



Socio-Culture and Health Factors Determining Stunting in Children Under-Five in Banggai Kepulauan Regency, Central Sulawesi

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A B S T R A C T

Stunting is still a severe global health problem and needs to be addressed. Stunting is defined as a problem in the growth and development of children under five (toddlers). The purpose of this study was to reveal the factors that cause stunting in toddlers. The research location was Labotan Kandi Village, Banggai Kepulauan Regency, Central Sulawesi. The number of stunted toddlers recorded based on the February 2022 weighing was 19 children. Data collection was carried out through a series of observations, interviews, and documentation studies. The findings show that several factor are causing stunting under-fives such as limited parental knowledge regarding stunting problems that many children/toddlers experience. In addition, there are several other contributing factors, namely low education (the majority do not go to school and only graduate from elementary school), trapped by poverty and economic instability, high rates of early marriage, limited access to health services, and minimally implemented local food processing. by a stunting toddler mother in Labotan Kandi Village, Banggai Islands Regency. Based on these findings, the problem of stunting still needs to be solved, and appropriate management policies must be implemented.

A. INTRODUCTION

Nowadays, various media timelines, both television and social media, are actively reporting stunting. Stunting is one of the unresolved global health problems. The appearance of a pamphlet entitled "Avoiding Stunting" or *Ayo Cegah Stunting* (In the Indonesian Language) decorated every street in the city center or front of a rural office. With a reasonably large size and a bright color background, this pamphlet hypnotizes the eye to take a glance or put it to read even though the words read pass and soon disappear.

According to the World Health Organization (WHO), stunting is defined as a disruption in the growth and development of children caused by malnutrition, repeated infections, and inadequate psychosocial stimulation. A child is defined as stunted if their height

exceeds two standard deviations below the WHO Child Growth Standards median (WHO, 2015). Under the Ministry of Health, the Indonesian government has set standards to determine whether stunting, when a child is below the established standard by looking at the length or height of the child's body.¹ The determination of short babies (stunting) based on the PB/U² or TB/U index where in anthropometric standard assessment of the child's nutritional status, the measurement results are at the threshold (Z-Score) < -2 SD to -3 SD (short/stunted) and < -3 SD (very short/often stunted) (Ministry of Health, 2018).

Global Nutrition Report 2016 noted that the prevalence of stunting in Indonesia was ranked 108 out of 132 countries.³ According to data collected by WHO,

¹ See: Presidential Decree Number 72 of 2021 Concerning Acceleration of Stunting Reduction

² Body Length by Age

³ See: <https://stunting.go.id/strna-p2k>.

UNICEF, and the World Bank (2019), Overall, the number of stunting cases in the world is 22%, while stopping cases – based on Basic Health Research Results (Indonesia: *Hasil Riset Kesehatan Dasar, RISKESDAS*) in 2018, the figure was 30.8%. Despite a decline to 6.4% over the five years, compared with the prevalence of cases in 2013 at around 37.2%, this number is still relatively high if compared with the minimum threshold of stunting established by the World Health Organization, which is less than 20%. The latest data from 2022 and 2023 shows that the stunting rate has dropped a lot, although it is still above the WHO recommendation. This shows that efforts to solve Indonesia's stunting problems have not been performed optimally and maximally.

The efforts to handle stunting cases in Indonesia have been set as a national priority approved through Presidential Regulation 42 in 2013 by the National Movement for Acceleration and Improvement of Nutrition. These rules then became the foundation for the creation of the National Strategy for Stunting 2018-2024, Formed by the National Team for Accelerating Poverty Reduction (Indonesia: *Tim Nasional Percepatan Penanggulangan Kemiskinan, TNP2K*) through 8 Action of Convergence or Integration. These eight actions include 1) situation analysis, 2) activity plan, 3) stunting discussion, 4) rules of the City, about roles of the village to act, 5) construction of "Human Development Framework" (Indonesia: *Kader Pembangunan Manusia, KPM*), 6) data management system, 7) measurement and publication of stunting data, and the latest is 8) annual work review (TNP2K, 2017).

