappropriate handling, worsening trauma and potentially causing long-term disability. Likewise, insufficient knowledge of seizure response may cause unsafe interventions, such as restraining the person or inserting objects into their mouth, which can aggravate the condition. Siriwardena et al. (2024) emphasized that simple, evidence-based measures, such as staying calm, ensuring safety, and positioning the person on their side, can prevent complications and save lives.

The highest-rated indicator was awareness of choking response ($M = 1.98$, $SD = 0.92$), though this still fell below the satisfactory level and was interpreted as low knowledge. This suggests some familiarity with choking interventions such as the Heimlich maneuver but insufficient competence in executing them correctly. Limited hands-on training opportunities likely contribute to this gap. Schnaubelt et al. (2024) found that individuals who underwent simulation-based training demonstrated greater confidence and effectiveness in performing choking interventions, underscoring the value of practical reinforcement.

The findings reveal that residents of Barangay Proper Pinsao have low knowledge of emergency first aid, with particularly critical deficiencies in managing poisoning, seizures, fractures, and shock. While awareness of choking response is slightly higher, competence remains limited. These results emphasize the urgent need for structured, community-based training programs with practical demonstrations and continuous reinforcement. Such initiatives can empower residents to respond effectively to medical emergencies and enhance overall community health resilience.

4.3. Challenges Encountered by the Residents in the Application of Basic Life Support and Emergency First Aid

Limited knowledge and training in BLS and emergency first aid. A significant issue hindering effective emergency response is the limited knowledge and training in BLS and emergency first aid. Many residents and barangay officials admitted having little to no formal training in life-saving procedures, making them hesitant to respond during emergencies. One respondent shared, *“I have attended a seminar on first aid before, but I have never practiced CPR or any hands-on application. I’m not sure if I would do it correctly in an actual emergency.”* This illustrates the gap between theoretical knowledge and practical application, which can be critical when immediate intervention is required. Another respondent admitted, *“I have no formal training at all. If an emergency happens, I would not know what to do.”* These statements suggest that while awareness of first aid exists, the absence of practical training prevents individuals from confidently administering life-saving measures.

The lack of accessible training programs compounds this problem. As one official explained, *“We would like to have training, but the problem is finding the resources and experts who can teach us. Most of the time, these programs are only available in the city or for those who can afford them.”* Structural barriers such as financial limitations and the absence

of local opportunities prevent residents from acquiring essential first aid skills. Without training, the barangay remains vulnerable to emergencies that could otherwise be mitigated with basic interventions. Addressing this gap requires collaboration among local government units, NGOs, and healthcare providers to implement community-based programs that are practical, affordable, and reinforced through refresher courses.

Fear, panic, and psychological barriers. Even residents with some knowledge of BLS and emergency first aid face psychological barriers such as fear, panic, and self-doubt. Many respondents admitted that the pressure of responding correctly in life-threatening situations overwhelms them, leading to inaction. One resident said, “*I am afraid that if I perform first aid, I might make things worse instead of helping.*” Another shared, “*What if I get blamed if something goes wrong? I’d rather wait for someone more experienced to arrive.*” These concerns highlight legal and moral apprehensions that discourage individuals from intervening.

The stress of witnessing an emergency also induces panic, impairing decision-making. A barangay official recalled, “*There was a time when someone collapsed in front of me, and I didn’t know what to do. I felt frozen, like my mind went blank.*” Such reactions demonstrate the need for training programs that include stress management and repeated exposure to simulated emergencies, which can build confidence and composure. Community reassurance and encouragement also play a role, as residents are more likely to act when supported rather than judged.

Limited availability of first aid equipment and supplies. Another challenge is the shortage of first aid equipment and supplies. Many respondents expressed concern that even with knowledge, the lack of materials such as bandages, splints, and automated external defibrillators (AEDs) limits their capacity to respond. One official stated, “*We have a first aid kit in the barangay hall, but it is not well-stocked. Sometimes, we only have alcohol and bandages, and we don’t even know if they are expired.*” This highlights both shortages and poor inventory management. The absence of AEDs is particularly concerning in cardiac arrest cases. One respondent stressed, “*Even if we knew CPR, what if the person needed a defibrillator? We don’t have one, and waiting for medical help takes too long.*” These concerns underscore the need for barangay-level investment in essential equipment and stronger

partnerships with health organizations to ensure consistent provision and maintenance of supplies.

Lack of access to training programs. Despite these challenges, residents expressed strong willingness to learn BLS and emergency first aid. One official explained, “*If there was a free or affordable first aid training here in the barangay, I would join. We just don’t have the resources to attend training in the city.*” Another respondent said, “*I want to learn, but I don’t know where to start. There are no available programs that I know of.*” This lack of awareness reflects communication gaps. According to officials, some BLS activities had been conducted, but not all residents were informed, and only a few joined. Localized and well-publicized programs are therefore needed. Structured training with regular refreshers would help residents retain skills and ensure preparedness. A proactive, barangay-based approach can bridge the knowledge gap and create a safer, more resilient community.

5. Conclusion and Recommendations

The study found that while residents of Barangay Pinsao Proper recognize the importance of basic life support and emergency first aid, many lack training, confidence, and access to resources, limiting their ability to respond effectively to emergencies. This gap directly addresses the research problem of insufficient preparedness at the community level.

It is recommended that the barangay implement structured, community-based training programs in partnership with health and emergency agencies, focusing on hands-on exercises, simulations, and psychological preparedness. Awareness campaigns through social media, posters, and assemblies should reinforce learning, while first aid kits and AEDs must be strategically distributed in public areas and supported at the household level. Regular drills and sustained collaboration with health professionals should also be institutionalized to ensure readiness and coordinated response.

This study was limited to a single barangay, with data primarily from surveys and interviews, which may restrict generalizability to other communities with different cultural or logistical contexts. Future research should explore larger comparative studies, assess the long-term impact of structured training, and examine the role of technology, such as mobile health apps, in strengthening grassroots emergency response.

Disclosure statement

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Institutional Review Board Statement

This study was conducted following the ethical guidelines set by the University of Baguio. The conduct of this study has been approved and given relative clearance(s) by the University of Baguio.

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