



Community-based infant and young child feeding in emergencies: Lessons from the 2022 Cianjur earthquake for disaster preparedness and resilience

Firda Dewi Yani¹, Fatmah Fatmah^{1,*}, Fajar Tri Waluyanti²

¹ Department of Magister Disaster Management, Graduate School of Sustainable Development, Universitas Indonesia, Central Jakarta, Special Capital Region of Jakarta 10430, Indonesia;

² Department of Pediatric Nursing, Faculty of Nursing, Universitas Indonesia, Depok, West Java 16424, Indonesia.

*Correspondence: ffatmah@yahoo.com

Received Date: March 12, 2026

Revised Date: June 12, 2026

Accepted Date: July 30, 2026

ABSTRACT

Background: Infant and Young Child Feeding (IYCF) remains a critical yet often overlooked component of disaster preparedness and response due to the high vulnerability of this population to nutritional disruption during emergencies. This study aims to analyze caregivers' and Posyandu cadres' perceptions and Infant and Young Child Feeding (IYCF) practices for children aged 6–23 months during the 2022 Cianjur earthquake in Indonesia and explore their implications for community-based disaster preparedness and resilience. **Methods:** A qualitative case study design was used in Cijedil Village, which was severely affected by the earthquake. The study involved 18 participants, comprising nine mothers or caregivers of children aged 6–23 months and nine Posyandu cadres, selected through purposive sampling. Data were collected through focus group discussions and analyzed using thematic analysis. **Findings:** The caregivers' and Posyandu cadres' understanding of IYCF was limited and uneven. Although some caregivers were familiar with complementary feeding, many had incomplete knowledge of age-appropriate texture, feeding frequency, dietary diversity, food safety, and continued breastfeeding. During the early emergency phase, complementary feeding practices were shaped by survival needs and limited food access, damaged household facilities, and reliance on general food aid, adult meals, instant foods, and formula milk. The establishment of an IYCF kitchen improved access to more appropriate and diverse foods for children, but the delay in its implementation revealed a gap in child-specific feeding support. **Conclusion:** As grassroots actors, Posyandu cadres played important roles through household outreach, caregiver communication, child identification, and food distribution. However, their role remained dependent on external support. This study recommends that caregiver education, cadre capacity, child-specific data systems, information management for emergency nutrition services, and integration of IYCF considerations into public kitchen and food assistance mechanisms be strengthened in the future. The findings should be interpreted within the limitations of the study, particularly its single-village scope and retrospective data collection. **Novelty/Originality of this article:** This study emphasizes IYCF in emergencies as both a response priority and a preparedness agenda, highlighting the importance of community empowerment in building nutrition-sensitive and resilient disaster management systems.

KEYWORDS: community resilience; disaster preparedness; earthquake; feeding practices; IYCF.

1. Introduction

Infants and young children represent one of the most vulnerable populations groups during disasters, particularly in terms of health and nutrition. The first 1,000 days of life are

Cite This Article:

Yani, F. D., Fatmah, F., & Waluyanti, F. T. (2026). Community-based infant and young child feeding in emergencies: Lessons from the 2022 Cianjur earthquake for disaster preparedness and resilience. *Calamity: A Journal of Disaster Technology and Engineering*, 4(1), 69-89. <https://doi.org/10.61511/calamity.v4i1.2026.3843>

Copyright: © 2026 by the authors. This article is distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).



a critical period for growth and development, during which inadequate nutrition can lead to stunting, impaired cognitive development, and increased susceptibility to disease (Brines et al., 2022; WHO & UNICEF, 2003). In humanitarian contexts, Infant and Young Child Feeding (IYCF) is widely recognized as a life-saving intervention aimed at reducing malnutrition-associated child morbidity and mortality (European Commission, 2012). However, despite its importance, the implementation of appropriate feeding practices during emergencies remains a persistent challenge (Summers & Bilukha, 2018).

Feeding practices for infants and children in humanitarian contexts are often shaped by immediate survival needs rather than established nutritional guidelines. Disruptions in food systems, limited access to diverse and safe food, and disruption of basic services contribute to suboptimal feeding practices. Complementary feeding in emergency contexts may fail to meet recommended standards in terms of dietary diversity, feeding frequency, and food safety (Theurich et al., 2019). In addition, challenges such as unequal food distribution, limited food choices, and poor food quality have been widely reported in disaster settings, often linked to logistical constraints and weak coordination mechanisms (Lyon, 2023; Nurulfuadi et al., 2021). These conditions indicate that feedings infant and young children is not only a nutritional issue but also a systemic challenge during disaster response.

Existing literature on IYCF in humanitarian emergencies has substantially addressed programmatic and operational challenges, including intervention delivery, service capacity, and implementation of recommended feeding practices (Hwang et al., 2021; Prudhon et al., 2018), with less attention given to the community-level factors that influence these practices. Evidence shows that knowledge, social norms, and access to information strongly influence feeding behaviors (Rabbani et al., 2020). However, community awareness of appropriate feeding practices remains limited in many contexts,, and information dissemination is often inconsistent. Moreover, media narratives and practices of external aid may unintentionally reinforce misconceptions, such as the prioritization of breastmilk substitutes over breastfeeding in emergencies (Gribble, 2013). Beyond immediate nutritional outcomes, community resilience provides an important framework for understanding how households and local actors respond to IYCF challenges during disasters.

In recent years, the role of community resilience in disaster risk reduction has received increasing attention. Community resilience refers to the ability of individuals and communities to anticipate, cope with, and recover from a disaster while maintaining essential functions (Cvetković, 2024). In this context, resilience is closely linked to the availability of local knowledge, access to resources, and social support systems. Strengthening community-level capacity is critical in ensuring effective disaster preparedness, particularly for vulnerable populations such as infants and young children (Baudoin et al., 2016). However, Infant and Young Child Feeding (IYCF) remains insufficiently integrated into disaster preparedness and emergency planning. A recent policy audit in Indonesia found that only four of 513 identified disaster-related regulations specifically addressed IYCF in emergencies, and even these lacked comprehensive provisions for breastfeeding protection and support (Pramono et al., 2025).

Community-based disaster preparedness emphasizes the role of local capacity, participation, and empowerment, including the contributions of grassroots actors such as Integrated Health Service Post/*Pos Pelayanan Terpadu* (Posyandu) cadres. These actors play a critical role in health promotion, information dissemination, and service delivery (Lestari & Hanim, 2020; Zahra et al., 2024). Similarly, Disaster Preparedness Cadets/*Taruna Siaga Bencana* (TAGANA) functions as a key actor in emergency response in the Indonesian disaster management system, particularly in the management of public kitchens and the distribution of food assistance (Ministry of Social Affairs, 2012). Despite their important roles, existing evidence indicates persistent gaps in IYCF emergency preparedness, including limited trained personnel and insufficient integration of nutrition-specific considerations into emergency response systems (Hwang et al., 2021; Sari et al., 2022).

These gaps suggest the need for stronger integration of community health cadres and emergency food-provision actors into preparedness planning.

The 2022 Cianjur earthquake in Indonesia affected 16 subdistricts and 180 villages, resulting in 114,683 displaced individuals, 56,548 damaged houses, 602 deaths, and 5 missing people (Figure 1). It caused widespread infrastructure damage, disrupted food access, and forced communities into temporary shelters, creating challenges for infant and young child feeding practices (National Agency for Disaster Management, 2023). The availability of specialized IYCF services, such as dedicated feeding kitchens, was limited and delayed during the early phase of the emergency response, resulting in reliance on general food aid that was not tailored to the nutritional needs of young children (Cianjur Regency Health Office, 2022).

