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Review

# Challenges Faced by Marginalized Communities in a Post-Disaster Context: A Systematic Review of the Literature

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**Abstract:** Many international organizations embrace the ideals of resilience and inclusion in the service of marginalized communities but neglect their inclusion in post-disaster settings. It is imperative to explore the challenges faced by marginalized communities to increase their inclusion in the post-disaster context. Therefore, this paper presents a systematic literature review of the challenges facing marginalized communities in the post-disaster context. The study identified 57 challenges faced by children, women, people with disabilities, and older adults under six categories: social, health, political, infrastructure, economic, and communication. The most common challenges all four marginalized communities face are the development of post-traumatic stress disorder, the struggle to acquire the necessities of life due to unequal distribution, the lack of income-generating opportunities, and sexual and gender-based violence. Most studies focus on women's challenges, followed by those of children, older adults, and persons with disabilities. The study also explored the challenges faced in terms of intersectionality, experienced by groups of people who fall under more than one marginalized community. Finally, a conceptual framework was developed to improve the inclusion of marginalized communities during the post-disaster context by incorporating the challenges as one of the key components of the framework.

**Keywords:** challenges; inclusivity; marginalized communities; post-disaster context; systematic literature review



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## 1. Introduction

Globally, there has been an increase in disaster severity over the past decade, contributing to a growing number of deaths [1]. The consequences of these recent disasters are significant and have severe repercussions on social life and the distribution of economic power. Disaster management includes all activities, programs, and initiatives before, during, or after disasters to prevent and reduce their effects and to provide ways of healing from the consequences of disasters [2]. The post-disaster situation can be complex and challenging, and perhaps the most critical challenge is determining the needs quickly to provide crucial assistance to affected communities [3]. Furthermore, people affected by disasters face daily challenges such as losing their routine, lacking social and domestic roles and leisure activities, and, more significantly, losing their purpose in life [4]. Among these people, marginalized communities are exposed to relatively high risks and are consequently more severely affected by disasters than others are [5]. Marginalization denies groups and individuals access to significant economic, religious, or political positions and symbols in a society [6,7]. Generally, each community has identified a group of people considered vulnerable in mainstream society. These groups include children, women, disabled people, minorities, poor people, older adults, and low-income groups [8]. However, in the face of

natural disasters, it is mainly women, older adults, people with disabilities, and children who are often affected by multilayered kinds of marginalization and are less resilient to risk aversion [9,10].

Community involvement in post-disaster management programs is increasingly important and has received consideration from researchers, academics, policymakers, and national and international organizations [11]. The community is the first to respond to any disaster, and disaster management procedures would become ineffective without their involvement [12]. Since marginalized communities are the ones most affected, it is essential to engage them in any post-disaster program [13]. However, it is worrying that many of these communities are usually invisible, and their participation in post-disaster activities is not recognized. This unrecognition leads to higher fatalities, injuries, and economic damage rates with a comparatively longer recovery time [8,14].

Disasters intensify socioeconomic disparities and wealth, making the marginalized most likely to be left behind [15,16]. According to Zayas et al. [17], although inclusivity is a buzzword for post-disaster management, its real challenges include deep-rooted obstacles in various social organizations and governance procedures. Therefore, it is crucial to identify the challenges marginalized communities face in the post-disaster context to ensure the equitable distribution of resources, improve the effectiveness of post-disaster management efforts, reduce vulnerabilities, promote resilience, and foster inclusivity and social justice. By identifying the specific needs of these communities, post-disaster management efforts can tailor their response to address their unique challenges and promote their recovery from the impact of a disaster.

Therefore, this paper first presents the adopted methodology for the systematic literature review, followed by an analysis of the challenges marginalized communities face in post-disaster situations to develop a framework to improve their inclusion in the post-disaster contexts.

## 2. Research Methodology

### 2.1. Scope of the Literature Review and Search Strategy

Following the PRISMA guidelines, forming the research question is the first step in a systematic literature review [18]. The research question “What are the challenges faced by marginalized communities in the post-disaster phases?” was developed using the PICO (population, intervention, comparison, and outcome) approach. The PICO approach provides a solid foundation for developing research questions and establishing keywords for the literature review based on the terms of the research questions [19]. According to Melnyk and Fineout-Overholt [20], “Comparison” is the only optional component in the PICO approach. In this instance, the comparison component was excluded as there was no comparison; an alternative is to compare the interventions in the research question. A logic grid was created using the PICO approach, and a preliminary search was initiated using the key terms. Subsequently, the title and abstract of the articles obtained during the preliminary search were reviewed, and alternative key terms for building a comprehensive logical grid were identified, as shown in Table 1.

The search strategy was developed using the terms identified in Table 1. There, quotation marks ("" ) were used to derive articles that matched the exact terms and wildcard characters (\* and ?) to identify different variations of a specific term. Subsequently, the identified terms were combined using Boolean operators, “OR” and “AND”, as shown in Figure 1.

**Table 1.** Logic grid for key terms with alternative terms.

PICO Elements	Key Terms	Alternative Terms
P (Population)	Post-disaster Phases	Post-disaster phase, Post disaster phase, Post disaster situations, Post-disaster period, Post disaster period, Post crisis, Post-crisis, Disaster response, Disaster recovery, Disaster rebuilding, Disaster reconstruction, Disaster rehabilitation, Disaster relief phase, and Disaster early recovery
I (Intervention)	Marginalized Communities	Marginalized communities, Marginalized communities, Marginalized population, Marginalized population, Marginalized groups, Marginalized groups, Marginalisation, Marginalization, Gender, Woman, Women, Children, Youth, Young adult/s, Older adult/s, Older people, Elderly, People with disabilities, Persons with disabilities, Disabled people, Minorities, and Minority groups
C (Comparison)	-	-
O (Outcome)	Challenges	Challenges, Social exclusion/s, Experience/s, and Barriers

(challenges OR "social exclusion\*" OR experience\* OR barriers) AND (marginali\* OR gender OR wom\*n OR children OR youth OR "young adult\*" OR "older adult\*" OR "older people" OR elderly OR "people with disabilit\*" OR "persons with disabilit\*" OR "disabled people" OR minorit\*) AND ("post disaster" OR "post crisis" OR "post-disaster" OR "post-crisis" OR "disaster response" OR "disaster recovery" OR "disaster rehabilitation" OR "disaster rebuilding" OR "disaster reconstruction" OR "disaster relief" OR "disaster early recovery")

**Figure 1.** Final search strategy.

## 2.2. Literature Search and Article Filtering

The literature search was conducted within three widely recognized databases; Web of Science, Scopus, and Emerald Insight (Social Science Citation Indexed [SSCI]). These databases are known to contain highly ranked and indexed scholarly journals dealing with disaster management [21]. In addition, the following inclusion conditions were considered during the literature search:

- Sources published in English; English is the universal language widely used in academic publications and the language the authors can comprehend.
- Publication year since 2010: this duration was used to identify the challenges in the current context.
- Document type: journal articles, articles on early access; journal articles that experts in the field have extensively reviewed through a blind review process compared to other document types as journal articles generally provide primary research findings.

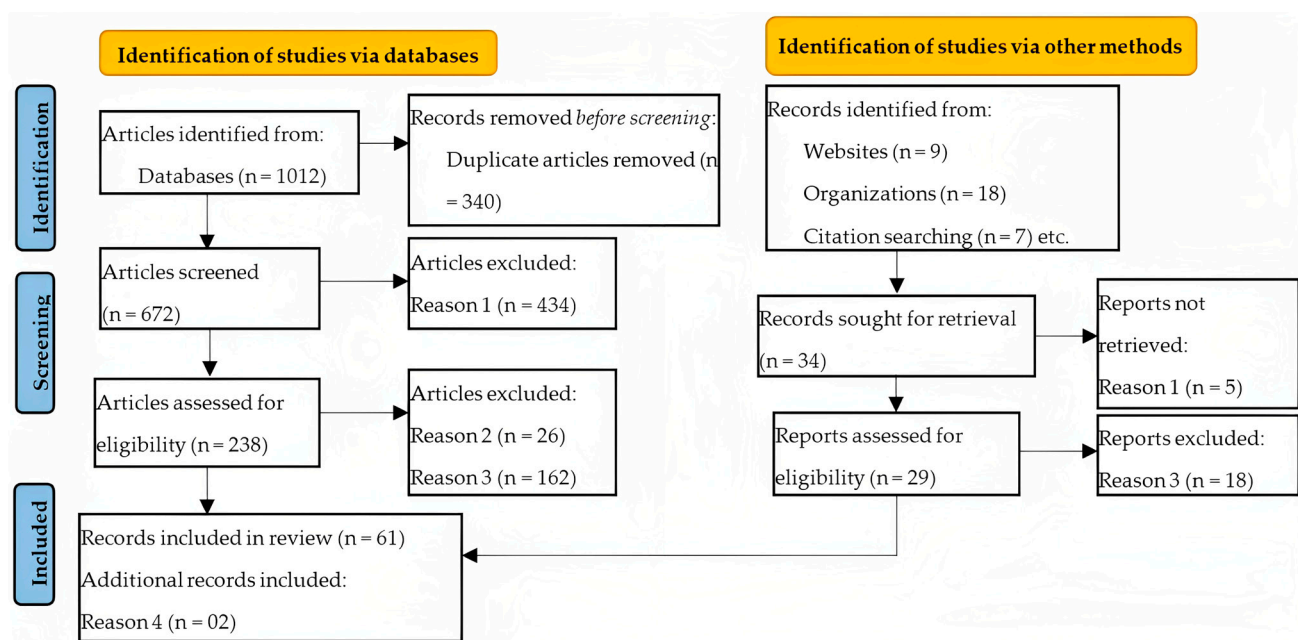
Sections 2.2.1 and 2.2.2 present the article identification and screening processes of the literature search following the PRISMA guidelines.

