



Analysis Of Diversification Of Food Consumption And Prevalence Of Stunting Under-Child Based On Socio Demography Of Coastal Communities In Pandemi Period

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Abstract

Availability of sufficient quantity and quality food makes the family's nutritional intake fulfilled. Good nutritional intake will have an impact on the overall health of the family, including the nutritional status of children. Families who are unable to provide sufficient and nutritious food, especially for a long time, will result in nutritional problems, one of which is stunting. This research method is observational analytic with the instrument used in this study in the form of a questionnaire based on the

Food Frequency Questionnaire (FFQ) which has been validated from the Guidelines for measuring household and individual dietary diversity. Then weighing the toddler's weight using a digital weighing device and measuring height as well as observing by looking at the WHO-NCHS standard anthropometric standard table to determine the nutritional status of toddlers which are categorized into four namely poor nutrition, undernutrition, good nutrition and high nutrition. Secondary data was obtained based on monitoring of nutritional status, food consumption data, HDI score data and population data. Data testing was carried out using the chi-square statistical test, which correlates the diversity of food consumption with the nutritional status of toddlers. From the results of the study it was found that in the research location the problem of stunting that had to be overcome was the young age of childbearing.

Keywords : *Stunting , ;toddlers , ;coastal, ;food_diversification, ;nutrition*

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Introduction

Stunting is a nutritional problem that occurs in Indonesia that requires special attention to be addressed immediately. Stunting (dwarf) is a condition where a toddler has a length or height that is less when compared to age. There are five factors that cause stunting, namely poverty, social and culture, increased exposure to infectious diseases, food insecurity and community access to health services (Aridiyah, et. al., 2015) and factors related to stunting, including birth weight (Varella and Dickinson , 2008), short maternal stature (Yang, et. al., 2010), intake of energy, protein, fat (Assis, et. al., 2004), family economic status (Hong, 2007), number of household members and water facilities (Merchant, et. al., 2003). Selection of food types is very important to meet nutritional needs. In general, there are 6 nutrients needed by the body, namely carbohydrates, fats, proteins, vitamins, minerals such as iron (Fe) and zinc (Zn).

To strengthen the condition of food security in a region, it is necessary to diversify food consumption. The food diversification strategy is used to reduce dependence on rice consumption, and the advantage of food diversification is the variety of alternative types of food offered, not just focusing on rice. Diversification of consumption of traditional local staple foods other carbohydrate sources such as cassava, corn and sago is an implementation of food consumption patterns in the daily diet, food consumption is the type and amount of food eaten by someone with a specific purpose. Consumption behavior is also an important cause of stunting (Krasevec, et. al., 2017).

Communities living in coastal areas such as fishermen should have a greater opportunity to consume high-protein animal foods such as fish because there is a lot of access and availability, so nutritional problems such as stunting do not occur. But there are still many fishermen's children who don't like fish, this can also be caused by their parents' low knowledge and education. Children prefer snack foods such as snacks, meatballs and even instant noodles. For parents, children who look fat are considered healthy without thinking about what will happen in the future. If this is allowed to occur periodically, it will have an impact on the child's growth rate and can be interpreted as the ability to minimize consumption of certain foods, especially during difficult times such as the current pandemic.

A pandemic is an epidemic that has spread to other countries and is affecting large numbers of people worldwide simultaneously or continuously. At this time, the condition of food security is affected by the impact of the pandemic where food insecurity problems can occur if the effects of the pandemic are not resolved quickly and appropriately. The impact of a pandemic affects human life patterns to the point where a person's economy declines. When the economic impact decreases, humans must still be able to fight for their own lives by maintaining life's problems such as clothing, food and shelter.



Methods

1. RESEARCH LOCATION AND TIME

The research was conducted in Nelayan Indah Village, Medan Labuhan District, Medan which is a coastal area. Research will begin in 2022.

2. POPULATION AND RESEARCH SAMPLE

In this study, the population was toddlers aged 1-5 years in Nelayan Indah Village, Medan Labuhan District, Medan. The research sample was taken using the total sampling method, namely by including the entire population as the research sample.

3. DATA COLLECTION TECHNIQUES

a. Primary data

Primary data is data that is directly collected by researchers about the relationship between diversity in food consumption and the nutritional status of toddlers by answering questions using the Food Frequency Questionnaire (FFQ). The questionnaire used in this study is a validated questionnaire. Then weigh the toddler's weight to determine the toddler's nutritional status and height.

b. Secondary Data

Secondary data comes from the Indonesian Ministry of Health in the form of a nutritional status monitoring pocket book for nutritional status data for underweight, stunting and wasting toddlers. Food consumption data (energy, protein, PPH score) comes from Susenas (National Socioeconomic Survey), HDI score data comes from the publication of the BPS New Method Human Development Index and population data comes from the Central Statistics Agency (BPS).

