RESEARCH ARTICLE

Current status and prospects of social work in disaster management systems in Indonesia

Adi Fahrudin , Budi Pramono², Uke Hani Rasalwati³, Sulistyary Ardiyantika⁴, Silvia Fatmah Nurusshobah⁵, Husmiati Yusuf⁶, Suradi Suradi⁷

¹ Universitas Bhayangkara Jakarta Raya, Jakarta, 12140, Indonesia

² Universitas Pertahanan, Jakarta, 16810, Indonesia

^{3,4,5} Polytechnic of Social Welfare, Bandung, 40135, Indonesia

^{6,7} National Research and Innovation Agency, Jakarta, 10340, Indonesia

* Corresponding author: Adi Fahrudin, adi.fahrudin@dsn.ubharajaya.ac.id

ABSTRACT

This literature review examines social work's current status and prospects within Indonesia's disaster management system. Indonesia's location within the seismically active "Ring of Fire" makes it highly susceptible to frequent and devastating natural disasters, underscoring the critical role of social work in disaster response, recovery, and mitigation. However, a significant gap exists in the literature regarding social work's involvement in Indonesia's disaster management. This review will analyze available global research on social work in disaster management, extrapolating potential applications to the Indonesian context while acknowledging the inherent limitations of such an approach. The analysis will focus on the current integration of social work into disaster management systems; the effectiveness of existing social work interventions; the challenges and limitations faced by social workers; and recommendations for improving the role and impact of social work in disaster management, with specific consideration for the Indonesian context.

Keywords: Disaster social work; disaster response; recovery; multidisciplinary perspective; disaster resilience

1. Introduction

The current status and prospects of social work in disaster management in Indonesia are characterized by an evolving understanding of community resilience, the importance of social capital, and the integration of local knowledge and practices into formal disaster management systems. Social work plays a crucial role in enhancing community resilience, particularly in the context of Indonesia's vulnerability to natural disasters. In Indonesia, the traditional paradigm of disaster management has predominantly centered on government-led initiatives, often sidelining community involvement. However, recent studies emphasize that community engagement is vital for effective disaster response and recovery. For instance, Aksa and Afrian highlight the significance of "mutual cooperation" within communities, which enhances their capacity to respond to tidal floods and other disasters by fostering social networks and collective action^[1]. This aligns with findings from

ARTICLE INFO

Received: 6 January 2025 | Accepted: 6 February 2025 | Available online: 28 February 2025

CITATION

Fahrudin A, Pramono B,Rasalwati UH,et al.Current Status and Prospects of Social Work in Disaster Management Systems in Indonesia. Environment and Social Psychology 2025; 10(2): 3421. doi:10.59429/esp.v10i2.3421

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other studies that underscore the role of social capital in disaster management, where community networks facilitate resource sharing and collective resilience^[2,3]. The Tengger community's survival strategies, rooted in their cultural norms and values, further illustrate how local practices can enhance disaster preparedness and response.

Moreover, the integration of social work into disaster management frameworks is increasingly recognized as essential. Social workers are positioned to act as educators, community organizers, and advocates, helping to bridge the gap between formal disaster management agencies and local communities^[4]. Their involvement is critical in disaster preparedness, response, and recovery phases, as they can mobilize community resources and facilitate communication among stakeholders^[5]. The role of social work in disaster management is not only about providing immediate assistance but also about fostering long-term resilience through community empowerment and capacity building. The COVID-19 pandemic has further highlighted the importance of social work in disaster management, as communities have had to adapt to new challenges. Research indicates that social media and virtual networks have played a significant role in maintaining community engagement and resilience during the pandemic^[6,7]. This shift towards digital platforms for communication and support underscores the need for social workers to adapt their practices to leverage technology in disaster management efforts. Looking ahead, the prospects for social work in disaster management in Indonesia appear promising, particularly as there is a growing recognition of the need for collaborative governance and community-based approaches. Initiatives that promote stakeholder engagement and local-level participation are essential for building resilience ^[8,9]. Furthermore, enhancing the capacity of social workers through training and resources will be crucial in equipping them to effectively address the complexities of disaster management in a rapidly changing environment ^[10]. In conclusion, the integration of social work into Indonesia's disaster management system is vital for fostering community resilience. By leveraging social capital, enhancing community engagement, and adapting to new challenges, social workers can play a pivotal role in mitigating the impacts of disasters and promoting sustainable recovery.

