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Indigenous Toddlers Stunting: Ethnographic Study in Tehit and Yaben Tribes, West Papua

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ABSTRACTS

Stunting shows nutritional problems that are chronic and last long time, such as poverty, unhealthy behavior, poor parenting/ feeding patterns since the child was born. This study aims to analyze the cultural aspects that influence the incidence of stunting under five in Tehit and Yaben Tribes, South Sorong, West Papua. This research uses ethnographic method during 45 days. Data were collected through participatory observation, in-depth interviews, direct observation supported by visual data (photos, videos), secondary data and literature study. Thematic analysis by comparing secondary data and literature study used in this study. Family parenting, consumption of toddlers, unhealthy behaviour and environment, and infection are themes that considered related to stunting. It is important for the government to provide education related to parenting and fulfilling family nutrition through sustainable development.

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1. Introduction

Health development is based on several indicators, namely the health of children under five, maternal mortality, infant mortality, infectious and non-communicable diseases, reproductive health, risky behavior, and vulnerable nutritional status. This is supported by the assessment of several determinants that are related to one another, which can be joint determinants of key health indicators. In general, the determinants of health include aspects of behavior and a supportive environment.[1]

Under-five nutrition plays an important role in improving the quality of human resources. Modification of the model of social determinants of health states that at the ecological level, individual health is indicated by nutritional status as a toddler. Nutritional problems are health problems of a person or society caused by an imbalance in the fulfillment of their needs for nutrients that can be obtained from food. Nutritional disorders during toddlers and will continue to interfere with individual growth and development because the first three years of life is the golden age (golden period of growth).[2]

The pattern of growth from birth to death is not a straight-line curve, but consists of several parts that show a fast growth rate, interspersed with a slow growth rate. The fast growth phase is called the growth spurt, while the slow growth phase is called the growth plateau. On a person's growth curve, we get two growth spurt phases, namely in the period of infancy and toddler age, and in adolescence or adolescence. Between the two phases of the growth spurt, there is a growth plateau phase, namely in the preschool period and the late adult life.[3]

One of the nutritional problems faced by toddlers is stunting. Stunting can lead to long term implications including diminished cognitive and physical development, lower test performances, lower household expenditure per capita, an increased likelihood of living in poverty, an increased risk of obstructed labor and asphyxia when giving birth, and an increased risk of degenerative diseases such as obesity, diabetes mellitus, heart disease, stroke, hypertension, and cancer diabetes.[4,5]

The WHO framework provides an overview of the causes of stunting and classifies them into four main proximal factors: household and family factors, inadequate complementary feeding practices, inadequate breastfeeding practices, and infection.[6] Stunting shows nutritional problems that are chronic and last long time, such as poverty, unhealthy behavior, poor parenting/feeding patterns since the child was born.[7] WHO (2010) states that public health problems are considered severe if the prevalence of stunting ranges from 30-39% and is considered serious if it is more than 40%.[7]

South Sorong Regency was a division district in 2007. The IPKM (Public Health Development Index) of 2013 assessment showed the prevalence of short and very short toddlers was 60.70%, higher than the data of West Papua Province and national data of 44.64% and 37.21%, respectively. The results of Riskesdas (Basic Health Research) in 2018 showed that children under five were very short in South Sorong by 39.61%, higher than the West Papua province data of 27.75%.[8] The high rate of stunting in South Sorong Regency shows that this problem is very serious.

This study aims to analyze the cultural aspects that influence the incidence of stunting under five in Tehit and Yaben Tribes, South Sorong, West Papua. The results of this study are expected to help analyze health problems through a cultural approach that develops in society.

2. Materials and Methods

2.1. Study Design

This research uses ethnographic method. Ethnography is an activity to describe a culture. The main purpose of this activity is to understand a view of life from the point of view of the indigenous people.[9] This research was conducted for 40 days. During that time the researcher lived with the residents of Kampung Konda and Wamargege, participating in activities and mingling with the community.

2.2. Participants

Participants in this study were taken purposively, meaning people who are considered to be able to provide information about the problems that have been formulated. Informants in this study were tribal chiefs, village heads, priests, health workers in Konda and Wamargege, posyandu cadres, and community members. All informants were asked to be prepared verbally and recorded.

