

NUTRITIONAL IGNORANCE: DIETARY HABIT OF UNDER FIVE CHILDREN WITH STUNTED GROWTH IN LABOTAN KANDI VILLAGE, BANGGAI REGENCY, CENTRAL SULAWESI ISLANDS

Eka Yuniati^{1*}, Atik Triratnawati²

¹ Student of Master of Anthropology, Faculty of Cultural Sciences, Universitas Gadjah Mada

² Lecturer of Anthropology Department, Faculty of Cultural Sciences, Universitas Gadjah Mada

Email: eka.yuniati0198@mail.ugm.ac.id

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Abstract: Stunting in under-five children is mostly due to unbalanced nutritional intake. Stunting is a health problem that requires further treatment. Taking care of the diet is a shortcut to the improvement of child nutrition and growth. This study aimed to examine the dietary habits formed by parents of under-five children with stunted growth. The study was conducted in Labotan Kandi Village, South Bulagi District, Banggai Islands Regency, Central Sulawesi. The data were collected through a series of observations, in-depth interviews, and documentation. This research was carried out from July to August 2022 by conducting interviews with 18 mothers of children under five years that fall into the stunting category (based on weighing data of February 2022). The results show that the formation of dietary habit in under-five children with stunted growth is done in simple and careless manners. Children mainly consume tubers in their daily diet, including *bete*, *kela*, *ndeke*, *kasibi*, and *ubi Banggai*. Access to fruits and vegetables (such as chayote, papaya, and ferns leaves) and animal protein (such as fish, chicken, beef, and pork) is still very limited, and they cannot be accessed every day. As long as the child is quiet, does not cry, and eats till full, parents no longer think about the nutritional needs that must be met by their children who fall into the stunting category.

1 INTRODUCTION

Providing nutritious food for children is among the main and most important things to do by every parent to ensure sufficient nutrition and normal growth and development for their children. From the discourse presented regarding nutritious and balanced food, it turns out that not every parent in Indonesia provides food with adequate and balanced nutritional content to children. Stunting or impaired growth and development in children under five years is a serious health problem requiring further treatment and is still found both in developed and developing countries (Nachvak et al., 2020).

Stunting is the impaired growth and development children experience from poor nutrition, repeated infection, and inadequate psychosocial stimulation. Children are defined as stunted if their height-for-age is more than two standard deviations below the WHO Child Growth Standards median (Kemenkes RI, 2018; WHO, 2018). The prevalence of stunting in Indonesia ranks 5th in the world. According to data from the latest report of the Indonesian Nutritional

Status Study (SSGI) reported in December 2021 (at the National, Provincial, and Regency/City levels), the prevalence of stunting in children under five years in Indonesia is 24.4%.

Stunting in children under five years begins during pregnancy. Symptoms of stunting are usually seen when the child reaches the age of 24 months. Food taboos still apply in some areas in Indonesia. Research by several experts shows that stunting is caused by several factors, including lack of knowledge among mothers of children under five years, poor diet taken by pregnant women and under-five children, and limited access to health services (Rofi'ah, 2017).

The dietary habit of children under five years with stunted growth can be seen in what their parents provide to them during the first 1000 days of their life. For example, in the Sasak community, parents rarely provide animal protein to their under-five children. Besides, there are still inaccurate practices and perceptions regarding breastfeeding, and the diet has not met balanced nutritional standards (Nurbaiti et al., 2014).

On the other hand, socio-cultural factors also underlie stunting (Sahardin et al., 2020), including myths or taboos related to food, eating behaviors, and other traditions prevailing in society (Diana et al., 2018; Triratnawati, 2019). This finding is in line with Foster & Anderson's (2006: 311) that many health problems have to do with beliefs about food associated with health and illness, including taboos of what can and cannot be consumed and ceremonies that forbid people to make use of the foods available to them.

In Banggai Islands, the prevalence of stunting is still quite high and significant, 21.8%. This figure is higher than that of the other 13 districts in Central Sulawesi. There are 1,341 cases of children under five years with stunted growth in Banggai Islands, spreading across 12 sub-districts and *puskesmas* (primary health services centers at the sub-district level) (TPPSK BangKep, 2021). The problem of stunting in this particular area is complex because it is caused by various factors including the high incidence of early marriage, the very limited activity and participation in *posyandu* (integrated community healthcare center at the village level), and the misguided and haphazard practices in providing food for children under five.

