

# Analysis of the Effectiveness of the Infant and Child Feeding Program (IYCF) in Disaster Emergency Situations in Lumajang Regency, Indonesia

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**Keyword:** CIPP Model, Emergency Nutrition, Infant and Young Child Feeding Program.

**Abstract:** The IYCF program primarily aims to protect mothers, infants, and toddlers from malnutrition and other diseases. Unfortunately, the majority of IYCF have shown no significant success. The preliminary study found that during the eruption of Mount Semeru in December 2021, IYCF program was discovered. This study aimed to analyze the effectiveness of the IYCF program in disaster emergency situations in Lumajang Regency. This study was evaluative research using the CIPP model, with a mix-method approach. Data collection was carried out through in-depth interviews regarding the needs (context), resource use (input), and activities (process) with 7 informants, as well as measuring the nutritional status of toddlers (product). Data analysis was carried out through content analysis in the form of frequency based on indicator assessment. The context aspect of the success of the IYCF program is 75% (effective) related to limited time for local food and nutrition services; input aspect 83% (effective) related to lack of trained nutritionists; process aspects 67% (quite effective) related to the focus only on IYCF kitchen; product aspects 100% (very effective) related to normal nutritional status in toddlers. It is still necessary to increase the effectiveness of the IYCF program which can directly affect the nutritional status.

## 1 INTRODUCTION

Disaster emergency conditions are closely related to the emergence of problems in the nutrition section, especially for infants and toddlers as a vulnerable group. This specifically occurs in Indonesia which is among the top 3 countries at the highest risk of natural disasters, after the Philippines and India (World Risk Report, 2022). Therefore, to address the nutritional problems of infants and toddlers in disaster situations, the Government is implementing the Infant and Child Feeding Program (IYCF). The IYCF program primarily aims to protect mothers, infants, and toddlers from malnutrition and other diseases that arise as a result of disasters. Activities in the IYCF program include organizing IYCF kitchens, providing support for breastfeeding and IYCF counseling, offering counseling orientation and training on breastfeeding and IYCF, ensuring access to mother and child-friendly spaces, and enhancing IYCF coordination (RI Ministry of Health, 2020).

Unfortunately, several previous studies have found that the majority of emergency nutrition programs, specifically IYCF, have shown no significant success. According to Siagian (2014), during the eruption of Mount Sinabung in Karo District in 2014, the provision of toddler food menus was minimal, as public kitchens did not prepare special menus adapted to the needs of toddlers. Additionally, there was no management to control the assistance of breast milk substitute products, which influenced the occurrence of 15.5% of cases of malnutrition in toddlers. Similar findings were shown in the results of research by Nasrul et al. (2019), which found that food for toddlers became irregular and lacked nutritional value during the earthquake in Palu City in 2018, resulting in 9.1% of toddlers experiencing severe wasting and 22.7% experiencing wasting. The results of the research by Sulistiawati & Taufiqurrahman (2020), also found that during the earthquake in West Lombok Regency in 2018, the provision of food for toddlers and adults was not differentiated, and toddlers tended to consume instant

food, such as instant noodles and snacks, that lack of nutrients.

The preliminary study found that during the eruption of Mount Semeru that occurred in Lumajang Regency in December 2021, a feeding program for infants and children was discovered. In this regard, the evaluation of program effectiveness can be carried out using one of the evaluation models, namely the Context, Input, Process, Product (CIPP) model. The CIPP model in the evaluation format is more comprehensive at each evaluation stage, especially for IYCF programs that involve planning, implementation, monitoring, and evaluation stages. As for the evaluation of IYCF programs in Indonesia, there is still a tendency to solely focus on the final results neglecting the assessment of each stage of the program, as observed in the research by Widaryanti and Rahmuniyati (2019). Based on this, this study aimed to analyze the effectiveness of the Infant and Child Feeding Program (IYCF) in disaster emergency conditions in Lumajang Regency, East Java.

