

Strengthening Community-Based Disaster Preparedness: Strategies, Barriers, and Policy Implications

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ABSTRACT: Community-based disaster preparedness (CBDP) has gained global recognition as a critical strategy for reducing disaster risk and enhancing community resilience. This review aims to synthesize current knowledge on the effectiveness, challenges, and enabling factors of CBDP across diverse geographical and socio-economic settings. A structured narrative review methodology was adopted, with literature sourced from Scopus and Google Scholar using targeted keywords. Inclusion criteria focused on peer-reviewed studies published within the last ten years that addressed community engagement in disaster risk reduction. The review reveals that CBDP strengthens disaster response through participatory planning, community-driven early warning systems, and institutional partnerships with NGOs, religious bodies, and local governments. Community participation enhances responsiveness and legitimacy of interventions, especially when grounded in local knowledge and cultural context. However, systemic barriers such as poverty, low education levels, and inadequate infrastructure significantly limit community capacity. Policy misalignments further hinder program effectiveness, highlighting the need for responsive, inclusive, and decentralized governance. Key recommendations include formalizing community involvement in policy, leveraging accessible technologies for communication, and integrating psychosocial resilience into disaster planning. Future research should prioritize comparative, longitudinal, and mixed-methods studies, with emphasis on marginalized populations. This review underscores that sustainable CBDP requires strategic alignment between grassroots action and systemic support to effectively mitigate disaster impacts.

Keywords: Community-Based Disaster Preparedness, Disaster Risk Reduction, Community Resilience, Participatory Disaster Planning, Early Warning Systems, Local Institutions, Disaster Policy Alignment.



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INTRODUCTION

In the last two decades, there has been a growing recognition that disaster preparedness must move beyond centralized governance and instead adopt more decentralized, inclusive, and community-driven approaches. Community-Based Disaster Preparedness (CBDP) has emerged as

a cornerstone in disaster risk reduction (DRR) frameworks globally, aligning with international calls such as the Sendai Framework for Disaster Risk Reduction, which emphasizes the active role of communities in managing their own risks (Kitagawa, 2018; Wyte-Lake et al., 2016). This paradigm shift underscores that local communities are not merely passive victims of disaster events but essential actors capable of contributing substantially to disaster planning, preparedness, and response. The increasing frequency and intensity of disasters—many driven by climate change and rapid urbanization—further highlights the urgency for local preparedness and resilience (Ma et al., 2023).

CBDP is particularly relevant in the face of diverse and complex hazards where governmental response alone is often inadequate or delayed. Several empirical studies affirm that communities are often the first responders during disasters, especially in resource-limited settings, making their preparedness and capacity critical (Paterson & Charles, 2019; Rangarirai et al., 2023). However, despite these insights, efforts to institutionalize and scale CBDP remain fragmented. The adoption and implementation of community-focused strategies have been uneven across countries, shaped by political will, resource availability, institutional frameworks, and cultural contexts.

Fundamental to the relevance of CBDP are the empirical findings that show a direct link between community awareness and disaster response effectiveness. For example, Husna et al. (2021) demonstrated in Aceh, Indonesia, that a strong understanding of local hazards was correlated with higher levels of household preparedness. Moreover, interventions designed by and with community members tend to be more contextually relevant and widely accepted, compared to externally imposed models (Alcayna et al., 2016; Austin, 2012). This finding is consistent with Shariff & Hamidi (2019), who reported that community-based strategies achieved greater legitimacy and trust among local populations, leading to more sustainable outcomes.

Other case studies provide further support for this approach. In the Philippines, community-led disaster education and training programs have enhanced disaster responsiveness and reduced casualty rates (Alcayna et al., 2016). Similarly, community-based early warning systems (EWS) have proven instrumental in enabling timely evacuations and disaster mitigation, especially in areas with recurrent climate-related hazards (Paterson & Charles, 2019). These examples underscore the importance of bottom-up approaches that value local knowledge and contextual adaptability.