Labotan Kandi Village, located in the South Bulagi District, is one of the areas with the highest stunting locus in Banggai Islands Regency. As of February 2022, 18 out of 34 or 60% of children under five years fall into the stunting category as measured by the *posyandu*. The cases are caused by various factors with one of the most important relating to the diet adopted by mothers that do not meet nutritional standards, lack of knowledge of parenting and healthy diet, and poverty.

The high stunting rate in the Banggai Islands has made the local government implement a series of programs to reduce stunting cases, including the care for stunting community movement (*gerakan masyarakat peduli stunting* or Gema Peling), *Kerapu Stunting*, GenerASI Anak Top (Top Children Generation), collaboration to overcome stunting with parcels of hope (*kolaborasi atasi stunting dengan parcel harapan* or Koas Selapa), and the provision of fish nugget supplementary food (*pemberian makanan tambahan nugget ikan* or PMT Nuis) to mothers, pregnant women, and under-five children with stunted growth in Banggai Islands Regency (TPPSK BangKep, 2021). These programs continue to be pursued by the local government to reduce the relatively high stunting rate in Banggai Islands Regency.

One of the intervention measures to overcome the problem of stunting in children under five years is through education to enable people to recognize potential nutritious foods in the surrounding environment and behavior patterns related to food consumption as a way to improve the nutrition status of under-five children in Labotan Kandi Village. Through education, people will be informed about balanced nutrition for children, make use of natural food available in their surroundings, and know how to process foods in proper and hygienic ways (Sari & Putri, 2021). However, there are still many obstacles in terms of education, economy, knowledge, as well as social and cultural development in Labotan Kandi Village. This study aimed to answer several questions, including the following: how are eating behavior patterns formed and applied to stunted under-five children? What kind of diet do parents, especially mothers, in Labotan Kandi Village provide to under-five children who are stunted? Why do they choose this kind of diet? These questions are crucial to explore more deeply due to the high prevalence of stunting in the Banggai Islands. This study sought to examine the eating behaviors of under-five children with stunted growth in Labotan Kandi Village to be further discussed in this article.

2 RESEARCH METHODS

This study used a qualitative descriptive approach with an ethnographic research method. Research with a qualitative approach is carried out to understand the phenomena experienced based on the views of the participants of a problem that occurred and then described in the form of words and language (Creswell, 2016; Moleong, 2017). The ethnographic study method was also chosen to know, describe, and find out what kind of knowledge developed in the community related to the formation of food behavior patterns of under-five children who fall into the stunting category (Spradley, 2006).

This study was conducted in Labotan Kandi Village, South Bulagi District, Banggai Islands Regency, Central Sulawesi Province. This village is one of the areas with the highest stunting cases in Banggai Islands Regency. Referring to the data of February 2022, 18 of 34 children under five years are classified as stunted.

The data collection techniques used in this study were observation and interviews. A documentation study was also carried out to obtain relevant support information to support and achieve comprehensive results. This research was conducted from July to

August 2022 by interviewing 18 mothers of under-five children with stunted growth (based on weighing data in February 2022). The results were grouped into some categories to find out how the dietary habits are formed and related to the types of food available and consumed by stunted under-five children in the area. The results of the study were then analyzed in terms of several main components, including data collection, data reduction, data presentation, and drawing conclusions or verification (Huberman & Miles, 1992; Sutopo, 2006).

3 RESULTS AND DISCUSSIONS

Labotan Kandi is located in South Bulagi District, Banggai Islands Regency, Central Sulawesi. The total population of this village is 436 people with a total of 116 families. The Labotan Kandi people belong to the Sea-Sea tribe that still inhabits Peling Island since ancient times. They still carry out the prevailing local traditions and culture. They still have customary leaders with customary law in them. The majority of the population are devout Protestant Christians.

The village of Labotan Kandi is located in a mountainous area, where the main potential of the village is agriculture. While the majority of the people work as farmers (118 people), the rest includes a trader, a nurse, and four people who have other jobs. The people grow various types of crops in their forest lands. With the high number of people working in agriculture, the community depends on the yields and their forest's natural potential. The inadequate land processing in the community results in minimum yields and sources of processed local food for under-five children's consumption in this area.

