

## FOOD FULFILLMENT FOR CHILDREN UNDER FIVE BY FAMILY IN DISASTER RESERVE AREA

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### ABSTRACT

*The ability of families to meet the food needs becomes one of the determining factors in the fulfillment of food of children under five. For the communities living in disaster areas, the situation can be further complicated by the conditions of the natural environment damaged by the disaster. This research describes the fulfillment of food of children under five, especially those aged between three to five years, by families who lived in disaster-prone areas. This research was conducted in Nagrakjaya Village, Curug kembar Subdistrict, Sukabumi Regency which is prone to earth movement disaster and part of its territory is considered as the red zone. The research employed a qualitative method using data obtained from parents informant of children under five, health cares, and community leaders. The aspects covered in this study were: food access, food availability, consumption pattern, coping strategy food, and food preparedness. The results showed that in terms of access to food, people obtained their foodstuffs depending on what was available to mobile vendors and small shops regardless of their financial ability to obtain food. Moreover, people did not provide special foods for toddlers. In dealing with difficult situations during the event of a disaster, people relied on the provision of food from fellow citizens or small shop owners and outside help. People also felt no need to store food supplies for the possibility of difficult situations, both for adults and toddlers, even though toddlers have a different consumption pattern to adults and require balanced nutritional needs. As a recommendation, it is necessary to conduct campaigns and dissemination of healthy food for children under five to increase parents' knowledge about healthy consumption for children under five, especially in the disaster-prone areas.*

**Keywords:** *food fulfillment, children under five, disaster area*

### INTRODUCTION

Being sited on a belt of seismic activities along the rim of the Pacific Ocean Basin, so-called Pacific Ring of Fire, Indonesia has to deal with a constant risk of natural disasters, including earthquakes and volcanic eruptions. Among the provincial regions, West Java has earthquake-prone areas covering 15 cities and the southern part of the province, especially in Cianjur, Tasikmalaya, Ciamis, Bandung, and Sukabumi had suffered greater damage with significant casualties. In addition to causing death tolls and other damages, the earthquake also disrupted the availability of food in disaster-prone areas and led to food insecurity. According to Law no. 24 of 2007 disaster is an event or series of events that threaten and disrupt the lives and livelihoods of the community caused by natural factors and/or non-internal factors and human factors resulting in the occurrence of human casualties, environmental damage, property loss, and psychological impact.

Generally, natural disasters are characterized by a relatively short time of disaster, occurring suddenly, uncontrolled but predictable, and can cause damage and chaos (Bell *et al.*, 1990). Carter (1991) has addressed that there are several kinds of natural disasters, including volcanic eruptions, earthquakes, tsunamis, floods, and landslides; the other forms of natural disasters can include droughts, hurricanes, and forest fires. Natural disasters can cause tremendous damage, and even cause casualties. The impact is also extraordinary on the various dimensions of human life, in terms of psychological, social, political, economic, and cultural aspects.

One of the most perceived disturbances in society due to the existence of natural disasters is in the aspect of the fulfillment of food needs given food is one of the basic human needs. To illustrate the fulfillment of food needs, the concept of food security can be used as a reference. Chung *et al.* (1997) described that food security system is a series of three main components, namely the availability and stability of food, the ease of obtaining food (food access), and the absorption of food. These three components will determine the consumption of family food that is determined by the availability of food. In addition, families experiencing food insecurity will overcome their food problems by adopting a coping strategy (Adi *et al.*, 1999).

As part of the disaster management, food provision plays an important role in coping food insecurity in the event of disasters. The fact that children are the most vulnerable group to the disaster effects, the food provision should also be addressed not only to meet the nutritional appropriateness but also meet dietary requirements. In most cases, nevertheless, the provision of food reserves mainly consists of rice and noodles. Such food materials would not suitable for immediate relief as they require further processing and insufficient to meet the nutritional needs of the community, especially groups of children.