Yet, several challenges remain. One significant issue is the general lack of disaster awareness among communities, especially in rural and underserved areas. Research by Husna et al. (2021) and others reveals that many community members are unaware of the specific types of hazards they face or the steps necessary to mitigate them. This knowledge gap is exacerbated by insufficient education, limited access to information, and minimal government-led public awareness campaigns.

Another critical challenge pertains to the weak institutional linkages between community actors and governmental agencies. While many CBDP initiatives are spearheaded by NGOs or grassroots organizations, they often operate in silos with minimal coordination with local or national authorities. Shariff & Hamidi (2019) identified the disconnect between official DRR policies and community implementation as a major barrier to success. Moreover, dependence on external agencies or consultants frequently leads to plans that fail to reflect local values or needs (Firdaus et al., 2023; Alcayna et al., 2016).

There is also an ongoing tension between modern scientific approaches and indigenous or local knowledge. While the former provides technical robustness, the latter ensures cultural relevance and community ownership. Successful programs have demonstrated the value of integrating these perspectives to build more resilient communities (Alcayna et al., 2016; Austin, 2012). However, institutional frameworks often lack mechanisms to recognize and formally include community input, resulting in top-down programs that are ineffective or underutilized.

Despite the increasing interest in CBDP, gaps in the academic literature persist. Notably, there is limited understanding of how social, cultural, and economic variables shape community engagement in different disaster contexts. Smith & Chan (2017) argue that the lack of alignment between national policy frameworks and local initiatives hinders the scalability of successful programs. Similarly, Ardalan et al. (2013) highlight the need for more rigorous assessment tools to evaluate the effectiveness of community participation in disaster risk management. These gaps point to the necessity of further research to explore the dynamics of community engagement, especially in settings where disaster risk intersects with poverty, marginalization, or political instability.

The aim of this narrative review is to synthesize current knowledge on CBDP with a specific focus on evaluating the effectiveness, challenges, and enabling factors of community-led interventions in disaster preparedness. This review seeks to examine the mechanisms through which communities engage with disaster risk, how these engagements influence resilience outcomes, and the extent to which these approaches are supported by institutional systems (Peterson et al., 2022). It also aims to identify best practices and derive actionable insights that can inform future DRR policies and programming, particularly in low-resource and high-risk settings.

In doing so, the review will pay particular attention to contextual variability across geographic regions and population groups. It will explore how urban versus rural settings, socio-economic diversity, and cultural dynamics affect the implementation and outcomes of CBDP. For instance, Hermawan et al. (2024) and Yang & Wu (2020) provide comparative insights into how different environments demand tailored approaches to community engagement and resource allocation. The analysis will also consider how marginalized populations—such as ethnic minorities or displaced communities—interact with and are served by community-based DRR efforts (Rezaei et al., 2023).

The geographical focus will include regions with a high incidence of natural hazards and where community-led initiatives have been piloted or institutionalized. Southeast Asia, particularly Indonesia and the Philippines, will serve as primary case studies due to their frequent exposure to disasters and documented CBDP experiences. The review will also incorporate examples from other regions to provide comparative perspectives, enabling a more comprehensive understanding of global CBDP practices (Kawashima et al., 2012; Pike et al., 2024; Gentle et al., 2020).

Through this review, we hope to contribute to the scholarly discourse on disaster preparedness by bridging theory and practice and by illuminating the systemic, institutional, and grassroots dimensions of community resilience. The ultimate goal is to inform more inclusive and context-sensitive DRR strategies that empower communities as co-creators of their own safety and resilience (Gin et al., 2019).

METHOD

This narrative review adopted a rigorous and structured approach to collect and analyze academic literature related to community-based disaster preparedness (CBDP). The goal was to capture a comprehensive and nuanced understanding of how communities worldwide are involved in disaster risk reduction and management. To ensure scholarly integrity and a high level of academic rigor, this section outlines the literature search strategy, keyword usage, selection criteria, and data evaluation procedures.