Social workers in Indonesia are in a strategic position in disaster management because Indonesia is a country that is highly susceptible to various types of natural and non-natural disasters. A lot of humanitarian aid and relief assistance has been channeled to those in need through various forms of work by social workers. However, policies and standards in disaster management rarely regulate or comprehensively use existing practices in social work. Furthermore, there is still a significant gap between the goals of disaster management and the principles of social work. There is a need for a comprehensive framework that integrates the notion of the work of social workers with that of how lives can be rebuilt in society so that a better environment can be built on the one that has been hit by a disaster with social work. This aims to identify a prospect and gauge the current status of disaster social work in Indonesia.

The objectives are to identify the current state of disaster social work with internally displaced persons (IDPs) in Indonesia; to assess the extent to which it has been supported as a professional service in theories of disaster management; and to identify areas where further research may be of use. Following the introduction, the essay starts by discussing a defining cultural approach to studying disaster responses and what we can learn from this about approaches to disaster management in IDP situations. The essay then further discusses social work and disaster management, focusing specifically on what social work with IDPs entails. The essay goes on to discuss what IDPs are and what the practices of disaster management in Indonesia involve. Finally, the arguments are presented as well as the future direction in assisting IDPs through advocacy. The essay is carried out through a literature study of the areas identified, and the observation of the field, covering numerous books and papers written by experts in the areas of sociology,

management, and social policy. The next section of the essay presents definitions of what social work and disaster management are as well as the forms of related interventions.

2. Methodology

Review approach

This study employs a scoping review approach to systematically examine the role of social work in disaster management in Indonesia. The scoping review framework follows the five-stage methodology outlined by^[11], with enhancements from^[12], ensuring a structured and transparent process.

Inclusion and exclusion criteria

To ensure relevance, studies were selected based on the following criteria:

- Inclusion Criteria:
 - Peer-reviewed journal articles, books, and reports published between 2000–2024.
 - Studies focusing on the role of social work in disaster management.
 - Research conducted in Indonesia or applicable to similar socio-cultural and geographical contexts.
 - Empirical studies, theoretical papers, and policy reviews.

• Exclusion Criteria:

- \circ Articles unrelated to social work in disaster contexts.
- \circ $\;$ Opinion pieces, non-peer-reviewed sources, and duplicates.
- Studies with insufficient methodological transparency.

Search strategy

A systematic search was conducted in electronic databases, including; Scopus, Web of Science, PubMed, Google Scholar, and Indonesian Research Repositories (Garuda, Neliti). Search terms were structured using Boolean operators: ("social work" AND "disaster management" AND "Indonesia"), along with variations such as "disaster social work," "disaster response," "community resilience," "humanitarian intervention," and "disaster recovery." Citation chaining was also used to identify additional relevant sources.

Data extraction and analysis

- a. The studies were screened based on title, abstract, and full-text review.
- b. Data were extracted using a standardized form covering study design, objectives, methodology, key findings, and relevance to Indonesia.
- c. A thematic analysis was conducted to categorize the findings under key themes, including:
 - a. Role of social work in disaster preparedness, response, and recovery
 - b. Challenges in integrating social work into disaster management systems
 - c. Effectiveness of social work interventions in disaster contexts
 - d. Policy and institutional frameworks for social work in disaster settings

In discussing core competencies required for disaster social work, this study draws on^[13], which identifies essential skills and competencies for social workers in disaster response. Additionally, comparative insights from^[13] regarding disaster social work in China provide valuable context for understanding the adaptability of social work interventions in Indonesia. Furthermore, reflections from^[14] on social work practices in Türkiye's hospital-based disaster response highlight practical challenges that are relevant to the Indonesian context.

Quality assessment

To ensure rigor, studies were evaluated using the Mixed Methods Appraisal Tool (MMAT) for qualitative, quantitative, and mixed-methods research. Policy papers and gray literature were appraised based on credibility and relevance.

Ethical considerations

Since this study is a literature review, no primary data collection was conducted. However, ethical considerations were maintained by properly citing all sources and ensuring objectivity in data interpretation.

Limitations

While this scoping review provides a broad overview of the field, it does not conduct a meta-analysis *due* to variations in study designs. Future research could employ systematic review methodologies to further analyze specific interventions' effectiveness.

3. Result and discussion

3.1. Historical overview of disaster management in Indonesia

The historical overview of disaster management in Indonesia reveals a complex evolution influenced by the country's geographical vulnerabilities, legislative frameworks, and the integration of community-based approaches. Indonesia, situated on the Pacific Ring of Fire, is prone to a variety of natural disasters, including earthquakes, tsunamis, volcanic eruptions, and floods, which necessitate a robust disaster management system^[15,16].

