The Relationship Between Family Food Security and The Nutritional Status of Toddlers in Tamalate Sub-District, Makassar City

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Abstract: Food security is a condition where food is sufficiently available for one's body. The magnitude of the impact caused by the lack of food security makes it necessary to pay attention to its availability because this can cause problems of malnutrition so that health status decreases. The purpose of this study was to determine the relationship between family food security and the nutritional status of toddlers in Tamalate sub-district, Makassar City. The method used is observational using the design case-control with descriptive research design using quantitative and qualitative approaches. Data collection was carried out by means of observation, interviews with mothers who have children aged 23-60 months as many as 73 toddlers. The results showed that toddlers who experienced Normal Nutrition were as many as 24 toddlers with Food Resilience, followed by Light Food Insecurity 12 toddlers with Malnutrition status with a value of 0.05 $P$-Value = 0.045 < 0.05 and it can be concluded that there is a relationship between food security and the nutritional status of toddlers in the Tamalate Health Center environment which is located in Kel. Pr Tambung Kec. Tamalate Makassar City. This research can then be used as information material for further related research.

Keywords: Food Security; Nutrition Status; Toddlers

Introduction

The current health focus focuses on food security where with food security that is obtained for a person's body properly can have an impact on good body condition (Kristiawan, 2021; Pradipta, 2019). The food security that is meant is a condition where food is available sufficiently for a person's body. This food security can also be fulfilled by someone both physically and economically (Mbow et al., 2020; Roberts et al., 2020; WHO, 2020). The focus of food security must be provided at the regional, local and household levels so that the nutritional needs of each individual can be met (Arenawati et al., 2021). The availability of food security also aims to end hunger and improve nutrition so that it can improve sustainable agriculture. This goal will be achieved if people have avoided hunger (Agarwal, 2018; Ashar, 2021; Nicolétis et al., 2019).

The impact of this unavailability of food security is that malnutrition can occur. Malnutrition is also called the impact of a status condition in the short or long term. One form of malnutrition is stunting (Suhaimi, 2019; Ussyifa, 2022). Malnutrition where the nutritional status needed in the body is not obtained sufficiently so that it can cause malnutrition (Amirullah et al., 2020; Fitriani, 2020). Stunting often occurs in toddlers due to

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nutritional problems (Achmad, 2022; Do Rosario et al., 2017; Utami et al., 2019). Measures of stunting nutritional status need to pay attention to height or length, gender and age of toddlers (Abreha et al., 2020; Kurniawati & Yulianto, 2022). There are still many people who have not routinely measured the height and weight of toddlers, which makes stunting difficult to realize, making stunting a nutritional improvement problem that must be resolved until 2025 (Khan et al., 2019; Murti et al., 2022; Sineke et al., 2023).

Stunting is one of the problems of malnutrition that can be caused by the absence of nutrients entering the body, if this happens continuously it will cause chronic nutritional problems. Usually stunting is a disease that ranges from occurring in children aged <2 years, this has a very dangerous impact because it can result in death in sufferers and usually sufferers have a less optimal posture (Suhaimi et al., 2023). Several risk factors are involved in the occurrence of stunting in toddlers, namely maternal education, birth weight, height and breastfeeding (Syakur et al., 2023).

The magnitude of the impact caused by the lack of food security makes it necessary to pay attention to its availability (Blekking et al., 2020; Yu & Deng, 2022). If food security is lacking, it can cause nutritional status problems which cause nutritional status problems so that health status decreases. Food security is related to nutritional status, especially for human health, if food security in one family is very lacking, especially in a long period of time, this will have an impact on a person's nutrition. The level of household food security has a close relationship with the amount of toddlers consuming protein. This is different in the research of Putri & Muniroh (2023) characteristics of toddlers such as weight, height, socio-economic such as maternal education, family income there is no relationship with food security which causes stunting in toddlers.

In Indonesia in 2020 the incidence of stunting was 22% (149.2 million people) this figure increased in 2022 in the Asian Development Bank data where the percentage of stunted children in Indonesia was 22% *Prevalence of Stunting Among Children Under 5 Years of Age* in Indonesia to 31.8 percent. In 2022, this makes Indonesia in the 10th level where in this position the number of stunting sufferers is a lot in Southeast Asia. However, from the Ministry of Health's data, the stunting rate in Indonesia has been reduced to 21.6%. However, the target prevalence of stunting in 2024 is 14%, therefore nutrition cases in Indonesia still need to be considered so that they can decrease as expected (Direktorat PAUD, 2023).