Food processing methods in families of under-five children who fall into the stunting category in the village of Labotan Kandi are still very simple. People use the yields from their gardens mostly for daily consumption. The community grows various types of tubers and harvests them mainly for personal (family) consumption. When there are excess yields, they will sell them in the market on certain days. Tubers are the staple food of the local people; they are equivalent to rice and cannot be separated from the daily life of the community. During the week, people consume more tubers than rice.

There are several types of tubers grown by the local community, including *bete*, *kela*, *ndeke*, *kasibi*, and *ubi Banggai*. Hestin (39), stunting under-five mother, also revealed:

"I'am in the garden planting Banggai yam, planting a little. There is also sweet potato, cassava. Only eaten by family. There maybe some for sale, but few for sale." (Fieldnote July 17, 2022)

The following subsections describe these tubers in more detail.

1) Bete



Figure 1. *Bete* or *Ubi Talas*
(Source: Personal Documentation, 2022)

In Java, *bete* is also known as *ubi talas* (yam taro) (*Colocasia esculenta*). This tuber is produced from the taro plant. *Bete* is widely planted by the community in Labotan Kandi Village. *Bete* is consumed by the community as daily food and has an equal position to rice. In one week, people cook and consume more *bete* than rice. *Bete* is mostly cooked by boiling. *Bete* is usually consumed with or without side dishes and vegetables.

2) Kela



Figure 2. *Kela* or *Ubi Jalar*
(Source: Personal Documentation, 2022)

Kela or *ubi jalar* (sweet potato) (*Ipomoea batatas*) is also one of the typical food sources that are widely grown in Labotan Kandi Village. This plant lives by creeping on the ground and can be harvested every 6 months. This plant is mostly cooked by boiling or frying. People usually eat fried *kela* with *sambal dabu-dabu* (spicy raw tomato sauce). In the village of Labotan Kandi, *kela* is also known as 'batata.' There are two types of *kela* growing on people's land, the yellow and purple *kela*.

3) Ndeke



Figure 3. *Ndeke* or *Ubi Bentul*
(Source: Personal Documentation, 2022)

Ndeke plant is similar to that of *bete*. In the Indonesian language, *ndeke* is also known as *bentul* (*Colocasia esculenta*). The difference between *ndeke* and *bete* lies in the shape and texture with *ndeke* tend to be softer or in Banggai language called 'lombo'. Like *bete*, this tuber is cooked by boiling. *Ndeke* is consumed with or without side dishes and vegetables.

4) Kasibi



Figure 4. *Kasibi* or *Ubi Kayu*
(Sumber: Dokumentasi Pribadi, 2022)

Kasibi or *ubi kayu* (cassava) (*Manihot esculenta*) is widely grown in community gardens. However, the cassava grown by the Labotan Kandi community does not grow as well as in other areas. Cassava in Labbotan Kandi is smaller. *Kasibi* is usually not for sale. People only consume it for their daily needs. It is cooked by boiling and eaten with or without side dishes and vegetables.

5) Ubi Banggai



Figure 5. *Ubi Banggai* (red)
(Source: Personal Documentation, 2022)

There is a special type of tuber that only grows in the Banggai Islands called *ubi Banggai* (the Banggai yam) (*Dioscorea alata*). This tuber cannot be grown in other areas outside Banggai Island. In Labotan Kandi Village, *ubi Banggai* can only grow on certain land, so not all people grow and consume this particular yam. There are two varieties of *ubi Banggai*, white and red, with the red variety is more widely consumed by the local community. *Ubi Banggai* is cooked by boiling and then eaten with or without side dishes and vegetables.

Limited Sources of Vegetables

The availability of vegetables is very limited and they cannot be easily found in the surrounding environment. Some people grow vegetables for their daily consumption. However, people do not regularly include vegetables in their daily diet. The vegetables grown and consumed by the community include Japanese cucumber, papaya, and ferns.

1) Ketimun Jepang



Figure 6. *Ketimun Jepang* atau *Labu Siam*
(Source: Personal Documentation, 2022)

Ketimun Jepang or *labu siam* (chayote) (*Sechium edule*) is widely grown in the garden. People deliberately grow this plant for daily consumption. *Ketimun Jepang* is usually cooked by sautéing with simple spices such as garlic, onion, salt, and MSG. Under-five children love *ketimun Jepang* and eat it with sweet potatoes or rice.