Various factors cause stunting problems in children. According to UNICEF (2013), Stunting causes are divided into two categories: direct and indirect causes. Direct causes are insufficient nutritional intake and disease factors. In addition, indirect causes include a lack of household food resources, inadequate care and food supply, unhealthy household environment, and inadequate health care. Other things, such as socioeconomic, including low educational level, minimum family income, and nutritional status of parents (especially mothers), have a close link with stunting problems in babies (Li *et al.*, 2020). Foster and Anderson (2006) also mentioned that the number of health problems that arise in children depends on the parents' beliefs about food, food taboos (what food can and can't be eaten), perception of health-sick conditions, and specific ceremonies that affect the validity of certain prohibitions.

Banggai Kepulauan Regency became one of the regions with a higher percentage of stunting problems. SSGI data 2021 shows that Banggai Kepulauan Regency ranks third out of 13 other districts in Central Sulawesi.

The rate of stunting babies in this area is around 10.6%. Meanwhile, the Central Sulawesi Province ranks ninth with a percentage of 29.7% at the national level. This number still needs to reach the national target in 2024, which is expected to fall to 14%.

As an island territory, the Banggai Islands depend on nature and sea products daily. Coastal communities rely on marine products such as fish, which are abundant daily. No wonder the price is cheap. Unlike the people in the hill areas, they rely only on natural products such as agricultural and livestock products as they have. Not every people in this area can access and consume fish regularly.

In addition, facilities and infrastructure in Banggai Islands Regency are very minimal. Electricity sourced from PLN Unit Induk Wilayah (UIW), North Sulawesi, Central Sulawesi, and Gorontalo (Suluttenggo) only reached four villages in Banggai Island in 2021.⁴ The electricity supplied is limited to only 6 pm to 6 am in the Central Indonesian Time zone. Likewise, the internet signal reached the island smoothly and thoroughly in early 2022. One of the villages that receive electricity and internet signals is Labotan Kandi Village.

Labotan Kandi village is included in the South Bulagi sub-district. This village is in one of the stunting locus areas with a high percentage. Overall, South Bulagi has a prevalence of 36.39%, which is divided into 20 villages. The number of toddlers measured at the weighing (in *Posyandu*⁵) in February 2022 amounted to 588. The weighing results showed that in 2014, toddlers were declared stunted with the three highest village rankings, namely Osan village (73.91%), Palabatu Dua village (63.64%), and Labotan Kandi village (62.07%).

Based on height-for-age measurement data, 19 out of 34 children under five are stunted in Labotan Kandi village. This prevalence is high and requires intensive handling efforts. Various background factors need to be studied further by looking at the stunting toddlers' geographical and environmental conditions. Therefore, this research proposes a problem formulation to examine why there are still many stunted toddlers and what factors cause the birth of stunted toddlers in Labotan Kandi Village, Banggai Kepulauan Regency.

⁴ See: <https://sulut.inews.id/berita/pln-suluttenggo-listriki-desa-di-wilayah-3t-sebanyak-307-kk-nikmati-penerangan>.

⁵ Posyandu is an abbreviation for Pos Pelayanan Terpadu or in English is: Integrated Service Post

B. METHOD

This research was conducted using a qualitative method through an ethnographic approach. This method is very suitable for producing descriptive data based on research analysis in the field (Creswell, 2016). The ethnographic approach was chosen to discover, identify, and understand people's behaviors, ideas, and society's views about something (Spradley, 2007).

This study is based on field research conducted in Labotan Kandi Village, South Bulagi District, Banggai Islands Regency. 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 research ran for two months, in July-August 2022. Labotan Kandi was chosen as the research location because it has a high percentage of stunting rates for the Banggai Islands Regency. The number of informants in this study was 26 people and was determined based on saturation (data saturation). After the data was collected, it was transcribed verbatim and coded (classified). It was searched for relationships between existing data to obtain the meaning behind the stunting phenomenon.

The data was collected through 3 stages namely observation, interviews, and documentation. The stage began with observation to collect a list of names of stunting category toddlers. Furthermore, interviews were conducted with parents of stunted toddlers, stunting cadres, and *Puskemas* officers. Interviews were conducted with 18 parents of stunted toddlers, five stunting cadres, and three health workers. Documentation studies were also undertaken to strengthen the research findings by referring to the weighing results. After going through a series of data collection processes, analysis was carried out by processing/reducing data to conclusion. 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).