The primary sources of literature for this review were two major academic databases: Scopus and Google Scholar. These platforms were chosen due to their wide coverage of peer-reviewed journals, relevance in interdisciplinary research, and access to recent empirical studies in disaster risk reduction, community resilience, and public health. Searches were conducted independently in both databases to ensure the comprehensiveness of the results. No geographical limitation was initially applied to ensure the global relevance of findings.

To identify the most relevant studies, a set of predefined search terms was used. The keyword combinations included: "Community-based disaster preparedness," "Community engagement in disaster management," "Disaster risk reduction community approaches," "Participatory disaster planning," "Local knowledge in disaster response," "Community resilience to disasters," "Disaster response community involvement," and "Grassroots disaster preparedness." Boolean operators such as AND and OR were used to combine these terms effectively. For instance, searches such as "community-based disaster preparedness" AND "resilience" or "local knowledge" OR "community engagement" were employed to broaden and then narrow the scope as appropriate (Shariff & Hamidi, 2019; Austin, 2012). This strategy enabled the identification of literature with both a broad conceptual reach and specific application to community-level disaster management.

The inclusion criteria were carefully defined to select high-quality and relevant literature. First, only studies that explicitly addressed community-based approaches in disaster preparedness or risk management were included. This criterion ensured the thematic relevance of each article (Wyte-Lake et al., 2016; Husna et al., 2021). Second, selected studies had to provide a clear and validated methodology, such as case studies, cohort studies, randomized control trials, qualitative field research, or mixed-methods approaches. These methodological standards were necessary to ensure analytical depth and data reliability (Peterson et al., 2022).

Third, relevance to vulnerable populations or at-risk communities was prioritized. Studies focusing on marginalized or high-risk groups engaged in community-based preparedness initiatives were particularly favored due to their significance in disaster resilience discussions (Alcayna et al., 2016; Hamzah et al., 2022). Lastly, the review included articles published within the last ten years to maintain relevance to the current socio-environmental context and policy landscape (Siddiqi et al., 2023; Riley et al., 2017). This temporal filter allowed for the incorporation of literature that addresses emerging challenges such as climate change and urban vulnerability.

Conversely, specific exclusion criteria were applied to maintain the quality and focus of the literature reviewed. Studies that did not directly address community-based disaster preparedness or were only tangentially related were omitted, particularly those with a broader focus on general disaster response without community-specific frameworks (Cahyono et al., 2022). Articles characterized by poor methodological design, including those based solely on expert opinion without empirical backing, were also excluded to prevent the dilution of evidence-based insights (Pickering et al., 2021; Sofyana et al., 2022).

Additionally, studies confined to geographically irrelevant contexts—those whose findings could not contribute meaningfully to a global understanding of CBDP—were excluded. For example, narrowly scoped studies focusing on institutional preparedness within isolated or low-disaster-risk regions were removed from consideration (Hermawan et al., 2024; Yang & Wu, 2020). Finally, non-academic publications such as opinion pieces, newsletters, blog posts, or non-peer-reviewed reports were excluded due to the lack of scientific scrutiny and replicability (Kawashima et al., 2012; Park et al., 2016).

After the initial search, all articles retrieved from the databases were exported into reference management software for organization and further screening. Duplicates were removed, and titles and abstracts were reviewed for initial eligibility. This stage filtered out a significant number of studies that either lacked relevance or did not meet the methodological standards. For the articles that passed the initial screening, full-text reviews were conducted to confirm alignment with the inclusion criteria.

The selection process employed a multi-layered evaluation framework. Each article was assessed for its conceptual relevance, methodological clarity, and contribution to the understanding of community resilience. A critical appraisal tool, adapted from existing systematic review guidelines, was used to assess the robustness of each study. Articles were rated on their clarity of research questions, data collection methods, sample representativeness, analytical depth, and the strength of the conclusions drawn. Studies that met all quality benchmarks were retained for inclusion in the final synthesis.