### 2.2.1. Article Identification

The search identified 1012 articles, 414 from Web of Science, 493 from Scopus, and 105 from Emerald Insight databases. Additionally, 34 reports published by recognized authorities and key references not found in the three selected databases were obtained through a Google search. All identified records were imported into the Mendeley software (BibTeX format; \*.bib file format) for further screening and systematic analysis.

### 2.2.2. Article Screening

The next step in the systematic review was screening. Before starting the screening process, 340 duplicate articles were removed. Figure 2 depicts the flow chart of the screening process.



**Figure 2.** Study selection flow chart.

Per Figure 2, the screening process refined the search for the most relevant articles for three reasons. After a screening of title, abstract, and keywords, 439 articles that were not relevant to the context were removed (Reason 1), in addition to 26 articles that had only abstracts (Reason 2) and 180 articles irrelevant to the research question (Reason 3).

At the end of the screening process, 61 (706–439–26–180) articles were retrieved for the qualitative analysis and included 50 journal articles from databases, 7 reports were from organizations and websites, and 4 journal articles were from outside the databases. In addition, two records were added to strengthen the conceptual framework to improve the inclusivity of marginalized communities in the post-disaster context (Reason 4).

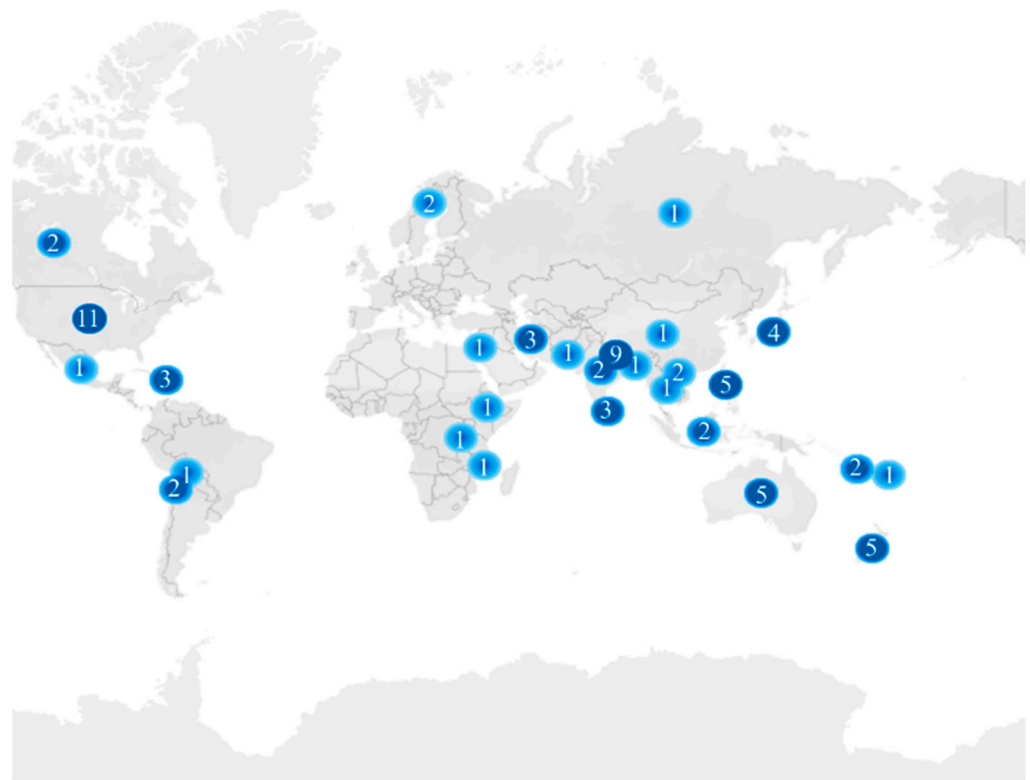
### 2.3. Literature Search Results

Figure 3, generated from Tableau 2021.4 software, summarizes the number of studies conducted in various countries worldwide. The frequency of the articles per country varies with the color density of the map points. Moreover, four articles obtained primary data from more than one country.

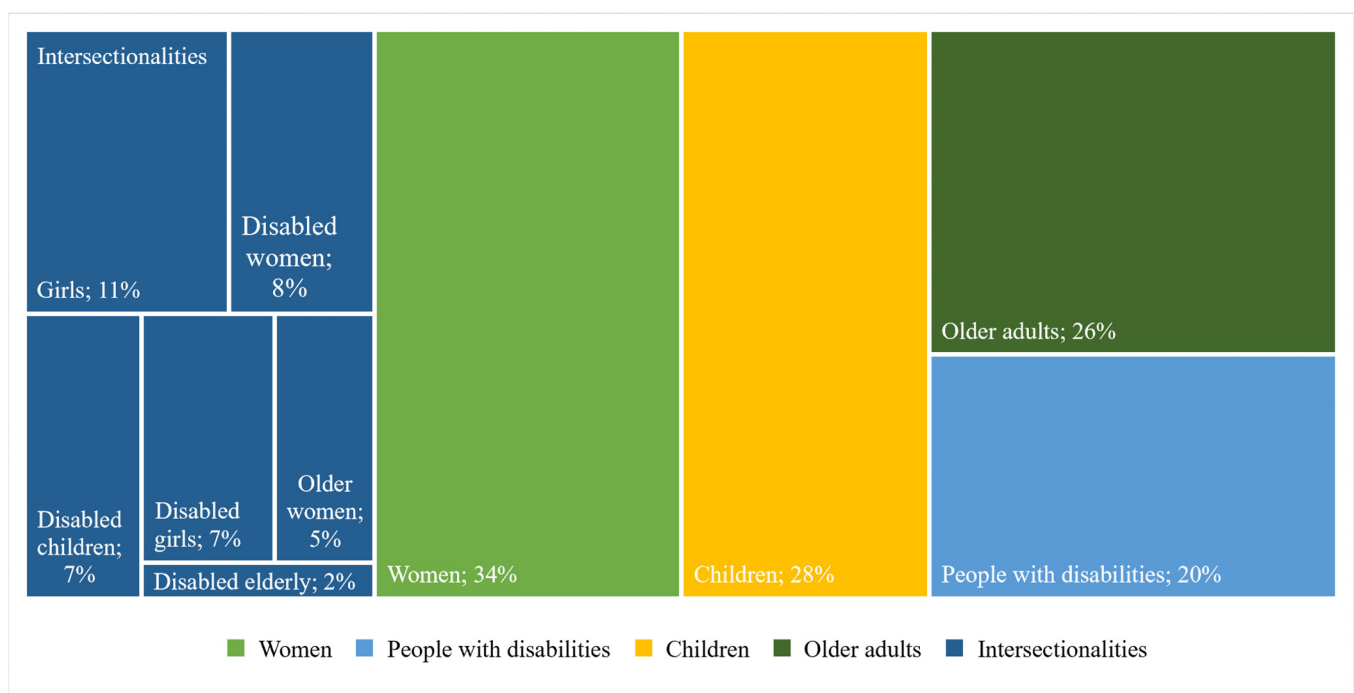
Figure 3 shows that most articles (35) are from Asian countries. The World Bank [22] has identified South Asia as one of the most vulnerable regions to disaster-induced consequences. However, the United States (11 articles) has conducted the highest number of studies, closely followed by Nepal (9 articles).

In addition, a “Treemap” was created to present the dispersion of different marginalized communities involved in the systematic review (shown in Figure 4).

It is necessary to note that some articles described more than one type of marginalized community. Figure 4 shows the percentages for each category based on the number of articles specifically relating to each marginalized community segment. Most (34%) of the articles discuss post-disaster challenges faced by women, followed by children (28%), older adults (26%), and people with disabilities (20%). Intersectionality refers to articles that describe more than one type of marginalized community. For example, a person with disabilities can also be a woman, a child, or an older adult. In such situations, that person becomes more vulnerable to disasters due to being oppressed/marginalized on multiple levels. The intertwined features may contribute to more marginalization, inequality, or problems in disaster situations [23]. However, only a few research articles explicitly focused on intersectionality (3 out of 61).



**Figure 3.** Mapping of articles by origin country.



**Figure 4.** Dispersion of different types of marginalized communities considered for the review.

### 3. Data Analysis

The code-based content analysis method was utilized to analyze the data gathered from the systematic literature review [24]. The primary codes and sub-codes were derived mainly to identify the challenges faced by marginalized communities, to develop the conceptual framework, and to suggest future research directions to improve the inclusivity of marginalized communities in the post-disaster context. All four authors were engaged



in the coding process one after the other. This process was carried out in two rounds to reduce the subjectivity of the identified codes.

### 3.1. Challenges Faced by Marginalized Communities in the Post-Disaster Phases

Post-disaster challenges are not borne equally among affected people. Disasters tend to hit the poorest and most marginalized populations the hardest [25]. Although post-disaster discussions emphasize the role of society in promoting resilience, the needs of marginalized communities in recovering from a disaster have been overlooked [26]. The authors identified 57 challenges faced by marginalized communities during the post-disaster context based on the empirical evidence gathered from the 61 filtered articles. Appendix A shows the horizontal and vertical frequency analysis of the challenges identified from the systematic review of the literature. Each challenge identified is assigned a unique code, such as C01, C02, and so on up to C57, to improve the clarity of analysis. Figure 5 presents a graphical representation of these challenges.