C. RESULT AND DISCUSSIONS

The results of interviews with 18 informants, in this case, mothers of stunted toddlers in Labotan Kandi Village, found several categories related to the

causes of stunting in terms of social, economic, education, and access, which are limited. The following is an explanation of each of these causal factors.

1. Limited Knowledge

In the lexicon of anthropology, knowledge is considered an element that is not easily accessible for discussion. For instance, a mother may know when her child is seriously ill but cannot explain and deliver that knowledge (Pelto & Pelto, 1997). Pelto argues that the concept of knowledge is considered a cultural belief as defined in anthropology. The implications of this position are primarily concerned with developing a decision-making approach to understanding and analyzing healthcare behaviors that will be undertaken.⁶

'Stunting' is a new knowledge and term still unfamiliar to mothers of toddlers in Labotan Kandi Village. Stunting, or in the local language of the community is more familiar with the term '*pependek*' stunting or in the local language the community is more familiar with the term *pependek* was only known by mothers of toddlers when the FK-KMK UGM team came and held a meeting through *focus group discussion* (FGD) in January 2022. At that time, several representatives of mothers whose children were declared stunted (based on August 2021 weighing) were invited and attended this FGD activity. After the visit, the term stunting or *pependek* was considered a normal thing and not a problem, no longer widely heard, and socialized to the surrounding community, especially to mothers of toddlers or prospective mothers.

Not long after, in July-August 2022, people started hearing the term *stunting* again. Some mothers of children under five who did not attend the FGDs said that they only found out that their children were stunted when one of the local village officials announced the list of names of stunted children at Church during weekly worship activities. Mr. Max, as a pastor, announced the list of names of stunted toddlers who would be used as informants to be interviewed by researchers to complete this field study.

After being announced in the Church, the term *stunting* or *pependek* began to be discussed again by word of mouth, from one neighbor to another, from house to house, and from villages to people who still live in the forest. Many mothers of toddlers are still curious and ask why their children are included in the list of stunted toddlers, with the initial rejection that the mothers felt that their children were healthy and never had problems in their growth and development so far.

⁶ Ibid. 152

A different experience was felt by the father of a stunted toddler who did not know that his child was part of a stunted or *pependek* toddler. Mr. Yunus (35 years old) initially felt that his 4-year-old daughter was experiencing the same growth as other children, could play around, and was not sickly. However, Mr. Yunus noticed that his son had a shorter body than his peers. However, Mr. Yunus was not too concerned about this and considered it normal. Mr. Yunus thought that his son's stunting was caused by heredity from his ancestors.

Similar interview results were obtained in line with research Margawati & Astuti (2018) exploring the mothers' knowledge of stunted toddlers in the Genuk Subdistrict, Semarang City. Their unfamiliarity with the term stunting means that they do not have a misperception about stunting. Parents' beliefs about the causes of stunting are always based on heredity. Hereditary factors that are believed to be one of the reasons for stunting still need to be questioned. Anung Sugihantono, Director General of Public Health at the Indonesian Ministry of Health, even denies that: "The main cause of stunting is nutritional intake. Not a single study has ever said that heredity holds a more important factor than nutrition in terms of child growth" (Octaviyani, 2017). This research shows that nutritional intake is essential role in dealing with stunted toddlers.

From the interviews conducted above, the knowledge of mothers in Labotan Kandi Village regarding stunted toddlers is limited. Parents' lack of understanding of stunting or *pependek* significantly impacts mothers' knowledge of how overcoming the problem. Mothers' limited knowledge and insights cause them only to replicate the old knowledge that already exists and is still preserved from generation to generation. No new insights or discourses they receive make breaking down the old knowledge still developing in the surrounding community challenging. A study conducted by Hall *et al.* (2018) through structured interviews with 3,150 mothers of toddlers spread across ten provinces in Indonesia. Hall found that 2,098 mothers (2/3 of respondents) had never heard, read, or known about stunting. This lack of knowledge and awareness presents a severe challenge to modify coping behaviors related to stunting, particularly regarding nutritious feeding. Therefore, adequate knowledge should be possessed by mothers of toddlers (even from adolescence) before marriage. However, it cannot be denied that this limited knowledge is strongly influenced by the parents' low level of education.