2) Tapea or Papaya



Figure 7. Papaya Plant
(Source: Personal Documentation, 2022)

There are two parts of the tapea or papaya plant (*Carica papaya L.*) that are commonly cooked and consumed as vegetables, namely the flowers and the young fruits. Tapea or papaya flowers are usually cooked in coconut milk with cassava leaves or moringa leaves. Meanwhile, people usually process a young papaya fruit by grating it into small pieces and cooking it by frying it with a mixture of yellow spices, garlic, salt, and MSG. Papaya plants are widely grown by people in their gardens.

3) Daun Pakis or Daun Paku (Linggom)



Figure 8. *Daun Linggom* or *Paku*
(Source: Personal Documentation, 2022)

In the village of Labotan Kandi, ferns are called as *linggom* in the Banggai language. *Linggom* plants grow wild in the forest. People usually collect them in the forest for later cooking. *Linggom* leaves are

usually processed by sautéing with salt, MSG, *rica* (chili), and garlic only.

Animal Protein Sources That Are Not Available Every Day

Animal protein sources that exist and are available in Labotan Kandi Village are fish, chicken, beef, and pork.

As an archipelago, it can be said that fish is easier to access. Fish are sold in the community in various kinds. Fish sellers come from the coast and bring the fish to Labotan Kandi by motorbike. The sellers usually come from the villages of Lumbi-Lumbia, Matamaling, and Lelang-Matamaling. A bunch of tied fish is valued at IDR 10,000-20,000. The contents vary from 7-10, depending on the size of the fish in the tie. Rin (43), a housewife, was interviewed say that:

"There is a fush that cost IDR 10,000, there is IDR 20,000. One bunch, meaning that the fish sold are usually tied together. Usually there are 7 fish, there are 5 fish." (Filednote July 16, 2022)

During July-August, the most traded fish are Kadompe fish (mackerel), jacket fish, and *Siloon* fish. Sea fish is usually cooked by grilling, frying, or cooking in tamarind sauce. Children under five years are fond of fish processed by frying or made into sour soup. Fish can also be accessed easily during market days, such as Tuesdays and Thursdays. Outside the market days, people can buy fish from fish sellers who come by motorbike to their neighborhood.



Figure 9. People buying fish from a mobile fish seller

(Source: Personal Documentation, 2022)

During the rainy season, such as April-August, the availability of fish in the market is limited and the

number of fish sellers who go around villages using motorbikes is also limited so people cannot get fish according to their needs for consumption every day. It also applies to chicken and beef in that people do not eat them every day. People can get access to animal foods such as beef, chicken, and pork only when neighbors or other community members have a party. On other days, not many people cook and consume animal foods because they are quite expensive. The price of a cow in this area is twelve to fifteen million rupiahs, whereas a chicken is one hundred and fifty thousand rupiahs and a pig is around two million rupiahs, depending on the size. Lamina (33), a housewife, tells about meat consumption as follows.

"Chicken is rarely cooked for children. If I cook fish in a month only 1-2 times, because I do not have money every day." (Fieldnote July 16, 2022).

Salt and MSG for Every Dish

From the information above, it can be seen that salt is one of the main and most important ingredients used by the community to cook various kinds of dishes. The types of local foods that tend to be salty and spicy make sugar not a priority ingredient for cooking. The price of salt sold at kiosks varies from 5,000 to 6,000 rupiahs per pack, while MSG ranges from 1,000 to 5,000 rupiahs per pack. The prices of onions and garlic are quite expensive. With 10,000 rupiahs, people can only get two cloves of garlic and 5-7 red onions. Such a high price makes people not use many spices in cooking and choose to use salt and MSG only. Lamina (33), explained that:

"Usually the vegetable dish is linggom or daun paku. Cooked with coconut milk or sauteed oil. The only condiments are pitsin (MSG) and salt." (Fieldnote July 17, 2022)

This practice also applies to the processing of fish and vegetables the author has explained in the previous sections. From the various explanations above, a lot of salt and MSG is the key to the presence of delicious dishes, including dishes served for stunted under-five children in the Labbotan Kandi area. Other kitchen spices such as ginger, tamarind, bay leaf, and other types of spices are not even available or traded in this area, causing people to use the same ingredients for all types of dishes: salt and MSG.

