Characteristics, Demographics and Malnutrition of Toddlers in West Papua Province

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1. Pendahuluan

Malnutrition (malnutrition and stunting) is still a global problem. The high prevalence of malnutrition until now has become the focus of attention in the world. In the world, about 1 in 5 children is still a nutrition problem both nationally and internationally. More than 1/3 of the 9.2 million deaths in children under five years of age in the world based on data from the WHO (World Health Organization) states that the incidence of stunting (stunted) in 2016 was 22.9% and underweight (malnutrition and malnutrition) as much as 14.04% (WHO, 2017).

Indonesia is one of the countries with the fifth-highest incidence of malnutrition (malnutrition and stunting) in the world. In Indonesia, based on Indonesia basic health research in 2013, the prevalence of nutrition in children under five based on weight/age, malnutrition is 5.7%, and malnutrition is 13.9%. The prevalence of nutrition in children under the age of five is determined by height/age. The short prevalence is 37.2%, and the very short prevalence is 19.2%. Indonesia basic health research in 2018 states that
the prevalence of weight loss/age nutritional status in children aged 0-23 months old (under two years of age) in Indonesia is as much as 3.8% malnutrition, 11.4% malnutrition, good nutrition as much as 82.0% and over nutrition as much as 2.7% (Kementerian Kesehatan RI, 2018). Prevalence of height/aged nutritional status in children aged 0-23 months babies under two years in Indonesia. As much as 17.1% of babies under two years were born short, 12.8% of babies under two years were born very short. Indonesia basic health research in 2013 shows that the prevalence of malnutrition and malnutrition based on weight/age in West Papua Province is 32.0%, and based on weight/age, the prevalence of short birth and very short underweight is 37.2% (Kementerian Kesehatan RI, 2018).

The cause of malnutrition and malnutrition is high, namely the poverty rate in Indonesia, which is still high at 25 million people (9.66%). The provinces of Papua, West Papua, East Nusa Tenggara (NTB) and Maluku are provinces with the lowest HDI (human development index) and have many malnutrition cases in Indonesia. The human development index of West Papua Province in 2013 was 60.91% and increased in 2018 by 63.74%. This causes poverty and unequal development so that education, economy, social, and community resources are low (BPS, 2019). Complete facilities and infrastructure are some of the factors that impact the incidence of malnutrition cases (Ismail, 2016).

The problem of malnutrition (malnutrition and shortness) in children under two years of age can have an impact, namely low endurance, making them susceptible to infectious diseases, inhibiting children's growth and development both physically and mentally, affecting children's intelligence and having an impact on the future formation of human resources of high quality (Diniyyah, 2017). The short-term impact is increasing morbidity and long-term impacts, namely the lower quality of future human resources (HR) as seen from intelligence, creativity, and productivity (Kementerian Kesehatan RI, 2018). Babies exposed to infectious diseases tend to lose weight; this is due to an increase in metabolism in the toddler's body and usually followed by a decrease in appetite. However, straight weight loss can lead to a decrease in nutritional status (Oktavia, 2017).
Sociodemography deals with social and economic status. Socioeconomic status, low income, low housing density, and low parental education result in high malnutrition rates because it affects eating habits (Galgamuwa et al., 2017). The percentage of children aged 18-24 months experiencing nutritional problems is greater than that of children aged 6 to 1 month. Age level is also a determining factor for a person's nutritional needs. At a young age, the baby's immune system is still low, so it is prone to nutritional (Lestari, 2015). Male toddlers have a 2,441 times chance of malnutrition (malnutrition and stunting) compared to female toddlers. There is a relationship between gender and the incidence of malnutrition (malnutrition and shortness) of children aged 6-23 months in Lampung Province. Gender is an indirect factor in causing nutritional problems in children under five (Angelina F, 2018). The highest malnutrition status is found in children with low-educated parents. (Konstantin et al., 2020). The work of parents for underweight children (malnutrition and deficiency) has a significant relationship with parental work (Pratiwi, 2015).

Rural areas have a higher prevalence of underweight (malnutrition and deficiency), as much as 59.7% compared to urban areas, as much as 40.3% (Rahmad, 2016). High culture or customs and social economy impact the emergence of malnutrition in children under five. Urban communities are better off in terms of economic levels and knowledge of nutrition. Meanwhile, many rural communities still experience poverty, lack of food supplies and lack of public knowledge about nutrition (Pratiwi, 2015). The purpose of this study was to determine the socio-demographic characteristics and nutritional status of toddlers under the age of two in West Papua Province.