As depicted in Figure 5, the 57 identified challenges were categorized into six main categories: social, health, political, infrastructure, economic, and communication. Most of the challenges fall under social challenges. Moreover, the most frequent and common challenges to women, people with disabilities, children, and older adults are the development of post-traumatic stress disorder (PTSD) (C11), the struggle to acquire the necessities of life due to unequal distribution (C51), the lack of income-generating opportunities (C29), and sexual and gender-based violence (SGBV) (C48). Women experience most (53%) of the 57 identified challenges (see Appendix A). When disasters occur, women face more difficulties due to existing vulnerable living conditions, known as a “double vulnerability” situation [27]. Women become more vulnerable in the aftermath of disasters due to social imbalances and their lower socioeconomic status compared to that of men [28]. Fewer challenges are recognized in terms of intersectionality than they are in individual communities, as many literature sources have not explored the challenges encountered by intersectionality (see Section 2.3). The study identified only three unique challenges faced by intersectional communities: the inability to provide adequate self-care (C02) faced by older women; the inability to deal with crowded shelters (C04) faced by disabled children; decreased access to religious relationships (C09) faced by older adults with disabilities.

The following sections analyze the challenges faced by marginalized communities under the six categories.

#### 3.1.1. Social Challenges

Marginalized communities often face a disproportionate burden of social challenges in the post-disaster context due to pre-existing inequalities and discrimination that make them more vulnerable to the impact of disasters [17,29]. Sexual and gender-based violence (SGBV) (C48) is the most prevalent social problem experience after a disaster by this community segment. Much sexual harassment and violence happens in shelter camps; many cases are invisible or unreported [30]. Standing et al. [31] argue that SGBV after a disaster against women shows that women are pre-existing victims of violence, and that this is exacerbated by disasters and existing social and gender inequalities. Moreover, the Women’s Refugee Commission [32] reported on SGBV in its research, with some disabled women and girls reporting repeated and frequent sexual violence, including rape, by several perpetrators. In addition, the study claimed that sexual violence, including rape, was widespread in men and boys with disabilities but much lower in women and girls.

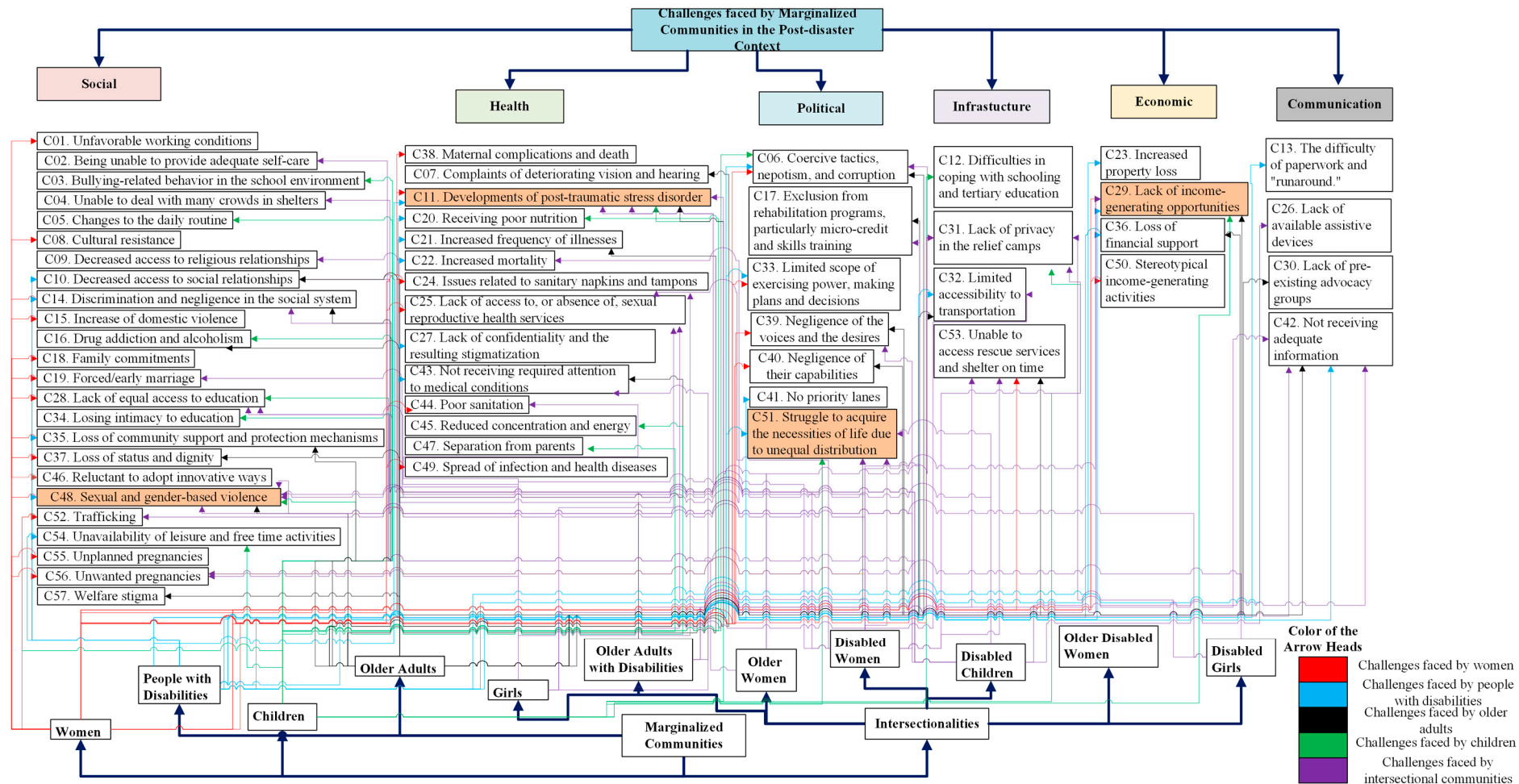


Figure 5. Key challenges faced by marginalized communities in the post-disaster context.



According to Witting et al. [30], prejudice towards widows manifests in various forms, including sexual abuse, social stigma (e.g., the belief that widowed women bring bad luck), and the belief that they are promiscuous and may threaten existing family units. Therefore, widows may have limited mobility [31] and sometimes are compelled to hide their widowhood from their children, and in Southeast Asia, there are little or no safe and lucrative forms of employment they can attain or social gatherings [33] they can attend. In some Southeast Asian countries, single women and widows are deemed “unwanted insiders” in society [34]. While women are marginalized in the aftermath of a disaster, widowed women face a critical stigma on religious, patriarchal, and social grounds [30].

In the aftermath of disasters, parents have expressed despair and concern that their children had to “beg” for food and water at times [35]. Lord et al. [36] claimed that child traffickers use this as an opportunity to persuade parents to give up their children by promising food, education, and a better life for their children. It is significant to highlight that young boys and girls may both be as vulnerable to trafficking, although there is only limited data that focuses on the age and gender of children who are at risk or who were rescued [31]. Children with disabilities such as autism are often uncomfortable in the presence of crowds and the general environment of shelters. Therefore, a great deal of stress exists for parents who must handle such situations in the post-disaster relief phase [37].

### 3.1.2. Health Challenges

The development of post-traumatic stress disorder (PTSD) is considered the most severe health problem affecting marginalized communities in the post-disaster context. PTSD is a serious health problem that negatively influences a person’s mental and physical well-being [17,38–46]. Marginalized communities commonly experience waves of irresistible solid negative feelings, anxiety, helplessness, insecurity, grief, and flashbacks during the post-disaster context as symptoms of PTSD [1,4,31,43,47–52].

Menstrual hygiene management is a priority for women and girls, although it is often neglected during the post-disaster relief phase [17,31,53]. Zayas et al. [17] reveal that there are neither suitable sanitation facilities for females in shelter camps nor breastfeeding areas. Disabled women reported that the late distribution of personal hygiene kits was a problem they faced during the disaster relief phase. Additionally, hygiene kits were not always appropriate to meet their needs (for example, women with disabilities and mobility limitations preferred adult diapers over sanitary pads). Ensuring access to adequate water for personal use, providing hygienic kits with essential medicines, first aid, and hygiene pads, and ensuring the safety and dignity of women using toilets and washrooms are fundamental rights of all women, and hence should be protected [31,53]. Additionally, women in communities cannot talk freely about menstruation, indicating that menstruation is still considered taboo. Similarly, several social restrictions, including religious rituals, are practiced for menstruation in South Asia, primarily in India and Nepal [53], and this is a common issue for women and girls in the post-disaster relief phase.

Similarly, pregnant women are uniquely vulnerable in a post-disaster setting. Many disaster personnel do not have in-depth obstetric training, and there is tremendous pressure on women to go for cesarean sections when no medical condition requires them. The management of labor at birth with labor coaching, active labor management using Pitocin, and a portable ultrasound unit to monitor the fetus can increase the likelihood of vaginal delivery [53]. Therefore, there is a significant need to train disaster health personnel in labor management and vaginal delivery.