## 2 METHOD

This research is evaluative research using the Context, Input, Process, Product (CIPP) model, with a mixed method approach. The research was conducted in Lumajang Regency, Penanggal Village, and Sumbermujur Village Relocation Settlement. The research was conducted from March to April 2023. The research is part of the thesis research that comprehensively analyzes the effectiveness of the emergency nutrition program on the nutritional status of toddlers after the disaster in Lumajang Regency. However, to evaluate the effectiveness of the IYCF program, this study focuses on evaluating programs related to IYCF, including the needs of toddlers (context evaluation), resource utilization (input evaluation), and activities in the IYCF program (process evaluation). The evaluation data was collected from 7 informants selected through a purposive sampling technique, including 2 nutrition officers, each from the district and village, as key informants, as well as 1 cadre and 4 parents of toddlers who have survived the disaster, as supporting informants.

Furthermore, the collection of data related to the nutritional status of infants and toddlers, encompassing an assessment of parental knowledge, attitudes, and skills toward toddler nutrition (product evaluation). A total of 44 respondents, identified as toddlers, participated in the measurement.

After collecting the data, the results of the in-depth interviews were carried out for content analysis

using a triangulation technique to answer each indicator in terms of context, input, and process. Meanwhile, the results of completing the questionnaire were assessed using score interpretation criteria, with scores  $\leq 33\%$  falling into the poor category, 34 – 67% into the sufficient category, and  $\geq 68\%$  into the good category.

The results of the analysis of the context, input, process, and product aspects were further analyzed by frequency based on the indicator assessment criteria sheet developed by researchers. The criteria sheet was formulated based on the guidelines for implementing nutritional responses during the emergency response period (Indonesian Ministry of Health, 2020), a pocketbook for nutritional emergencies for toddlers after the disaster (Fahmida et al., 2019), Regulation of the Minister of Health of the Republic of Indonesia Number 75 of 2019 concerning Health Crisis Management, Regulation of the Head of the National Disaster Management Agency Number 7 of 2008 concerning Guidelines for Procedures for Providing Assistance to Fulfill Basic Needs, and Law of the Republic of Indonesia Number 24 of 2007 concerning Disaster Management.

The assessment of each indicator was categorized into 3 levels: high (score 3), moderate (score 2), and low (score 1). Determination of the effectiveness assessment was calculated based on the percentage of the total score obtained for each aspect sub-component. Based on the results of calculating the percentage interval of all indicators, the effectiveness criteria are presented in Table 1 below.

Table 1: IYCF Program Effectiveness Criteria in Emergency Conditions.

No.	Effectiveness criteria (%)	Category
a.	86-100	Very effective
b.	73-85	Effective
c.	60-72	Quite Effective
d.	47-59	Less effective
e.	$\leq 46$	Ineffective

## 3 RESULTS AND DISCUSSION

### 3.1 Characteristics of Research Subjects

The qualitative approach of this study managed to collect data from various informants, including 1 district nutrition officer (DN)(n=1) and 1 nutrition officer in one of the villages which became the center of relocating shelter (VN) (n=1) as key informants, 1 cadre (C) (n=1) and parents of toddlers who lived in

the Sumbermujur Village Relocation Settlement (PT) (n=4) as supporting informants.

In the quantitative approach, this study successfully identified 44 infants and toddlers as recipients of the IYCF program since the onset of the Mount Semeru volcanic eruption disaster in December 2021, residing in the Sumbermujur Village Relocation Settlement. The research findings revealed that 59% of the toddlers were females. The most prevalent age group (34%) was 3 years old. A majority (39%) of the toddlers' mothers were aged between 31 and 35 years, and 91% of them were employed as daily wage laborers. The characteristics of the toddlers can be observed in Table 2 below.

Table 2: Characteristics of Infants and Toddlers's Parents Receiving the IYCF Program in Lumajang.

General Characteristics	n = 44	%
Age (years)		
21-25	9	20
26-30	10	23
31-35	17	39
36-40	6	14
>40	2	5
Level of education		
Elementary school	30	68
Junior high school	10	23
Senior high school	2	5
Bachelor	2	5
Ethnicity		
Jawa	31	70
Madura	5	11
Jawa-Madura	8	18
Work		
Mechanic	1	2
Trader	1	2
Operator	1	2
Teacher	1	2
Daily laborer	40	91

### 3.2 Effectiveness of the IYCF Program from the Context Aspect

The evaluation of the success of the IYCF program from the context aspect involves several indicators, including the availability of nutrition services, the availability of special local food for toddlers, the timing of providing assistance with local food for toddlers, and the suitability of program goals and priorities.