2.3. Tools and Materials

Data were collected through participatory observation, in-depth interviews, direct observation supported by visual data (photos, videos), secondary data and literature study. Participation observations were carried out by following the daily activities of the community, activities in community work, namely cutting sago and coming directly to Tanjung Bakoi, where Wamargege residents look for shrimp and fish. The researcher also participates in religious activities such as worship at the church every Sunday and is involved in the community kitchen at church retreat activities.

Interview is one of the instruments used in this research. The form of interview used is an unstructured interview. The interview took place naturally like a normal conversation so that the informant did not do engineering in providing information. The focus of the interview was on the heads and secretaries of the two villages, the heads and officers of the Konda Health Center, the Konda and Wamargege Pustu officers, the Mama Kader Posyandu, and the Mama who has children under five. Interviews with other community members were conducted to enrich the required information. The instruments used in the interview process are recorders, field notes and mobile phones.

The visual data obtained are photo and video images. Visual data is used as a reinforcement of the information that has been obtained in order to obtain an accurate picture of the phenomenon or event being discussed. The instruments used are digital cameras and camcorders.

Secondary data is data that was already available before the research was conducted. The data used include the South Sorong Regency Profile, the South Sorong District Health Office Profile, the Konda Village and Sub-District Profiles and the Konda Health Center's data.

2.4. Data analysis

Data was validated by triangulating of each data obtained either through triangulation of data, informants and the time of data collection. The next stage is to conduct a thematic analysis by comparing secondary data and literature study.

3. Results and Discussion

Kampung Konda and Wamargege are two adjoining villages and are +/- 35 km from Teminabuan (the district capital). These two villages are inhabited by two different tribes. The Tehit – the largest tribe in South Sorong – occupy the Konda and Yaben tribes in the village of Wamargege. The livelihood of the Tehit tribe is generally gardening and farming in sago gardens or forests.[10] The Yaben tribe are known as sailors and fishermen and only live in coastal areas. They together with the Tehit Tribe, who originally lived in the forest - built Kampung Konda near the coast, while Kampung Wamargege itself had been inaugurated as a village separated from Kampung Konda since 1998.

The two tribes coexisted for hundreds of years and resulted in the mixing of tribes through marriage. The acculturation of two different cultures through marriage and the daily life of the activities, though does not necessarily leave the original culture. An example is many people in Konda work as shrimp fishermen. They only occasionally go to the sea and return to their village for a week. They go on Monday and return to the village on Saturday to worship at church on Sunday. Another thing that cannot be lost is language, by daily speech will appear come from the Tehit or Yaben.

The results of reports on posyandu activities in the two villages showed that 54 toddlers (56%) who were weighed in Konda and Wamargege were stunted.[11] The results of in-depth interviews with several informants and observations in the field showed several reasons behind stunting in Konda and Wamargege. Family parenting, consumption of toddlers, unhealthy behaviour, and infection are themes that considered related to stunting.

3.1. Family parenting

The Yaben tribe can go to sea for months and only return to the village during Christmas and New Year celebrations. They built temporary houses (para-para) and took all their belongings and family members to live in Tanjung Bakoi, where they used to look for shrimp. The church council's policy that requires residents to pray every Sunday, then changes the rhythm of the Yaben Tribe is looking for shrimp for a week and returning to the village every Saturday, but this is also only carried out by some people. Others still remain in Bakoi and only return at certain times.

The lifestyle of living in Tanjung Bakoi - for Wamargege residents – and Seneboi for Konda residents have many negative impacts. Parenting patterns are not controlled because parents go out to sea all day and the children are entrusted to relatives or neighbors. Health services are also not running and people only buy over-the-counter medicines sold by shrimp owners when they are sick. Sanitation is also poor. People open defecation behind their houses or on parapets that plunge straight down without a special room. There is no clean water source and the community takes advantage of natural wells around the settlements where the water is salty and brown.