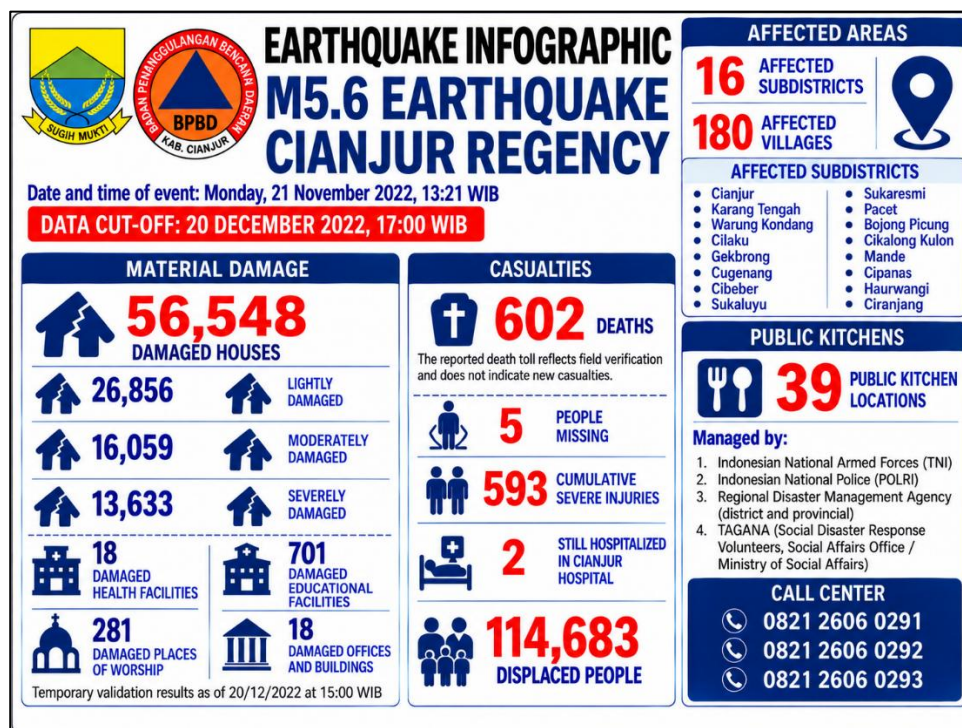


Fig. 1. Overview of the impact and emergency response of the 2022 Cianjur earthquake (National Agency for Disaster Management, 2022)

Although this study focuses on community perceptions and practices of IYCF during the emergency response phase, the findings also provide important insights into existing gaps and capacities at the community level. The limited knowledge of age-appropriate feeding practices, dependence on generalized food assistance, and the central role of local actors in facilitating access to services highlight the critical areas for improvement. These findings suggest that strengthening disaster preparedness requires not only improvements in emergency response systems but also the development of community-based capacities that can support appropriate feeding practices before and during disasters (Lacher, 2024).

Enhancing disaster preparedness involves strengthening local knowledge systems, improving access to information, and supporting the role of grassroots actors in decision-making and service delivery. Integrating the IYCF into community-based disaster preparedness strategies can help ensure that the specific nutritional needs of infants and young children are more systematic and sustainable (Kristian et al., 2024).

Therefore, this study aims to analyze (1) community perceptions of IYCF in disaster settings and (2) feeding practices among affected populations during the emergency response phase. Furthermore, this study explores the implications of these findings for strengthening community-based disaster preparedness and resilience, particularly through the role of local actors, knowledge integration, and community engagement.

2. Methods

2.1 Research design and setting

This study used a qualitative case study design to explore caregivers' and Integrated Health Service Post/*Pos Pelayanan Terpadu* (Posyandu) cadres' perceptions and IYCF practices in the context of the 2022 Cianjur earthquake. A qualitative case study design was considered appropriate because it enabled an in-depth examination of IYCF experiences and community-level responses within the specific context of the 2022 Cianjur earthquake (Hardani et al., 2020). The case study focused on Cijedil Village, Cugenang Subdistrict, Cianjur Regency, Indonesia, which was among the areas most severely affected by the 2022 Cianjur earthquake (National Agency for Disaster Management, 2023). The disaster caused extensive infrastructure damage, disrupted food access, and displaced communities into temporary shelters, creating significant challenges for infant and young child feeding practices. The research location map is shown in Figure 2.

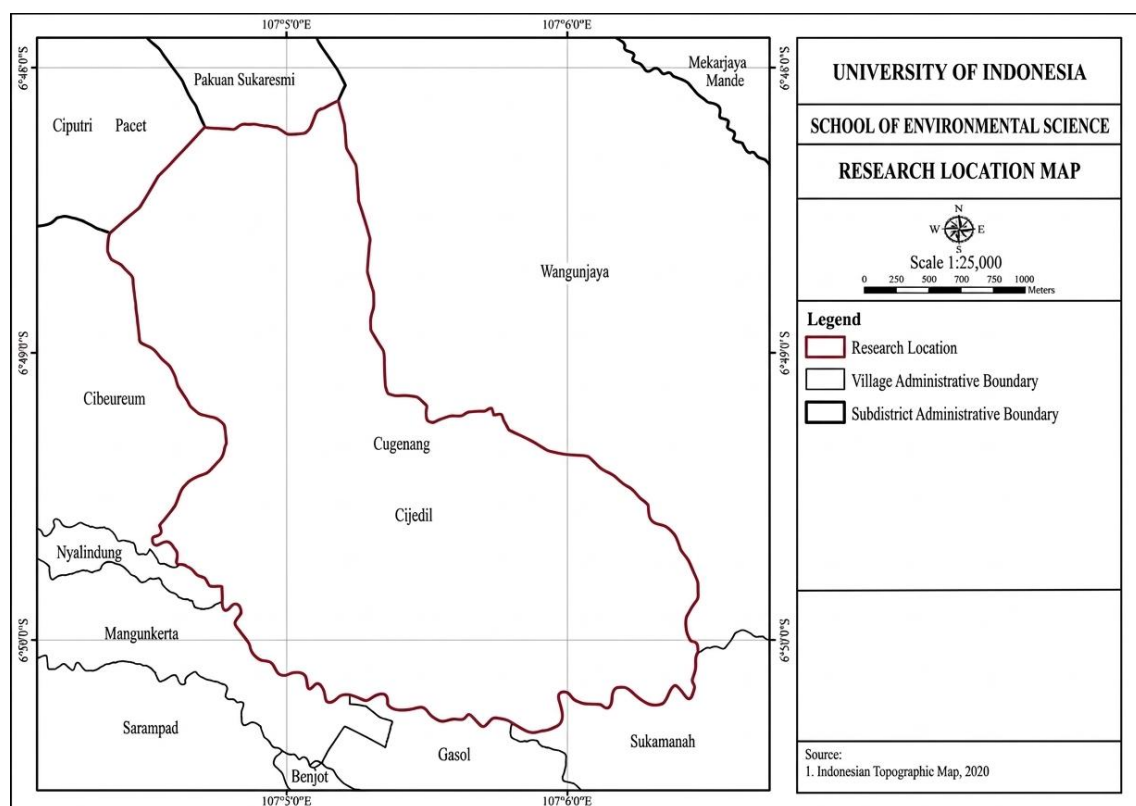


Fig. 2. Research location

2.2 Participants and data collection

Purposive sampling was used to select the mothers or primary caregivers and Integrated Health Service Post/*Pos Pelayanan Terpadu* (Posyandu) cadres. Eligible caregivers were mothers or primary caregivers who had children aged 6–23 months at the time of the 2022 Cianjur earthquake and who directly fed their children during the emergency period. Eligible Posyandu cadres were those who were active in Cijedil Village during the earthquake response and had direct involvement in community health, nutrition, or IYCF-related activities.

Data were collected through two separate offline focus group discussions (FGDs), conducted independently with nine Posyandu cadres and nine caregivers, using a semi-structured discussion guide. Each session lasted approximately 1.5 hours. The FGD guide explored participants' understanding of IYCF, feeding practices during the emergency

phase, information sources, access to complementary foods, the role of community actors, and perceived challenges and suggestions for future disaster response. Data collection was conducted between September and October 2025. All discussions were recorded with participants' consent and transcribed for analysis.