As shown in Table 3, the study's results reveal that, from the context aspect, the indicator of local food assistance for toddlers meets the high category of assessment. However, other indicators, namely the availability of nutrition services, the duration

coverage for providing food assistance, and the suitability of program goals and priorities, exhibit moderate values. The fulfillment of needs reaches a score of 78%, which is classified as effective while program goals and priorities attained 67% which is classified as quite effective. Considering all aspects of the context, the overall assessment reached 75%, classifying it as effective.

Table 3: Assessment of Context Aspects of the IYCF Program in Lumajang Regency.

No. Context Aspect	Rating	%	Information
Fulfillment			
a. 1) Availability of nutritional services	2		
2) Local food assistance for toddlers	3	78	Effective
3) Length of time for food assistance	2		
b. Program goals and priorities	2	67	Quite Effective
<b>Average</b>		<b>75</b>	<b>Effective</b>

#### 3.2.1 Fulfillment of Needs

The availability of nutrition services falls within the moderate category, indicating that nutrition services are available for toddlers, but do not cover all toddlers.

Quote 1 *"Because of our shortcomings there, we are unable, I mean the government is also confused about spreading it. Because we also don't know. If we want to gather everyone in one place it's not enough."* (VN)

Based on the above quotation, it can be observed that the limited coverage of nutrition services is related to a lack of resources, and the fact that the community as disaster survivors are not displaced at the 7 designated evacuation points, such as the Penanggal Village Field, the Village Hall in Penanggal, the Village Hall in Candipuro, Candipuro Field, The Pasirian Village Hall, Pasirian Middle School 2 and Pronojiwo Middle School 2. Instead, they chose to evacuate independently in rented houses or relatives' houses. This decision was caused by the uncomfortable living conditions, especially for toddlers.

Quote 2 *"The point is, I lived in a rented house for 7 months and then moved here (Permanent Residents in Sumbermujur Village) after Eid Al-Fitri."* (PT 3)

Quote 3 *"Arrived at Sumbermujur Village Hall just after sunset, then stayed at a relative's house last night, right the next day."* (PT 4)

Quote 4 *"It's hot there, so it's uncomfortable."* (PT 1)

Regarding nutrition services in the form of counseling, only one session was carried out for breastfeeding mothers. However, counseling for toddlers was not carried out due to the lack of monitoring of their nutritional status.

Quote 5 *"Well, you know, there was a pregnant mother, and when it was time for her to give birth, her breast milk didn't come out, so we provided counseling for breastfeeding." "...Those toddlers are not mine, you know, so I don't really know. I mean, I can't really understand their needs either."* (VN)

Apart from this, according to the Indonesian Ministry of Health (2020), nutrition services in the IYCF program include IYCY and breastfeeding counseling, as well as access to appropriate, safe, and age-appropriate food. The suboptimal implementation of nutritional counseling and the low coverage of its implementation can indirectly affect the nutritional status of toddlers. According to Ariati et al. (2019), providing nutritional services to toddlers, including counseling and nutrition education to parents, can significantly increase toddlers' weight. In this case, the limited coverage of nutrition services may pose a risk for toddlers' nutritional status.

One of the nutrition services in the IYCF program is local food assistance through IYCF kitchens. The assessment of the implementation of the IYCF kitchen indicated a high rating, suggesting that local food is available and sufficient to meet daily needs, with the provision of local food 3 times a day. Unfortunately, the availability of the IYCF kitchen only lasts for 3 weeks, limited to the emergency response period.

Quote 6 *"3 full weeks complete meal is provided, 3 times a day."* (VN)

The provision of local food through IYCF kitchens, which is only provided during the emergency response period, poses potential risks to the nutritional status of toddlers. Indeed, the condition of the people affected by the disaster not having fully recovered economically plays a crucial role in their ability to fulfill their food needs independently (Panjaitan et al., 2021). According to National Disaster Management Agency Regulation number 4 of 2020, the disaster emergency status consists of

three phases: emergency alert, emergency response, and the transition period from emergency to recovery. The emergency response period itself represents a phase where threat still disrupts the lives of community groups. In this case, the provision of local food should continue until the recovery period, in the form of support for IYCF practices through counseling and home visits (Widaryanti & Rahmuniyati, 2019).

### 3.2.2 The Goals and Priorities Program

The fulfillment of inappropriate needs ultimately affects the goals and priorities of the IYCF program. In this case, the assessment is classified as moderate, which means that the program's goals and priorities are still not appropriate and do not meet the needs of toddlers.