2. Lack of Education Access

The majority of mothers of stunted children in Labotan Kandi Village have a low level of education. There are 18

mothers of stunted toddlers who became informants in this study; there is only 1 person who graduated from university (S1), 2 people graduated from high school, 7 people graduated from elementary school, and 9 other people did not have opportunity to get an education in school.

Several reasons cause limited access to education. According to interviews with nine mothers of stunted toddlers who do not attend school, the main reason is that parents cannot afford to send them to school for financial reasons. Parents consider school burdensome and expensive costly, so not sending their children to school is the right choice, like the experience Mama Sinta (21 years old) conveyed in the previous chapter. Mama Sinta was not sent to school by her parents because the cost of education at that time was considered expensive, and they could not afford to send her to school. Other mothers of stunted toddlers also answered with similar statements related to this reason.

The second reason mothers with children under five did not go to school in the past was because the access to school was very far, while their homes were in the forest. They had to travel kilometers to get to school. Do not imagine the condition of the road as it is now that it has been cast concrete; they have to pass through rocky roads and up and down the forest. If it rains, they have to take shelter under a traditional umbrella called "*indung*". Wet clothes are a daily companion when going to school during the rainy season. This long distance is a crucial factor that prevents people, especially in developing countries, from accessing education properly and impacts on individual lives (Muttaqin, 2020; Syafii, 2019).

Children who should be in school are left to look after younger siblings at home. Parents can go to the forest freely without worrying about their children. Sometimes, some parents take their children to the forest to help with work in the fields, such as clearing grass, harvesting yams, or transporting firewood from the forest to the house, which is pretty close. Children have been accustomed to helping lift weights since childhood by using baskets or *bois*⁷.

In reality, education that is only seen through a certificate makes people orientated towards getting a diploma instantly without the need to go through a long process. Chase tests, for instance, such A, B, and C, represented by services such as brokers, are easily found in the region. This is widely done by some employees who work as local village government officials. They need a certificate of education at a certain level to fulfill the

⁷ Bois is the name for a traditional basket made by local people to carry the harvest.

requirements of being a village government official or for promotion, granting positions, and other needs that require administrative completeness. For instance, one of the village government officials who took the Chase test-C was represented by a broker and had to pay some money.

Another problem is that the school is not easily accessible to teachers. This causes teachers to come to the school only sometimes. The kindergarten education level is only taught by one teacher who lives in Labotan Kandi village. Because there is only one teacher, the kindergarten operates on Mondays, Tuesdays, and Wednesdays only (for one week). This is in contrast to kindergartens in general, which attend school every day.

At the primary school level, there are five teachers: the principal, three class teachers, and one sports teacher. Two of the five are from Labotan Kandi village and come to school daily. The other three teachers are not always present at the school, which means that the children do not get the transfer of knowledge from the teachers every day. Furthermore, four teachers are at the junior secondary school level with one concurrently teaching at the primary school. These teachers come from somewhere other than the local village close to the school. Junior high school teachers do not come to school daily, causing many parents to complain.

These limitations contribute significantly to Labotan Kandi Village's status as a 3T area (frontier, outermost, underdeveloped), mainly since it is located on a small and remote island. From the two interviews that have been conducted, it appears that the limitations of access to education in the 3T areas are very diverse in terms of access or distance to schools that are pretty far, the unavailability of qualified and capable educators, inadequate educational facilities, and the lack of ability and awareness of parents in supporting their children to go to school (Pratiwi *et al.*, 2022). The limited access to education means that education development in the 3T areas tends to be uneven, discriminated against, and marginalized. People's inadequate education and limited access prevent them from seeing developments in the outside world, accessing a decent economic life, and other impacts.

Although, from year to year, the records regarding the condition of education in the 3T areas have improved a lot and meet the standards of educational eligibility. However, many areas still need to be reconfirmed for the development and construction progress in education. (Rahmadi, 2020). The problems that arise are the high number of children who drop out of school, many who do not attend school due to economic issues, lack of motivation and parental support, and

educational facilities far from the settlement (Vania *et al.*, 2021).