The National Disaster Management Agency (BNPB) noted that about 15% of children under five in the affected areas were affected by malnutrition. These conditions further affect the number of under-five mortality, especially those associated with infectious diseases. In addition, the condition of malnutrition in infants will also cause long-term consequences such as low level of intelligence, low ability to socialize and low performance in work. The provision of dietary supplements combined with intensive nutrition and health-related counseling programs is an idea that is expected to provide positive results in dealing with children with poor nutritional status in the affected areas.

In understanding the problems associated with adequate food needs for toddlers in disaster-prone areas, there are several factors that need to be considered: the natural conditions, the ability of the family, and the condition of society. The condition of nature and social condition will basically influence also the ability of family in fulfilling the requirement of food for children under five. Need a good understanding of the food before reviewing the conditions of food fulfillment by the family. The food Law No. 7/1996 states that food is anything derived from biological resources and water, whether processed or unprocessed, which is intended as food or beverage for human consumption, including food additives, raw materials of food and other materials used in the process of preparing, processing and or making food or drink.

Based on this view, the family's food fulfillment capability is not only referred to the provision of food for children under five but also includes ways and resources for the acquisition of food. For families in the red zone, food fulfillment efforts for family members, especially for children under five, need to be specifically explored. Environmental conditions are damaged by the earthquake affecting the provision of facilities and accessibility of the region. This condition may further affect the condition of the community in the disaster area and affect the ability of the family.

## **RESEARCH METHODS**

This research employed qualitative methods in order to describe the process of the family in meeting the needs of food for children under five comprehensively. To obtain complete and in-depth views, the data collection was carried out by in-depth interview technique and non-participative observation. In-depth interviews were conducted with the respondents considered know the family's efforts in meeting the food needs of children under five, parents, health cadres, and community leaders. Observations were made to complete the acquisition of data that can be the diameter. This observation was made on family and community activities related to family efforts to meet the needs of children under five. Interviews and observations were used to obtain data on the ability of the family in terms of food access, food availability, coping strategy of food, and preparedness in the fulfillment of food.

The collected data were then processed and analyzed. Data processing was done during the process of data collection so that the unreliable data could be immediately overcome. In accordance with the rules of qualitative research, Miles & Huberman (1992) outlined that the analysis process includes three components of analysis, namely: data reduction, data presentation, and conclusion. The conclusions generated from the data processing to illustrate the fulfillment of infant food needs in each aspect, so as to provide a complete picture of the fulfillment of food needs of children under five by the family in the study sites.

## RESULTS AND DISCUSSION

Results of the study are presented sequentially according to steps in data processing on every aspect of the food fulfillment by the family, namely: food access, food availability, consumption patterns, coping strategy of food, and food preparedness. The description of each aspect provides an overview of family efforts in disaster-prone areas to fulfill the food of children under five. Food access is the ability of households to periodically meet sufficient quantities of food through a combination of their own food reserves and home production, purchases, barter, gifts, loan or food aid (WFP, 2005). Food aid can be sourced from various parties, both from the government and the social environment. The ability of household food access is said to be good if households are able to reach the available food both physically, economically, and socially. Food access implies a guarantee that every individual has sufficient resources to access food needs in accordance with the nutrition norm.

The village of Nagrak Jaya is administratively located in Curug Kembar sub-district. This village does not have a market, but there are small grocery shops, merchants, and villager gardens as providers for food. The nearest market of Nagrak Jaya Village is located in Sagaranten District. Nevertheless due to poor road conditions, going to the market will cost IDR 25,000 for a one-way fare and take about an hour using a four-wheeled vehicle or half an hour using a motorcycle. Although road improvement has been made, the often occurrence of the landslide has caused damage to the improved road. Consequently, food prices, except rice, are expensive as result of the low accessibility to the village. Moreover, BMKG (The Indonesian Agency for Meteorology, Climatology, and Geophysics) has classified Nagrak Jaya as a red area of land movement and uninhabitable.