According to the Indonesian Ministry of Health (2020), IYCF during a disaster aims to protect groups of mothers, babies, and children from malnutrition and other diseases that can arise as a result of disasters. However, in Lumajang Regency, the goals and priorities of the program were classified as inappropriate due to the unpreparedness of implementing the program for toddlers. At the beginning of the disaster, the program only focused on the general public. The IYCF program commenced after an NGO assistance initiative was implemented one week after the disaster.

Quote 7 *"Well, on day 2 until, I mean, the first day, H+1, the children get their food from the public kitchen until H+7. That's because we haven't received any donations yet."* (VN)

Even after the NGOs stopped running the IYCF program during the emergency response, the Department of Health and the Community Health Centers were unable to continue the IYCF program independently. As a result, feeding for toddlers was once again diverted to public kitchens, where the food provided did not consider the type of food and nutritional adequacy required for toddlers.

Quote 8 *"The public kitchen, yes. Because there are limitations, you know, hahaha, with the donations we receive."* (VN)

The focus on the general public from the beginning of the disaster in Lumajang Regency indicated that toddlers, as a vulnerable group, did not receive direct attention. According to the Ministry of Health (2012), the IYCF program should have been implemented from the start of the disaster by providing food menus that were classified as durable, such as meat floss and biscuits, while still considering



toddler nutritional needs and adequacy. According to Sulistiawati and Taufiqurrahman (2020), providing local food to toddlers through public kitchens is insufficient to meet the nutritional needs in terms of quantity, quality, and type of food given. This is also supported by the results of research findings of Siagian (2014), which revealed that the provision of food for toddlers through public kitchens minimally meets their nutritional needs for growth and development. The menu available in public kitchens is specifically tailored for adults, lacking diversity and limited in choices suitable for toddlers.

### 3.3 IYCF Program Effectiveness Level from Input Aspect

The study results presented in Table 4 show that, from the input aspect, the lowest rating is attributed to the indicator of resources implementing the IYCF program, with a total percentage of 67%, which can be considered quite effective. Regarding supporting sources, including the role of the government and nutrition officers, it is classified as effective, with a total percentage of 83%. In terms of infrastructure and facilities indicators, the IYCF program achieved a score of 100%, which is classified as a very effective rating. Consequently, the overall effectiveness of the input aspect is 83%, which is classified as effective.

Table 4: Assessment of Input Aspects in the IYCF Program in Lumajang Regency.

No	Input Aspects	Rating	%	Information
a.	IYCF Program			
	Implementing Resources	2		
	1) Education		67	Quite Effective
b.	2) The number of implementers	2		
	Supporting sources			
	1) Government role	3	83	Effective
c.	2) The role of the nutritionist	2		
	IYCF Program Infrastructure and Facilities	3		
	1) Physical facilities		100	Very effective
	2) Nutritional supplies or equipment	3		
Average			83	Effective

#### 3.3.1 IYCF Program Implementing Resources

The education assessment of the program implementing resources was moderate, meaning that only a few implementers were nutrition implementing staff who had received special training in emergency nutrition management, specifically IYCF in disaster conditions.

Quote 9 *"Yes, so at that time, the incident happened suddenly. We hadn't received any training*

*from the Health Department regarding nutrition during disasters."* (VN)

Based on the interview excerpts, it is evident that all nutrition workers in Lumajang Regency have not received special IYCF training in disaster conditions. Some nutrition workers who have undergone training are part of volunteers or NGOs. The number of nutrition officers who received the training was only 2 people, so the assessment for the indicator of the number of implementing staff was classified as moderate.

However, it should be noted that training obtained directly in the field through learning from volunteers or NGOs does not necessarily address all issues in the implementation of IYCF. The training received from NGOs only emphasized food processing for toddlers and was specifically provided to Cadres, lasting for 2 days. The temporary and shallow training related to IYCF also caused the Department of Health and the Community Health Centers to be unable to independently run the IYCF program, which should include more than just IYCF kitchen activities.