2.3 Data analysis and ethical considerations

Data were analyzed using an inductive thematic approach. The coding process followed open, axial, and selective coding procedures (Alhassan et al., 2023). The analysis began with repeated reading of the transcripts to familiarize the researchers with the data. During open coding, meaningful statements were identified and assigned data-driven codes. Similar codes were then grouped through axial coding into related sub-themes and broader categories. Finally, selective coding was used to integrate the main categories into overarching themes that represented the participants' experiences and perceptions.

The themes were reviewed by comparing patterns across caregiver and cadre groups. Caregiver and cadre transcripts were initially coded within their respective participant groups. Codes and emerging themes were then compared across groups to identify convergence, divergence, and complementary perspectives, and subsequently integrated into the final thematic structure. Group-specific differences were retained where relevant. Triangulation was applied by comparing information from caregivers and cadres to enhance the credibility of the findings. When no substantially new themes emerged from the FGDs and the recurring patterns were consistent across participant groups, data saturation was considered reached.

Reflexivity was maintained by acknowledging the researcher's professional background in nutrition and humanitarian response and by continuously reviewing whether interpretation was grounded in participants' narratives rather than in prior assumptions. Because data were collected retrospectively approximately 3 years after the earthquake, recall bias may have occurred. Participants were encouraged to describe concrete experiences, examples, and events related to feeding practices and IYCF kitchen services. Ethical considerations were observed by obtaining informed consent from all participants and ensuring confidentiality and anonymity throughout the research process.

3. Results and Discussion

This section presents and discusses the key findings on IYCF perceptions and practices in the context of the 2022 Cianjur earthquake and examines their implications for community-based disaster preparedness and resilience. The discussion is organized into four main themes: community knowledge gaps, complementary feeding practices during emergencies, the role of grassroots actors, and the potential for strengthening community-based IYCF preparedness.

Table 1. Characteristics of the FGD participants

Participant group	Number of participants	Inclusion criteria	Data collection
Mothers/caregivers	9	Mothers or primary caregivers of children who were aged 6–23 months at the time of the 2022 Cianjur earthquake and who directly experienced feeding their children during the emergency period.	FGD
Integrated Health Service Post/Pos Pelayanan Terpadu (Posyandu) cadres	9	Community health cadres involved in the 2022 Cianjur earthquake	FGD
Total	18		

The thematic matrix also demonstrates how the findings were synthesized across the two participant groups and how the participants' experiences were organized into broader patterns. While some experiences were consistently shared by caregivers and Posyandu cadres, several perspectives remained group-specific, particularly regarding practical feeding challenges, the interpretation of IYCF recommendations, and the implementation of community-based support during the emergency period. The comparison of these perspectives provides a more comprehensive understanding of how IYCF practices were influenced by individual knowledge as well as by the wider conditions experienced during the disaster. In particular, the findings highlight the interaction between limited community knowledge, restricted access to food and cooking facilities, the role of grassroots actors, and the need for earlier integration of IYCF services into emergency response. This comparison also helps identify areas in which caregivers' experiences and cadres' observations converged, complemented each other, or revealed different dimensions of the same challenge. The matrix therefore provides a structured overview of the thematic findings by linking the main themes and sub-themes with participant perspectives, key findings, and representative quotations from the FGDs.

Table 2. Summary of themes, sub-themes, and representative quotations

Main theme	Sub-theme	Participant perspective	Key finding	Representative quotation
Gaps in community knowledge	Limited familiarity with the IYCF	Caregivers	Caregivers understood IYCF mainly as food provision rather than a comprehensive feeding practice.	"Free food was given during the earthquake." (Caregiver)
Gaps in community knowledge	Age-appropriate feeding knowledge	Caregivers and cadres	Caregivers demonstrated partial understanding, while cadres described more specific recommendations related to texture, age, and portion size.	"Provision of meal portions according to age for children." (Caregiver) / "Children aged 6–12 months should receive puree..." (Cadre)
Feeding during emergencies	Survival-driven feeding	Caregivers and cadres	Both groups described feeding as being determined largely by food availability before the IYCF kitchen became operational.	"Just following whatever adult meal menu there is." (Cadre)
Feeding during emergencies	Household constraints	Caregivers	House damage, lack of kitchen facilities, limited ingredients, and displacement affected caregivers' ability to prepare appropriate food. Posyandu cadres helped	"Don't have my own kitchen yet, don't have food ingredients..." (Caregiver)
The role of grassroots actors	Cadres as community connectors	Caregivers and cadres	identify children, communicate with caregivers, and support food distribution.	"We visited families one by one." (Cadre)
IYCF preparedness	Need for earlier integration	Caregivers and cadres	Caregivers and cadres expected IYCF services to be activated together with public kitchens.	"When the public kitchen comes, the IYCF also comes immediately." (Cadre)

3.1 Community knowledge gaps and their implications for preparedness

Community understanding of IYCF, particularly regarding complementary feeding practices for children aged 6–23 months, remains limited and uneven. Caregivers were generally familiar with feeding young children, but their understanding tended to focus on food availability rather than on age-appropriate nutrition, texture, frequency, dietary diversity, hygiene, and continued breastfeeding. One caregiver associated IYCF with food assistance received during the earthquake, describing it as:

“Free food that was given during the earthquake...”

Another caregiver offered a more specific but still partial understanding, defining IYCF as:

“Provision of meal portions for children according to their age.”

These responses suggest that IYCF was understood mainly through visible food provision rather than as a comprehensive feeding practice. Limited familiarity with the IYCF term was also evident. Some caregivers had never heard the term before; one participant stated,

“Just heard about it during that time,”

While another admitted,

“I do not know it.”

Although several participants recognized complementary feeding, their explanations rarely included broader IYCF elements such as dietary diversity, feeding frequency, responsive feeding, and food safety. When asked whether they had heard of IYCF, four of the nine caregivers raised their hands, suggesting limited familiarity with the term among participants.

Caregivers who had received IYCF-related information mostly identified Posyandu cadres as their main sources. One participant explained that she received information from Integrated Health Service Post/*Pos Pelayanan Terpadu* (Posyandu) cadres, particularly during interaction at Posyandu. This indicates that Posyandu activities and direct interactions with cadres served as important channels for IYCF-related information among caregivers. The caregivers themselves recognized this gap. One participant stated that the IYCF kitchen was important because:

“Not many people know about it,”

while another reflected on her own reliance on instant food:

“For me, I prefer instant food, but it should be self-cooked.”

These statements show that knowledge gaps were not only conceptual but also affected feeding decisions. Cadres' accounts provided additional perspectives on IYCF knowledge and practices. Several cadres described more detailed age-related feeding recommendations. For example, one cadre explained that children aged 6–12 months should receive puree, while children aged 12–24 months could receive steamed or semi-solid rice. Another cadre mentioned that feeding also involves specific rules for the grams of the food, including the amount of rice, side dishes, and vegetables. However, the cadres also acknowledged that the household practices were not always consistent with these recommendations. One cadre noted that some caregivers prepared appropriate porridge, while others relied on instant food.

The findings of this study are consistent with those of previous studies indicating that community knowledge of IYCF is often inadequate, particularly in low-resource and crisis-affected settings. Limited awareness and understanding of appropriate feeding practices may influence caregiver feeding decisions, especially in situations where access to reliable information is constrained (Rabbani et al., 2020). In emergency situations, caregivers frequently lack clear and consistent guidance on feeding practices, resulting in suboptimal dietary diversity and feeding patterns (Theurich et al., 2019). This shows that knowledge gaps are not merely individual-level issues but are shaped by broader structural and informational constraints.

This study suggests that these knowledge gaps have implications beyond immediate feeding practices and may reflect broader limitations in community-level disaster preparedness. In disaster situations, where formal systems are disrupted and external support may be delayed, communities rely heavily on existing knowledge and local capacity to respond to emerging needs. Therefore, limited understanding of IYCF may represent one preparedness gap in addressing the nutritional needs of infants and young children during emergencies.