With the limited access to the market, the villagers of Nagrak Jaya have to produce their own foodstuff. In addition to rice, there are also some vegetables and fruits that are often grown, including eggplant, cassava, orange, squash, chili, taro, banana, lime mango, pineapple, sapodilla, sweet potato, bean, water apple, kale, spinach, black bead, bitter bean, and corn. These vegetables and fruits are mostly used to meet the family consumption and only small portions are sold to the other villagers. For those who do not grow their own crops, their food needs are purchased from the nearest small shops or the peddlers. From the shop, they can buy vegetable oil, salted fish, chicken eggs, and other needs, while the peddlers usually provide vegetables and fruits. Unfortunately, there some areas are not visited by the peddlers on a daily basis so that vegetables are not available every day.

As atypical village life, concern for others still occurs in Nagrak Jaya Village. Offering food to a neighbor is a habit in social life. Mutual help with neighbors is still common, especially in the fulfillment of food needs. In a case of food shortage, the community is usually overcome by borrowing or giving food to each other or owe to the small shop. However, the need for cash, the majority of villagers prefer to borrow money from the families nearby rather than to the neighbors.

The second aspect of the food fulfillment by the family is food availability. Food availability is a provisioning condition that includes foods and beverages derived from crops, livestock, and fish, and their derivatives for the inhabitants of a territory over a period of time. Food availability is a tiered system, ranging from national, provincial (regional), local (district/city), and household (Baliwati & Rosita, 2004). Various ways can be done by the family to provide enough food for their family members, among others, by producing their own food on their farms or home yard and buy in markets or small shops in the neighborhood. This food availability can form the eating habits of the community, in addition to three other factors, namely food production for household use, household food expenditure, and nutritional knowledge (Suhardjo *et al.*, 1988).

To meet foods need, at the time before or after the disaster, the people still work as usual. Because there is no urgent situation, community members do not have a specific strategy in providing food in the event of a disaster, they continue to work either to work in the fields or to be laborers elsewhere. By staying employed, the residents get access to their daily needs, especially the need for food. If there are people who have difficulty then he will owe to the shop so that he can meet the needs of his family. Usually, the owner of the shop does not mind giving debt to the people who are experiencing difficulties. As several studies have shown that the impact of disasters can be positive as well as increased solidarity among them. Feeling that they have the same fate, disaster victims will tend to help each other (Bell *et al.*, 1990).

As the third aspect of the food fulfillment by the family, food consumption shows food eaten by a person or group of people, either in kind or in quantity at a certain time (FAO, 2007). This means that food

consumption can be seen from the aspect of the number and type of food (frequency and diversity of food) consumed (Rohimah, 2009). The diversity of food consumption is very important, this is because there is no one type of food containing nutrients in the type and number of complete. By consuming a variety of foods, the lack of nutrients in one type will be complemented by the content of nutrients from other foods so that will ensure the fulfillment of balanced nutritional quality in sufficient quantities.

Based on the consumption pattern, the children under five in Nagrak Jaya Village commonly eat twice a day; although there are children only once a day and few who eat three times a day. The meal times are usually from 10 am to 2 pm and from 4 pm to 6 pm. Toddlers prefer to consume snacks and beverages during the meal times. They prefer to consume a snack with salty, savory or sweet taste and packaged sweet beverage, such as *Teh Gelas*, *Ale-ale*, *Power-F*, and *Okky Jelly Drink*. Both snacks and beverages are easily obtained from the small shops and peddler around the residential area, such as traditionally made ice cream, tapioca dough (known as *cilok*), egg ball (known as *cilor*), meatballs, and other snacks. This snack eating habits seemed to make children less like to eat rice. Typically, toddlers eat rice only as much as 1-2 table spoons, but more of them eat rice only one spoon with salted fish as the side dishes. Otherwise, they eat boiled instant noodle. To meet the dietary fiber needed by the children, the mother usually serves the children dishes with rice porridge with some additional vegetables. Some fruits are also frequently given to the children. Both vegetables and fruits are obtained from the family yard or garden.