Historically, disaster management in Indonesia has transitioned from a reactive approach to a more proactive and integrated framework. The enactment of Law Number 24 of 2007 marked a significant milestone in formalizing disaster management practices, emphasizing the importance of preparedness, response, recovery, and mitigation^[17]. This law aimed to protect communities from disasters and foster cooperation among various stakeholders, including government agencies, local communities, and non-governmental organizations^[17]. The establishment of the National Disaster Management Agency (BNPB) further institutionalized disaster management efforts, providing a centralized body to coordinate disaster response and recovery activities across the archipelago^[18,19].

The 2004 Aceh earthquake and tsunami served as a pivotal moment in Indonesia's disaster management history, catalyzing significant reforms and international cooperation in disaster response ^[20,21]. This disaster highlighted the need for comprehensive disaster education and preparedness programs, leading to the integration of disaster risk reduction (DRR) into the national education curriculum^[22,23]. The emphasis on disaster literacy has been recognized as crucial for enhancing community resilience, as it equips individuals with the knowledge and skills necessary to respond effectively to disasters^[24].

In recent years, there has been a shift towards community-based disaster risk management (CBDRM), recognizing the vital role of local knowledge and community engagement in disaster preparedness and response^[25,26]. This approach aligns with the Hyogo Framework for Action, which advocates for local-level participation in disaster risk reduction efforts^[25]. Studies have shown that disaster literacy and community engagement significantly influence behavioral responses to disasters, thereby enhancing overall resilience^[24].

Moreover, the Indonesian government has increasingly focused on integrating disaster risk reduction into regional development planning, emphasizing the need for a multi-sectoral approach that considers social, economic, and environmental factors^[27]. This shift reflects a broader global trend towards sustainable disaster management practices that prioritize prevention and preparedness over mere response^[27].

3.2. Role and integration of social work in disaster management

During disasters, social workers carry out several functions as a form of participation in efforts to reduce disasters and support the principles of sustainable development. The role in the disaster cycle starts from the pre-impact stage to the post-impact. At the pre-impact stage, the assessment role is carried out; in the impact phase, the roles of planning, organizing, and intervening are carried out; and in the post-impact phase, the role of following up and evaluating programs for empowerment and changes in the affected individuals is carried out to decrease their vulnerabilities. Social workers play an important role in managing disasters when there are natural or man-made disasters. The role of social workers starts with assessment and planning interventions that are needed during the crisis to empower individuals and communities affected by the disaster so that they become more resilient and independent in managing their lives and families. This statement will discuss at length the current state and prospects of social work participation in disaster management in Indonesia. Some examples that have been or are being done by social workers include community education in search and evacuation activities, safe buildings for earthquakes, and the establishment of rubber-emergency schools that have proven to be successful in the form of community development that is more independent and is manifested in its social resilience. The involvement of social workers in disaster management has interdisciplinary value, where a multidisciplinary approach between institutions is needed. Financial humanitarian aid is one of the triggers for the bureaucratic management of institutions and agencies depending on funds from abroad. Social workers have a role in reconstruction and advocacy. In terms of rehabilitation, social workers perform a range of activities that help the coping of those affected by disaster.

While the provided documents lack direct information on Indonesia's social work integration within disaster management, they offer valuable insights into the global role of social work in disaster contexts. The substantial mental health impact of disasters is well-documented^[28-30], highlighting the urgent need for psychosocial support interventions. These interventions typically include supportive counseling, psychoeducation, and skills training^[28], all core components of social work practice. A community-based approach is also crucial^[28,30], aligning with the fundamental community focus of social work. Effective disaster response requires robust organizational structures and strong inter-sectoral collaboration^[30,31], areas where social workers can play a vital coordinating and facilitating role.

However, the extent to which these principles are implemented within Indonesia's disaster management system remains unknown without dedicated research on the Indonesian context. The successful implementation of trauma-informed support programs in other regions, such as Iraqi Kurdistan^[32], illustrates the potential of tailored interventions. However, their direct applicability to Indonesia requires further investigation given the unique socio-cultural factors and disaster profiles in Indonesia^[33]. The complex dynamics of organizational structures during disasters^[30] underscore the need for improved coordination and integration of social work services.

The gendered dimensions of disasters, where women disproportionately experience negative consequences^[29], necessitate gender-sensitive approaches and specialized training for social workers^[30]. This is especially critical in Indonesia, considering its diverse cultural landscape.^[29] highlight the disproportionate impact of disasters on women, including increased vulnerability to gender-based violence. This underscores the need for gender-sensitive interventions in disaster response and recovery efforts.

