Analysis of the Characteristics of Stunting Toddler Mothers in the Working Area of the Anak Air Health Center in Padang City

Yaumil Fauziah¹, Joserizal Serudji², Mayetti³, Nur Indrawaty Lipoeto⁴, Asrawati Nurdin⁵, Endrinaldi⁶

¹Ilmu Kebidanan, Fakultas Kedokteran, Universitas Andalas
²,³,⁴,⁵Fakultas Kedokteran, Universitas Andalas

Email corespendensi: jserudji@gmail.com

INTRODUCTION

Stunting is a growth disorder experienced by children which results in delays in children's growth and development based on age, when compared to children of their age, where it affects the quality of life of children in the long and short term, so that toddlers who experience stunting are predicted to experience difficulties in achieving optimal physical and cognitive development in the future. One of the targets of the Sustainable Development Goals (SDGs) which is the 2nd goal of sustainable development, namely eliminating hunger and all forms of malnutrition by 2030 and achieving food security. The target set is to reduce the stunting rate by 40% by 2025 (Kemenkes RI, 2022).
The incidence of stunting under five is still a major nutritional problem in Indonesia at this time which has attracted public attention and requires special policies and handling by the government and related stakeholders. Stunting is a chronic nutritional problem caused by many factors such as age, mother's education and occupation, number and spacing of births, socioeconomic conditions, maternal nutrition during pregnancy, lack of infant nutrition and infant morbidity (Kemenkes RI, 2018).

The mother's age factor will affect the mother's experience and ability to meet the nutritional needs of the family, especially infant nutrition. The more mature age makes mothers not only rely on experience but also increase knowledge from various sources of knowledge that can be accessed, including knowledge in processing food ingredients so that the nutritional quality of food is maintained (Paramashanti, 2019).

The higher the mother's education will affect the mother's knowledge, including knowledge related to parenting and caring for toddlers, besides that it also affects the selection and serving of food that will be consumed by her child. Selection of ingredients and food menus that are suitable for toddlers in an effort to improve nutritional status will be able to this can be realized if the mother has an adequate level of understanding of nutrition (Nurmalasari et al., 2020).

Birth spacing of less than 2 years has a greater chance of stunting. The greater chance of stunting occurring can be attributed to the shorter gap between birth and subsequent pregnancies, which affects the health condition of the mother who has not recovered and is ready to become pregnant again, and also has an impact on the lack of focus on attention and care for each child. This can have a negative impact on the growth and health development of toddlers, previous studies suggest that ideally the distance between pregnancies and previous births is at least three years to prevent stunting in toddlers (Ezeh et al., 2021).

The United Nations International Children's Emergency Fund (UNICEF) stated that in 2020 the number of stunted children under the age of five would be 149.2 million. However, the progress in addressing the problem of stunting is still not evenly distributed throughout the region. This is evidenced by the prevalence of stunting in the West and Central Africa region which is still high, namely 29.3 million, and East and South Africa experienced the same thing (UNICEF, 2020).

The prevalence of short toddlers in Indonesia tends to be static. Based on the results of the 2015 monitoring of nutritional status, the prevalence of short toddlers in Indonesia was 29%, the prevalence of short toddlers again increased to 29.6% in 2017, and 30.8% in
2018 (Kemenkes RI, 2018). In 2020 Indonesian Toddler Nutrition Status Survey cannot be carried out due to the co-19 pandemic. After further research, in 2021 the prevalence of stunting under five will be 24.4% and decrease to 21.6% in 2022. However, this is still quite high based on the government's target of reducing the prevalence of stunting to 14% in 2024 (Kemenkes RI, 2022).

West Sumatra Province is one of the provinces that has a high prevalence of stunting in 2018, namely 30.6% (Riskesdas, 2018). The city of Padang has become one of the focus areas for integrated stunting reduction interventions. In 2020, based on data from the Health Service in Padang City, there are still 2,943 toddlers suffering from stunting with the highest stunting prevalence in Koto Tangah District, more precisely in the Working Area of the Air Children's Health Center, namely 333 toddlers experiencing stunting (Dinas Kesehatan Kota Padang, 2020).