After a disaster, people with disabilities and older adults may face significant challenges in accessing medical care and attention for their specific needs [42,54,55] due to several factors, including damage to healthcare facilities, the limited availability of medical personnel, and disruptions to transportation and communication systems [17]. Unfortunately, in many post-disaster contexts, these needs are not adequately addressed, and people with disabilities and older adults may not receive the care they require. This in-

equality can lead to worsening health conditions, an increased risk of complications or secondary health issues, and even death [17,36,56,57].

### 3.1.3. Political Challenges

In the aftermath of a disaster, political factors such as the unequal distribution of resources and systemic inequalities can exacerbate the struggle for all marginalized communities to access the necessities of life (C51). The unequal distribution of resources is frequently influenced by political power structures perpetuating discrimination and marginalization. This behavior can lead to the inadequate distribution of resources, such as food, water, shelter, and medical care, which are critical to survival and recovery [3,29,41,42,54,55,58–62].

Marginalized communities, especially women and people with disabilities, may experience political challenges such as a lack of representation in decision-making processes. They may also experience corruption or an abuse of power, which can further marginalize them [41,59]. The research found that when women expressed concern about the challenges of forced tactics and corruption after the disaster, male committee leaders tried to silence these women and intimidate them [43]. These problems significantly affect women due to increased poverty and psychological suffering [29,41,43,63] when they cannot play the traditional gender role of caring for children and others.

In some shelter camps, male-dominated committees controlling aid distribution force women to negotiate using sexual favors to meet basic needs and access to food [1,41]. Similarly, Thapa and Pathranarakul [58] revealed a significant lack of knowledge on identifying barriers to gender inclusion rooted in the male-dominated social structure. Therefore, women should distribute relief assistance so that they are not harassed and abused and ensure that women and their families receive sufficient food. When women work as humanitarians and front-line leaders, other women are empowered to report abuse in exchange for help [1,31].

### 3.1.4. Infrastructure Challenges

The study identified 22 challenges encountered by people with disabilities and older adults in the post-disaster setting. Among them, the most common challenge is limited accessibility to transportation (C32), which they face throughout the post-disaster context. People with mental or physical disabilities often depend on public transport when they cannot drive. Stough et al. [62] state that disabled people with mobility issues may require transportation that is accessible, for example, taxis and buses that are accessible for wheelchair users. In post-disaster situations, disabled people are only offered a limited range of viable alternatives that meet their basic functional needs.

The lack of privacy in shelter camps (C31) for women and children, especially girls, in the relief centers can be viewed as a significant challenge due to the lack of suitable infrastructure services. When shelter camps are set up in the aftermath of a disaster, they often lack adequate infrastructure, such as separate living spaces, gender-segregated toilets, washing facilities, and adequate lighting and security measures to meet the basic needs of displaced people [35,40,41,49,64,65]. Lord et al. and Moreno and Shaw [36,49] claimed that these infrastructure challenges could exacerbate the lack of privacy for women and children, increasing the risk of gender-based violence, harassment, and exploitation.

### 3.1.5. Economic Challenges

Marginalized communities may experience economic challenges such as a loss of income, reduced access to resources, and increased poverty. They may have limited access to financial resources or lack insurance coverage, making it difficult to recover from a disaster [12,30,66]. One of the most severe economic challenges marginalized communities experience in the post-disaster context is the lack of income-generating activities (C29). According to Zayas et al. [17], most of the difficulties faced by people with disabilities are due to their limited employment opportunities and the lack of support that reflects their disabilities. This situation is more critical for them in the post-disaster recovery phase.

In addition, a loss of livelihood and worsening living conditions can make it difficult for many women to raise their children [43]. Additionally, in many cases, older adults may have limited access to income-generating opportunities even before a disaster due to agism, discrimination, and health challenges [59,60]. These challenges can become even more pronounced in the aftermath of a disaster, as older adults may face increased difficulty finding work or starting businesses [52]. Furthermore, a lack of income can lead to various other challenges, including food insecurity, poor health outcomes, and reduced access to education and other essential services [41,59,61].

### 3.1.6. Communication Challenges

Communication challenges can be particularly critical for people with disabilities and older adults in post-disaster contexts. In such situations, communication is essential to access information, support, and assistance. Communities affected by disasters, especially older adults, face communication challenges due to the absence of hand-crank radios, mobile phones, and personal emergency response systems. In addition, the lack of assistive devices (C26) such as canes, wheelchairs, and hearing aids causes stress to families with disabled people who already manage complex disaster-related situations [17,32,54]. Moreover, people with disabilities and older adults may face challenges accessing the information they need to make informed decisions about post-disaster efforts, such as the necessary information regarding evacuation orders, shelter locations, medical services, and recovery benefits [67]. According to Stough et al. [62], the reason behind most of the challenges faced by people with disabilities following a disaster is the lack of information or, in some cases, the communication of contradictory information by multiple agencies.

## 4. Discussion and Way Forward

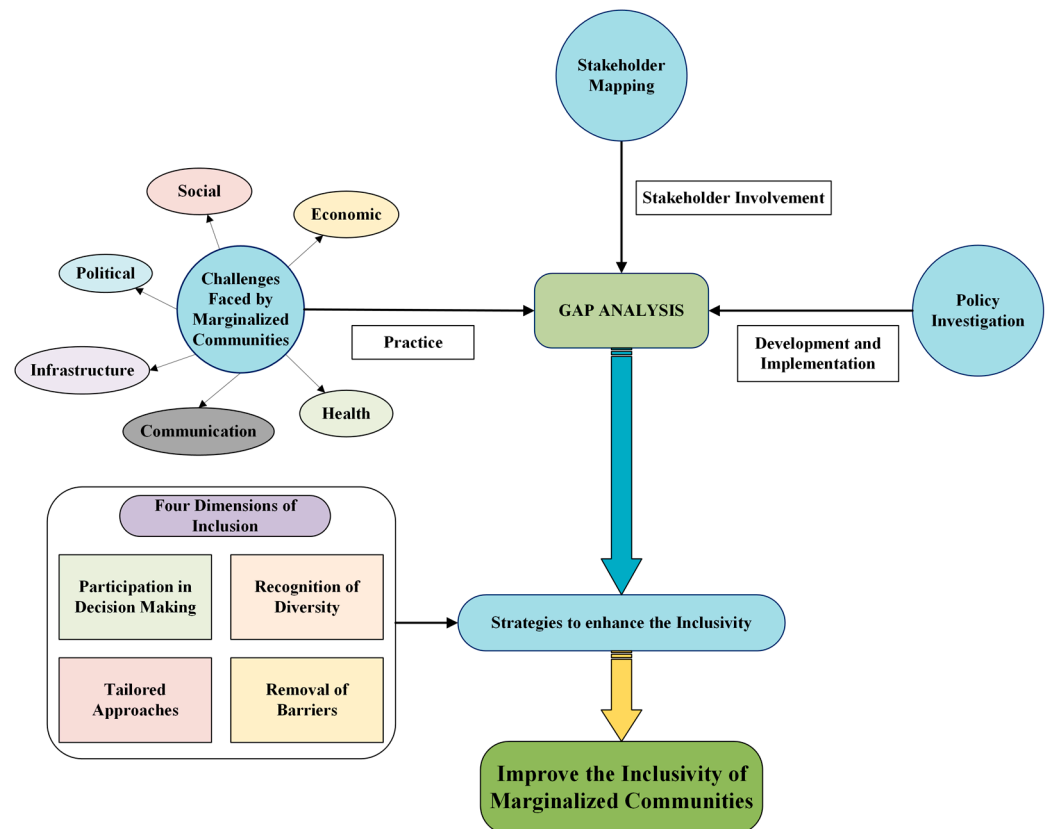
The study collected 57 challenges faced by marginalized communities in the post-disaster context under six main categories. It can be observed that these social, health, economic, political, infrastructural, and communication challenges can all influence and exacerbate each other. For example, social challenges such as discrimination and the stigmatization of marginalized communities can impact their access to economic resources, political power, and infrastructural support. This challenge, in turn, can further limit the ability to communicate their needs and participate in decision-making processes related to post-disaster recovery efforts. Therefore, addressing these challenges comprehensively and in an integrated manner, recognizing their interconnectedness, is crucial to improve these communities' inclusion in the post-disaster context effectively.

While there are many challenges for women, Clissold et al. [29] claim that women also support recovery by playing an essential role in providing and maintaining household income after disasters, primarily through entrepreneurialism and income diversification. Overlooking women's roles and contributions at the local and national levels leads to a lack of use of women's abilities and the neglect of their specific needs and vulnerabilities, undermining the possibility of recovery. Charan et al. and Ganapati [68,69] claimed that engaging women and men should be at the heart of discussions, policies, and practices about disaster response and recovery. They also stated that women enjoy being in public after disasters and seem to benefit from the social support they receive when participating in community reconstruction processes [43]. Similarly, McDonald-Harker et al. [70] claimed that, despite their heightened vulnerability, children show resilience when confronted with adversity and may serve as crucial change agents in their families and communities. However, the relevant authorities exclude their needs in the decision-making processes due to the dominance of the senior male leadership of the main political parties [13].

Crawford and Morrison [13] claimed that government organizations have largely neglected older adults and people with disabilities in countries such as Nepal and Sri Lanka. Their lack of pre-existing advocacy groups may partly account for this neglect. However, a study by Kako and Mayner [71] highlights the strength of older adults in rebuilding their lives after a disaster in a new living area. Though older adults have revealed that they did

not want to recall their past experiences, they were happy to recall these later and even share them with others since it felt optimistic that they survived the disaster. Therefore, while addressing their challenges, highlighting their capabilities is crucial to improve their inclusion in the post-disaster context. Moreover, collaboration among stakeholders, policy refinement, and effective implementation are crucial to improving the inclusivity of marginalized communities in the post-disaster context. Inclusive decision-making and participatory processes must be prioritized to achieve sustainable recovery.