The narrative synthesis approach allowed for thematic analysis across heterogeneous study types. While quantitative studies contributed statistical validation of intervention outcomes, qualitative studies enriched the review with contextual insights into community engagement processes, barriers, and success factors. Mixed-methods research provided a bridge between empirical generalizability and local specificity, thereby offering holistic insights into the dynamics of CBDP.

Through this meticulous methodological process, the final dataset comprised peer-reviewed studies that collectively span multiple geographic regions, disaster types, community contexts, and implementation models. The selected studies were subsequently categorized based on their thematic focus, such as community participation, early warning systems, institutional collaboration, and cultural integration. These themes guided the structure of the results and discussion sections in the subsequent parts of this review.

This methodology ensures that the review is not only comprehensive but also analytically rigorous, enabling it to serve as a reliable resource for scholars, policymakers, and practitioners interested in advancing community-based approaches to disaster preparedness and risk reduction.

RESULT AND DISCUSSION

The literature reviewed reveals a multifaceted landscape of community-based disaster preparedness (CBDP), emphasizing various forms of community participation, early warning system effectiveness, the role of local institutions, best practices in collaboration, and the challenges communities face. The findings are organized under five interrelated thematic subsections: community participation, early warning systems (EWS), institutional roles, best practices, and barriers to effective implementation.

Community participation is one of the most widely documented dimensions in CBDP research. Literature consistently emphasizes the importance of direct community involvement in both the design and implementation of disaster preparedness programs. Education and awareness initiatives are the foundational elements of this participation. Communities are routinely engaged in disaster education programs, including risk communication, simulation drills, and awareness campaigns tailored to specific hazards (Shariff & Hamidi, 2019; Alcayna et al., 2016). These efforts aim to bridge the gap between hazard knowledge and actionable preparedness measures. For instance, participatory planning exercises involving local community members in Aceh, Indonesia, have enabled households to identify local risks and determine appropriate responses, thereby significantly improving their disaster response efficiency (Husna et al., 2021).

Beyond education, communities play a crucial role in formulating disaster preparedness plans. These are developed through structured community discussions, resource mapping, and identification of vulnerable populations (Nahar et al., 2014). Participatory planning fosters local ownership and enhances the cultural and contextual appropriateness of preparedness strategies. A study by Rangarirai et al. (2023) found that communities actively involved in disaster planning demonstrated quicker, more organized responses to real-world events, affirming the critical linkage between inclusive planning and effective disaster management outcomes.

Another significant area of community engagement lies in the development and maintenance of community-based early warning systems. The literature highlights that EWS effectiveness is directly proportional to the level of community involvement. Community members are often trained to monitor environmental indicators, disseminate warnings, and participate in drills (Yang, 2020; Yang & Wu, 2020). Their engagement fosters a sense of ownership and accountability, ensuring that EWS mechanisms are maintained and functional when needed. Studies in rural Nepal illustrate how localized and culturally adapted warning systems, coupled with community involvement, significantly improved timely evacuations and response measures during flood events (Gentle et al., 2020).

Adaptation to local contexts is a recurring feature of successful EWS. In the Philippines and Indonesia, EWS have incorporated local languages, cultural codes, and traditional communication channels to enhance message dissemination and comprehension (Paripurno & Nugroho, 2018).

These systems have also utilized low-cost technologies, such as radio broadcasts and mobile phone alerts, which are accessible even in remote and economically disadvantaged regions (Khankeh et al., 2023). In contrast, centralized, top-down systems lacking community integration have been shown to suffer from poor response rates and limited public trust.

Comparative studies across countries illustrate divergent outcomes based on the maturity of EWS infrastructure and community readiness. In China, for example, communities trained to operate EWS independently displayed higher resilience during emergencies compared to regions where government agencies retained full control over warning systems (Shariff & Hamidi, 2019). These findings emphasize the value of decentralizing risk communication systems and leveraging grassroots capacities for real-time disaster management.