Nutritional Ignorance: Lack of Knowledge of Nutritious Foods and How to Process Them

Even though the community has plenty of cultivable lands, they have not been able to use them

properly. The planting system they adopt is still simple, planting different types of crops alternately, in a way that is still natural, and does not even use additional fertilizers or plant vitamins so that the yields are not optimal.

The community cultivates the land by moving alternately. For example, a family with a land area of about 2 hectares divides the land into four parts. In one planting season, they cultivate Land 1 then move, alternately, to Land 2, 3, and 4 in the following seasons, then back to Land 1 again, and so on, which is certainly an ineffective and unproductive use of land.

The provision of food for stunted under-five children is still based on the quantity-first principle without paying attention to their need for balanced nutrition. Foster and Anderson (2006: 322-392) suggest that one of the gaps in traditional food wisdom in traditional and agricultural communities is the frequent failure to recognize that children have special nutritional needs before and after weaning. Children are too often considered small adults when it comes to nutrition.



Figure 10. A stunted under-five boy eating *Ubi Banggai*

(Source: Personal Documentation, 2022)

The haphazard attitude in the effort to fulfill the need for nutrition is also still easy to find in this area. Children will be fed tubers only without side dishes. Children eat tubers three times a day. In one meal, a stunted under-five child eats 2 to 3 pieces of tubers. Uni (42), said that:

"One person in this house usually eats Banggai yam until 3 pieces." (Fieldnote August 1, 2022)

The absence of animal protein and vegetables in their diet is one of the main determining factors of stunting in under-five children due to inadequate

nutritional intake. Due to this habit, the long-term effect is that children cannot easily accept new and unfamiliar foods. As experienced by the mother of a under-five stunting named Roslin (24), she explained that:

"He (Wahyu) doesn't want to eat eggs. Usually for eggs, I mix them into porridge (already mashed). He also eats fish, but only fried and grilled fish while it's still hot (freshly cooked). If it's cold he won't eat." (Fieldnote July 17, 2022)

Children will only want to eat the kind of food they used to consume daily, leading to the absence of the special food-for-children concept. The food served to children is the same as food served to adults. In addition, the excessive use of salt and MSG is also a factor that causes stunted growth (Khairunnisa et al., 2022).

Reflecting on the various statements and explanations, it is very clear that the fulfillment of the nutritional needs of under-five children with stunted growth in Labotan Kandi Village is still inadequate. Children adopt an eating behavior pattern of only eating simply boiled tubers like *kela*, *bete*, *ndeke*, and *ubi Banggai*. Mothers also do not introduce varied foods to their children. What is more important to them is that their children do not refuse to eat till full. If it continues for an extended time, it will affect growth and development because children will experience a lack of protein which may cause them vulnerable to certain diseases.

4 CONCLUSIONS

The feeding practice adopted by mothers in Labotan Kandi Village for their stunted under-five children is simple and carried out haphazardly. As long as their children's stomach is full, parents do not have to worry about what side dishes or vegetables their children should eat to fulfill their nutrition needs. Children in Labotan Kandi Village only consume tubers such as *bete*, *kela*, *ndeke*, *kasibi*, and *ubi Banggai*. The access to vegetables and animal food sources is also still limited, and they are not available every day. There are only 3 types of vegetables available, namely Japanese cucumber, papaya, and fern leaves. Sources of animal protein available are fish, beef, chicken, and pork. The simple food processing methods and the ignorance of nutritional factors are problems in this area. As long as the child's stomach is full, the parents will be happy and not bother to think about nutritious and balanced side dishes.

5 REFLECTIONS

The local government needs to assist the community, especially the women, who have limited experience and knowledge about stunting. Why should women be the main target of education? Because women play a major role in finding, processing, and serving food. The decision regarding the food the family should eat is in the hands of women. Women are also the ones who take care of babies when they are sick, women are the “caregivers”, and the first and foremost nurses in their families. What goes into a child's mouth and stomach is determined by the mother, not the father or grandparents. Efforts to address the problem of stunting through education related to serving food for children will expectedly be able to reduce the incidence of stunting under five in Labotan Kandi Village, South Bulagi District, Banggai Islands Regency, Central Sulawesi Province.

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