2. Metode

This study used a quantitative research approach with a cross-sectional design (cross-sectional). This study used secondary data and further analyses the 2018 West Papua Indonesia basic health research; this national-scale survey was carried out in 13 districts in West Papua Province. This research was conducted in 13 districts/cities of West Papua Province, conducted from January 2017 to December 2018. The population in this study were infants aged 0-23 months from West Papua Province. The sample for this study consisted of 159 babies. The inclusion criteria were selected households in the
census block (BS) who were interviewed, were in the research location, and the exclusion criteria were children who could not be assessed, were not in the research location within 14 days. Instruments and data collection methods in this study utilized the 2018 West Papua Basic Health Research data collection results using a household questionnaire instrument and individual instruments conducted by interview. Measurements using anthropometry with measuring instruments (weight/age), and upper arm circumference measurement. This study's independent variables were the frequency of under-age age, frequency of sex of under-five, frequency of parental education, frequency of parental work, and frequency of residence. The nutritional state of the toddler was the dependent variable in this study. Data analysis used cross-tabulation descriptive analysis and then presented in the form of a frequency distribution table.

3. Results

Table. 1 Proportion of Nutritional Status (Weight/Age) in Children aged 0-23 Months According to the Characteristics of West Papua Province

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Nutritional Status (Weight/Age)</th>
<th>Total</th>
<th>P</th>
<th>PR</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Malnutrition</td>
<td>Normal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aged Group</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12-24 months</td>
<td>60  9,4</td>
<td>257</td>
<td>40,1</td>
<td>317</td>
</tr>
<tr>
<td>0-11 months</td>
<td>47  7,3</td>
<td>277</td>
<td>43,2</td>
<td>324</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>56  8,7</td>
<td>240</td>
<td>37,4</td>
<td>296</td>
</tr>
<tr>
<td>Female</td>
<td>51  8</td>
<td>294</td>
<td>45,9</td>
<td>345</td>
</tr>
<tr>
<td>Education Of The Head Of The Household</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>69  10,8</td>
<td>243</td>
<td>37,9</td>
<td>312</td>
</tr>
<tr>
<td>High</td>
<td>38  5,9</td>
<td>291</td>
<td>45,4</td>
<td>329</td>
</tr>
<tr>
<td>Worker</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not Working</td>
<td>12  1,9</td>
<td>21</td>
<td>3,3</td>
<td>33</td>
</tr>
<tr>
<td>Working</td>
<td>95  14,8</td>
<td>513</td>
<td>80</td>
<td>608</td>
</tr>
<tr>
<td>Residence</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td>34  5,3</td>
<td>216</td>
<td>33,7</td>
<td>250</td>
</tr>
<tr>
<td>Rural</td>
<td>73  11,4</td>
<td>318</td>
<td>49,6</td>
<td>391</td>
</tr>
<tr>
<td>Area</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mountain</td>
<td>29  4,5</td>
<td>138</td>
<td>21,5</td>
<td>167</td>
</tr>
<tr>
<td>Coastal</td>
<td>76  11,9</td>
<td>398</td>
<td>62,1</td>
<td>474</td>
</tr>
</tbody>
</table>
Based on Table 1, it is known that the results showed that out of 317 infants aged 12-24 months who performed weight/age anthropometry measurements, there were 60 infants (9.4%) in the category of malnutrition and 257 infants (40.1%) have normal nutrition. As many as 324 infants aged 0-11 months who received weight/age measurements, 47 infants (7.3%) malnutrition, and 277 infants (43.2%) have normal nutrition. The chi-square test results showed no link between the infant age group and the incidence of malnutrition in the Province of West Papua (value p=0.101>0.05).

The results showed that out of 296 infants under two years old, there were 56 infants (8.7%) in the category of malnutrition, and 240 infants (37.4%) have normal nutrition. Of the 345 female infants under the age of two who received weight/age measurements, there were 51 infants (8%) in the category of malnutrition and 294 infants (45.9%) have normal nutrition. The chi-square test results showed that there was no relationship between the gender of the children under five and the nutritional status of the children (p <0.161).

The results of this study showed that out of 312 infants had a head of household with low education, there were 69 infants (10.8%) in the category of malnutrition and 243 infants (37.9%) have normal nutrition. Of the 329 people who received weight/age measurements, 38 infants (5.9%) in the category of malnutrition and 291 infants (45.4%) have normal nutrition. The chi-square test results showed a link between the head of household education group and the incidence of malnutrition in the Province of West Papua (value p = 0.0003 < 0.05 ). A two-year-old who had a head of a household with low education had a 1,914 greater risk of malnutrition than a two-year-old who had a head of a household with a higher category of education. The higher a person's education level, the easier it is to understand information and the easier it is to implement his knowledge in behaviour, especially in terms of health and nutrition.