The effectiveness of CBDP is also significantly shaped by the role of local institutions, including non-governmental organizations (NGOs), religious institutions, and municipal governments. NGOs are frequently highlighted as pivotal actors in delivering risk communication, facilitating training, and connecting communities to external resources. Their ability to mobilize quickly and adapt programming to the local context enables them to fill critical gaps left by public sector limitations (Shariff & Hamidi, 2019; Alcayna et al., 2016). Through their presence, NGOs often become the operational backbone of community preparedness initiatives.

Religious organizations also serve as key intermediaries. With deep-rooted community trust and expansive social networks, these institutions can effectively mobilize collective action and disseminate disaster-related information. They play vital roles in psychological recovery, providing emotional and spiritual support post-disaster while also organizing relief logistics (Alcayna et al., 2016).

Local governments, meanwhile, are positioned to institutionalize community preparedness by embedding CBDP into local policy frameworks. Their access to data, regulatory authority, and budgetary discretion enables them to scale community interventions and align them with broader risk reduction policies. The integration of locally sourced data by municipal governments into disaster risk management planning has proven particularly effective in tailoring interventions to specific community vulnerabilities (Pickering et al., 2021; Husna et al., 2021).

From the review, several best practices emerge from effective collaborations between formal institutions and community actors. One notable example is the integration of governmental, religious, and civil society actors in disaster education and simulation programs in the Philippines. These collaborations have not only improved community preparedness but also fostered inter-sectoral trust and coordination, which are critical during disaster events (Alcayna et al., 2016; Peterson et al., 2022). Similarly, initiatives that emphasize inclusive dialogue, mutual learning, and sustained engagement have built robust social capital, empowering communities to manage disaster risk more autonomously (Cahyono et al., 2022).

Despite these advances, numerous challenges continue to impede the full realization of community-based preparedness. One of the most pervasive barriers is poverty. Communities facing economic hardship often prioritize immediate survival needs over long-term preparedness, limiting their ability to invest in risk-reduction activities or infrastructure (Yang & Wu, 2020;

Sofyana et al., 2022). Financial constraints also hinder their capacity to access training, communication technologies, and resilient infrastructure.

Educational limitations further constrain community readiness. Low literacy rates, especially in remote or marginalized populations, inhibit the effective transmission and assimilation of disaster knowledge. Studies demonstrate that community members with limited education are less likely to understand or act upon early warnings, increasing their vulnerability during hazard events (Ke et al., 2020; Rezaei et al., 2022).

Infrastructural inadequacies represent an additional obstacle. Communities with poor road networks, limited access to emergency health services, or fragile housing are disproportionately affected during disasters. These vulnerabilities are exacerbated when early warning systems fail to reach the population in time due to weak communication channels or geographic isolation (Hermawan et al., 2024; Ma et al., 2023).

Importantly, these challenges are interlinked and mutually reinforcing. Economic deprivation contributes to educational disparities, which in turn limit community engagement and the development of infrastructure. Therefore, holistic interventions addressing these systemic issues are essential for building sustainable community resilience. Multi-stakeholder strategies that align local knowledge with technical resources and policy commitments are crucial for overcoming these barriers (Kawashima et al., 2012; Rezaei et al., 2023).

In conclusion, the results demonstrate that community participation in disaster preparedness enhances the efficacy of early warning systems and builds trust and cohesion across different societal sectors. The role of NGOs, religious groups, and local authorities is instrumental in enabling and scaling these efforts. However, persistent challenges related to poverty, education, and infrastructure must be systematically addressed to ensure equitable and sustainable disaster resilience. This evidence reinforces the need for inclusive, context-sensitive, and participatory models of disaster risk reduction that place communities at the core of preparedness strategies.

The findings from this narrative review largely reinforce existing literature on the value of community-based disaster preparedness (CBDP) while also revealing key differences in how such strategies are interpreted and implemented across contexts. One of the most consistently supported observations in the literature is the assertion that disaster preparedness strategies developed with community participation are often more effective than externally designed approaches. Alcayna et al. (2016) emphasized that plans originating within communities tend to be more contextually relevant, culturally acceptable, and practically executable. This review affirms that active community involvement strengthens disaster mitigation efforts and aligns preparedness strategies with actual community needs.