3.3. Social work interventions in disaster contexts: Evidence and research gaps

Research on the effectiveness of social work interventions in disaster settings reveals varied outcomes. A randomized controlled trial of a trauma-informed intervention in Iraqi Kurdistan showed statistically significant improvements in depressive symptoms and dysfunction among participants^[32]. This highlights the potential of targeted interventions to address the mental health consequences of disasters. However, generalizing this to Indonesia is challenging due to the unique socio-cultural factors and disaster profiles present in Indonesia. The absence of specific data on social work interventions in Indonesia represents a significant research gap. The literature lacks sufficient detail on the types of interventions implemented, their reach, and their long-term impact within Indonesia^[30].

Further research is needed to evaluate the effectiveness of various approaches within the Indonesian setting. While the Iraqi Kurdistan study^[32] provides valuable evidence, it does not address the specific challenges and nuances of the Indonesian context. Therefore, the effectiveness of similar interventions in Indonesia requires empirical testing. The development of disaster mental health guidelines through the Delphi process in Japan^[32] offers a methodological example for developing context-specific guidelines for Indonesia. This approach involves a thorough literature review, focus group interviews, and a multi-round consensus-building process with experts. This systematic approach ensures the inclusion of local knowledge and expertise, leading to more culturally appropriate and effective guidelines.^[32] emphasize the importance of developing culturally appropriate guidelines, taking into account the unique needs and experiences of the local population.

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3.4. Challenges and limitations: Barriers to effective social work integration in Indonesia

Social workers face numerous challenges in disaster management, which can significantly impact their effectiveness in responding to crises. These challenges stem from a combination of systemic issues, resource limitations, and the inherent complexities of disaster situations. One of the primary challenges is the lack of clear communication and coordination among various stakeholders during disaster events. Maher and Maidment highlight that even with established policies and guidelines, social workers often find themselves operating in chaotic environments where communication systems are compromised, and their roles may shift unexpectedly. This unpredictability can lead to confusion and hinder the timely delivery of services to affected populations. Furthermore, the need for social workers to assume roles outside their planned

responsibilities can lead to increased stress and burnout, as they navigate the complexities of disaster response without adequate support^[35,36].

Additionally, the evolving nature of disasters, particularly in the context of climate change and public health crises like the COVID-19 pandemic, has necessitated that social workers adapt quickly to new challenges. Henley et al. emphasize the importance of flexibility and the acquisition of new skills in response to changing circumstances, such as the integration of public health education into their practice. This adaptability is crucial, yet it can be overwhelming for social workers who may not have received training in these areas, leading to feelings of inadequacy and anxiety about their ability to meet community needs^[37].

Another significant challenge is the limited resources available for disaster management. Social workers often operate within constrained budgets and insufficient staffing, which can impede their ability to provide comprehensive support to disaster-affected individuals and communities.^[38] note that while social workers strive to adopt a non-judgmental and resource-focused approach, the reality of resource scarcity can limit their effectiveness in empowering individuals to take control of their situations during and after disasters. This scarcity can also affect the sustainability of recovery efforts, as social workers may struggle to secure ongoing support for vulnerable populations^[36].

Moreover, social workers must contend with the emotional toll of their work in disaster contexts. The psychological impact of witnessing trauma and loss can lead to vicarious trauma among social workers, which may affect their mental health and job performance. The need for self-care and institutional support is critical, yet often overlooked in disaster management planning^[39,40]. In summary, the challenges faced by social workers in disaster management are multifaceted, encompassing issues of communication, resource limitations, the need for adaptability, and the emotional toll of their work. Addressing these challenges requires a concerted effort to enhance training, improve communication and coordination among stakeholders, and provide adequate resources and support for social workers in disaster contexts.

There are many obstacles to carrying out social work in a disaster management context in Indonesia. The social workers who usually work for the Ministry of Social Affairs and dozens of units belonging to other technical ministries are very limited in resources. Coupled with this, social workers confess that they have had difficulty carrying out emergency response work, including in disaster-affected areas, because they have not been adequately trained. The role of social work, including social workers, in disaster relief is still a side dish. This is because the bureaucracy that exists for social workers is complicated, so many stages must be taken. For example, if social workers must be deployed to collect data in the field, even though social workers already have certain skills like others.

Fieldwork in disaster areas often causes stress and burnout for social workers because fieldworkers sometimes become emotional after seeing the sad faces of the affected people, in addition to the problem of inaccessibility of disaster areas. The social worker culture is sometimes a problem when interventions are carried out in a multi-ethnic and multicultural context. In a multi-ethnic society, various cultures also have different meanings and attitudes towards social work. Lack of communication can also be a barrier. Sometimes, while working in the field, it is difficult for social workers to communicate with the local community or victims because of differences in language. Other problems in working as a social worker in disaster-affected areas include the political situation in the field. Political intervention can also hamper the process of carrying out the mandate of humanitarianism itself. Environmental conditions in disaster areas can also hinder the process of work in disaster areas and can threaten the safety of social workers. For example, natural disasters such as tsunamis in some areas have not only threatened the lives of the community but could also threaten the lives of the social workers who helped. In humanitarian work, social workers –

especially those who work directly – often encounter obstacles that are part of their activities. In Indonesia, the division of social worker teams has not been freed from the division of tasks from each field, so social workers often need help from other units to assist in the field.