Consequently, the low level of parental education contributes to the number of stunted toddlers in the region. Some studies say that the tendency of stunting in toddlers is more experienced by mothers with low education (Mugianti *et al.*, 2018). Limited education causes parents to be less than optimal in understanding the importance of paying attention to children's health starting from pregnancy until the child is 2 years old, and limited parenting patterns result in a greater risk of birth of stunted toddlers. Therefore, improving maternal education is crucial to addressing stunting. Good maternal education is consistently strongly associated with reduced stunting. More proximal factors most likely mediate the complex relationship between education and stunting (Hall *et al.*, 2018). Protective parenting behaviors reflect knowledge and ability to implement parenting practices that support children's growth and development.

3. Tangled in Poverty

Several papers have reviewed that poverty is one of the main factors that are prone to contributing to the high prevalence of stunting among certain groups of people. In Labotan Kandi Village, for instance, the majority of families with stunted toddlers have an unstable and limited economic life. Those who need more income only sometimes hold money every day and save it. They only depend on the crops available in the garden for their daily lives. As a result, they only provide children with the minimum food intake without knowing whether the food is nutritious and good or inhibits growth. Their understanding is limited to ensuring that the child is whole and does not cry.

Some families with stunted toddlers also rely on money from the assistance they receive, either from social funds (In Indonesia, it is called *Bantuan Sosial* or *Bansos*) or from the family program (In Indonesia, it is called *Program Keluarga Harapan*). One mother of a stunted toddler I interviewed, Mama Lamina (33 years old). She got into debt because of her family's economic limitations. She is willing to remain in debt to her neighbors until now, even though she is charged with very high interest rates. She does this to fulfill the needs of her household. The funds she receives from the social program/fund (*Bansos*) are used to pay debts and buy necessities. When they have more money, they will only buy their children noodles and snacks that contain a lot of MSG (Yuniati & Triratnawati, 2022).

From the above, it can be concluded that limited access and poverty have perpetuated the high prevalence of stunting (Ortega *et al.*, 2012; Taufiqurrohman & Chusna,

2022). Financial support, such as a stable economic life, should be the main thing and is very important in maintaining the health of toddlers. The balance of economic life in the household is essential to improve the accessibility of health services. Moreover, stable financial support also impacts on families in providing nutritious supplementary food for children (Setiyowati *et al.*, 2020). Poverty is a significant problem for the community in Labotan Kandi Village.

4. Early Marriage

It is not uncommon for local communities to hear of neighbors or even their relatives marrying off their children at an early age. Early marriage is defined as a marriage between a husband and wife under 19 years old and is not allowed by law, especially in Indonesia.⁸ According to data from the Central Bureau of Statistics, the trend of early marriage increased in the percentage curve from 2017, which was only 14.8 percent, rising to 15.66 percent in 2018. During the pandemic, this trend increased. In 2021, the Ministry of Women's Empowerment and Child Protection recorded 64,000 minors applying for marriage dispensation during the Covid-19 pandemic.

Data obtained from interviews with 18 mothers of stunted toddlers illustrates marriage age of mothers of stunted toddlers and the number, as in the following table.

Table 1. Marital age of mothers of stunted children under five

No	Marital Age	Quantity
1	16 years old	4
2	17 years old	1
3	18 years old	4
4	19 years old	4
5	20 years old	1
6	21 years old	1
7	22 years old	1
8	23 years old	1
9	24 years old	1
Total		18

(Source: Fieldwork Data, 2022)

Table 1 above shows that many mothers of stunted children under five were married at an early age. There were four mothers of stunted children under five who got married at 16, 18, and 19 years old, while the others got married at 17 years old and 20-24 years old. They married young because they were no longer in school, had graduated from school, were married off by

their parents, or could no longer support their children's lives. Other reasons include marrying early because of their desire or being caught dating by the local community (receiving customary sanctions). However, based on the table above, there are some mothers of toddlers whose marriage age is by the provisions of the law, but the toddlers who are born are stunted. Saputri & Tumengger (2019) mentioned that many communities and program implementers at the grassroots level still do not have adequate knowledge about stunting itself, its impact, causal factors, and how to overcome it. Although it seems to refute some related articles⁹, however, in this research study, it appears that age maturity is not directly proportional to readiness to become parents, coupled with a family culture that maintains patriarchy and all decisions follow the orders of the husband (Prasetya *et al.*, 2019).