Quote 10 *"Yes, it was just for two days. Cadre is used to cooking, but this time, she was asked to add carrots and white tofu to the usual soto (soup), as there were no carrots in it. That was the only additional menu item requested."* (C)

The lack of trained nutrition officers in IYCF can affect the decline in the nutritional status of toddlers. According to Sunguya et al. (2013), nutrition training can improve feeding practices for toddlers, including practices related to meal frequency, energy intake, and food diversity. The training provided must also consider local food availability to ensure its practicality. The results of this study were also supported by Wijayanti and Fauziah (2019), who found that IYCF training enabled health officers, including cadres, not only to improve food processing skills but also able to provide counseling and change parenting patterns regarding providing toddler food based on balanced nutrition rules, which may improve the nutritional status of toddlers.

#### 3.3.2 Supporting Sources

Concerning supporting sources, namely the government, a high rating was obtained. This pertains to the government's role in assisting the IYCF program by establishing policies, granting permits for program implementation, participating directly in the field, and allocating funds. However, despite fulfilling all of these responsibilities, it was found that there was suboptimal allocation of funds concerning

the length of time the emergency funds were to be disbursed.

Quote 11 *"...Actually, we had the local funds available at that time. It's called emergency funds, and we did allocate them, but the process of accessing local funds takes a long time."* (NO)

According to Law Number 24 of 2007 concerning Disaster Management, the Government and local governments have the authority to determine policies, including disaster management planning, guaranteeing the rights of communities and refugees according to minimum service standards, protecting disaster-affected communities, implementing development programs, and allocating disaster management funds. Maximum funds allocation in the program is required to achieve better outcomes in the nutrition program. This is in line with the results of research by Pearson et al. (2018), which emphasizes the importance of adequate program funding balanced with the promotion of improved IYCF practices in reducing nutritional problems, especially stunting.

Regarding other supporting sources in the IYCF program, namely nutrition officers, a moderate rating was obtained. This means that the nutrition officers have not fully met the needs and resolved the problems faced by toddlers as a whole in IYCF. This is related to the lack of nutrition officers who receive emergency nutrition training, limited nutrition services that are unable to reach all toddlers, and the inability to follow up on IYCF implementation until the recovery transition period.

### 3.3.3 IYCF Program Infrastructure and Facilities

Regarding the facilities and infrastructure of the IYCF program, namely the availability of physical facilities, a high rating was obtained, indicating that  $\geq 68\%$  of adequate facilities were available. In this instance, there is a special food storage area for infants and toddlers that meets the standards. This storage area is separate from the general food storage, shielded from direct sunlight, stored on pedestals, and supervised by competent staff. During the IYCF kitchen implementation process, the availability of cooking utensils and distribution is guaranteed. However, regarding physical facilities, access to mother and child-friendly rooms is lacking and is only available in one of the evacuation sites.

According to the Indonesian Ministry of Health (2020), the person in charge of nutrition should ensure that mother and child-friendly spaces are

available in various evacuation centers and accessible to pregnant and breastfeeding women, allowing them to practice IYCF comfortably. The unavailability of mother and child-friendly spaces can be a factor in the discomfort of mothers residing in evacuation sites, caused by concerns and the stressful conditions they experience. This is following research by van Dellen et al. (2022), who found that quality-friendly spaces for breastfeeding mothers can help alleviate stress, positively impact milk production, foster a sense of organizational support, and enhance subjective well-being. Metzler et al. (2019), also found that the establishment of child-friendly spaces has a long-term impact on psychosocial well-being.

Besides physical facilities, the availability of nutritional supplies or equipment also exhibits a high score in supporting the IYCF program. However, during IYCF implementation, the nutritional equipment, in the form of IYCF kits, belonged to NGOs. The assistance provided to the Community Health Centers in the form of IYCF kits was still incomplete. Furthermore, the nutrition kit did not provide the IYCF survey study form, which is required to maximize the process of monitoring and evaluating the program (RI Ministry of Health, 2020).

Quote 12 *"None (IYCF survey review form). That is also not available (IYCF kit). We don't have any, that's why we asked Wahana Visi for them. The community health center received some, but they were incomplete."* (VN)

### 3.4 IYCF Program Effectiveness Level from Process Aspect

The evaluation of the level of effectiveness of the IYCF program in terms of the process can be observed through program planning, forms of activities, timing of program implementation, and reporting of IYCF program activities. Based on the research results in Table 6, the level of effectiveness of the IYCF program from the process components in Lumajang Regency is as follows: program planning reached 50%, which is classified as less effective; the form of activity reached 67%, classified as quite effective; program implementation time reached 67%, also classified as quite effective; while the reporting of IYCF program activities reached 100%, classified as very effective. Overall, the effectiveness of the IYCF program from the process aspect reached 67%, which is classified as quite effective.