In an effort to meet food needs, developing strategies for coping strategies may occur in the family. Davies (2016) stated that the coping strategy or coping mechanism is an effort made by someone in overcoming unprofitable situations or circumstances. One can work by relying on intellectual, physical, and material abilities. Coping mechanisms usually utilize a medium of exchange in an attempt to improve the ability to obtain food in order to ensure the survival of the entire family members. The coping mechanism also provides a way to utilize the bill assets and food access savings to keep household functioning, including food consumption, health, status, and livelihoods.

Any family experiencing food insecurity problems will naturally attempt to overcome the problem by coping strategy through the use of exchange tools to minimize the risk. Utilized exchange tools can be physical (energy) as well as family assets, including livestock (chicken and goat) and household items (jewelry and utensils). Although coping strategy has become one of the determinants of food security, Frankenberner & Goldstein (1990) remarked that there is no strong evidence that a successful coping strategy will balance the current food needs with future food sustainability as one of the conditions of food security. Coping behavior by the family can vary depending on the conditions experienced. Corbett (1988) noted that coping strategy can be categorized into four levels: 1) adaptation to dietary changes, such as food consumption shifted to corn consumption as a substitute for rice, reduced daily meals, which are rarely consumed, seek additional income as laborers, and borrow money from other families; 2) selling unproductive assets, jewelry, borrowing other than family, temporarily moving jobs, or reducing meals throughout the day; 3) selling land, livestock and other productive assets; and 4) permanent migration and seeking food aid. Regarding the stages performed in the food based coping strategy, Maxwell (1996) determined six main stages: (1) eating less favored foods; (2) restrict the portion of the meal; (3) borrow food or money to buy food; (4) changes in food distribution; (5) reduce the frequency of eating per day; and (6) did not eat for several days.

Associated with the pattern of community consumption in the study sites, the diet of toddlers was not independent of the values contained in the community. The value embedded in society is not a myth about the taboo of food, but rather the sense of prestige shown by the pattern of their toddler's snacks. They do not want to see their child crying because they do not get the snacks they want. This sense of pride is what makes parents prefer to always give whatever is desired by the child. Any snacks that the child wants will always be fulfilled by the parent.

In the event of a disaster, Nagrak Jaya villagers seem to lack food readiness. In general, the stock of food supplies, such as rice, is only available in the food store. Other food elements such as vegetables and processed ingredients are readily available in small shops. In the event of a disaster, small shops or peddlers continue to operate as usual so that it makes villagers feel no need to store food. They can buy and directly process the food obtained from the small shop. In addition, with the food aid from disaster post to make food need for the villagers is always fulfilled. As several studies have shown that the impact of disasters can be positive as well as increased solidarity among them. Feeling that they have the same fate, disaster victims will tend to help each other (Bell *et al.*, 1990).

## CONCLUSION

Villagers of Nagrak Jaya have limitations to obtain food sources due to the unavailability of a nearby market to meet the needs of the community. Most people choose to shop for food from the store near the house, which in general are dried foods, eggs, and salted fish. For the fulfillment of vegetables and fruits are usually obtained from vegetables and fruit vendors who usually sell 2-3 days. The toddler's diet in Nagrak Jaya Village is influenced by several factors, namely parent factor, environmental factor, and factors of toddler itself. In the case of disaster, people do not depend on any food problems from outsiders. Because shop and peddlers still operate, the community does not have food preparedness in facing the disaster. In the face of disaster, people only reserve long-lasting food, especially staple food such as rice, before the disaster. As a recommendation, it is necessary to conduct campaigns and dissemination of healthy foods for children under five to increase parents' knowledge about healthy consumption for children under five.

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