Additionally, consistent with studies by Hamzah et al. (2022) and Shariff & Hamidi (2019), the results of this review underscore the crucial role of institutional support, particularly from NGOs and local governments, in sustaining community preparedness. The best practices observed in the Philippines, where non-governmental and faith-based organizations have contributed significantly to local resilience, illustrate how collaborative partnerships enhance the sustainability and impact of CBDP initiatives. However, not all communities possess equal capacities for active

participation, as socioeconomic and infrastructural barriers often hinder engagement. These findings point to the necessity of a nuanced understanding that balances the ideal of community autonomy with the practical need for structural support.

Notably, challenges identified in this review align with prior studies, including those by Austin (2012) and Cahyono et al. (2022), which found that poverty, limited education, and inadequate infrastructure remain core impediments to effective disaster preparedness. Communities burdened by economic hardships frequently lack the time, resources, or information to engage proactively in disaster risk reduction efforts. This discrepancy emphasizes the interdependence between systemic factors and localized preparedness efforts, revealing that community-based strategies cannot function in isolation from broader structural determinants.

National policy frameworks play a foundational role in shaping the success or failure of community disaster preparedness. Siddiqi et al. (2023) highlighted how integrated, inclusive national policies enable local actors to act decisively and cohesively. In Bangladesh, for instance, the national disaster risk reduction policy framework has significantly bolstered grassroots preparedness efforts, demonstrating the powerful synergy between top-down support and bottom-up engagement (Zaman et al., 2022). This review affirms that when national governments prioritize participatory disaster management and allocate resources accordingly, communities are empowered to organize and respond more effectively.

Beyond policy, social structures also influence disaster preparedness outcomes. Communities with strong social cohesion and active civic networks tend to exhibit higher resilience levels, as these networks facilitate rapid resource mobilization and support during crises (Everett et al., 2020). Conversely, fragmented or marginalized communities often face internal communication barriers, weakening the efficacy of collective action (Cahyono et al., 2022). These dynamics suggest that community engagement in disaster preparedness must be underpinned by efforts to strengthen social ties and promote inclusive local governance.

Institutional collaboration is another critical determinant of CBDP success. Austin (2012) found that both formal and informal cooperation between governmental bodies, NGOs, and community organizations significantly enhanced emergency response outcomes. In this review, successful examples of institutional synergy reveal that integrated approaches—where responsibilities and resources are shared—lead to more comprehensive and responsive preparedness systems (Adams et al., 2017; Rivera et al., 2019). In contrast, poorly coordinated efforts often result in duplicated initiatives, confusion among stakeholders, and inefficiencies in resource deployment.

Nonetheless, national policies sometimes hinder rather than support community-based initiatives. Kheirallah et al. (2022) and Arifin et al. (2021) argue that misalignment between policy design and community realities leads to ineffective implementation and community disillusionment. For instance, when disaster preparedness programs do not incorporate cultural context or local input, they risk being seen as irrelevant or intrusive, thereby reducing participation and overall program efficacy. Cahyono et al. (2022) further noted that even well-intended policies may falter due to disconnects between policy objectives and operational feasibility at the community level.

The implications of these findings for future policy and intervention design are substantial. One key recommendation is the formal institutionalization of community engagement in all phases of disaster preparedness. Shariff & Hamidi (2019) and Husna et al. (2021) stressed that inclusive planning leads to strategies that are not only more effective but also more widely supported by community members. Policies that mandate and facilitate community involvement in disaster risk management can generate more grounded, adaptable, and resilient preparedness systems.

Future interventions must also embrace collaborative planning frameworks that include both community actors and institutional stakeholders. Austin's research on "clustering preparedness" demonstrates that shared ownership of preparedness responsibilities fosters accountability and innovation in localized disaster response strategies (Shariff & Hamidi, 2019). These inclusive models ensure that no single actor bears the full burden of preparedness, enhancing systemic resilience.