From the findings obtained from the systematic literature review, the authors developed a conceptual framework to enhance the inclusion of marginalized communities in the post-disaster context (See Figure 6).



**Figure 6.** Conceptual framework to improve the inclusion of marginalized communities in the post-disaster context.

The purpose of the conceptual framework illustrated in Figure 6 is to improve the inclusion of marginalized communities in the post-disaster context. The three main components contributing to exploring the gaps in achieving inclusivity are “the challenges faced by marginalized communities”, “the development and implementation of policies related to post-disaster management and marginalization”, and the “stakeholder involvement of the post-disaster management”. This paper explored in detail one of the components of the conceptual framework, i.e., challenges. Identifying the challenges facing marginalized communities is crucial, as these challenges can significantly impact their ability to recover from disasters. If these challenges are not identified and addressed, marginalized communities may be left behind in the recovery process, leading to further inequities and disparities.

Policy gaps may exist when existing policies and regulations do not adequately address the specific needs of these communities, while implementation barriers may arise when policies or programs are not effectively implemented. Therefore, identifying policy gaps and implementation barriers is essential to improving the inclusion of marginalized communities during post-disaster management. In addition, stakeholders involved in post-disaster management need to be studied via developing stakeholder mapping to identify

their levels of contribution towards enhancing the inclusion of marginalized communities. An analysis of these three components of the conceptual framework will lead to the ability to envisage the gaps associated with inclusivity, which in turn will be considered to develop strategies. In proposing suitable strategies to enhance the inclusion of marginalized communities during the post-disaster context, the authors have adopted the four dimensions of inclusion introduced by Inclusive Community Resilience for Sustainable Disaster Risk Management (INCRISD) [8]. As such, the main dimensions for the proposed strategies will be the removal of challenges, recognition of diversity, participation in decision-making, and tailored approaches [8,14]. By utilizing these four dimensions of inclusion, more comprehensive and effective strategies can be developed for enhancing the inclusion of marginalized communities in the post-disaster context.

## 5. Conclusions

Through a systematic and comprehensive literature review, this study has established sound knowledge and understanding of the challenges encountered by marginalized communities during the post-disaster phases. The systematic review adhering to PRISMA guidelines identified 57 challenges faced by women, people with disabilities, children, older adults, and intersectional groups in the post-disaster context. The challenges were identified to fall under six categories: social, health, political, economic, infrastructural, and communication. Most of the challenges come under the social category. The common challenges for all marginalized communities are the development of post-traumatic stress disorder (PTSD), the struggle to acquire the necessities of life due to unequal distribution, lack of income-generating opportunities, and sexual and gender-based violence (SGBV). The research reveals that most of the challenges are experienced by women. Based on several combinations of marginalized communities, this paper attempted to derive the intersectionality of and unveil the complexity of the challenges. However, only limited sources have explicitly recognized the challenges faced by intersectional groups compared to other marginalized communities.

Having identified the challenges marginalized communities face, this paper introduced a pathway to enhance their inclusivity in the post-disaster context by developing a conceptual framework. Challenges, policy gaps, policy implementation barriers, and stakeholder involvement in the context of the inclusion of marginalized communities in post-disaster management are the main components of the conceptual framework that can lead to a visualization of the gaps associated with inclusivity. The framework adopted four dimensions of inclusion to devise suitable strategies to improve the inclusivity of marginalized communities in post-disaster situations. This comprehensive approach can help ensure that these communities are not left behind and have the support they need to rebuild their lives more equitably and justly.

In summary, as social implications, the study highlights the existing social inequality and injustice that marginalized communities face and the need for inclusive post-disaster management efforts that address their unique needs and vulnerabilities. It also emphasizes the importance of community resilience and social networks in mitigating the negative impacts of natural disasters. In terms of policy implications, the study stresses the need for targeted support and interventions to address the specific challenges faced by different marginalized communities. In addition, the study can inform the development of policies and guidelines for disaster responses and recovery efforts that promote the inclusivity and empowerment of marginalized communities. From a theoretical perspective, the study contributes to the literature on disaster resilience and community empowerment by identifying the challenges faced by marginalized communities and highlighting the need for a more inclusive approach to disaster response and recovery. Finally, the developed conceptual framework can serve as a basis for future empirical research and theoretical developments in the field of disaster resilience and community empowerment.

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**Data Availability Statement:** Not applicable.

**Conflicts of Interest:** The authors declare no conflict of interest.



Appendix A

Table 1. In-depth analysis of the challenges faced by marginalized communities in the post-disaster context.

Categorization of Challenges	Challenges	Marginalized Communities										Post-Disaster Phases			Literature Sources	Number of Citations		Rank
		Women	People with Disabilities	Children	Older Adults	Intersectionality					Older Disabled Women	Relief	Rehabilitation	Recovery		Quantity	%	
						Girls	Older Adults with Disabilities	Older Women	Disabled Children	Disabled Women								
Social	C48. Sexual and gender-based violence (SGBV)	✓	✓	✓	✓	✓					✓	✓	✓	[3,17,29–32,35,36,49,51,54,65,72]	13	21%	4	
	C28. Lack of equal access to education	✓		✓		✓							✓	✓	[3,40,41,51,54,58,73–75]	9	15%	5
	C14. Discrimination and negligence in the social system	✓	✓		✓						✓	✓	✓	[13,32,49,56,59–61,76]	8	13%	7	
	C35. Loss of community support and protection mechanisms	✓	✓		✓								✓	✓	[12,30,32,36,42,57,62,66]	8	13%	7
	C10. Decreased access to social relationships		✓		✓		✓	✓			✓	✓	✓	[17,32,42,54,55,67]	6	10%	12	
	C15. Increase in domestic violence	✓									✓	✓	✓	[31,35,41,49,65]	5	8%	15	
	C37. Loss of status and dignity	✓			✓						✓	✓	✓	[30,41,47,59]	4	7%	17	
	C19. Forced/early marriage	✓				✓					✓	✓	✓	[31,35,51]	3	5%	24	
	C01. Unfavorable working conditions	✓												✓	[45,58]	2	3%	29
	C05. Changes to the daily routine			✓							✓	✓		[74,77]	2	3%	29	
	C18. Family commitments	✓												✓	[41,58]	2	3%	29
	C34. Losing intimacy with education			✓									✓	[50,78]	2	3%	29	
	C52. Trafficking	✓		✓		✓					✓	✓		[31,36]	2	3%	29	
	C54. Unavailability of leisure and free time activities		✓	✓							✓			[42,74]	2	3%	29	

Table 1. Cont.

Categorization of Challenges		Marginalized Communities									Post-Disaster Phases			Literature Sources	Number of Citations		Rank	
		Intersectionality																
		Women		People with Disabilities	Children	Older Adults	Girls	Older Adults with Disabilities	Older Women	Disabled Children	Disabled Women	Disabled Girls	Older Disabled Women	Relief	Rehabilitation	Recovery	Quantity	%
Social	C55. Unplanned pregnancies	✓										✓			[49,63]	2	3%	29
	C56. Unwanted pregnancies	✓				✓			✓	✓			✓		[32,65]	2	3%	29
	C57. Welfare stigma				✓							✓		✓	[57,59]	2	3%	29
	C02. Being unable to provide adequate self-care						✓					✓			[56]	1	2%	45
	C03. Bullying-related behavior in the school environment			✓										✓	[75]	1	2%	45
	C04. Unable to deal with many crowds in shelters							✓				✓	✓		[37]	1	2%	45
	C08. Cultural resistance	✓												✓	[58]	1	2%	45
	C09. Decreased access to religious relationships					✓							✓		[54]	1	2%	45
	C16. Drug addiction and alcoholism			✓	✓								✓	✓	[79]	1	2%	45
	C46. Reluctance to adopt innovative ways	✓												✓	[12]	1	2%	45
Heath	C11. Development of post-traumatic stress disorder (PTSD)	✓	✓	✓	✓	✓		✓		✓		✓	✓	✓	[1,4,12,17,29–32,35,36,38–52,54,59,62,63,66,70–72,74,75,77–83]	42	69%	1
	C43. Not receiving required attention to medical conditions		✓		✓		✓					✓	✓	✓	[17,36,42,54–57]	7	11%	9
	C47. Separation from parents			✓								✓	✓	✓	[35,38,77,80,83]	5	8%	15
	C25. Lack of access to, or absence of, sexual reproductive health services	✓				✓				✓		✓	✓	✓	[17,51,63,65]	4	7%	17

Table 1. Cont.