Based on the results of a survey conducted at the Water Children's Health Center in Padang City, West Sumatra Province, in 2022 the number of stunted toddlers will be 337. The majority of mothers marry young, so the experience of being a mother is still very limited so that many toddlers do not get enough attention from their mothers and their parenting style is lacking. The majority of mothers have a low level of education with junior high school graduates, this makes mothers lack knowledge in managing the household, especially their family's diet. The majority of mothers under five do not work and are only housewives with an average number of mothers having more than 2 children with an average birth interval of 3 years.

Based on the background above, the authors are interested in analyzing the characteristics of mothers with stunting in toddlers in the working area of the Air Children's Health Center in Padang City, West Sumatra Province.

**METHODS**

This research is an observational study with a descriptive approach. The purpose of this study was to analyze the characteristics of mothers who have stunted toddlers in the working area of the Anak Air Health Center in Padang City, West Sumatra Province. This research was conducted in the working area of the Anak Air Health Center in Padang City, West Sumatra Province. The time of the research was carried out from November 2022 to January 2023.
The population in this study were all mothers who had stunted toddlers in the Working Area of the Anak Air Health Center, Padang City, West Sumatra in 2022 as many as 337 toddlers. The sample in this study were 54 stunted toddlers.

The sample calculation in this study uses the sample size formula for two population groups, with the average difference test as follows:

$$n = 2 \left( \frac{(2\alpha + 2\beta)s^2}{x_1 - x_2} \right)$$

Description:

- $Z_\alpha$: Type fault I, $\alpha = 5 \%$ [1,96]
- $Z_\beta$: Type fault II, $\beta = 10 \%$ [1,28]
- $X_1 - X_2$: Desired difference = 36,22-30,19
- $S$: Standard deviation of the two groups = 2,63

$$n = 2 \left( \frac{(1,96 + 1,28)2,63^2}{36,22 - 30,19} \right)$$

$$n = 2 \left( \frac{(3,24)2,63}{6,03} \right)^2$$

$$n = 2 \left( \frac{72,6108}{6,03} \right)$$

$$n = 2 [12,04]$$

$n = 24,08 + 10\%$ drop out 26,48 =27 toddler

The total sample for the 2 groups was 54 people, the video stunting group was 27 people and the leaflet stunting group was 27 people using simple random sampling technique.

Data collection was carried out using a questionnaire on demographic characteristics, which included age, employment status, last mother's educational status, number of children, and birth spacing. The data analysis used is descriptive analysis, which is presented in the form of frequency distribution tables and narratives using computer software in the SPSS version 23 application.
RESULTS

The Characteristics of Stunting Toddler Mothers in the Working Area of the Anak Air Health Center in Padang City can be seen in the table below:

Table 1. Analysis of the Characteristics of Stunted Toddler Mothers in the Working Area of the Anak Air Health Center in Padang City

<table>
<thead>
<tr>
<th>Characteristics of Respondents</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21-35 years</td>
<td>33</td>
<td>61.1 %</td>
</tr>
<tr>
<td>&gt;35 years</td>
<td>21</td>
<td>38.9 %</td>
</tr>
<tr>
<td><strong>Work</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private employees</td>
<td>2</td>
<td>3.7 %</td>
</tr>
<tr>
<td>Housewife</td>
<td>52</td>
<td>96.3 %</td>
</tr>
<tr>
<td><strong>Last education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elementary school</td>
<td>4</td>
<td>7.4 %</td>
</tr>
<tr>
<td>Junior high school</td>
<td>10</td>
<td>18.5 %</td>
</tr>
<tr>
<td>Senior High School</td>
<td>37</td>
<td>68.5 %</td>
</tr>
<tr>
<td>Higher Education</td>
<td>3</td>
<td>5.6 %</td>
</tr>
<tr>
<td><strong>Number of children</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≤2</td>
<td>23</td>
<td>42.6 %</td>
</tr>
<tr>
<td>&gt;2</td>
<td>31</td>
<td>57.4 %</td>
</tr>
<tr>
<td><strong>Birth Distance</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≥3 years and Child 1</td>
<td>37</td>
<td>68.5 %</td>
</tr>
<tr>
<td>&lt;3 years</td>
<td>17</td>
<td>31.5 %</td>
</tr>
</tbody>
</table>

Based on table 1 above, it can be concluded that the characteristics of mothers who have stunted toddlers aged 21-35 years are 33 (61.1%), the mother's occupation as a housewife is 52 (96.3%), her last education is high school 37 (68.5%), the number of children >2 was 31 (57.4%), and the birth spacing of ≥3 years and the first child was 37 (68.5%).