The limited understanding of IYCF observed in this study may also be influenced by gaps in routine health education and community outreach. In the Indonesian context, Posyandu services are a primary platform for delivering nutrition education at the community level. However, participation in these services is not always consistent, and the depth of information provided may vary with cadres' capacity and the availability of training. As a result, caregivers may not fully internalize information about IYCF practices, particularly regarding food diversity, preparation, and safety.

From a community empowerment perspective, this highlights the importance of strengthening knowledge systems as a foundational component of disaster preparedness. In this context, empowerment involves access to information and the ability of individuals and communities to understand, interpret, and apply knowledge in practice. Caregivers are more likely to rely on ad hoc decision-making during emergencies without adequate knowledge of appropriate feeding practices, which may not align with nutritional recommendations. Therefore, improving community awareness of the IYCF should be considered a critical entry point for enhancing preparedness and resilience, particularly in disaster-prone areas.

Knowledge gaps in the IYCF are not only a matter of individual understanding but also an indicator of broader community-level preparedness challenges. Addressing these gaps requires sustained efforts in community-based education, strengthening the role of local health systems, and ensuring that caregivers have access to accurate and contextually relevant information before disasters occur.

3.2 Complementary feeding practices as survival strategies in emergencies

Participants described complementary feeding practices during the emergency phase as being shaped largely by immediate survival needs and constrained access to food, rather than by consistent adherence to recommended feeding practices. In the early phase after the earthquake, caregivers and cadres described feeding practices as highly dependent on whatever food was available from households, relatives, general aid, or public kitchens before the IYCF kitchen was established. A cadre explained that children often had to follow the available adult menu due to the emergency conditions:

"Just following whatever adult meal menu there is. Just as it is."

This indicates that feeding decisions were driven by feasibility and access rather than age-appropriate dietary requirements. Participants described instances in which children received foods intended for the general population, including those perceived as less suitable in texture or nutritional diversity for young children.

The absence of child-specific food provision in public kitchens further contributed to this adaptive pattern. Participants reported that several public kitchens were available immediately after the disaster, but they were designed for the general population and did not provide specific complementary food. One cadre stated that available support for young children was mostly instant food, mostly just instant baby food, Cerelac, which was often still provided in boxes rather than prepared as ready-to-eat meals. Formula milk, snacks, and other packaged foods were also mentioned as common forms of assistance prior to the IYCF kitchen becoming available.

Caregivers mentioned a similar situation in which household feeding practices were constrained by damaged infrastructure, such as homes, limited cooking facilities, and a lack of food ingredients. One caregiver explained that the IYCF kitchen was important because, at that time, families did not yet have a proper kitchen or sufficient food materials:

"Don't have my own kitchen yet, don't have food ingredients... the house is still not good... not suitable for cooking for the baby."

This statement illustrates that the challenge was not only knowledge, but also the physical and material inability to prepare appropriate food for infants and young children during displacement. These practices can be interpreted as adaptive coping strategies under emergency conditions; caregivers prioritized ensuring that children received food, even when the food was not fully aligned with IYCF recommendations. This reflects a pragmatic response to disrupted food access, damaged household infrastructure, limited water and sanitation, and dependence on external aid. Cadres also described broader constraints affecting feeding practices, including lack of clean water, crowded shelters, and health risks in temporary living spaces. For example, one cadre noted difficulties related to water access, while another described living in crowded tents where children became ill due to exposure to smoke, cold air, and dense living conditions.

Such patterns are aligned with some studies on feeding infants and children in emergency settings. Complementary feeding practices in humanitarian contexts often fail to meet recommended standards due to food availability, preparation facilities, and access to safe water (Theurich et al., 2019). Similarly, disaster-affected populations frequently face challenges related to limited food choices and disruptions in food systems, which directly influence dietary practices (Lyon, 2023). These conditions create an environment in which caregivers prioritize food accessibility and immediacy over nutritional adequacy. In such contexts, caregivers make decisions based on what is feasible rather than what is optimal. This aligns with broader disaster-response dynamics, in which households adapt to resource constraints, often at the expense of long-term nutritional considerations. While such strategies are rational within the context of a crisis, they may have unintended consequences for the health of children, particularly when prolonged over time.

The cadres confirmed that the IYCF kitchen provided regular support. According to one cadre, caregivers did not merely collect the food; they also helped deliver it:

"We deliver the food."

The service was provided in the morning and at noon, indicating a more organized feeding mechanism than the earlier public kitchen model. They also recalled various menu items such as rice, rolade, fish, porridge, vegetables, eggs, and fruit. One caregiver mentioned receiving meatballs, fish, rice, and papaya, while others described menus such as corn porridge, eggs, chicken, broccoli, bananas, and papaya. These accounts suggest that participants had greater access to more diverse and freshly prepared foods after the IYCF kitchen became available, compared with the earlier reliance on general food aid and instant products. Cadres also reported positive acceptance among children and their families. One cadre stated,

"Alhamdulillah, what was given was eaten."

While another said that the community felt very supported. This suggests that the IYCF kitchen not only provided food but also reduced the burden on caregivers during the emergency. However, participants' accounts of the delayed establishment of the IYCF kitchen suggest a gap in preparedness for timely child-specific feeding support. Cadres recalled that although public kitchens were established very soon after the disaster, the IYCF kitchen did not begin until later. This delay meant that for a significant period, young children depended on adult meals, instant foods, formula milk, or other available assistance. As one cadre later suggested, future responses should ensure faster provision of child-specific feeding services:

"If there is a disaster, a faster response is needed to set up a kitchen for toddlers."

The use of communal kitchens, while essential for addressing large-scale food needs, presents inherent limitations regarding meeting the dietary requirements of young children. Public food provision systems are typically designed for efficiency and scalability, with a focus on delivering large quantities of staple foods. However, such systems may not be well suited to accommodate variations in dietary needs across different age groups. As noted in previous studies, emergency food assistance programs often prioritize caloric sufficiency over dietary quality, resulting in inadequate nutrition for infants and young children (Nurulfuadi et al., 2021). This reinforces the importance of integrating child-specific feeding considerations into disaster response systems.

From a community empowerment and preparedness perspective, these findings suggest that improving complementary feeding practices during emergencies requires strengthening both knowledge and system-level readiness. While caregivers play a central role in feeding decisions, the availability of suitable food options and the support systems in place heavily influence their ability to provide appropriate nutrition. The findings therefore suggest that preparedness should combine caregiver education with mechanisms for timely access to age-appropriate foods and child-specific feeding support. Overall, this study demonstrates that a combination of resource constraints, limited preparedness, and systemic challenges in food provision shapes complementary feeding practices during disasters. Addressing these issues requires a shift toward more integrated and anticipatory approaches that recognize the specific needs of infants and young children as a core component of disaster preparedness and response.

3.3 Role of grassroots actors in shaping feeding practices

Posyandu cadres play a central role in shaping IYCF practices during emergency response. In a disrupted post-disaster setting, cadres became key intermediaries between external support, health information, and affected households. Caregivers identified cadres and Posyandu as important sources of information, while cadres described themselves as the actors who directly reached families and ensured access to IYCF services.

Posyandu cadres play a significant role in disseminating information and guiding caregivers on feeding practices. According to one cadre, they directly informed mothers:

"We tell the mothers of toddlers, 'Later there will be food from an NGO that is healthy for our toddlers'."

This was done not only through general announcements but also through direct household outreach. The same cadre explained that they visited families one by one and door to door because many families were scattered across tents and temporary shelters. This shows that cadres served as community connectors, adapting their communication strategies to the context of displacement. The importance of cadres was strongly recognized by the cadres themselves. One participant stated,

"Cadre automatically has to be involved"

Explaining that cadres are the people closest to the community and the ones most likely to know the actual situation in the affected area. This proximity enabled cadres to identify eligible children, locate displaced families, communicate with caregivers, and support food distribution. Compared with other community structures, cadres were perceived to have a wider and more routine reach within the community.