Based on the various reasons mentioned above, economic problems are the dominant reason that causes parents to marry off their children at an early age. It cannot be denied that some people in Labotan Kandi Village depend only on agricultural products and have unstable incomes. They will only have money when they receive financial assistance from the government. Deciding to marry off their children is part of an effort to reduce the burden and save economic stability in the household. Sardi (2016) also found that the high rate of early marriage in Mahak Baru Village is thought to be due to the low economic burden on the family, so parents quickly marry off their children to reduce the family's financial burden. Married daughters will become the husband's responsibility (Rahayu, 2017). This is often found in rural areas regardless of the children's young age, especially if the man who comes to propose is wealthy. This decision is made to improve their economic welfare status.

Generally, young couples who marry early do not have sufficient provisions to pursue childcare with good care. The experience shared by Mama Ipia, who was faced with the birth of her premature child, needed help from various parties. The first thing this couple (Mama Ipia and Mr. Liko) did was cry and say that they were already pessimistic and gave up when their child could not live (or eventually had to die). This shows that independence and knowledge about life after marriage are essential, and caring for and providing good parenting for children tends to be lacking in young married couples.

⁸ Law Number 16 of 2019 concerning Amendments to Law Number 1 of 1974 concerning Marriage.

⁹ See in detail: Aini, J. (2015). Differences in Parenting Patterns between Mature and Early Marriage in Sewon District, Bantul Regency, Yogyakarta. *Post-Doctoral Thesis*. STIKES Jenderal Achmad Yani, Yogyakarta.

Early pregnancy under the age of 20 years is highly vulnerable to the risk of maternal and child mortality during childbirth, with a meager chance of survival compared to mothers who are already aged between 20-39 years (Afifah, 2011). The age and nutritional status of children under five are also strongly correlated. Early marriage is an indirect factor affecting children's nutritional status. Children born to mothers who marry early experience energy and protein deficits that can result in weight loss, decreased immunity, mucosal damage, susceptibility to pathogens, and impaired growth and development in toddlers (Khusna & Nuryanto, 2017). If this happens continuously, it will worsen the health and nutritional conditions of children under five.

5. Limited Health Care

Health services in Labotan Kandi Village rely on services Ses Erna provides as the local nurse, such as *Posyandu* activities. *Posyandu* is conducted regularly every month with or without the assistance of health workers from the Bonepuso Health Centre. However, not all mothers of toddlers participate in these activities. Many only attend if they need remember or prefer to go to the forest. In other cases, some are still in the forest and have not returned to the village, causing them not to attend and come to the *Posyandu* to check the health condition of their toddlers. Of course, this causes obstacles to monitoring growth and development, especially for stunted toddlers, which health workers carry out.

Health services are also still limited in reach, as experienced by Mama Sinta. When her son was sick, Mama Sinta and Pak Maludi had to take him to the local hospital. The short distance and road access, which are not easily traveled by just any vehicle are challenges they must face. In addition, the cost of transport has to be incurred and is pricy. This is just one example from one of the parents of a stunted toddler and illustrates how access to health is not easily accessible to the people of Labotan Kandi Village.

In addition, many people experience problems accessing BPJS health. Those affected by the government's mass blocking of BPJS cards are rarely use the card or do not pay contributions regularly. This was experienced by Mama Armin (26 years old), Mama Ipia (20 years old), and Mama Roslin (24 years old) when they gave birth to their first child at the local health center. Their BPJS cards could not be used to pay for the childbirth. Thus, they generally had to pay for childbirth themselves.

The descriptions above illustrate that the dominant factor that causes barriers to reaching health services is related to access or distance. Access barriers are

also still a problem that occurs in several other regions in Indonesia (Triratnawati & Arista, 2019). Other factors that hinder access to health services include the unavailability of funds, blocked BPJS cards, and people's laziness when coming to the *Posyandu*. The BPJS card created by the government in its role as health insurance as a solution to overcome the cost of health services for all Indonesian people has not been appropriately implemented (Suparmi & Lestari, 2019). In the end, the various causes that have been mentioned result in handling stunted toddlers cannot be monitored optimally by local health workers.