The results showed that out of 33 infants under the age of two who had a head of household not working, there were 12 infants (1.9%) in the category of malnutrition and 21 infants (3.3%) have normal nutrition. Of the 608 infants under the age of two who received weight/age measurements, there were 95 infants (14.8%) in malnutrition and 513 infants (80%) have normal nutrition. The results of
the chi-square test in this study showed that there was no relationship between the work status of the head of the household and the nutritional status of children under five (p = 0.001). A family whose head of household who does not work has a 2,327 times greater risk of having a malnourished baduta than a working household head who has malnutrition.

The results of this study showed that out of 250 classifications of urban dwellings, there were 34 people (5.3%) in the category of malnutrition (malnutrition) and 216 people (33.7%) have normal nutrition. Of the 391 people who received weight/age measurements, 73 people (11.4%) in the category of malnutrition and 318 people (49.6%) have normal nutrition. The chi-square test results showed no relationship between the classification group of residences and the incidence of malnutrition in the Province of West Papua (value p = 0.086 > 0.05 ).

This study indicates that out of 167 babies with houses in the mountains, 29 toddlers (4.5%) have malnutrition and 138 babies (21.5%) have normal nutrition. As many as 474 babies in coastal areas, 76 babies (11.9%) have malnutrition, and 398 infants (62.1%) have normal nutrition. The chi-square test results in this study showed no relationship between the area of residence and the nutritional status of children under five (p = 0.45).

4. **Discuss**

This study shows that 4.98% of infants suffer from malnutrition, 13.44% of infants with malnutrition, and 87.26% of normal infants. Hanifah (2020) research states that malnutrition and malnutrition are as much as 4.04% in infants aged 12-≤18 months in Jatinangor District. Adinda (2020) stated that consumption of nutritious and varied food will be related to nutritional status. Adequate nutrition in the form of adequate energy, protein, fat and carbohydrates will impact nutritional status. Fatimah (2020) stated that healthy eating behaviour is intended for every individual for all ages, cultures, and geographical situations. Each individual is recommended to consume each food group. Malnutrition and malnutrition have been experienced by toddlers from a very early age, in line with the child's increasing age. Underweight occurs at ≤six months of age and the incidence of underweight after six months of age because, at that
age, the child has given complementary foods (complementary foods) where the child is already growing, so it is not enough to rely on breast milk. However, after 24 months, this situation decreases because the child can consume a more varied diet (Ernawati, 2019).

This study indicates that 23.75% of babies born short in the age range 12-23 months, 14.04% of babies born very short in the age range 12-23 months and 81.45% of babies born normal in the age range 0-5 months. Hidayat (2017) research states that children under 0-23 months experience short nutrition as much as 18.5%. Risk factors for stunting in babies aged 12-24 months are low levels of energy adequacy, protein, zinc, low body weight and high exposure to pesticides (Wellina et al., 2016).

This study stated that most malnourished babies were male as much as 4.65%, malnourished babies were male as much as 14.05%, and babies with normal nutrition were female as much as 85.93%. Rahmawati (2019) research that 68.5% of underweight children are male. 19) Boys get a higher priority than girls. Boys are more active than girls. The nutritional requirements needed by girls are lower than those needed for boys. Boys get a higher priority than girls. Boys are more active than girls. The nutritional requirements needed by girls are lower than those needed for boys. Boys get a higher priority than girls, boys are more active than girls. Angelina F (2018) said the nutritional requirements needed by girls are lower than those needed for boys.

This study indicates that most babies born shortly were male as much as 19.02%, 12.52% of very short babies were born to be male, and 70.8% of normal-born babies were female. Tsaralatifah (2020) research which states that 40% of male children aged 0-23 months stunted. Boys in toddlers have a 2.441 times chance of being stunted compared to female toddlers. Setyawati (2018) research states that 56.5% of stunted babies are male compared to 43.5% of women. Gross motor growth in boys is quickly, and these various things require more and not less energy. Male toddlers have more active playing activities than girls; if this condition is not balanced with adequate nutritional intake; it can cause stunting.