Their close relationship with community members, built through routine health services, positioned them as trusted sources of information and played a crucial role in delivering nutrition education and influencing maternal behavior during the crisis (Lestari & Hanim, 2020). This aligns with previous studies emphasizing the importance of community health workers in promoting appropriate infant feeding practices, particularly in resource-constrained settings. Community-based actors are critical in bridging gaps between formal health systems and caregivers, especially when access to formal services is limited (Rabbani et al., 2020).

Beyond their role as information providers, cadres also served as intermediaries, facilitating access to available services and resources. This intermediary role is particularly important in disaster settings, where information flows may be fragmented and uneven. Effective communication and trust between community members and local actors significantly influence the uptake of health-related practices (Zahra et al., 2024). Cadres were also involved in the operational aspects of the IYCF kitchen. Their roles were not fixed but were organized through shared arrangements and rotation. During the FGD, cadres described that tasks such as shopping, cooking preparation, distribution, and door-to-door activities were discussed and rotated among members. One cadre explained that they would discuss first and decide who would shop or take another role each week, indicating that the IYCF kitchen relied on the collective work of local actors and informal coordination.

External actors, particularly NGOs and the health sector, supported the cadres' role. Cadres reported receiving guidance and capacity-building, including food-preparation training. One cadre stated that there was training at the district health office, and that:

"The training is about learning how to make food."

This suggests that cadres were not only volunteers delivering services but also local actors whose capacity could be strengthened to support age-appropriate feeding practices during emergencies. Although Disaster Preparedness Cadets/*Taruna Siaga Bencana* (TAGANA) is formally recognized in Indonesia's disaster response system as an important actor in public kitchen management and food assistance (Ministry of Social Affairs, 2012) The FGD data in this study did not strongly identify Disaster Preparedness Cadets/*Taruna Siaga Bencana* (TAGANA) as the main operational actor in the IYCF kitchen in Cijedil. Instead, participants more frequently referred to Posyandu cadres, Non-Governmental Organization (NGO) support, the health sector, local residents, and public kitchens. In this case, the most visible grassroots actors shaping IYCF practices were Posyandu cadres, particularly through door-to-door communication, household-level food distribution, and direct engagement with caregivers.

Nevertheless, Disaster Preparedness Cadets/*Taruna Siaga Bencana* (TAGANA) remain relevant for understanding the broader food response system. In disaster settings, public kitchens are generally designed to provide food at scale for the affected population, but they may not adequately account for the specific dietary needs of infants and young children. This study suggests that future preparedness efforts could consider mechanisms for linking the community-level role of Posyandu cadres with actors responsible for public kitchen management and food assistance. This would help align caregiver guidance, child identification, food preparation, and distribution mechanisms within a more coordinated IYCF-sensitive emergency response system.

The potential coordination between cadres and actors involved in public kitchen management highlights the need to integrate community knowledge and food provision systems in disaster preparedness (Irtanto, 2022). Cadres are well positioned to identify eligible children, communicate with caregivers, and provide localized guidance, while actors

involved in public kitchen management can support the availability and distribution of suitable food. Without such coordination, feeding practices may remain dependent on general food aid and may not fully meet age-specific nutritional needs. This finding is consistent with previous research indicating that knowledge and the enabling environment, including access to appropriate resources, influence behavior change (Ruel & Alderman, 2013). In disaster contexts, where resource availability is highly constrained, the alignment between information and food provision becomes particularly critical.

Despite their significant contributions, the potential of grassroots actors to support IYCF practices remains underutilized, particularly in disaster preparedness. In this study, Posyandu cadres were the most visible community-level actors during the response, supporting household outreach, child identification, caregiver communication, and food distribution. Disaster Preparedness Cadets/*Taruna Siaga Bencana* (TAGANA), while institutionally relevant to emergency food provision and public kitchen management, was not strongly identified by FGD participants as a main operational actor in the IYCF kitchen in Cijedil. This distinction suggests that future preparedness efforts should more clearly connect community health actors with those responsible for large-scale emergency food provision. Broader disaster-risk-reduction literature similarly emphasizes the importance of involving local actors in preparedness planning, capacity building, and decision-making, rather than engaging them only during emergency response (European Commission, 2012).

From a community empowerment perspective, these findings highlight the importance of strengthening and integrating grassroots actors within disaster preparedness frameworks. This includes providing cadres with enhanced training on IYCF in emergencies, incorporating child-specific nutrition considerations into public kitchen operations, and strengthening coordination among health, social, and disaster response sectors (Prudhon et al., 2018). Overall, this study demonstrates that grassroots actors play a pivotal role in shaping feeding practices during disasters. However, their impact depends on whether they are supported by a coordinated system before emergencies occur. Evidence suggests that interventions that leverage community-based platforms and local actors are more effective in sustaining behavior change and improving health outcomes (Rabbani et al., 2020).

3.4 The penta-helix collaboration for IYCF preparedness

The findings of this study indicate that IYCF preparedness cannot rely solely on caregivers, Posyandu cadres, or humanitarian organizations. The delayed establishment of the IYCF kitchen, the reliance on general public kitchens during the early emergency phase, and the dependence on local cadres for household-level identification suggest that a more structured multi-actor preparedness system is required for child-specific feeding support. Based on the identified gaps in coordination, food provision, and community-level support, this study proposes a pentahelix approach as a framework for strengthening future IYCF preparedness. Drawing on the study findings and existing literature, this approach involves coordinated contributions from government, community, academia, private and humanitarian actors, and media (Pasaribu et al., 2023).

Within a proposed penta-helix framework, government actors such as BPBD, the Health Office, the Social Affairs Office, and village governments are essential for policy direction, emergency coordination, beneficiary data management, and IYCF service integration into public kitchen systems. In disaster management, government actors play a central role in planning, implementing, controlling, monitoring, and evaluating disaster response activities (Pasaribu et al., 2023). In the context of IYCF preparedness, the health sector should provide technical guidance on menu planning, food texture, portion size, feeding frequency, food safety, and IYCF counseling, while social and disaster-response actors should support public kitchen operations, logistics, and distribution mechanisms.

Community actors, particularly Posyandu cadres, PKK, caregivers, and local volunteers, play a critical role in identifying infants and young children, communicating with households, supporting food distribution, and providing feedback on food acceptability. Community participation is a core element of disaster preparedness because local actors

possess contextual knowledge, social networks, and direct access to affected households (Baudoin et al., 2016). Posyandu cadres could reach families directly, locate displaced households, and connect caregivers with IYCF services.

Within the proposed framework, academic institutions could support IYCF preparedness through evidence generation, operational research, training modules, evaluation of IYCF kitchen models, and the development of practical preparedness tools. Within the pentahelix model, academia contributes knowledge production, analysis, and innovation to support decision-making and improve program quality (Fridayani et al., 2026). Universities and research institutions can also contribute to documenting lessons learned, assessing the effectiveness of integrated IYCF kitchen models, and developing indicators for monitoring child-specific nutrition services during emergencies.

Within the proposed pentahelix approach, business, private-sector, and humanitarian actors could contribute through logistics support, food supply chains, technical assistance, capacity building, SOP development, and surge support during emergencies. Private-sector actors may support resources, transportation, supplies, and operational capacity in disaster response, while humanitarian organizations and professional associations may provide specialized expertise and technical assistance (Pasaribu et al., 2023)

Media actors also play an important role in strengthening risk communication and public awareness. The media contribute to information dissemination, public education, and communication between institutions and communities within the pentahelix model (Fridayani et al., 2026; Pasaribu et al., 2023). Drawing on the penta-helix literature, accurate media messaging could support the dissemination of information on appropriate feeding practices during emergencies, available child-specific feeding services, and the risks of inappropriate donations, including uncontrolled breastmilk substitutes, in IYCF preparedness.

3.5 Community-based IYCF preparedness and empowerment

Improving IYCF practices in disaster settings requires a shift from reactive, response-oriented approaches to more proactive and community-based preparedness strategies. The establishment of specialized feeding services was perceived as useful by participants; however, the delay in their implementation highlights the limitations of relying solely on response mechanisms. The establishment of specialized feeding services has contributed to improvements in feeding practices; however, their delayed implementation highlights the limitations of relying solely on response mechanisms. This indicates the need to strengthen community-level preparedness by integrating IYCF considerations into broader disaster risk reduction and resilience frameworks.