4. RESEARCH INSTRUMENTS

The instrument used in this study was a questionnaire that asked for some respondent information and to see the diversity of food consumption in toddler food intake the validated Food Frequency Questionnaire (FFQ) from the Guidelines for measuring household and individual dietary diversity was used. Then weighing the toddler's weight using a digital weighing device and observing by looking at the WHO-NCHS standard anthropometric table to determine the nutritional status of toddlers are categorized into four, namely malnutrition, undernutrition, good nutrition and high nutrition.

5. DATA ANALYSIS

The data processing process includes coding, data entry, cleaning and analysis. The data obtained will be processed and analyzed descriptively and inferentially using a computerized system and the Statistical Program for Social Science (SPSS). The statistical analysis used was descriptive analysis and bivariate analysis (chi square test) to obtain the odds ratio.



Results and Discussion

1. Frequency Distribution of Respondent Characteristics

The frequency distribution data for the characteristics of the respondents can be seen in table 1 below.

Table 1. Frequency Distribution of Respondent Characteristics

Characteristics	n = 102	%
Changes in Food Intake		
Yes	78	76,5
Not	24	23,5
Exclusive breastfeeding		
Yes	62	60,8
Not	40	39,2
sanitation		
Well	96	94,1
Bad	6	5,9
Nutritional status		
Short	13	12,7
Normal	78	76,5
Tall	11	10,8
Socioeconomic		
Gakin	33	32,4
Non-Gakin	69	67,6
Childbirth Age		
Good (> 20 yrs)	47	46,1
Not Good (< 20 yrs)	55	53,9

Based on table 1 above, there was a change in food intake during the pandemic by 78 (76.5%), 62 (60.8%) toddlers who were given exclusive breastfeeding, 96 (94.1%) of families who implemented good sanitation, the condition good environmental sanitation is 217 (75.6%), the nutritional status of children with stunting (short) is 13 (12.7%), normal is 78 (76.5%) and high is 11 (10, 8 %), non-gakin socio-economic conditions were 69 (67.6 %) and good birth age were 47 (46.1 %) respondents.



Table 2. Logistic Regression of Stunting Incidents Based on Respondents' Characteristics

Characteristics	r	p-values	95% CI
Changes in Food Intake	0.547	0.003	0.818 1.182
Exclusive breastfeeding	0.506	0.001	0.559 0.749
sanitation	0.162	0.104	1,717 1,976
Socioeconomic	0.534	0.001	0.787 1.123
Childbirth Age	0.534	0.001	0.787 1.123

Based on table 2 above, it can be seen that changes in food intake have an effect of 54.7%, exclusive breastfeeding has an effect of 50.6%, socioeconomic conditions have an influence of 53.4% and the age of the mother giving birth has an influence of 53.4% on the incidence stunting in toddlers, while sanitation only has an impact of 16.2% on the incidence of stunting in toddlers. Based on the results of statistical analysis, changes in food intake, exclusive breastfeeding, socioeconomic conditions and age at birth have a significant influence on the incidence of stunting in toddlers.

Based on the results of the interviews and questionnaires, the respondents stated that there had been changes in their food intake during the pandemic due to the reduced income they received to meet household needs. The majority of residents in the research locations work as fishermen and fish collectors. The lack of people's purchasing power during the pandemic has also reduced income for these residents. Of course changes in food intake and lack of diversity in types of food consumed can affect their nutritional status. This of course can lead to cases of stunting in the region.

Stunting is a condition of failure to thrive in children under five (infants under five years) due to chronic malnutrition so that children are too short for their age. Malnutrition occurs since the baby is in the womb and in the early days after the baby is born, however, stunting only appears after the baby is 2 years old. Stunted and severely stunted toddlers are toddlers with body length (PB/U) or height (TB/U) according to their age compared to WHO-MGRS (Multicenter Growth Reference Study) standards (WHO, 2018).