DISCUSSION

Analysis of the Characteristics of Stunting Toddler Mothers in the Working Area of the Anak Air Health Center in Padang City

1. Characteristics of the age of the mother under five with the incidence of stunting in the Working Area of the Padang City Water Children's Health Center

Based on the results of the research conducted by the researchers, it was shown that the majority of mothers who had stunted toddlers aged 21-35 years were 33 mothers (61.1%). The age grouping of mothers at delivery with a range of 21-35 years is related to being at risk or not at risk, theoretically outside of that age (under 21 years or over 35 years) is declared very risky. The risks vary, ranging from disability to malnutrition.
The results of this study are in line with research Marlani et al., (2021) that most of the toddlers who experience stunting are mothers who are 26-35 years old by 55.4%. However, the age of the mother is not the main factor that causes stunting but is influenced by many other factors. Research Indah Nurdin et al., (2019) stated that at the age of the mother, stunting was more common in mothers aged <35 years by 37.3% compared to mothers aged ≥ 35 years which was only 12.7%. Based on the research Wati et al., (2022), it was stated that 60% of mothers aged <30 years under five experienced stunting.

Women who are under the age of 21 have immature reproductive organs, which will disrupt the growth and development of the fetus. On the other hand, women over the age of 35 generally have begun to experience a decline in their reproductive organs so that the absorption of nutrients through the placenta is not optimal so that the fetus they contain has a higher chance of experiencing growth and development problems which have an impact on low birth weight and stunting (Ardian, 2021).

Mature age will produce mature mental and psychological aspects as well as mature thoughts. In addition, experience also increases with age. This is what supports child care, including the fulfillment of nutrition in children (Suciningtyas et al., 2019). Research Aryanti et al., (2019) states that when he enters middle adulthood (age 31-40), a person is more able to adapt and be responsible for maintaining the family such as caring for a spouse, parenting children and other family problems/needs. The maturity of a person's age is also related to the social-community activities that a person participates in. The more active a person is in community activities, the more experience and information he has.

According to the researchers' assumptions, the age of mothers 21-35 years who tend to be young is closely related to stunting. This is because at a young age they still get little information or experience and the ability to meet nutritional intake for toddlers which is useful for the growth and development of toddlers compared to mothers aged> 35 years. Therefore, the small amount and inadequate food by meeting the intake of protein, vitamins and minerals according to the needs of toddlers makes toddlers experience malnutrition.

2. Characteristics of mothers' work with stunting in the Working Area of the Water Children's Health Center in Padang City

Based on the results of the research that has been done, the researchers show that the characteristics of mothers who have stunted toddlers are the majority working as housewives as many as 52 mothers (96.3%). In the opinion of Walker and Thompson that housewives are women who are married and do not work, spend part of their time taking
care of the household and inevitably every day will find the same atmosphere and routine tasks (Andarwulan et al., 2019).

This research is in line with research Suryati et al., (2020) stated that the majority of mothers did not work, namely 52 people (57%) and also in families with income less than the District/City Minimum Wage, namely 63 people (70%). Work in the sense of doing activities to earn money. The type of work a person has is related to his income level and socio-economic status. Income owned by the family is closely related to the family's ability to buy and provide nutritious food ingredients that are suitable for their children and other family members.

Research Mentari (2019) stated that the majority of toddlers experienced stunting in mothers who did not work as many as 47 (52.8%). This is caused by economic factors because mothers who don't work cannot help the family's income compared to working mothers who can help the family's income. Adequate family income will support the growth and development of children because parents can provide all the basic needs of children.