The IYCF kitchen was perceived as useful in Cijedil Village, but it was established after the initial emergency phase, when caregivers had already relied on general food aid, adult meals, instant foods, or limited household resources. Both caregivers and cadres emphasized that IYCF services should be established earlier. One caregiver suggested,

“If possible, yes, together with the public kitchen. When the public kitchen comes, IYCF also comes immediately.”

Indicating that child-specific feeding services should begin at the same time as public kitchens. Similarly, one cadre member stated that the government should respond more quickly,

“To establish a kitchen for toddlers”

This study shows that IYCF preparedness should be integrated with existing public kitchen systems rather than treated as a separate, delayed intervention. Caregivers recognized that public kitchens were available earlier but did not necessarily provide age-appropriate food. One caregiver proposed that public kitchens and IYCF kitchens could be

managed in an integrated way, stating that if the government provides food for adults, it should also provide food for children:

“For example, from the Ministry of Social Affairs, yes for the adults, yes for the children.”

This indicates the need for coordination between health, social, and disaster-response sectors, including actors responsible for public kitchens, so that food provision can address both general and child-specific needs.

Community-based disaster preparedness emphasizes the role of local capacity, participation, and knowledge in reducing vulnerability and enhancing resilience. In this context, preparedness is not limited to the availability of resources but also includes the ability of communities to anticipate, respond to, and recover from disruptions using existing knowledge and social structures. Studies have shown that communities with stronger local capacity and access to relevant information are better able to manage risks and adapt to crisis situations (Kirby, 2025). Improving feeding practices requires sustained engagement at the community level, including continuous education, support, and reinforcement of appropriate behaviors (Dickin et al., 2021).

Building capacity is another key element of preparedness. Cadres reported that training improved their ability to prepare age-appropriate meals. After receiving guidance, one cadre explained that they were able to combine rice with appropriate ingredients,

“How much for specific age group,”

While others mentioned learning about food variation, animal-source protein, portion size, food measurement, and clean water. One cadre also noted that the IYCF kitchen helped parents understand nutrient needs for children, showing that the intervention functioned not only as a food provision but also as practical nutrition education.

From a practical perspective, strengthening community-based IYCF preparedness can be approached through three interconnected components. First, it is essential to enhance community knowledge through sustained education and communication (Winters et al., 2024). Routine platforms, such as Posyandu, can be leveraged to provide consistent and contextually relevant information on infant and young child feeding, including guidance on appropriate complementary feeding practices. Evidence suggests that regular engagement through community-based platforms can significantly improve caregiver knowledge and feeding practices over time (Rudert et al., 2024).

Second, strengthening the capacity of grassroots and disaster-response actors is critical. The findings demonstrate the important role of Posyandu cadres in information dissemination, household outreach, child identification, and support for food distribution. Although Disaster Preparedness Cadets/*Taruna Siaga Bencana* (TAGANA) was not strongly identified by participants as a main operational actor in the IYCF kitchen, its institutional role in public kitchen management and emergency food provision suggests an opportunity for stronger coordination with community health actors in future IYCF preparedness. Integrating IYCF considerations into the training and operational guidance of relevant community and disaster-response actors could support more appropriate feeding assistance during emergencies. Previous research also highlights the importance of adequate knowledge, skills, and institutional support for community-based actors involved in disaster response.

Third, it is essential to improve system integration to ensure alignment between information and resource availability. This study shows that even when caregivers receive guidance on appropriate feeding practices, the food environment constrains their ability to implement such practices. This highlights the importance of aligning food assistance systems with nutritional needs, particularly for infants and young children. Emergency food assistance programs that do not consider age-specific dietary requirements may fail to address the needs of vulnerable populations (Oliver et al., 2020; Theurich et al., 2019).

Therefore, integrating IYCF into the planning and operations of communal food systems is a key component of preparedness.

From a community empowerment perspective, these components reflect a shift toward enabling communities to take a more active role in managing their own risks. Empowerment involves not only access to resources but also the capacity to make informed decisions and participate in systems that affect their well-being. Empowering communities to understand and address the nutritional needs of infants and children can contribute to more resilient and adaptive responses in disaster contexts. This aligns with broader disaster risk reduction frameworks, which emphasize the importance of local participation and ownership in building sustainable resilience (Theda & Mercado, 2024).

3.6 Implications of information management for emergency IYCF services

Although this study did not directly examine disaster technologies or digital information systems, the findings suggest several areas where stronger information management could support IYCF preparedness and response. Participants reported delayed establishment of the IYCF kitchen, difficulties reaching families dispersed across temporary shelters, and reliance on informal coordination among cadres. These findings point to potential information-management needs related to child identification, service planning, and coordination. Information systems are important in disaster management for supporting coordination, resource allocation, decision-making, and situational awareness during preparedness and response (Sataria & Petrus, 2025). Evidence from health crisis management in Palu also shows that unclear information systems, delayed reporting, and inaccurate data can lead to delayed and ineffective disaster response (Saputri et al., 2025). This is relevant because IYCF-E guidance applies across preparedness, response, and recovery, while nutrition information management is expected to support timely, appropriate, and coordinated nutrition response by ensuring that data are collected, analysed, shared, used, and archived (Global Nutrition Cluster, 2026; IFE Core Group, 2017). Without timely information on the number and location of infants and young children, emergency actors may face difficulties in estimating food needs, determining service locations, mobilizing trained personnel, and integrating IYCF services with public kitchens.

Table 3. Study findings, preparedness implications, and proposed information-management support

Empirical finding from this study	Preparedness implication	Proposed information-management support
The IYCF kitchen was established later than general public kitchens, leaving young children dependent on adult meals, general food aid, instant foods, or formula milk during the early response phase	Earlier activation of child-specific feeding support is needed during emergency response.	Link child-specific information with emergency assessment and public-kitchen planning to identify priority locations for IYCF services.
Cadres conducted door-to-door outreach to locate families with young children who were dispersed across tents and temporary shelters.	Rapid identification and location of eligible children may become more difficult during displacement.	Use pre-disaster Posyandu/village data on children aged 6–23 months and update locations during displacement.
IYCF kitchen activities relied on informal coordination and rotating tasks among cadres, including shopping, food preparation, distribution, and household outreach.	Clearer coordination records could support continuity, role clarity, and learning during emergency operations.	Maintain a simple coordination log documenting roles, decisions, distribution arrangements, referrals, and lessons learned.

Therefore, strengthening information management is essential to ensure that IYCF support can be activated earlier and monitored more systematically. This includes pre-disaster mapping of infants and young children through Posyandu and village-level data, rapid updating of beneficiary data during displacement, and integration of these data with

disaster response assessment mechanisms. Nutrition information systems are intended to guide the collection, storage, analysis, and dissemination of nutrition-related data and to support timely and accountable humanitarian decision-making (Global Nutrition Cluster, 2026). Existing systems, such as Electronic Community-Based Nutrition Recording and Reporting/*Elektronik Pencatatan dan Pelaporan Gizi Berbasis Masyarakat* (ePPGBM), record individual and Posyandu-based child nutrition data in the Indonesian context, whereas Electronic Cohort Recording System (e-KOHORT) supports integrated electronic monitoring for mothers, infants, and children under five (Ministry of Health, 2023). Although these systems may provide an entry point for improving preparedness data, their use during emergency response would still require clear procedures, data updating, and coordination mechanisms.

Information management is also relevant to coordination and learning. Systematic documentation of decisions, distribution arrangements, public kitchen integration, and monitoring results can help clarify the roles of health, social affairs, disaster management agencies, village actors, and humanitarian partners. Digital tools should be understood as supportive mechanisms to strengthen data readiness, coordination, monitoring, and accountability in future IYCF preparedness and response.