Table 5: Assessment of Process Aspects in the IYCF Program in Lumajang Regency.

No	Process Aspects	Rating	%	Information
a.	Program Planning			
	1) IYCF intervention plan	2	50	Less effective
	2) IYCF evaluation plan	1		
b.	Forms of activity			
	1) IYCF intervention	2	67	Quite Effective
c.	Program implementation time			
	1) IYCF kitchen implementation time	3	67	Quite Effective
	2) Implementation time for breastfeeding counseling and IYCF	2		
	3) Implementation time for breastfeeding counseling and IYCF training	1		
d.	Reporting on IYCF program activities	3	100	Very effective
Average			67	Quite Effective

### 3.4.1 Program Planning

The assessment of planning for the IYCF intervention is moderate, as it focuses on ensuring the output of a policy plan and management mechanism for donations of breastmilk substitutes, access to nutritious food, support from related sectors, and coordinated IYCF interventions. However, there is uncertainty in the output of access to mother and child-friendly spaces. Currently, mother and child-friendly spaces are only available at one of the evacuation sites, making them inaccessible to all breastfeeding mothers and toddlers.

Regarding the policy plan and mechanism for managing the donation of breast milk substitute products, the government has formulated a policy plan, but the Department of Health and the Community Health Centers are facing challenges in managing it. A large amount of formula milk assistance made the Community Health Centers unable to control the circulation of milk products, especially for infants under 6 months. This issue can harm the nutritional status of these infants, as research by Lestari et al. (2014) has shown a positive relationship between the dose mismatch of giving formula milk and nutritional status, as well as a negative relationship between the sanitation of serving milk and the duration and frequency of diarrhea, which can cause a decline in the nutritional status of infants under 6 months.

Despite those challenges, access to nutritious food for toddlers has been ensured through joint planning with NGOs, involving local health officers and cadres

to discuss area coverage, availability of staple foods, and the implementation mechanism for IYCF.

Quote 13 *"Yes, before the training, the people come here. It means that no matter the shifts, just do everything. I mean, there are no designated shifts for cooking. It's 3 times a day. There's no need to divide the responsibilities; we do it collectively to avoid overwhelming anyone at home."* (C)

Regarding the evaluation plan of the IYCF program, the assessment was classified as low. This is related to the evaluation process which is only carried out for one activity, namely the IYCF kitchen, including how cadres prepare food for toddlers. According to the Indonesian Ministry of Health (2020), the evaluation of the IYCF program should be carried out in all series of IYCF program activities, including mechanisms for managing donations of breastmilk substitute products, bottles and baby pacifiers, IYCF kitchens, access to breastfeeding and IYCF counseling, access to mother and child-friendly spaces, as well as IYCF coordination.

Quote 14 *"Yesterday, we did this, and the evaluation mainly focused on the implementation of the kitchen."* (DN)

Quote 15 *"Yes, so the evaluation was about whether the cadres' way of cooking was appropriate or not."* (VN)

An evaluation plan that solely focuses on one activity can lead to neglect of other activities and run suboptimal, thereby affecting program achievement. In this case, it can have implications for the nutritional status of toddlers.

### 3.4.2 Forms of Activity

In practice, the assessment of the IYCF program intervention was classified as moderate. This is related to the implementation of activities, such as IYCF kitchens, breastfeeding and IYCF counseling support, access to mother and child-friendly spaces, as well as IYCF coordination. However, training on breastfeeding and IYCF counseling was not conducted during the disaster situation.

Quote 16 *"Not if they are trained in this way, but according to their knowledge they are capable."* (DN)

According to the Indonesian Ministry of Health (2020), training in breastfeeding counseling and IYCF in disasters must target health and non-health officers, including cadres and the community. This is

to ensure the availability of human resources capable of continuing counseling activities, especially during the rehabilitation and reconstruction period after the assignment of counselors from outside the area or from NGOs ends. The absence of this training is a contributing factor to the unsustainability of the IYCF program and can affect the decline in the nutritional status of toddlers. This is in line with the findings of research by Syihab et al. (2021), which revealed that the level of education and the attitude of the counselor significantly influences IYCF counseling practices. Therefore, providing training to improve the knowledge and attitudes of IYCF counselors is an important factor in supporting the improvement of the nutritional status of toddlers.