In line with the research conducted Savita (2020) that mothers who do not have jobs are found more in respondents who are stunted (as cases) as many as 68 people, conversely mothers who have jobs are more commonly found in respondents who are not stunted (as controls) as many as 39 people. Based on research Savita (2020) there is a relationship between the mother's work and the incidence of stunting (p = 0.000), where mothers who do not work have a tendency of 5 times their children will experience stunting compared to mothers who work (OR = 5.390).

But contrary to the results of research Bustami (2020), which states that one of the variables that has no effect on the incidence of stunting is the mother's occupation. This can be assumed because if the mother does not work outside the home, the mother will be able to focus more on the condition of the child's growth and development, especially during infancy, by paying full attention to meeting the nutritional needs of the child according to their growth and development (Ilawati, 2022).

According to the researchers' assumption that the majority of mothers do not work, more toddlers experience stunting. This is because mothers who do not work cannot help the family's opinion to meet the nutritional needs of toddlers, compared to working mothers who can help obtain all the nutritious food needs for their toddlers so that children are not It's easier to experience a lack of nutrient intake.

3. **Characteristics of the mother's last education with stunting in the Working Area of the Water Children's Health Center in Padang City**
Based on the results of the research that has been done, it was found that the majority of mothers who had stunted toddlers had completed high school education as many as 37 people (68.5%). The level of education affects a person in receiving information. People with a better level of education will find it easier to receive information than people with less education. This information is used as a provision for mothers to care for their toddlers in everyday life (Ni’mah, 2015).

The results of this study are in line with research Husnaniyah et al., (2020) which stated that the majority of mothers who graduated from elementary school, as many as 134 (43.5%) experienced stunting in toddlers. There is a relationship between mother's education and the incidence of stunting in the working area of the Kandanghaur Indramayu Health Center (p-value=0.005). Research Suryati et al., (2020) in stunting toddlers, the majority of mothers' parents' education was in the low category, namely 60 mothers (66%). Education that a person has is the basis for someone to develop knowledge, and experience is the best teacher in honing knowledge (Notoatmodjo, 2012).

Mother's education will also affect the nutritional intake of her child. The results of research conducted by Boylan et al., (2017), The results showed that the level of education possessed by the mother had a direct effect on the nutritional intake of her children. Mothers with higher education will have better knowledge than mothers with low levels of education.

One of the parameters that determines the family's socio-economic level is the level of education, the level of education can make it easier for a person to receive information and apply it in the behavior of everyday life, especially in parenting, if the mother has low education and knowledge, as a result she is unable to sort and present proper food and meet the requirements of balanced nutrition (Nurmalasari et al., 2020).

Low maternal education can affect parenting and child care, as well as influence the selection and presentation of food to be consumed by toddlers. Mothers with low education will find it difficult to absorb nutritional information in providing the right diet for toddlers so that toddlers can be at risk of experiencing stunting (Marlani et al., 2021). Mother's knowledge in choosing food ingredients according to quality and quantity, the higher a person's education, the easier it will be for someone to accept the knowledge he gets (Andari et al., 2020).

According to the researchers' assumptions, the mother's education level does not guarantee that a toddler will experience stunting. In the results of this study, mother's education is more with junior high school and high school education which are categorized as low education. Mothers with low education tend to lack broad thoughts and insights...
about nutrition in toddlers. Knowledge possessed by a person becomes the basis for behaving and as a basis for doing or not doing an action. Someone who has the right knowledge about something or is positive and acts correctly to do something.

4. Characteristics of the number of children with stunting in the Working Area of the Anak Air Health Center in Padang City

The characteristics of the number of children are very closely related to cases of stunting. Based on the results of research that has been conducted in the work area of the Padang City Anak Air Health Center, the majority of mothers who have children > 2 are 31 mothers (57.4%).

This research is in line with research Wahyu et al., (2022) stated that mothers who had 1-3 children were more likely to experience stunting by 24 (88.9%). Based on research results Kusumawardhani (2020) stunted children with >2 children were 17 children (35%) and there was a significant relationship (p=0.008; OR=5.18). Birth length and maternal parity are two main factors that play an important role in the incidence of stunting in children aged 6 to 23 months.