4. Conclusions

This study examined community perceptions and complementary feeding practices for infants and young children during the 2022 Cianjur earthquake and their implications for disaster preparedness. Although some caregivers were familiar with complementary feeding, many did not fully understand IYCF as a comprehensive practice that includes age-appropriate texture, feeding frequency, dietary diversity, food safety, responsive feeding, and continued breastfeeding. This knowledge gap was reflected in caregivers' feeding decisions during the emergency, which were also shaped by limited food availability and household resources.

The study also found that survival needs largely shaped complementary feeding practices during the early emergency phase. Before the IYCF kitchen became available, caregivers relied on general food aid, adult meals, instant foods, formula milk, or other accessible resources. These practices reflect not only household-level constraints but also the absence of early, child-specific feeding mechanisms within the emergency response system. The IYCF kitchen helped improve access to more appropriate and diverse food for young children; however, its delayed establishment indicates that IYCF had not yet been fully integrated into disaster preparedness and response planning.

Grassroots actors, particularly Posyandu cadres, played a central role in providing information and supporting access to IYCF services. Cadres conducted door-to-door outreach, helped locate families with young children, communicated with caregivers, and supported food distribution. However, their role remained largely reactive and dependent on external support, rather than being systematically integrated into pre-disaster preparedness. While Disaster Preparedness Cadets/*Taruna Siaga Bencana* (TAGANA) remains institutionally relevant as part of Indonesia's emergency food provision system, future preparedness could strengthen coordination between community-level actors such as Posyandu cadres and actors responsible for public kitchen operations and large-scale food assistance.

Overall, this study highlights that IYCF in emergencies should be understood not only as a response issue, but also as a challenge to preparedness. Strengthening community-based IYCF preparedness requires improving caregiver knowledge through routine Posyandu-based education, strengthening the capacity of cadres through practical IYCF-in-emergencies training, integrating child-specific nutrition considerations into public kitchen planning and food assistance systems, and developing simple monitoring mechanisms to support earlier and more appropriate feeding assistance for infants and young children. This study has several limitations: it is based on a single case study in Cijedil Village and uses retrospective data collected approximately three years after the earthquake, which

may have introduced recall bias. Therefore, the findings should be interpreted as context-specific lessons rather than generalization to all disaster-affected settings.

Acknowledgement

The authors would like to express their sincere gratitude to all caregivers and Posyandu cadres who participated in the focus group discussions and generously shared their experiences and perspectives. The authors also acknowledge the support of the local community and relevant stakeholders in Cijedil Village, Cugenang Subdistrict, Cianjur Regency, who facilitated data collection. Their cooperation and contributions were essential to the completion of this study.

Author Contribution

All authors contributed to the development of the manuscript, reviewed and approved the final version, and agreed to be accountable for all aspects of the work.

Funding

This research received no external funding.

Ethical Review Board Statement

The study was conducted in accordance with and approved by the Ethics Commission of Health Research and Development, Sint Carolus School of Health Sciences (165/KEPPKSTIKSC/VIII/2025 and August 7, 2025).

Informed Consent Statement

Informed consent was obtained from all subjects involved in the study.

Data Availability Statement

We encourage all authors of articles published in this journal to share their research data. This section provides details on where the data supporting the reported results can be found, including links to publicly archived datasets analyzed or generated during the study. A statement is still required when no new data is created or when data is unavailable due to privacy or ethical restrictions.

Conflicts of Interest

The authors declare no conflict of interest.

Declaration of Generative AI Use

During the preparation of this work, the authors used ChatGPT to assist in improving grammar, clarity, and the academic tone of the manuscript. After using this tool, the authors reviewed and edited the content as needed and took full responsibility for the publication's content.

Open Access

©2026. The authors. This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original authors and the source, provide a link to the Creative Commons license, and indicate if changes were made. The images or other third-party material in this article are included in the article's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this license, visit: <http://creativecommons.org/licenses/by/4.0/>

References

- Alhassan, I., Sammon, D., Daly, M., Wibisono, A., & Kasraian, L. (2023). The use of open, axial and selective coding techniques: a literature analysis of IS research. *AIS Electronic Library (AISEL)*. <https://aisel.aisnet.org/ukais2023/20/>
- Baudoin, M. A., Henly-Shepard, S., Fernando, N., Sitati, A., & Zommers, Z. (2016). From top-down to “community-centric” approaches to early warning systems: Exploring pathways to improve disaster risk reduction through community participation. *International Journal of Disaster Risk Science*, 7(2), 163–174. <https://doi.org/10.1007/s13753-016-0085-6>
- Brines, J. S., Rigourd, V., & Billeaud, C. (2022). The first 1000 days of infant. *Healthcare (Switzerland)*, 10(1). <https://doi.org/10.3390/healthcare10010106>
- Cianjur Regency Health Office. (2022). *Laporan sub klaster gizi-KIA, respon bencana Cianjur*.
- Cvetković, V. M. (2024). *Community-Based Disaster Risk Reduction*. <https://doi.org/10.20944/preprints202408.1544.v1>
- Dickin, K. L., Litvin, K., Mccann, J. K., & Coleman, F. M. (2021). Exploring the influence of social norms on complementary feeding: A scoping review of observational, intervention, and effectiveness studies. *Current Developments in Nutrition*, 5(2). <https://doi.org/10.1093/cdn/nzab001>
- European Commission. (2012). *Addressing undernutrition in emergencies a roadmap for response*. https://ec.europa.eu/echo/files/policies/sectoral/nutrition_leaflet_en.pdf
- Fridayani, H. D., Isnadi, Y., Atmojo, M. E., Qurotianti, A., & Widyasari, S. (2026). Enhancing disaster preparedness capacity and multi-stakeholder coordination through pentahelix collaboration: The role of Kwarda DIY in regional resilience. *Engagement: Jurnal Pengabdian Kepada Masyarakat*, 10(02), 474–490. <https://engagement.fkdp.or.id/index.php/engagement>
- Global Nutrition Cluster. (2026). *Information management*. GNC. Retrieved July 12, 2026, from <https://www.nutritioncluster.net/thematic-areas/information-management>
- Gribble, K. D. (2013). Media messages and the needs of infants and young children after cyclone nargis and the wenchuan earthquake. *Disasters*, 37(1), 80–100. <https://doi.org/10.1111/j.1467-7717.2012.01289.x>
- Hardani, U., J., Juliana S., D., Auliya, N. H., Andriani, H., Fardani, R. A., Utami, E. F., & Istiqomah, R. R. (2020). *Buku metode penelitian kualitatif & kuantitatif* (H. Abadi, Ed.; 1st ed.). CV. Pustaka Ilmu Group.
- Hwang, C. H., Iellamo, A., & Ververs, M. (2021). Barriers and challenges of infant feeding in disasters in middle- and high-income countries. *International Breastfeeding Journal*, 16(1), 62. <https://doi.org/10.1186/s13006-021-00398-w>
- IFE Core Group. (2017). *infant and young child feeding in emergencies operational guidance for emergency relief staff and programme managers developed by the IFE core group* (3rd ed.). IFE Core Group.
- Irtanto. (2022). Evaluasi peran Taruna Siaga Bencana (TAGANA) dalam penanggulangan bencana alam. *Cakrawala Jurnal Litbang Kebijakan*, 16(2), 105–123. <https://doi.org/http://doi.org/10.32781/cakrawala.v16i2.382>
- Kirby, N. (2025). Strengthening community resilience through participation—a conceptual exploration. *Environmental Sociology*, 12, 76–91. <https://doi.org/10.1080/23251042.2025.2479666>
- Kristian, I., Mohammad, O. K., & Ikhsan, F. (2024). Integrating community-based approaches into national disaster management policies: Lessons from recent natural disasters. *The International Journal of Law Review and State Administration*, 2(4), 115–125. <https://doi.org/10.58818/ijlrsa.v2i4.150>
- Lacher, S. (2024). Exploring disaster preparedness: a scoping review of adult and continuing education approaches in international civil protection research. *Journal of Risk Research*, 27(10), 1273–1289. <https://doi.org/10.1080/13669877.2024.2447252>
- Lestari, A., & Hanim, D. (2020). Edukasi kader dalam upaya pencegahan dan penanggulangan stunting di Kecamatan Mondokan Kabupaten Sragen. *AgriHealth:*