6. Limited Processing of Nutritious Food

The community can choose from plantation products for daily needs. Yam is one of the agricultural commodities used as a staple food source equivalent to rice. Some types of yam grown by the community include *Bete* or taro yam (*Colocasia esculenta*), *Kela* or *Batata* or sweet potato (*Ipomoea batatas*), *Ndeke* or *Bentul* yam (*Colocasia Esculenta*), *Kasibi* or cassava (*Manihot esculenta*), and Banggai yam (*Dioscorea alata*).

One unique type of yam is the Banggai yam because it cannot grow in other areas outside the Banggai Islands. In Labotan Kandi Village, Banggai yam only grows in certain places or lands, so only some households grow and can consume this yam. There are two types of Banggai yam grown: white and red. Although many types of yams are grown by the community, the size of the yams, especially in Labotan Kandi Village, is smaller than in other places. According to residents, this may also be due to the condition of the land, which is dominated by coral rock (limestone soil), causing the yams to grow less fertile and the yields to be smaller. Various types of yams are harvested every 3-6 months. Local people often consume *bete* and *kela*, which are processed by boiling or frying. People usually eat yam accompanied by *dabu-dabu* chili sauce with vegetables or certain side dishes according to food availability at home.

Apart from yams, the availability of vegetables in Labotan Kandi Village is limited. The types of vegetables grown in home yards or forest gardens depend on the planting time and weather conditions. People who grow vegetables in their yards and gardens usually use them to fulfill their daily food needs. People only cook vegetables a few times a week. In a week, specific households are used to cooking vegetables only once or twice. Some of the vegetables I encountered during my fieldwork in July-August 2022 included Japanese cucumber (chayote), *Tapea* (papaya), and *Linggom* (fern leaf). These three types of vegetables are easy for researchers to find in the yard.

Health services are also still very limited in reaching the community, as experienced by Mama Sinta.

When their child was sick, Mama Sinta and Pak Maludi had to take him to the local hospital. The short distance to the access road, which is not quickly passed by any vehicle, is a challenge they must face. Not to mention, the transportation costs that must be incurred are not small. This is just one example from a parent of a stunted toddler and illustrates how access to health is not easily accessible to the people of Labotan Kandi Village.

Banggai Islands Regency, as an area on the islands, provides more accessible and cheaper access to fish. However, reaching out is still insufficient and challenging if the weather could be more friendly. During field studies, several types of fish were found for sale, such as *Kadompe* fish (mackerel fish), Jacket fish, and *Siloon* fish. These sea fish are usually cooked by grilling, frying, or cooking in sour sauce. Children under five prefer cooking this fish by frying it. However, no fish sellers were selling fish in Labotan Kandi Village. During the rainy season, they don't come because access to the village becomes increasingly complex, as it is flooded and muddy. The fish consumption is considered a menu that can solve nutritional problems in Indonesia (Arthatiani & Zulham, 2019). Protein as a macronutrient is necessary for growth, formation of body structure, maintenance of cells, replacement of damaged tissue, and assisting the metabolism of the immune system (Ayuningtyas *et al.*, 2018).

As with other animal protein sources, namely chicken, pork, and beef, people don't consume it daily. People will consume these three types of meat when their neighbors are having a party, or they can also deliberately slaughter chicken to be used as a side dish. People consume only a little of these types of meat because the price is quite expensive. One chicken is priced at around IDR 150,000-250,000, one pig is IDR 2,000,000-4,000,000 (depending on size), and one cow costs IDR 12,000,000-15,000,000. The availability of meat, which only appears when there is a party, is also unable to meet the nutritional needs required of children.

Kitchen ingredients such as salt and *vetsin*¹⁰ are often mentioned repeatedly. They are used by the local community to cook various types of dishes, both vegetables and meat, as well as stir-fried and soupy dishes. The food in Labotan Kandi Village tends to be salty and spicy, so sugar is not an essential kitchen ingredient that must be available at all times. The cost of salt sold in stalls varies, ranging from Rp 3,000-6,000. Similarly, the price of *vetsin* or *pitsin* ranges from Rp 1,000 (small package size) to Rp 5,000 (large package size).