Categorization of Challenges	Challenges	Marginalized Communities								Post-Disaster Phases			Literature Sources	Number of Citations		Rank
		Women People with Disabilities	Children	Older Adults	Intersectionality					Relief	Rehabilitation	Recovery		Quantity	%	
					Girls	Older Adults with Disabilities	Older Women	Disabled Children	Disabled Women							
Heath	C49. Spread of infection and health diseases (viruses, waterborne diseases, HIV, and other sexually transmitted infections)	✓	✓							✓	✓		[35,63,65,77]	4	7%	17
	C20. Receiving poor nutrition		✓							✓		✓	[40,73,80]	3	5%	24
	C24. Issues related to sanitary napkins and tampons (late distribution, not always appropriate, feeling shy to request them, the unavailability of a safe, private space for changing, the lack of a proper place to dispose of these products safely, and cultural issues)	✓			✓			✓		✓			[17,31,53]	3	5%	24
	C44. Poor sanitation	✓			✓					✓	✓		[35,41,63]	3	5%	24
	C38. Maternal complications and death	✓								✓	✓		[63,65]	2	3%	29
	C21. Increased frequency of illnesses		✓	✓						✓	✓	✓	[17,59]	2	3%	29
	C22. Increased mortality		✓		✓					✓			[54,67]	2	3%	29
	C45. Reduced concentration and energy			✓						✓			[77,78]	2	3%	29
	C07. Complaints of deteriorating vision and hearing			✓								✓	[59]	1	2%	45
	C27. Lack of confidentiality and the resulting stigmatization	✓								✓	✓		[32]	1	2%	45

Table 1. Cont.

Categorization of Challenges	Challenges	Marginalized Communities									Post-Disaster Phases			Literature Sources	Number of Citations		Rank	
		Women	People with Disabilities	Children	Older Adults	Intersectionality					Relief	Rehabilitation	Recovery		Quantity	%		
						Girls	Older Adults with Disabilities	Older Women	Disabled Children	Disabled Women								Disabled Girls
Political	C51. Struggle to acquire the necessities of life due to unequal distribution (e.g., of housing, food, water, health care)	✓	✓	✓	✓		✓		✓	✓		✓	✓	✓	[1,3,12,17,29,31,32,40–42,47,51,54–63,66,73]	24	39%	2
	C39. Negligence of the voices and desires	✓	✓		✓									✓	[17,29,43,57,59,67]	6	10%	12
	C06. Coercive tactics, nepotism, and corruption	✓	✓	✓	✓			✓					✓	✓	[13,41,57,59]	4	7%	17
	C33. Limited scope of exercising power, in making plans and decisions	✓	✓											✓	[3,43,76]	3	5%	24
	C17. Exclusion from rehabilitation programs, particularly micro-credit and skill training				✓					✓			✓		[54,57]	2	3%	29
	C40. Negligence of their capabilities	✓			✓									✓	[30,59]	2	3%	29
	C41. Lack of priority lanes		✓									✓			[17]	1	2%	45
Infrastructure	C31. Lack of privacy in the shelter camps	✓		✓		✓				✓	✓			✓	[17,31,35,36,40,41,49,64,65]	9	15%	5
	C32. Limited accessibility of transportation		✓		✓		✓					✓	✓	✓	[17,32,36,42,54,59,62]	7	11%	9
	C12. Difficulties in coping with schooling and tertiary education			✓								✓		✓	[40,73–75]	4	7%	17
	C53. Unable to access rescue services and shelter on time	✓			✓		✓			✓		✓			[31,54,55,67]	4	7%	17

Table 1. Cont.

Categorization of Challenges		Marginalized Communities											Post-Disaster Phases			Literature Sources	Number of Citations		Rank
		Intersectionality															Quantity	%	
		Women	People with Disabilities	Children	Older Adults	Girls	Older Adults with Disabilities	Older Women	Disabled Children	Disabled Women	Disabled Girls	Older Disabled Women	Relief	Rehabilitation	Recovery				
Economic	C29. Lack of income-generating opportunities	✓	✓	✓	✓	✓					✓		✓	✓	✓	[3,17,27,32,35,36,41,42,51,57–59,61,62,74,83–86]	19	31%	3
	C36. Loss of financial support	✓	✓		✓									✓	✓	[12,30,42,57,62,66,75]	7	11%	9
	C23. Increased property loss		✓										✓			[67]	1	2%	45
	C50. Stereotypical income-generating activities	✓													✓	[29]	1	2%	45
Communication	C26. Lack of available assistive devices		✓							✓			✓	✓		[17,32,42,54,56,67]	6	10%	12
	C42. Not receiving adequate information		✓		✓		✓		✓	✓			✓	✓		[17,36,54,60]	4	7%	17
	C13. The difficulty of paperwork and “run-around.”		✓												✓	[42,62]	2	3%	29
	C30. Lack of pre-existing advocacy groups					✓									✓	[13]	1	2%	45
Challenges		Count	30	22	18	22	11	8	3	8	14	3	0	36	33	34			
		%	53%	39%	32%	39%	19%	14%	5%	14%	25%	5%	0%	63%	58%	60%			

## References

- Arora, S. Intersectional vulnerability in post-disaster contexts: Lived experiences of Dalit women after the Nepal earthquake, 2015. *Disasters* **2022**, *46*, 329–347. [CrossRef] [PubMed]
- Khan, H.; Vasilescu, L.G.; Khan, A. Disaster Management Cycle—A Theoretical Approach. *J. Manag. Mark.* **2008**, *6*, 43–50.
- Alam, K.; Rahman, M.H. Post-disaster recovery in the Cyclone Aila affected Coastline of Bangladesh: Women's role, challenges and opportunities. *Nat. Hazards* **2019**, *96*, 1067–1090. [CrossRef]
- Miyadera, H.; Kawamata, H.; Tanimura, A.; Ishidai, T.; Kobayashi, N. Efficacy of a program to address older adults' challenges of daily living after disasters. *Educ. Gerontol.* **2020**, *46*, 816–827. [CrossRef]
- Sharma, A. *Disaster Risk Management: Inclusive*; INCRICD South Asia: Kathmandu, Nepal, 2014. Available online: [https://reliefweb.int/sites/reliefweb.int/files/resources/actionaid\\_inclusion\\_paper\\_final\\_170614\\_low.pdf](https://reliefweb.int/sites/reliefweb.int/files/resources/actionaid_inclusion_paper_final_170614_low.pdf) (accessed on 19 December 2022).
- Scott, J.; Marshall, G. *A Dictionary of Sociology*, 3rd ed.; Oxford University Press: Oxford, UK, 2009; ISBN 9780199533008.
- Chumo, I.; Kabaria, C.; Shankland, A.; Mberu, B. Unmet needs and resilience: The case of vulnerable and marginalized populations in Nairobi's informal settlements. *Sustainability* **2023**, *15*, 37. [CrossRef]
- Ferretti, S.; Khamis, M. *Inclusive Disaster Risk Management*; INCRICD South Asia: Kathmandu, Nepal, 2014. Available online: [https://www.preventionweb.net/files/submissions/44425\\_incrisdfameworktoolkit.pdf](https://www.preventionweb.net/files/submissions/44425_incrisdfameworktoolkit.pdf) (accessed on 25 December 2022).
- CORDAID. *Step-by-Step Guide to Inclusive Resilience*; CORDAID: The Hague, The Netherlands, 2020. Available online: [https://www.preventionweb.net/files/71675\\_716542020marchpfrinclusionontoolkit.pdf](https://www.preventionweb.net/files/71675_716542020marchpfrinclusionontoolkit.pdf) (accessed on 25 December 2022).
- Steele, P.; Knight-John, M.; Rajapakse, A.; Wickramasinghe, K.S.K. *Disaster Management Policy and Practice: Lessons for Government, Civil Society, and the Private Sector in Sri Lanka*; Institute of Policy Studies of Sri Lanka: Colombo, Sri Lanka, 2007; ISBN 9789558708507.
- Chandrasekhar, D.; Zhang, Y.; Xiao, Y. Nontraditional participation in disaster recovery planning: Cases from China, India, and the United States. *J. Am. Plan. Assoc.* **2014**, *80*, 373–384. [CrossRef]
- Pathak, S.; Emah, I.E. Gendered approach towards disaster recovery: Experiences from 2011 floods in Pathumthani province, Thailand. *Int. J. Disaster Risk Reduct.* **2017**, *24*, 129–134. [CrossRef]
- Crawford, G.; Morrison, C. Community-led reconstruction, social inclusion and participation in post-earthquake Nepal. *Dev. Policy Rev.* **2021**, *39*, 548–568. [CrossRef]
- Patri, A. *Inclusive Framework and Toolkit for Community-Based Disaster Risk Reduction in Myanmar*; Yangon, Myanmar, 2015. Available online: [www.actionaid.org](http://www.actionaid.org) (accessed on 25 January 2023).
- Mendis, A.P.K.D.; Thayaparan, M.; Kaluarachchi, Y. Gender and disability inclusion in post-disaster rebuilding 'Build Back Better' programmes in Sri Lanka: A literature review. In Proceedings of the 13th FARU International Research Conference, Homagama, Sri Lanka, 6–9 November 2020; University of Moratuwa: Colombo, Sri Lanka, 2020; pp. 81–88.
- Mendis, A.P.K.D.; Disaratna, V.; Thayaparan, M.; Kaluarachchi, Y. Policy-level consideration on marginalized communities in the post-disaster context: A desk study. In Proceedings of the 10th World Construction Symposium, Colombo, Sri Lanka, 24–26 June 2022; Sandanayake, Y., Waidyasekara, K.G.A.S., Eds.; pp. 668–681.
- Zayas, J.; Garcia, J.C.; Lacsamana, L.; Garcia, F.D.; Alburo-Canete, K.Z. *Build Back Better: Making Inclusion Work in Disaster Recovery in the Aftermath of Typhoon Haiyan*; Women with Disability Leap to Economic and Social Progress: Rizal, Philippines, 2017. Available online: [https://www.preventionweb.net/files/submissions/65859\\_buildbackbettermakinginclusionworkindisasterrecoveryintheaftermathoftyphoonhaiyan.pdf](https://www.preventionweb.net/files/submissions/65859_buildbackbettermakinginclusionworkindisasterrecoveryintheaftermathoftyphoonhaiyan.pdf) (accessed on 25 February 2022).
- Page, M.J.; McKenzie, J.E.; Bossuyt, P.M.; Boutron, I.; Hoffmann, T.C.; Mulrow, C.D.; Shamseer, L.; Tetzlaff, J.M.; Akl, E.A.; Brennan, S.E.; et al. The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *Syst. Rev.* **2021**, *10*, 89. [CrossRef]
- Geekiyange, D.; Fernando, T.; Keraminiyage, K. Assessing the state of the art in community engagement for participatory decision-making in disaster risk-sensitive urban development. *Int. J. Disaster Risk Reduct.* **2020**, *51*, 101847. [CrossRef]
- Melnyk, B.M.; Fineout-Overholt, E. *Evidence-Based Practice in Nursing & Healthcare: A Guide to Best Practice*; Wolters Kluwer/Lippincott Williams & Wilkins: Philadelphia, PA, USA, 2011.
- Lettieri, E.; Masella, C.; Radaelli, G. Disaster management: Findings from a systematic review. *Disaster Prev. Manag. An Int. J.* **2009**, *18*, 117–136. [CrossRef]
- World Bank. *Inclusive Resilience: Inclusion Matters for Resilience in South Asia*; World Bank: Washington, DC, USA, 2021. Available online: <https://openknowledge.worldbank.org/handle/10986/35220> (accessed on 10 February 2023).
- Bennett, D. Five years later: Assessing the implementation of the four priorities of the sendai framework for inclusion of people with disabilities. *Int. J. Disaster Risk Sci.* **2020**, *11*, 155–166. [CrossRef]
- Hsieh, H.-F.; Shannon, S.E. Three approaches to qualitative content analysis. *Qual. Health Res.* **2005**, *15*, 1277–1288. [CrossRef]
- Zhu, X.; Sun, B. Recognising and promoting the unique capacities of the elderly. *Int. J. Emerg. Manag.* **2018**, *14*, 137–151. [CrossRef]
- Hsu, M. Lost, Found and troubled in translation: Reconsidering imagined indigenous "communities" in post-disaster Taiwan settings. *Altern. Int. J. Indig. Peoples* **2016**, *12*, 71–85. [CrossRef]
- Pongponrat, K.; Ishii, K. Social vulnerability of marginalized people in times of disaster: Case of Thai women in Japan Tsunami 2011. *Int. J. Disaster Risk Reduct.* **2018**, *27*, 133–141. [CrossRef]
- Kantamaneni, K.; Panneer, S.; Sudha Rani, N.N.V.; Palaniswamy, U.; Bhat, L.D.; Jimenez-Bescos, C.; Rice, L. Impact of coastal disasters on women in urban slums: A new index. *Sustainability* **2022**, *14*, 3472. [CrossRef]