Policy responsiveness to local diversity is another critical area of improvement. Alcayna et al. (2016) found that participatory frameworks tailored to the unique characteristics of communities yield better preparedness outcomes. The adoption of localized risk assessment tools and flexible policy instruments can ensure that strategies are both effective and contextually appropriate. This responsiveness must be institutionalized through decentralized planning processes that empower local governments and community groups.

Technology and innovation also present opportunities for enhancing CBDP effectiveness. Austin (2012) provided evidence of how community radio in Odisha was used to disseminate disaster information effectively. Expanding the use of digital platforms and mobile-based applications can bridge communication gaps, particularly in remote or underserved regions. However, these technologies must be accompanied by community training and infrastructure development to ensure accessibility and usability.

The psychological dimensions of disaster resilience should also be more deeply integrated into policy frameworks. Firdaus et al. (2023) and Everett et al. (2020) emphasized that community mental health support and trauma-informed approaches are vital for sustaining long-term resilience. Future preparedness strategies should incorporate psychosocial interventions, particularly in communities with high exposure to recurrent disasters. Building emotional and mental resilience is equally important as physical infrastructure and logistical capacity.

Monitoring and evaluation mechanisms must be rooted in community participation. Nahar et al. (2014) proposed that community-based monitoring systems can generate real-time feedback and enhance accountability. Shariff & Hamidi (2019) echoed this by advocating for adaptive learning processes that evolve based on localized insights. Embedding community voices into program evaluation not only improves transparency but also fosters ownership and continual improvement.

Despite the valuable insights this review provides, it is important to acknowledge the limitations of the current body of literature. Many existing studies are context-specific and may not be generalizable to other regions with different social, economic, or environmental conditions. Furthermore, there is often a lack of longitudinal data tracking the long-term outcomes of CBDP interventions, limiting the ability to assess sustainability over time. Future research should

prioritize comparative studies across multiple regions and cultures, employ mixed-methods approaches to capture both quantitative outcomes and qualitative experiences, and explore the intersections between CBDP and other areas such as climate adaptation and urban planning.

Additionally, more attention is needed on the role of youth, women, and other underrepresented groups in community preparedness efforts. Their participation not only broadens the base of engagement but also introduces diverse perspectives and solutions that can enrich disaster risk management strategies. Understanding the barriers these groups face and identifying ways to empower them is essential for building truly inclusive and effective preparedness systems.

By addressing these research gaps and policy challenges, stakeholders can co-create disaster preparedness systems that are adaptive, equitable, and grounded in the lived realities of communities. As this review has demonstrated, integrating systemic support with community-driven action remains the cornerstone of effective and sustainable disaster risk reduction.

CONCLUSION

This narrative review affirms that community-based disaster preparedness (CBDP) significantly enhances the effectiveness of disaster mitigation and response strategies. The findings demonstrate that participatory approaches, community-driven early warning systems, and institutional collaborations with local governments, NGOs, and religious organizations are essential pillars of successful CBDP implementation. Active community engagement improves contextual relevance and response efficiency, particularly in areas where centralized systems fall short. However, systemic challenges such as poverty, limited education, and weak infrastructure continue to constrain the ability of many communities to participate meaningfully in disaster preparedness efforts.

The discussion highlights that without supportive national policies and well-structured institutional frameworks, even the most motivated communities struggle to sustain preparedness activities. Mismatches between national policy and local needs often hinder the effectiveness of programs, underscoring the need for policy alignment, decentralization, and inclusivity. Recommendations for future policy include institutionalizing community involvement in disaster planning, leveraging low-cost technologies for risk communication, and integrating psychosocial resilience into preparedness strategies.

To address the limitations in current literature, future research should explore comparative analyses across diverse socio-economic and geographical contexts, and investigate the role of marginalized groups, such as women and youth, in CBDP. Expanding the evidence base through longitudinal studies and mixed-methods research will help ensure that disaster preparedness is both equitable and sustainable. Ultimately, enhancing community capacity, promoting institutional collaboration, and designing context-sensitive interventions are key to overcoming persistent challenges and building resilient societies.

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