While the provided documents lack direct information on Indonesia's social work integration within disaster management, they offer valuable insights into the global role of social work in disaster contexts. The substantial mental health impact of disasters is well-documented^[29, 32,34], highlighting the urgent need for psychosocial support interventions. These interventions typically include supportive counseling, psychoeducation, and skills training^[32], all core components of social work practice. A community-based approach is also crucial^[4,32], aligning with the fundamental community focus of social work.

Effective disaster response requires robust organizational structures and strong inter-sectoral collaboration^[4,31], areas where social workers can play a vital coordinating and facilitating role. However, the extent to which these principles are implemented within Indonesia's disaster management system remains unknown without dedicated research on the Indonesian context. The successful implementation of trauma-informed support programs in other regions, such as Iraqi Kurdistan^[34], illustrates the potential of tailored interventions. However, their direct applicability to Indonesia requires further investigation given the unique socio-cultural factors and disaster profiles in Indonesia^[33].

The complex dynamics of organizational structures during disasters ^[31] underscore the need for improved coordination and integration of social work services. The gendered dimensions of disasters, where women disproportionately experience negative consequences ^[29], necessitate gender-sensitive approaches and specialized training for social workers ^[32]. This is especially critical in Indonesia, considering its diverse cultural landscape. ^[29] highlight the disproportionate impact of disasters on women, including increased vulnerability to gender-based violence. This underscores the need for gender-sensitive interventions in disaster response and recovery efforts.

Several challenges hinder the effective integration of social work in disaster management globally, and these are likely amplified within the Indonesian context. Limited resources^[4,32] and inadequate training^[31,41] are substantial obstacles. A lack of clearly defined roles and responsibilities within the disaster management system^[31,41] further complicates matters.

The gendered impact of disasters^[29] necessitates gender-sensitive approaches, requiring specialized training and awareness among social workers^[32]. Addressing diverse community needs and navigating complex organizational structures during a disaster requires well-prepared and resourced social workers^[41]. The absence of a unified analytical framework for documenting and analyzing post-disaster transitions^[42] further limits learning and improvement.

In Indonesia, these challenges are exacerbated by geographical remoteness, linguistic diversity, and preexisting social inequalities^[33]. These factors require careful consideration in future research. The lack of a clear understanding of the organization and delivery of social services in extreme events^[41] is a significant barrier to effective social work integration in disaster management. Further research is needed to understand the complex dynamics between different levels of organization, diverse constituencies of disaster survivors, and the environments in which they operate^[41,41] work emphasizes the need for a deeper understanding of the complex organizational dynamics involved in delivering social services during disasters. This understanding is crucial for effective planning and implementation of social work interventions.

3.5. Opportunities and enhancing social work's role in Indonesia disaster management

The opportunities for improvement and future directions in the field of social work within disaster management are critical for enhancing the effectiveness of responses and recovery efforts. As the landscape of disasters evolves, social workers must adapt their practices and strategies to meet the changing needs of communities affected by crises ^[54]. One significant opportunity lies in the integration of evidence-based practices into disaster response frameworks. Harms et al. emphasize the importance of utilizing research to inform social work interventions in post-disaster contexts, highlighting that social workers are trained in assessment and intervention, which positions them well to contribute effectively during both immediate responses and ongoing recovery phases^[43].

By leveraging empirical evidence, social workers can enhance their practice, ensuring that interventions are tailored to the specific needs of affected populations. Moreover, the development of collaborative networks among social workers, government agencies, and non-governmental organizations (NGOs) presents a vital avenue for improvement. Maher and Maidment point out that effective disaster management requires clear communication and coordination among various stakeholders^[35]. Establishing robust partnerships can facilitate resource sharing, enhance information flow, and improve the overall efficiency of disaster response efforts. This collaborative approach can also help to address the challenges of resource limitations that social workers often face in disaster contexts^[36].