The implementation of counseling with NGOs cannot cover all cases of nutrition issues that occur. According to the Ministry of Health of Indonesia (2020), in the planning of emergency nutrition responses, a situation analysis is required, which includes the nutritional status before and after the disaster. The lack of data or information related to the nutritional status of toddlers also identifies insufficient planning in the nutritional response in Lumajang Regency. As a result, activities within the program, such as counseling, cannot be carried out to their full potential.

### 3.4.3 Time of Program Implementation

Regarding the timing of activities in the IYCF program, a relatively high score was obtained in the IYCF kitchen activities, which were carried out every day throughout the 3-weeks, providing staple food three times a day. However, moderate scores were obtained in the implementation of counseling support as it ran erratically, and low scores were obtained in counseling training activities as they were not carried out.

Quote 17 *"The staple food is sufficient, three times a day, every day."* (DN)

Regarding the implementation of counseling, it is carried out at uncertain times. Two months after the disaster, the community no longer received direct nutrition services at the evacuation sites. However, individuals who felt they needed nutritional services, including weighing and counseling, were directed to go to the Community Health Centers.

Quote 18 *"Yes, only for specific cases. So, after February in the following months, we conduct outreach in the community within the evacuation area. If there are any health issues, they can directly go to the community health center (Puskesmas). For*

*example, if they want to know the weight of their toddlers or any other health concerns, they can visit the community health center right away."* (VN)

According to Panjaitan et al. (2021), during a disaster situation, the community's condition is not yet stable, both psychologically and economically. Therefore, the program becomes unsustainable, which may trigger public distrust. This, in turn, will also influence the level of community participation in utilizing nutrition services at the Community Health Centers. Research by Fatimah and Hidayah (2022) revealed that factors supporting the participation of mothers of toddlers in utilizing nutrition services at the Community Health Centers include work, support from health officers and family, as well as the availability of facilities and infrastructure.

### 3.4.4 Reporting of the IYCF Program Activities

Regarding program evaluation, the assessment results for reporting IYCF activities are high, indicating that reporting is consistently carried out. In this case, reporting is conducted every week through online meetings for three consecutive weeks, focusing solely on IYCF kitchen activities.

However, despite conducting an evaluation, the recording and reporting of the evaluation results were not performed due to a lack of guidelines. According to Haniarti and Yusuf (2020), the absence of these guidelines also indicates that during a disaster, the handling of toddlers' nutrition has not been handled specifically. In this case, the responsibility for preparing SOPs for handling toddler nutrition in post-disaster conditions should lie with the Department of Health.

### 3.5 IYCF Program Effectiveness Level from Product Aspect

An assessment of the level of effectiveness of the IYCF program can be observed by examining the nutritional status, which is indirectly influenced by the knowledge, attitudes, and skills of parents of toddlers in fulfilling and improving toddler nutrition. The findings of the study by Ayed et al. (2021) revealed a significant positive relationship between knowledge, attitudes, and skills of mothers on weight for age (W/A) and height for age (H/A) for toddlers. In other words, a mother's knowledge, attitudes, and skills have a positive effect on toddler growth. These findings are further supported by the research conducted by Tanuwijaya et al. (2018), which also identified a significant relationship between mothers'



knowledge about IYCF and the nutritional status of infants and toddlers.

Concerning this, the results of the study found that among the 44 infants and toddlers who survived the disaster in Lumajang Regency, the majority (91%) had normal nutritional status after the disaster. Consequently, the effectiveness of the IYCF program from the product aspect could be classified as very effective.

This study has limitations in attaching supporting data in the form of real reporting results of infant and young-child feeding programs during disasters, related to the lack of program reporting by the Department of Health so that research data is only based on informant statements.

## 4 CONCLUSIONS

Apart from the results of the product aspect which is classified as very effective, there is still a need to enhance effectiveness in context aspects, including nutrition services and local food provision, input aspects, especially implementing resources, and process aspects, including planning, intervention, and implementation time of the IYCF program which can directly affect the nutritional status of infants and toddlers.

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