The income of fishermen seems higher than sago farmers, but there are visible factors reducing the income. Sago farmers do not need such a large initial capital because the sago land belongs to their large family and only consists of trees, usually from parents. Even though the fisherman's income is higher, they need to debt the ship and its equipment for the initial capital to the skipper, who is usually also as a collector. The fisherman will pay this debt in installment through the income he gets from the shrimp catch.

Parenting includes the ability of families to provide time, attention and support in the physical, mental and social needs of children who are growing in the family.[12] Parenting has an effect on the incidence of stunting. Children aged 12-23 months with poor parenting tend to be stunted by 4.714 times greater than children with good parenting.[13]

Family parenting is manifested in breastfeeding and complementary foods, psychosocial stimulation, hygiene and environmental sanitation practices, caring for sick children in the form of health practices at home and patterns of seeking health behaviour.[14] The habits that exist in the family as like as feeding practices, psychosocial stimulation, environmental hygiene and sanitation, and also the use of health services have a significant relationship with the incidence of stunting in children aged 24-59 months.[15]

3.2. Toddler's consumption

An interesting finding in Konda is the babies who born in Kampung Konda dan Wamargege generally has normal weight, but the next 2-3 months decreases and falls into the category of malnutrition. This information was conveyed by an LH – informant who also works as a midwife at the Konda Health Center.

> *"I'm surprised that the children are born normally… but at the age of 2 and 3 months their weight has decreased… shrunk… I don't understand…they already fed them at 2 weeks of age… some even took one week…. The baby's digestion is damaged when given papeda …we are losing weight…is her intestines wrinkled…I wonder…even though at birth her weight was normal…."*

Mama R said that breastfeeding her child until the age of 3 years. In addition to breast milk, mama also gave bananas, instant baby porridge, papeda, vegetables, canned sweetened condensed milk and powdered milk. Mama R started giving food other than breast milk when the baby was two weeks old.

The community habit is one of the factors affecting how parents feed their children.[16] There is a habit of early prelacteal feeding practices in newborn babies and early weaning practices in children under five.[17] The habit influencing these feeding practices also directly influences the children's nutrient adequacy and the incidence of stunting.[18]

Residents of Konda have as few as 1 to 3 children. The reason is the trauma of the past when there was still a tribal war, many children would make it difficult for them to move and survive. On the other hand, families in Wamargege generally have many children. The reason is that many children bring blessings to the family. Boys can work looking for shrimp, while girls will get marriage money when proposed. The amount of money varies depending on the family (marga), education level, and other aspects according to the request of the woman's family. In addition, the distance of children who are too close is also considered difficult in parenting and feeding patterns.

> *"Regarding nutrition, there are indeed many families who are lacking because the distance between children is very short, only a year already has a younger sibling. I have given the understanding that don't just like making children but can't take care of and fed them. They have a house in Tanjung there because there is a company that pays for them to work there. For the past 2 years I have not taken Raskin because people don't want to buy*

Raskin because the rice is yellow in color. They get a share from the businessmen even though they have to buy IDR 200,000 per sack. Children who do not go to school here, follow their parents there."

Children's eating behavior influences the incidence of stunting in children under five in the West Bangka Regency.[19] For pre-adolescent children, in particular, mothers or carers hold the primary role in food choices, food purchases, food preparation, and the serving of food to children.[20,21] Better knowledge of factors influencing food choices and consumption in childhood is of great importance for everyone to understand the issue of childhood overweight, as well as other aspects of child health.

3.3. Unhealthy Behaviour and Environment

The practice of washing hands with soap is rarely found in the Konda and Wamargege communities. This statement was made by several community members themselves and several community leaders. Sister L, who is in charge of the Konda Pustu, stated that most residents do not wash their hands when they are going to eat, especially with soap.

"Nothing… no one washes their hands… where does the water come from… let alone using soap… if you eat, just eat… your hands only just stick it on clothes…"

Researcher observations while chatting at the Mama Onyong Kiosk – the biggest kiosk/stall in Kampung Konda and Wamargege, shows children playing with soil media, immediately eating the cakes they bought. The hands are only pressed a few times on the clothes to remove any remaining dirt or dust.