Training and capacity building for social workers are also essential for enhancing their effectiveness in disaster management.^[44] highlight the need for ongoing professional development to equip social workers with the skills necessary to navigate the complexities of disaster recovery, particularly in the context of neoliberal policies that can shape recovery efforts^[44]. By investing in training programs that focus on disaster preparedness, response, and recovery, social workers can be better prepared to meet the diverse needs of communities during crises. Furthermore, the incorporation of community participation in disaster management processes is crucial. Huang et al. emphasize that effective disaster recovery relies on cooperation and communication among various stakeholders, including community members^[45]. Engaging communities in the planning and implementation of disaster response initiatives not only empowers individuals but also ensures that interventions are culturally relevant and responsive to local needs.

This participatory approach can enhance the sustainability of recovery efforts and foster a sense of ownership among community members. In addition, addressing the emotional and psychological needs of social workers themselves is vital for maintaining their well-being and effectiveness in disaster management. The high-stress nature of disaster response can lead to burnout and vicarious trauma among social workers^[39]. Implementing support systems, such as peer debriefing and mental health resources, can help social workers manage the emotional toll of their work, ultimately improving their capacity to serve affected communities. Lastly, there is a growing recognition of the role of social capital in disaster recovery. Cvetković et al. argue that strengthening social networks within communities can enhance resilience and facilitate recovery efforts^[46]. Social workers can play a pivotal role in fostering these connections, helping to build trust and collaboration among community members, which is essential for effective disaster management. In conclusion, the future directions for social work in disaster management should focus on integrating evidence-based practices, fostering collaboration among stakeholders, enhancing training and capacity building, promoting community participation, supporting the well-being of social workers, and leveraging social capital. By addressing these areas, social workers can significantly improve their effectiveness in disaster response and recovery, ultimately contributing to more resilient communities.

To enhance social work's role in Indonesia's disaster management system, several recommendations are crucial. First, comprehensive research is urgently needed to assess the current capacity of social workers,

identify gaps in service provision, and evaluate the effectiveness of implemented interventions within the Indonesian context^[41]. This research must account for Indonesia's diverse population and frequent natural disasters^[33].

Second, substantial investment in training and professional development programs is essential to equip social workers with the necessary skills and knowledge^[4,31]. These programs should incorporate gender-sensitive approaches and address the unique challenges faced by social workers in Indonesia^[29].

Third, establishing clear roles, responsibilities, and collaboration protocols within the disaster management system will ensure the effective integration of social work services^[31,41]. Strengthening intersectoral collaboration between social workers, government agencies, and NGOs is vital for effective disaster response and recovery^[47].

Fourth, developing and implementing robust monitoring and evaluation frameworks will help assess the impact of interventions and inform future improvements^[4,41]. This systematic approach will ensure social work contributes significantly to building more resilient and inclusive communities.

Finally, leveraging post-disaster windows of opportunity for change toward sustainability^[42] should be a key focus. This requires integrating concepts from both disaster recovery and sustainability literature to develop effective and lasting solutions.^[42] work emphasizes the importance of leveraging post-disaster opportunities for sustainable development. This requires a unified analytical framework that integrates concepts from both disaster recovery and sustainability literature. The framework should facilitate the documentation and analysis of transitions following disasters, enabling theory-building and the development of effective strategies for achieving sustainability objectives.

Moreover, Indonesia, with its new system of presidential government, has a great opportunity to develop an integrated system with clear hierarchical lines to guide the activities of national and local governments in the prevention, disaster management, and post-disaster recovery. Local disaster management policies can be harmonized with the national system, and funding can be adjusted for planning, organization, operation, and development in the field of social work in disaster management. Early recovery should implement the practice of construction and disaster rehabilitation that prioritizes community involvement. Post-disaster recovery should empower communities, both individual and group, to determine the desired model of development while considering disaster risk reduction. Development and recovery must consider local wisdom and conform to ecological, social, and cultural settings. Professional development programming for social workers and others in the community in disaster situations is very important. Limited resources that originate as a high burden on a large group of workers cause a lack of trained staff for emergency and disaster responses to provide primary prevention. Disaster management is currently an alternative policy that utilizes technology, especially information technology services. The implications are reducing spatial and temporal uncertainty, providing real-time information services, and using modeling to enable accurate prediction. This technology and modeling system can be applied more broadly in real disaster or emergency response and may also be delegated to social workers. The mechanism of delegation and the level of competence of technology use must be approved by disaster-affected communities or local governments. The establishment of professional networks is recommended. Concurrent training and ideally formal research in disaster-affected areas or countries, and documentation of experiences, should be introduced to other social workers, local governments, and communities.