Research Safitri et al., (2022) stated that in his research he found results of analysis with a p-value = 0.006 (<0.05) which means that there is a significant relationship between the number of children and the incidence of stunting in toddlers in the work area. Gunung Kaler Tangerang Health Center in 2021. The OR (Odd Ratio) value is 4.87 so that it can be stated that respondents who have 3-5 children are at risk of experiencing stunting 4.87 times.

Children who have short birth length will tend to experience stunting. Likewise, mothers who give birth more than or equal to 3 times tend to have stunted children. Therefore, improving nutritional status must begin before pregnancy until the child is 2 years old and the need for mothers to limit the number of pregnancies with short birth rates will result in a 0.2 times greater risk of stunting (Putri et al., 2022).

The number of children in a family affects food security in the family. Insufficient food intake due to the large number of family members is a supporting factor in determining nutritional status. Growth and development disorders tend to be experienced by children who are born later, because the burden on parents increases with the increase in the number of children they have. The first child will be more fulfilled because the burden on parents is still light so they can pay more attention to and meet all the needs of the child. The parents' age at the time of having one child was also relatively young so that the stamina was still prime, while for the third child and so on, the parents' age. relatively not young anymore and
decreased stamina. The age and physical stamina of parents will also affect their children’s education (Safitri et al., 2022).

Many people have now participated in the Family Planning (KB) program launched by the government, so that the distance between pregnancies/births can be adjusted according to the wishes of the mother. According to the researcher’s assumption that the number of children affects the incidence of stunting because parents who have more children if they can care for their children optimally will provide good nutrition to their children, as well as parents who have a normal number of children if they do not provide good nutrition. Stunting is also possible.

5. Characteristics of birth spacing with the incidence of stunting in the Working Area of the Padang City Water Children’s Health Center

Based on the results of research that has been conducted in the working area of the Anak Air Health Center in Padang City, it was found that the majority of mothers had birth spacing of ≥3 years and 37 (68.5%) first children. The results of this study are in line with research Azriful et al., (2018) which stated that there were 79 (78.8%) toddlers who experienced stunting with mothers who had close birth spacing.

Mothers who have birth spacing <2 years with stunting toddler nutritional status can be caused because mothers who have 2 toddlers will find it difficult to divide their time for 2 toddlers and tend to be too busy and usually focus more on newborns so mothers are not optimal in caring for their first child (Kholia et al., 2020).

Spacing of births can cause stunting because the spacing of pregnancies affects the parenting style of parents towards their children. The close spacing of pregnancies and the parity or number of children affect the hemoglobin level of the mother. Low hemoglobin levels will result in disrupted growth and development of the fetus in the womb so that it will have an impact on babies born with low birth weight which will also continue to problems with the nutritional status of children 0-6 months (Rufaida et al., 2020).

Adequate birth spacing allows mothers to recover perfectly from conditions after giving birth. When the mother feels comfortable with her condition, the mother can create a good parenting style in caring for and raising her child so that she pays attention to feeding her child properly, also mentioning that close birth spacing makes parents tend to be inconvenienced so that they are less than optimal in caring for their child (Kholia et al., 2020).

According to the researchers' assumption that families with a number of children and the distance between children who are too close can affect the nutritional status of children
because mothers find it difficult to care for their children in close proximity. Especially when coupled with the absence of support from husbands and other families in terms of raising children, stunting will not occur if the mother has full support from her husband and family in terms of parenting and fulfilling food intake even though the birth spacing of children is close together.

**CONCLUSIONS**

Based on research conducted by researchers, it can be concluded that the characteristics of mothers who have stunted toddlers are the majority aged 21-35 years as many as 33 (61.1%), the mother's occupation as a housewife is 52 (96.3%), her last high school education is 37 (68.5%), the number of children >2 was 31 (57.4%), and the birth spacing of ≥3 years and the first child was 37 (68.5%).

It is suggested to policy makers to work together optimally across sectors in reducing the prevalence of stunting according to the government's target, starting from the first-level health service center, namely the community health service center and it is suggested to health workers at the community health service center to be more routine in providing health education to mothers of stunting toddlers about the importance of nutritional needs for toddlers in the process of growth and development of toddlers. Apart from that, it is also necessary to pay attention to the demographic factors of the mother or parents to prevent the emergence of stunting toddlers.

**REFERENCE**