The latrines widely used by the people of Konda and Wamargege are public latrines that were built by the government using a central government project. However, the obstacle, in this case, is the provision of clean water and public awareness to maintain the cleanliness of public toilets. Finally, some people returned to the old habit of defecating in a *cemplung* latrine on the beach. The habit of people for years to dispose of their feces in a latrine on the beach without flushing, then carried over to the time of using public toilets. The house adjacent to the toilet finally locks the toilet and will open if neighbors want to use the toilet and bring water. The reason put forward is that they are very disturbed by the smell of feces. Some people finally return to the old habit of using the *cemplung* latrine because it is considered not a hassle. And clean living behavior is generally considered as the root of nutritional problems in Konda and Wamargege Villages, as stated by the Wamargege village head.

"… yeah, not too much but not too far… it's small, big belly… mom and dad know how to look for it… money is there…. but don't pay attention to household management… how to eat… how to take care of… everyone doesn't want to… don't know how to clean… every day… how about that… yesterday a lot of small children died… good parents make them lazy to take care of them… love to take a shower… eating problems…"

Various environmental risk factors, at multiple levels, are related to stunting and show the importance of considering how the environment interacts with nutrition.[22] The environmental risk factors all consisted of an 'unhealthy' child environment. Reducing stunting in childhood and maintaining these outcomes in the face of climate change requires interventions to reduce stunting to be comprehensive and integrated into their consideration of the role of environmental risk factors.[23] One of the unhealthy behaviors is open defecation and the ownership of latrines. Personal latrine ownership may not be as important as the percentage of latrines at the village/neighborhood level. Two studies found that as the percentage of homes with access to a latrine increased, rates of stunting in the study areas decreased.[24]

Another environment factors were lack of sanitation, lack of waste disposal at the community level, dirt floors in domestic settings, mycotoxins in food, and the burning of solid fuels indoors have sufficient evidence to find an association with childhood stunting.[22]

3.4. Infection

Regarding infectious diseases, the nurse at Pustu Konda stated that there were three cases of malnutrition referred last month at Keyen Hospital, all three were accompanied by infectious diseases. One measles and two had pulmonary TB. The three were supposed to have received treatment and formulas for weight gain for almost a month, but one toddler asked to be forced to go home after two of the children finished their treatment. The mother said that when her baby was one year old, he had a runny cough and his weight continued to decrease. After the assessment, he was declared to have pulmonary TB and his nutritional status was poor, and also need special treatment.

The combined and interactive effects of infections, environmental factors, and malnutrition as possible determinants of stunting in children have long been thought to be of great importance.[23] Both serious acute infections, particularly those that involve the gastrointestinal tract, and chronic infections can impair linear growth.[24,25] Symptomatic infection is common during the first years of life in low-income countries and repeated episodes of diarrhea or parasitic infection are associated with the increased risk of stunting. These interactions are mutually reinforcing through infection exacerbating any malnutrition, because of appetite suppression and reduced food intake, and any malabsorption reducing nutrient intake, while malnutrition reduces immune defense systems, thereby worsening the adverse influence of infections.[26]

Limitations in this study is that the time constraint is quite short so that the information obtained is still at the surface level, not yet detailed on the reality that occurs in the people of Kampung Konda and Wamargege. As a simple example, there were no wedding rituals during the study so that they were not able to make direct observations. Partus also only happened once and occurred in Tanjung Bakoi so it could not be observed. In addition, changes in seasons and rituals of holidays (Christmas) that result in changes in consumption patterns also cannot be analyzed. Time is also an obstacle, there is still a barrier between researchers and the community and to be accepted as part of the community.

4. Conclusions

The impact of unhealthy behavior and poor environmental conditions has resulted in an increase in infection cases. Other factors in the family that affect stunting are improper parenting, parents are more outside the home (gardening, mining for sand and looking for shrimp in Bakoi), open defecation, and do not regulate the distance between children. In a wider spectrum, stunting cases are influenced by aspects, namely culture, politics, ideology, economic policies, and natural resources.

The financial capacity of the people of Konda and Wamargege is quite good. However, inappropriate family financial management and relying only on natural factors can affect family consumption patterns. It is important for the government to provide education related to parenting and fulfilling family nutrition through sustainable development.

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