3.6. The path forward for social work in Indonesian disaster management

The role of social work in disaster management is multifaceted and critical to the overall effectiveness of disaster response and recovery efforts. Social workers are uniquely positioned to address the psychological, social, and community needs that arise in the aftermath of disasters. Their involvement spans various phases of disaster management, including preparedness, response, recovery, and mitigation^[55]. One of the primary roles of social workers in disaster management is to provide psychological support to individuals and communities affected by disasters.^[48] emphasize that disasters have profound psychological impacts, often leading to trauma and loss of emotional control^[48]. Social workers are trained to recognize and address these psychological needs, facilitating emotional stability through supportive interventions and community engagement. They can implement programs that foster communication and connection among affected individuals, which is essential for healing and recovery.

Moreover, social workers play a crucial role in enhancing social capital within communities during disaster recovery. Ganapati highlights that social capital, particularly among women, is vital for effective recovery^[49]. Social workers can help mobilize community resources, strengthen networks, and promote collective action, which are essential for rebuilding and recovery efforts. By fostering relationships and collaboration among community members, social workers can enhance resilience and facilitate a more effective recovery process. In addition to psychological support and community mobilization, social workers are instrumental in advocating for vulnerable populations during disaster management. Hay and Pascoe discuss the importance of social workers in articulating their unique expertise and advocating for the needs of affected individuals within the broader disaster management framework^[38]. This advocacy is crucial in ensuring that the voices of marginalized groups are heard and that their specific needs are addressed in recovery planning and implementation.

Furthermore, the involvement of social workers in disaster management is essential for fostering interagency collaboration. Huang et al. emphasize that effective disaster recovery requires cooperation and communication among various stakeholders, including government agencies and NGOs^[45]. Social workers can act as liaisons, facilitating dialogue and coordination among these entities to ensure a comprehensive and cohesive response to disasters. Their ability to navigate complex social systems and build relationships is invaluable in creating a unified approach to disaster management. Social workers also contribute to the development of disaster preparedness plans and training programs. By integrating their knowledge of community dynamics and social issues, social workers can help design training that addresses the specific needs of communities at risk. This proactive approach is essential for building resilience and ensuring that communities are better prepared to respond to future disasters.

Moreover, the role of social workers extends to the evaluation and improvement of disaster recovery efforts. Li and Tan highlight the importance of community participation in recovery processes, noting that social workers can facilitate this engagement^[50]. By involving community members in decision-making and recovery planning, social workers can ensure that recovery efforts are culturally relevant and responsive to local needs. This participatory approach not only enhances the effectiveness of recovery initiatives but also fosters a sense of ownership and empowerment among community members. In conclusion, the role of social work in disaster management is critical and encompasses a wide range of functions, including psychological support, community mobilization, advocacy, inter-agency collaboration, training, and participatory recovery planning. By leveraging their unique skills and expertise, social workers can significantly enhance the effectiveness of disaster response and recovery efforts, ultimately contributing to more resilient communities.

This review emphasizes the crucial yet under-researched role of social work in Indonesia's disaster management system. While global literature provides valuable insights into social work's potential contributions^[29,34,41], further research is urgently needed to understand the specific Indonesian context.

Addressing the identified challenges and implementing the recommendations will significantly improve the effectiveness and impact of social work in building more resilient and equitable communities.

Future research should focus on empirical studies examining specific interventions, challenges, and outcomes within Indonesia's disaster management framework. Comparative studies examining different models of social work integration across various Indonesian regions could provide valuable insights. Integrating social work into national disaster preparedness and response strategies is crucial for achieving sustainable development goals and building more resilient communities in Indonesia. This necessitates substantial investment in research, training, and policy development tailored to the Indonesian context.

The development of a framework for integrating equity and inclusive development perspectives into the Driver-Pressure-State-Impact-Response (DPSIR) framework^[51] could provide a useful tool for analyzing the social and environmental impacts of disasters and informing policy responses. This framework could be adapted to the Indonesian context to assess the effectiveness of social work interventions in promoting equitable and sustainable development.

Furthermore, the comparative policy analysis of ASEAN responses to the COVID-19 pandemic^[47] could offer valuable lessons for improving regional cooperation and coordination in disaster management. The "One ASEAN, One Response" framework could serve as a model for developing a national strategy for social work integration in Indonesia's disaster management system.

The study on the development of disaster mental health guidelines in Japan^[32] provides a valuable example of a systematic approach to developing evidence-based guidelines. This approach could be adapted to the Indonesian context to develop culturally appropriate and effective mental health interventions for disaster survivors.

Finally, the connections between disability and disaster recovery^[52] highlight the importance of inclusive approaches in disaster management. Social workers have a critical role to play in ensuring that the needs of persons with disabilities are met in disaster response and recovery efforts. This requires specialized training and resources to address the unique challenges faced by this vulnerable population effectively. Integrating social work into national disaster preparedness and response strategies is crucial for achieving sustainable development goals and building more resilient communities in Indonesia.