- Journal of Agri-Food, Nutrition and Public Health*, 1(1), 7.
<https://doi.org/10.20961/agrihealth.v1i1.41106>
- Lyon. (2023). *Humanities and social sciences modern analysis and researches* (Sevilay Özer, Ed.; 1st ed.). Livre de Lyon.
- Ministry of Health. (2023). *Petunjuk teknis peningkatan kualitas data bidang kesehatan*.
- Ministry of Social Affairs. (2012). *Pedoman umum taruna siaga bencana (TAGANA)* (Patent 28). Kementerian Sosial.
- National Agency for Disaster Management. (2022). *Infografis gempa bumi Cianjur 2022*.
<https://data.bnpb.go.id/dataset/gempabumi-cianjur-2022/resource/4b1cb991-9e99-475e-bb2c-28c1dc0e3c8e>
- National Agency for Disaster Management. (2023). *Update bencana gempa bumi Cianjur 2022*.
<https://gis.bnpb.go.id/Cianjur2022/>
- Nurulfuadi, Ayu Hartini, D., Aiman, U., Nadila, D., Rakhman, A., & Husna, S. (2021). Permasalahan gizi pada anak balita pasca gempa: Studi kasus di Palu, Sigi, dan Donggala. *Preventif: Jurnal Kesehatan Masyarakat*, 12(1), 127–134.
<https://doi.org/10.22487/preventif.v12i1.302>
- Oliver, T. L., McKeever, A., Shenkman, R., & Diwald, L. (2020). Barriers to healthy eating in a community that relies on an emergency food pantry. *Journal of Nutrition Education and Behavior*, 52(3), 299–306. <https://doi.org/10.1016/j.jneb.2019.10.005>
- Pasaribu, L. P., Cipta Apsari, N., & Sulastri, S. (2023). Kolaborasi penta helix dalam penanganan pasca bencana gempa bumi. *Social Work Journal*, 13, 140–149.
<https://doi.org/10.45814/share.v13i1.47909>
- Pramono, A., Hikmawati, A., Hartiningtiyaswati, S., & Smith, J. (2025). Breastfeeding support and protection during natural disaster and climate-related emergencies in Indonesia: Policy Audit. *Journal of Human Lactation*, 41(2), 231–242.
<https://doi.org/10.1177/08903344251322770>
- Prudhon, C., Benelli, P., Maclaine, A., Harrigan, P., & Frize, J. (2018). Informing infant and young child feeding programming in humanitarian emergencies: An evidence map of reviews including low and middle income countries. *Maternal and Child Nutrition*, 14(1). <https://doi.org/10.1111/mcn.12457>
- Rabbani, A., Padhani, Z. A., A Siddiqui, F., Das, J. K., & Bhutta, Z. (2020). Systematic review of infant and young child feeding practices in conflict areas: what the evidence advocates. *BMJ Open*, 10(9), e036757–e036757. <https://doi.org/10.1136/bmjopen-2020-036757>
- Rahmawati, N. D., & Dewi Sartika, R. A. (2020). Cadres' role in Posyandu revitalization as stunting early detection in Babakan Madang Sub-District, Bogor District. *ASEAN Journal of Community Engagement*, 4(2), 485–499. <https://doi.org/10.7454/ajce.v4i2.1055>
- Rudert, C., Koniz-Booher, P., Lung'aho, M., Stone-Jimenez, M., Arts, M., & Bégin, F. (2024). Development of the generic community infant and young child feeding counselling package. *Maternal and Child Nutrition*, 20(2). <https://doi.org/10.1111/mcn.12946>
- Ruel, M. T., & Alderman, H. (2013). Nutrition-sensitive interventions and programmes: How can they help to accelerate progress in improving maternal and child nutrition? *The Lancet*, 382(9891), 536–551. [https://doi.org/10.1016/S0140-6736\(13\)60843-0](https://doi.org/10.1016/S0140-6736(13)60843-0)
- Saputri, L., Rianto Budi Nugroho, A., & Wahyuni, P. (2025). Pemanfaatan sistem informasi penanggulangan krisis kesehatan terhadap kesiapsiagaan Dinas Kesehatan Kota Palu dalam Penanggulangan Bencana. *Indonesian Journal of Environment and Disaster (IJED)*. 4(1), 29–38. <https://doi.org/10.20961/vvrs6c94>
- Sari, N. M. W., Fadhila, F. R., Karomah, U., Isaura, E. R., & Adi, A. C. (2022). Program dan intervensi pemberian makan bayi dan anak (PMBA) dalam percepatan penanggulangan stunting. *Media Gizi Indonesia*, 17(1SP), 22–30.
<https://doi.org/10.20473/mgi.v17i1SP.22-30>
- Sataria, I., & Petrus, R. (2025). Information systems in disaster management: A narrative review. *International Journal of Strategic Information Systems and Knowledge Applications*, Universitas Salakanagara, 1(1), 17–31.
<https://doi.org/10.56861/jsiska.v1i1>

- Summers, A., & Bilukha, O. O. (2018). Suboptimal infant and young child feeding practices among internally displaced persons during conflict in eastern Ukraine. *Public Health Nutrition*, 21(5), 917–926. <https://doi.org/10.1017/S1368980017003421>
- Theda, M., & Mercado, M. (2024). Exploring community resilience strategies in disaster management: A Qualitative Study. *International Journal for Multidisciplinary Research*, 6(6). www.ijfmr.com
- Theurich, M. A., Humphreys, A. L., Gosselin, L. B., & McCool-Myers, M. E. (2019). Food safety considerations for commercial complementary foods from global operational guidance on infant and young child feeding in emergencies. In *Nutrition Reviews* (Vol. 77, Number 5, pp. 350–362). Oxford University Press. <https://doi.org/10.1093/nutrit/nuy065>
- WHO & UNICEF. (2003). *Global strategy for infant and young child feeding*. World Health Organization.
- Winters, S., Martinez, S., & Johannsen, J. (2024). Do improvements in infant and young child feeding (IYCF) practices endure the test of time? *Journal of Health, Population and Nutrition*, 43(1), 43–49. <https://doi.org/10.1186/s41043-024-00507-5>
- Zahra, R. A., Aziza, A., & Antasari, U. (2024). Peran posyandu terhadap tindakan pencegahan stunting pada balita di Posyandu Kenanga Banjar Baru. *DUNIA ANAK: Jurnal Pendidikan Anak Usia Dini*, 07(01), 2621–4016. <https://doi.org/https://doi.org/10.31932/jpaud.v7i1.3525>

Biographies of Authors

Firda Dewi Yani, Department of Magister Disaster Management, Graduate School of Sustainable Development, Universitas Indonesia, Central Jakarta, Special Capital Region of Jakarta 10430, Indonesia.

- Email: firda.dewi.yani@gmail.com
- ORCID: N/A
- Web of Science ResearcherID: N/A
- Scopus Author ID: N/A
- Homepage: N/A

Fatmah Fatmah, Department of Magister Disaster Management, Graduate School of Sustainable Development, Universitas Indonesia, Central Jakarta, Special Capital Region of Jakarta 10430, Indonesia.

- Email: ffatmah@yahoo.com
- ORCID: 0000-0002-2763-0219
- Web of Science ResearcherID: 607399
- Scopus Author ID: 57164872100
- Homepage: <https://dara.ui.ac.id/researcher/77603>

Fajar Tri Waluyanti, Department of Pediatric Nursing, Faculty of Nursing, Universitas Indonesia, Depok, West Java 16424, Indonesia.

- Email: fajar_tri@ui.ac.id
- ORCID: 0000-0001-8291-1681
- Web of Science ResearcherID: N/A
- Scopus Author ID: 36171063800
- Homepage: <https://nursing.ui.ac.id/fajartriwaluyanti/>