Factors that influence the incidence of stunting in toddlers are age, birth length, adequate levels of protein, carbohydrates, vitamin A, calcium, zinc and iron. The level of protein adequacy is the main factor causing stunting in children (Siringoringo, et. al., 2020). Other factors related to the incidence of stunting are mother's knowledge, exclusive breastfeeding and basic sanitation. Basic sanitation is the dominant factor related to stunting (Sutriyawan And Nadhira, 2020). Sanitation is closely related to socio-economic conditions, where environmental hygiene that is not maintained will cause infectious diseases such as diarrhea (Suyanto, 2004). Other research states that socioeconomic influences the incidence of stunting. Toddlers with low family income are more at risk of suffering from stunting (Ngaisyah, 2015; Rahmad and Miko, 2016).



Residents of fishing villages in the research location, the majority of whom work as fishermen and fish collectors, have a standard of living on the verge of the poverty line. The home environment has poor sanitation and aeration, and the amount of trash in the mangrove estuary shows that their condition is still at the poverty line level. Poverty is one of the causes of high stunting problems in toddlers. Families who have economic limitations or are included in the poor economy will experience difficulties in fulfilling household food. If this continues for a long time and continuously it has an impact on the child's growth, so that the child experiences stunting (Kleynhans et. al., 2006). Coupled with the pandemic, which made the number of families below the poverty line increase.

To meet the nutritional needs of children certainly requires a large amount of money. If a family cannot afford the nutritional needs of children, it is very likely that the child will experience stunting. The purchasing power of nutritious food is strongly influenced by family income, because determining the various types of food to buy depends on the level of income. The purchasing power of a family follows the level of family income. With a high income, it is likely that the food needs of all family members will be met. On the other hand, low family income levels can also result in low household food purchasing power. Low purchasing power for food can result in a lack of fulfillment of nutritional needs in children (Divine, 2017).

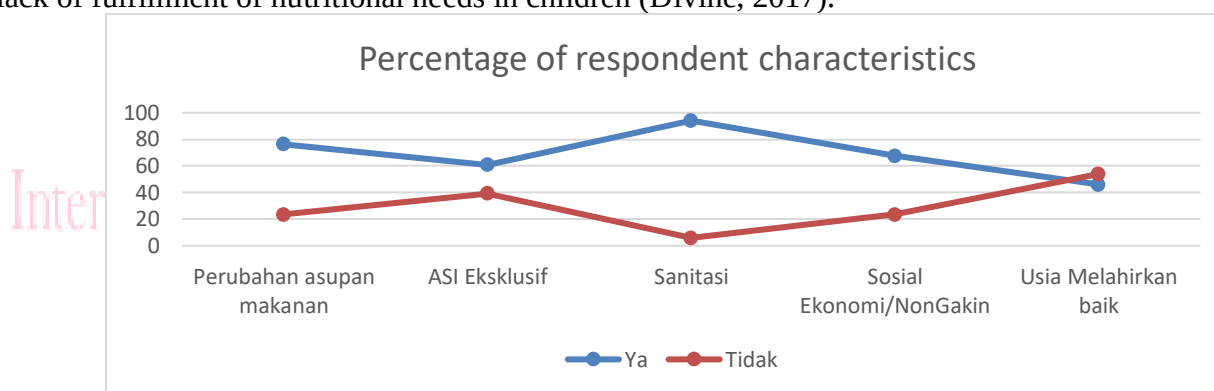


Image 1. Frequency Distribution of Respondent Characteristics

Based on Figure 1, it can be seen that in the research location, the problem of stunting that must be addressed is the young age of childbearing. The age at which children are born can also affect the incidence of stunting in children. In the study area, the age of the mother was dominated between 20-30 years. The condition of the mother is one of the factors that causes stunting in children. Mother's age is one of the factors that influence the occurrence of stunting because pregnancy at a young age (<20 years) makes the mother not yet have reproductive organs that are mature for pregnancy (Prawirohardjo, 2012). In addition, this age raises problems such as giving birth to premature babies to low birth weight (Marmi and Rahardjo, 2012). Whereas maternal age > 35 years or pregnancy at an old age will result in anxiety in pregnancy and childbirth and the reproductive organs are too old to get pregnant (Prawirohardjo, 2012). So that in the Fishermen's



Village area it is necessary to educate women, especially regarding the impact of a young childbearing age on cases of child stunting.

Conclusion and Recommendation

From the results of the study it was found that in the research location the problem of stunting that had to be overcome was the young age of childbearing. So that in the Fishermen's Village area it is necessary to educate women, especially regarding the impact of a young childbearing age on cases of child stunting. Based on the results of statistical analysis, changes in food intake, exclusive breastfeeding, socioeconomic conditions and age at birth have a significant influence on the incidence of stunting in toddlers. This research is expected to be implemented up to the community service stage to improve people's welfare, especially in the health sector.

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