29. Clissold, R.; Westoby, R.; McNamara, K.E. Women as recovery enablers in the face of disasters in Vanuatu. *Geoforum* **2020**, *113*, 101–110. [CrossRef]
30. Witting, A.B.; Barrow, B.H.; Lambert, J.; Whiting, J.; Hartshorn, R.; Marks, L.; Wickrama, T.; Thanigaseelan, S. 'We have lost our lives already': Loss and coping among Sri Lankan women. *J. Aggress. Maltreatment Trauma* **2020**, *29*, 1222–1243. [CrossRef]
31. Standing, K.; Parker, S.; Bista, S. Grassroots responses to violence against women and girls in post-earthquake Nepal: Lessons from the field. *Gend. Dev.* **2016**, *24*, 187–204. [CrossRef]
32. Women's Refugee Commission. *I See That It Is Possible Building Capacity for Disability Inclusion in Gender-Based Violence Programming in Humanitarian Settings*; Women's Refugee Commission: New York, NY, USA, 2015.
33. Surkan, P.J.; Broadus, E.T.; Shrestha, A.; Thapa, L. Non-disclosure of widowhood in Nepal: Implications for women and their children. *Glob. Public Health* **2015**, *10*, 379–390. [CrossRef] [PubMed]
34. UN Women. *Empowering Widows: An Overview of Policies and Programmes in India, Nepal and Sri Lanka*; UN Women: New York, NY, USA, 2014. Available online: <https://asiapacific.unwomen.org/en/digital-library/pub%0Alications/2015/09/empowering-widows> (accessed on 19 January 2023).
35. Krishna, R.N.; Ronan, K.R.; Alisic, E. Children in the 2015 south Indian floods: Community members' views. *Eur. J. Psychotraumatol.* **2018**, *9*, 1486122. [CrossRef]
36. Lord, A.; Sijapati, B.; Baniya, J.; Chand, O.; Ghale, T. *Disaster, Disability, & Difference: A Study of the Challenges Faced by Persons with Disabilities in Post-Earthquake Nepal*; UNDP: Lalitpur, Nepal, 2016.
37. Ducey, E.M.; Stough, L.M. Psychological effects of the 2017 California wildfires on children and youth with disabilities. *Res. Dev. Disabil.* **2021**, *114*, 103981. [CrossRef] [PubMed]
38. Adebäck, P.; Schulman, A.; Nilsson, D. Children exposed to a natural disaster: Psychological consequences eight years after 2004 Tsunami. *Nord. J. Psychiatry* **2018**, *72*, 75–81. [CrossRef] [PubMed]
39. Heid, A.R.; Christman, Z.; Pruchno, R.; Cartwright, F.P.; Wilson-Genderson, M. Vulnerable, but why? Post-traumatic stress symptoms in older adults exposed to Hurricane Sandy. *Disaster Med. Public Health Prep.* **2016**, *10*, 362–370. [CrossRef] [PubMed]
40. Hirani, S.A.A. Vulnerability of internally displaced children in disaster relief camps of Pakistan: Issues, challenges, and way forward. *Early Child Dev. Care* **2014**, *184*, 1499–1506. [CrossRef]
41. Horton, L. After the Earthquake: Gender inequality and transformation in post-disaster Haiti. *Gend. Dev.* **2012**, *20*, 295–308. [CrossRef]
42. Stough, L.M.; Ducey, E.M.; Holt, J.M. Changes in the social relationships of individuals with disabilities displaced by disaster. *Int. J. Disaster Risk Reduct.* **2017**, *24*, 474–481. [CrossRef]
43. Villarreal, M.; Meyer, M.A. Women's experiences across disasters: A study of two towns in Texas, United States. *Disasters* **2020**, *44*, 285–306. [CrossRef]
44. Bourke, J.A.; Nichols-Dunsmuir, A.; Begg, A.; Dong, H.; Schluter, P.J. Understanding the longer-term health, well-being, and sense of community for disabled people following the 2010–2011 Canterbury earthquakes: A Repeated cross-sectional study. *Int. J. Disaster Risk Reduct.* **2022**, *67*, 102649. [CrossRef]
45. Parkinson, D.; Kaur, A.D.J.; Archer, F.; Spencer, C. Gendered aspects of long-term disaster resilience in Victoria, Australia. *Aust. J. Emerg. Manag.* **2022**, *37*, 59–64. [CrossRef]
46. Adebäck, P.; Lundh, L.; Nilsson, D. Children or adolescents who lost someone close during the Southeast Asia Tsunami 2004—The Life as Young. *Brain Behav.* **2022**, *12*, e2563. [CrossRef] [PubMed]
47. Ardalan, A.; Mazaheri, M.; Naieni, K.H.; Rezaie, M.; Teimoori, F.; Pourmalek, F. Older people's needs following major disasters: A Qualitative study of Iranian elders' experiences of the Bam earthquake. *Ageing Soc.* **2010**, *30*, 11–23. [CrossRef]
48. Ardalan, A.; Mazaheri, M.; Mowafi, H.; VanRooyen, M.; Teimoori, F.; Abbasi, R. Impact of the 26 December 2003 Bam earthquake on activities of daily living and instrumental activities of daily living of Older People. *Prehospital Disaster Med.* **2011**, *26*, 99–108. [CrossRef]
49. Moreno, J.; Shaw, D. Women's empowerment following disaster: A longitudinal study of social change. *Nat. Hazards* **2018**, *92*, 205–224. [CrossRef]
50. Mutch, C. "Sailing through a river of emotions": Capturing children's earthquake stories. *Disaster Prev. Manag.* **2013**, *22*, 445–455. [CrossRef]
51. Robles, C.P.Q. *Gender Equality and Women's Empowerment in Disaster Recovery*; GFDRR: Washington, DC, USA, 2020. Available online: <https://www.gfdr.org/recovery-hub> (accessed on 24 October 2022).
52. Kim, E.-M.; Kim, G.S.; Kim, H.; Park, C.G.; Lee, O.; Pfefferbaum, B. Health-related quality of life among older adults who experienced the Pohang earthquake in South Korea: A Cross-Sectional Survey. *Health Qual. Life Outcomes* **2022**, *20*, 37. [CrossRef]
53. Budhathoki, S.S.; Bhattachan, M.; Castro-Sanchez, E.; Sagtani, R.A.; Rayamajhi, R.B.; Rai, P.; Sharma, G. Menstrual hygiene management among women and adolescent girls in the aftermath of the earthquake in Nepal. *BMC Womens Health* **2018**, *18*, 33. [CrossRef]
54. Bakera, S.; Brownb, T.; Calebc, N.; Iakavaid, J.; Marellaa, M.; Morrise, K.; Nasakd, M.; Reevea, M.; Roubinf, D.; Pryor, W. *Disability Inclusion and Disaster Risk Reduction: Experiences of People with Disabilities in Vanuatu during and after Tropical Cyclone Pam and Recommendations for Humanitarian Agencies*; UNDRR: Geneva, Switzerland, 2017. Available online: [https://mispgh.unimelb.edu.au/\\_\\_data/assets/pdf\\_file/0011/2567576/WEB-DIDRR-Report-14112017.pdf](https://mispgh.unimelb.edu.au/__data/assets/pdf_file/0011/2567576/WEB-DIDRR-Report-14112017.pdf) (accessed on 20 December 2022).