The increasing recognition of disasters as catalysts for change towards sustainability ^[42] presents an opportunity to integrate social work interventions into broader efforts to build more resilient and sustainable communities in Indonesia.

3.7. Strengthening social work's role in disaster management in Indonesia

This review highlights the critical yet under-researched role of social work in Indonesia's disaster management system. While global literature provides valuable insights into social work's potential contributions^[29,34,41], further research is urgently needed to understand the specific Indonesian context. Addressing the identified challenges and implementing the recommendations will significantly enhance the effectiveness and impact of social work in building more resilient and equitable communities.

Research needs and strategic investments

Future research should prioritize empirical studies examining specific interventions, challenges, and outcomes within Indonesia's disaster management framework. Comparative studies evaluating different models of social work integration across Indonesian regions could provide valuable insights into best practices. Such research must consider Indonesia's diverse cultural and geographic landscape, which is marked by frequent natural disasters^[33].

Substantial investment in training and professional development programs is essential to equip social workers with the necessary skills and knowledge^[4,31]. These programs should incorporate gender-sensitive approaches to address the unique challenges faced by social workers in Indonesia^[29]. Enhanced training will enable social workers to respond effectively to the needs of vulnerable populations, such as women, children, and individuals with disabilities, during and after disasters^[53].

Policy and framework development

Establishing clear roles, responsibilities, and collaboration protocols within the disaster management system will ensure the effective integration of social work services^[31,41]. Strengthening inter-sectoral collaboration between social workers, government agencies, and non-governmental organizations^[47] is crucial for coordinated disaster response and recovery.

The development of a framework for integrating equity and inclusive development perspectives into the Driver-Pressure-State-Impact-Response (DPSIR) model offers a promising approach^[51]. This framework could be adapted to assess the social and environmental impacts of disasters while informing policies aimed at promoting sustainable and equitable development in Indonesia.

Leveraging post-disaster opportunities

Disasters present unique opportunities to drive systemic change. The "One ASEAN, One Response" framework^[47] could serve as a model for Indonesia to develop a national strategy for integrating social work into disaster management. Additionally, lessons from Japan's systematic development of disaster mental health guidelines^[32] demonstrate the value of evidence-based approaches tailored to local contexts.

The increasing recognition of disasters as catalysts for change toward sustainability^[42] underscores the need to integrate social work interventions into broader resilience-building efforts. This approach can enhance long-term recovery while addressing structural inequities that exacerbate vulnerability.

Inclusive disaster management

Inclusive approaches are vital for ensuring that the needs of marginalized and vulnerable populations are met. Social workers are critical in advocating for and implementing disability-inclusive disaster management practices^[52]. Specialized training and resources are required to equip social workers to address the unique challenges faced by persons with disabilities effectively.

Moreover, gender-sensitive strategies must be embedded in disaster response efforts to mitigate the disproportionate impact of disasters on women^[29]. Social workers can act as facilitators, promoting equitable access to resources and decision-making processes within affected communities.

4. Conclusion

This review highlights the critical yet underutilized role of social work in Indonesia's disaster management system. Despite Indonesia's vulnerability to frequent natural and man-made disasters, the integration of social work into the national disaster management framework remains limited. Social workers have proven essential in disaster preparedness, response, recovery, and advocacy, yet their potential is often hindered by challenges such as inadequate resources, limited training, and complex bureaucratic processes. To address these challenges, a comprehensive strategy is needed. This includes investing in capacity-building for social workers, fostering interdisciplinary collaboration, and ensuring that disaster management policies are inclusive and culturally appropriate. Future research must focus on developing evidence-based interventions tailored to Indonesia's unique socio-cultural and geographical contexts. By strengthening the integration of social work into disaster management systems, Indonesia can enhance community resilience

and move towards sustainable development goals. Social work has the potential to bridge the gap between humanitarian needs and long-term recovery efforts, making it an indispensable component of disaster management in Indonesia. Integrating social work into national disaster preparedness and response strategies is essential for achieving sustainable development goals and building more resilient communities in Indonesia. This requires a unified effort encompassing substantial investment in research, tailored training programs, and inclusive policy development. By leveraging post-disaster opportunities for systemic change, Indonesia can strengthen its disaster management system while addressing the underlying social inequities that increase vulnerability. Social workers, with their expertise in community engagement and advocacy, are uniquely positioned to lead these transformative efforts and contribute to a more resilient and equitable future.

Conflict of interest

The authors declare no conflict of interest.

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