This study indicates that most babies have malnutrition with parental education, not completing primary school as much as 5.60%, malnourished babies with parental education who graduated from primary school are 24.55%. Babies with normal nutrition
with parental education graduated from high school with as much as 89.98%. Wahyudi (2015) study of parents' educational level (mothers) and 64.8% had low education. Alamsyah (2017) said the higher the mother's level of education, the less likely it is for children to experience malnutrition. Conversely, the lower the mother's level of education, the greater the risk of experiencing malnutrition (Alamsyah, 2017). The prevalence of undernourished children is more common in children of uneducated parents. In addition, less-educated parents are more likely to have underweight children than children of highly educated parents (Syahrul, 2016).

The results of this study indicate that the majority of babies suffering from malnutrition with the work of parents who do not work as much as 6.78%, malnourished babies with the work of parents who do not work as much as 28.72%, and babies with normal nutrition with parents work as labourers/driver servants households as much as 93.09%. Families with high income will fulfill food needs; families with income Inadequate or limited, the need for food will be less so that the need for nutrients will be less and impact the emergence of nutritional problems. The results of this study indicate that the majority of babies born shortly with fishermen's parents work as much as 27.01%, babies born very short with the work of self-employed parents as much as 15.6%, and babies born normally with parents as private employees as much as 82.15%. Amin (2016) research which shows that temporary workers are 68.25%. It affects how little income comes in; low income causes insufficient nutritional intake and can lead to stunting. Rachel (2020) study, which states that in Perlis Village, the prevalence of stunting among children under five is 49.32% with a fishing family job. Study Rahmah (2020) show toddlers from underprivileged families are 10.222 times more likely to experience malnutrition than toddlers from well-to-do families.

This study stated that the majority of babies suffering from malnutrition were in rural areas as much as 5.12%, malnutrition in rural areas was 13.22% and normal nutrition was in urban areas as much as 87.09%. There are cultural differences in urban and rural communities in their food needs and social status. Urban communities are better off in terms of economic levels and knowledge of nutrition. Meanwhile, many rural communities still experience poverty, lack of food supplies and lack of public
knowledge about nutrition. Underweight children occur in rural areas and disadvantaged groups, while urban areas are overweight.

Handayani (2017) said the role of the family, especially mothers in caring for children, will determine the growth and development of children, mother's behaviour in breastfeeding or feeding, healthy eating, providing nutritious food and controlling the large portion spent will improve the nutritional status of children. Children cared from mothers will interact more positively than if they are cared for by other than their mothers.

This study stated that the majority of babies suffering from malnutrition were in rural areas as much as 5.12%, malnutrition in rural areas was 13.22% and normal nutrition was in urban areas as much as 87.09%. There are cultural differences in urban and rural communities in their food needs and social status. Urban communities are better off in terms of economic levels and knowledge of nutrition. Meanwhile, many rural communities still experience poverty, lack of food supplies and lack of public knowledge about nutrition. Underweight children occur in rural areas and disadvantaged groups, while urban areas are overweight.

This study stated that most babies born shortly were in urban areas as much as 18.15%, 16.33% of very short babies were born in rural areas, and 75.14% of normal born babies were in urban areas. Rahmad (2016) research states that the prevalence of stunting under five is higher by 51.0% in rural areas than 49.0% in urban areas. The nutritional status of underweight and stunting in rural areas is higher than in urban areas. The family's economic situation influences stunting toddlers who live in rural areas with stunting children who live in urban areas. The two regions of stunting children; there are many families with low economic conditions that will affect the family's food purchasing power (Lusita, 2017).

5. Conclusion and Sugest

Conclusion

Malnutrition tends to occur in infants aged 0-11 months compared to infants aged 11-12 months. Malnutrition tends to be found in infants aged two years with male sex,
although not very significant. Malnutrition tends to occur in infants aged two years who live in rural areas than in urban areas.

A two-year-old baby who has a head of household with a low education (not attending school, not completing primary and junior high school) tends to have 1.91 times the risk of experiencing malnutrition than an infant under two years old who has a head of household with higher education (graduated from high school and college).

A two-year-old baby who has a household head who does not work tends to have 2.32 times the risk of experiencing malnutrition than a baby under two years old who has a working household head.

Suggest

The leadership of the West Papua Provincial Health Officer and the Education Office must collaborate in providing education on parenting and healthy food consumption patterns to heads of households, especially heads of households with low education, so that malnutrition does not occur.

Health workers must provide education to mothers who have low education about dietary consumption and parenting patterns to reduce malnutrition and stunting. The West Papua Provincial Government must pay more attention to the nutrition of pregnant women and the nutrition of children under five in rural areas of West Papua Province because it has a risk of malnutrition and short nutrition.

Reference