On the other hand, the price of shallots and garlic is also quite expensive. At that time, shallots and garlic were sold for Rp. 10,000 and only got two cloves of garlic and 5-7 shallots. This costly price makes people not often use kitchen spices such as shallots or garlic to be mixed in cooking. People choose to cook using only salt and *vetsin*. Salt and *vetsin* have become the key to making delicious dishes, including dishes for stunted toddlers in the Labotan Kandi area, and causing dependence. *Pitsin* or *vetsin*, or MSG, is a flavoring used to flavor dishes. Consuming MSG or *pitsin* in excessive amounts and continuously can threaten children's health, such as decreased cognitive brain function, which in the long run will reduce intelligence in children (Rochmah & Utami, 2022). Moreover, the *pitsin* was consumed by a child who was not even 5 years old.

Processing of local food sources, as mentioned above, still need improvement. Although the community much plantation land, it has yet to be appropriately utilized. Planting on agricultural land is still very simple, carried out alternately and naturally, and does not even use additional fertilizers or drugs, so the resulting harvest is not optimal. The community also cultivates their land by shifting and taking turns. For example, if a family head has a land area of about 2 hectares, it will be divided into four parts, with each plot having an area of 500 meters. They will plant and utilize their land in turn. In the first year, they will plant on the 1st field; the following season, they will plant on the 2nd field; the following season, they will grow on the 3rd field; and so on, until they return to the original order. This certainly makes agricultural land unable to be utilized effectively and productively, thus the yields obtained cannot be maximized and only fulfill household needs for daily needs.

Some people argue that the subsistence farming system is a waste of time and land. If they utilized all their land, it would produce productive farmland. However, this is one of the ways to preserve nature and their land. This is done by the indigenous people of Balawaian Village, who carry out a rotating cultivation pattern, also known as shifting cultivation, which has been carried out for generations (Yuniarti *et al.*, 2020).

The six factors described above are the most dominant factors contributing to the high number of stunted toddlers in Labotan Kandi Village. This starts with limited knowledge due to minimal access to education, which is difficult for the community to access. As a result, the early marriage rate is very high. Children no longer in school decide to marry at a very young age. This impacts on food processing, which is still very simple due to minimal knowledge and an immature age to care for the household and children. Finally, the last two crucial

¹⁰ Local name of MSG (monosodium glutamat)

factors that play a significant role in the 'perpetuation' of stunting in the area are the lack of health services in Labotan Kandi Village and the entanglement of the impoverished community.

D. CONCLUSION

The problem of stunting or *pependek* toddlers in Labotan Kandi Village, Banggai Kepulauan Regency, is caused by several factors that can be seen from the sides and aspects of education, economy, and access to health. These factors include limited knowledge, lack of access to education, poverty, early marriage, lack of health services in Labotan Kandi Village, and the last is simple local food processing. These six factors contribute significantly to the increasing number of stunted toddlers in Labotan Kandi Village. Education and economic factors are crucial aspects that determine the quality and quantity of mothers related to nutritional knowledge in the processing and feeding of toddlers. The six factors are dominant in contributing to the high number of stunted toddlers in Labotan Kandi Village.

As written above, the research findings show that stunting still needs to be handled or solved immediately. The big challenge for the Indonesian nation, which covers the entire region from Sabang to Merauke, has enormous implications for how the government thinks about various strategic plans or programs. It is common for delays in handling and distribution to still occur in efforts to handle this case. The problem of stunting will continue to increase if a solution is not found immediately. With the advantage of efforts to handle stunting, which is included in the 2020-2024 RPJPM, it provides maximum flexibility and authority to each region to reach and use its rights to flatten the stunting curve in Indonesia. The government's support for the local community through cooperation and partnerships is needed in this handling effort. Furthermore, there is a need for massive and monitored socialization regarding the problem of stunting, the impacts that will occur, and efforts to overcome it, starting from the grassroots in the form of preventive efforts carried out by parents. Efforts to be independent without relying on government assistance also need to be increased because stunting is an urgent problem and must be addressed immediately by all parties without waiting for anyone. Finally, monitor the distribution of human resources (HR) in the form of qualified health workers to be deployed and reach areas that are prone to stunting and challenging to access or reach. With adequate health workers according to their fields, they can be a bridge for monitoring and stunting problems that can be addressed immediately from an early stage.

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