55. Lieberman-Cribbin, W.; Gillezeau, C.; Schwartz, R.M.; Taioli, E. Unequal social vulnerability to Hurricane Sandy flood exposure. *J. Expo. Sci. Environ. Epidemiol.* **2021**, *31*, 804–809. [\[CrossRef\]](#)
56. Astill, S. Ageing in remote and cyclone-prone communities: Geography, policy, and disaster relief. *Geogr. Res.* **2017**, *55*, 456–468. [\[CrossRef\]](#)
57. Duggan, S.; Deeny, P.; Spelman, R.; Vitale, C.T. Perceptions of older people on disaster response and preparedness. *Int. J. Older People Nurs.* **2010**, *5*, 71–76. [\[CrossRef\]](#) [\[PubMed\]](#)
58. Thapa, V.; Pathranarakul, P. Gender inclusiveness in disaster risk governance for sustainable recovery of 2015 Gorkha earthquake, Nepal. *Int. J. Disaster Risk Reduct.* **2019**, *34*, 209–219. [\[CrossRef\]](#)
59. Joseph, J.; Jaswal, S. Elderly and disaster mental health: Understanding older persons' vulnerability and psychosocial well-being two years after Tsunami. *Ageing Int.* **2021**, *46*, 235–252. [\[CrossRef\]](#)
60. Mendez, M.; Flores-Haro, G.; Zucker, L. The (in)visible victims of disaster: Understanding the vulnerability of undocumented latino/a and indigenous immigrants. *Geoforum* **2020**, *116*, 50–62. [\[CrossRef\]](#) [\[PubMed\]](#)
61. Qi, H.D.; Gu, X. Older people and placemaking in post-disaster community rebuilding: An interdisciplinary action research in Sichuan, China. *Action Res.* **2020**, *18*, 48–68. [\[CrossRef\]](#)
62. Stough, L.M.; Sharp, A.N.; Resch, J.A.; Decker, C.; Wilker, N. Barriers to the long-term recovery of individuals with disabilities following a disaster. *Disasters* **2016**, *40*, 387–410. [\[CrossRef\]](#)
63. Goodman, A.; Black, L.; Briggs, S. Obstetrical care and women's health in the aftermath of disasters: The first 14 days after the 2010 Haitian earthquake. *Am. J. Disaster Med.* **2014**, *9*, 59–65. [\[CrossRef\]](#) [\[PubMed\]](#)
64. Espina, E.A.; Canoy, N.A. Unpacking the post-Haiyan disaster resettlement narratives of young Filipino women informal settlers in Tacloban City, Philippines. *Disasters* **2021**, *45*, 107–125. [\[CrossRef\]](#)
65. Alburo-Canete, K.Z.K. Bodies at risk: "Managing" sexuality and reproduction in the aftermath of disaster in the Philippines. *Gend. Technol. Dev.* **2014**, *18*, 33–51. [\[CrossRef\]](#)
66. Alpass, F.; Keeling, S.; Stevenson, B.; Allen, J.; Stephens, C. Ripples of recovery and resilience: Tracking the effects of the Canterbury earthquakes on older New Zealanders. *Australas. J. Disaster Trauma Stud.* **2016**, *20*, 117–124.
67. Griego, A.L.; Flores, A.B.; Collins, T.W.; Grineski, S.E. Social vulnerability, disaster assistance, and recovery: A Population-based study of Hurricane harvey in Greater Houston, Texas. *Int. J. Disaster Risk Reduct.* **2020**, *51*, 101766. [\[CrossRef\]](#)
68. Ganapati, N.E. In Good company: Why social capital matters for women during disaster recovery. *Public Adm. Rev.* **2012**, *72*, 419–427. [\[CrossRef\]](#)
69. Charan, D.; Kaur, M.; Singh, P. Indigenous Fijian women's role in disaster risk management and climate change adaptation. *Pacific Asia Inq.* **2016**, *7*, 106–122.
70. McDonald-Harker, C.; Drolet, J.; Sehgal, A. A Strength-based approach to exploring factors that contribute to resilience among children and youth impacted by disaster. *Br. J. Soc. Work* **2021**, *51*, 1897–1916. [\[CrossRef\]](#)
71. Kako, M.; Mayner, L. The experience of older people in Japan four years after the Tsunami. *Collegian* **2019**, *26*, 125–131. [\[CrossRef\]](#)
72. Basnet Bista, S.; Sharma, S. Violence against women and girls with disabilities during and after the 2015 Nepal earthquake: Thematic analysis of qualitative data. *Lancet Glob. Health* **2019**, *7*, S45. [\[CrossRef\]](#)
73. Seballos, F.; Tanner, T.; Tarazona, M.; Gallegos, J. *Children and Disasters: Understanding Impact and Enabling Agency*; Institute of Development Studies: Falmer, UK, 2011.
74. Aneelraj, D.; Kumar, C.N.; Somanathan, R.; Chandran, D.; Joshi, S.; Paramita, P.; Kasi, S.; Bangalore, R.N.; Math, S.B. Uttarakhand Disaster 2013: A report on psychosocial adversities experienced by children and adolescents. *Indian J. Pediatr.* **2016**, *83*, 316–321. [\[CrossRef\]](#) [\[PubMed\]](#)
75. Gibbs, L.; Block, K.; Harms, L.; MacDougall, C.; Baker, E.; Ireton, G.; Forbes, D.; Richardson, J.; Waters, E. Children and young people's well-being post-disaster: Safety and stability are critical. *Int. J. Disaster Risk Reduct.* **2015**, *14*, 195–201. [\[CrossRef\]](#)
76. Phibbs, S.; Good, G.; Severinsen, C.; Woodbury, E.; Williamson, K. What about us? Reported experiences of disabled people related to the Christchurch Earthquakes. *Procedia Econ. Financ.* **2014**, *18*, 190–197. [\[CrossRef\]](#)
77. Berger, E.; Maybery, D.; Carroll, M. Children's perspectives on the impact of the Hazelwood mine fire and subsequent smoke event. *Child Youth Care Forum* **2020**, *49*, 707–724. [\[CrossRef\]](#)
78. Moreton, M. *After the Disaster: Recovery for Australian Children*; UNDRR: Geneva, Switzerland, 2021. Available online: <https://www.unicef.org.au/our-work/unicef-in-australia/bushfire-response/after-the-disaster> (accessed on 20 October 2022).
79. Maclean, J.C.; Popovici, I.; French, M.T. Are natural disasters in early childhood associated with mental health and substance use disorders as an adult? *Soc. Sci. Med.* **2016**, *151*, 78–91. [\[CrossRef\]](#) [\[PubMed\]](#)
80. Arbour, M.; Murray, K.A.; Yoshikawa, H.; Arriet, F.; Moraga, C.; Vega, M.A.C. Emotional, physical, and social needs among 0–5-Year-old children displaced by the 2010 Chilean earthquake: Associated characteristics and exposures. *Disasters* **2017**, *41*, 365–387. [\[CrossRef\]](#)
81. Cherry, K.E.; Sampson, L.; Nezat, P.F.; Cacamo, A.; Marks, L.D.; Galea, S. Long-term psychological outcomes in older adults after disaster: Relationships to religiosity and social support. *Ageing Ment. Health* **2015**, *19*, 430–443. [\[CrossRef\]](#)
82. Cox, R.S.; Scannell, L.; Heykoop, C.; Tobin-Gurley, J.; Peek, L. Understanding youth disaster recovery: The vital role of people, places, and activities. *Int. J. Disaster Risk Reduct.* **2017**, *22*, 249–256. [\[CrossRef\]](#)
83. Freeman, C.; Nairn, K.; Gollop, M. Disaster impact and recovery: What children and young people can tell us. *Kōtuitui New Zeal. J. Soc. Sci. Online* **2015**, *10*, 103–115. [\[CrossRef\]](#)

84. Eadie, P.; Atienza, M.E.; Tan-Mullins, M. Livelihood and vulnerability in the wake of Typhoon Yolanda: Lessons of community and resilience. *Nat. Hazards* **2020**, *103*, 211–230. [[CrossRef](#)]
85. Pakjouei, S.; Aryankhesal, A.; Kamali, M.; Seyedin, H.; Heidari, M. Positive effects of earthquake from the perspective of people with physical disability in Iran. *Int. J. Disaster Resil. Built Environ.* **2021**, *12*, 157–169. [[CrossRef](#)]
86. Silva, K.D.; Jayathilaka, R. Gender in the context of disaster risk reduction; A case study of a flood risk reduction project in the Gampaha district in sri lanka. *Procedia Econ. Financ.* **2014**, *18*, 873–881. [[CrossRef](#)]

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