From the results of the Indonesian Nutrition Status Survey (SSGI) of the Ministry of Health in 2022, it was found that the prevalence of stunting that occurred in toddlers in South Sulawesi was 27.2%. South Sulawesi is also ranked in the top 10 with the highest number of stunting toddlers in Indonesia. The number of stunting is highest in Tamalate District with 681 children stunted. The high number of nutritional problems in Indonesia means that we must pay more attention to food security so that it can be fulfilled as a whole. Adequate food is a condition where everyone can receive and fulfill their food needs adequately and nutritionally. Food is defined as the basic needs that humans should have in full, fulfilling their daily needs. Based on the existing data, the researcher will examine with the title "The Relationship between Family Food Security and the Nutritional Status of Toddlers in Tamalate District, Makassar City" where Tamalate District is the highest area with the incidence of stunting.

**Method**

The method used in this study is observational using case-control design with descriptive analysis research design using quantitative and qualitative approaches (Sparling et al., 2022; Wingrove et al., 2021). The location of this research was conducted in Tamalate District Makassar. This location was chosen because there are still many toddlers with poor nutritional status. The population and samples used were all toddlers aged 23-60 months in the working area of the Tamalate Health Center, Tamalate District, Makassar City with a total of 73 toddlers.

![Figure 1. The flowchart of research](image)
observation, documentation and interview techniques in Tamalate District Makassar related to the relationship between family food security and nutritional status in toddlers.

**Result and Discussion**

**Characteristics**

This study focuses on the Tamalate Health Center which is located in Pr Tambung Sub-district, Tamalate City Makassar which has sample characteristics presented in Table 1 and Table 2. Obtaining these characteristics by conducting Univariate Tests on all variables including Age, Gender, Family Food Security and Nutritional Status.

**Table 1. Characteristics of Toddlers based on Age**

<table>
<thead>
<tr>
<th>Age</th>
<th>Toddler Children</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>23 – 35</td>
<td>19</td>
<td>26.00</td>
</tr>
<tr>
<td>36 – 47</td>
<td>41</td>
<td>56.00</td>
</tr>
<tr>
<td>48 – 60</td>
<td>13</td>
<td>18.00</td>
</tr>
<tr>
<td>Total</td>
<td>73</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Table 1 shows that the majority (56%) of children under the age of five were between 36 and 47, followed by 23 to 35 at 26% and 48 to 60 at 18%. Table 2 shows that 63% of male toddlers and 37% of female toddlers.

**Table 2. Characteristics of Toddlers by Gender**

<table>
<thead>
<tr>
<th>Gender</th>
<th>Total</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>46</td>
<td>63.00</td>
</tr>
<tr>
<td>Female</td>
<td>27</td>
<td>37.00</td>
</tr>
<tr>
<td>Total</td>
<td>73</td>
<td>100.00</td>
</tr>
</tbody>
</table>

**Family Food Resilience**

Family Food Resilience can be obtained from respondents' answers with several criteria including Food Resilience, food insecurity at mild, moderate and high (severe) levels. The data acquisition table is shown in Table 3.

**Table 3. Family Food Resilience**

<table>
<thead>
<tr>
<th>Food Resilience</th>
<th>Toddlers</th>
<th>Total</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food resistant</td>
<td>25</td>
<td>54</td>
<td>34.20</td>
</tr>
<tr>
<td>Food Insecure Mild</td>
<td>48</td>
<td>76</td>
<td>65.80</td>
</tr>
<tr>
<td>Total</td>
<td>73</td>
<td>100</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Table 3 shows that most of the families' food security is food security at 34.2% and food insecurity at 65.8%.

**Nutrition Status**

**Table 4. Nutritional Status of Toddlers**

<table>
<thead>
<tr>
<th>Nutrition Status</th>
<th>Total</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bad</td>
<td>26</td>
<td>35.60</td>
</tr>
<tr>
<td>Less</td>
<td>18</td>
<td>24.70</td>
</tr>
<tr>
<td>Normal</td>
<td>29</td>
<td>39.70</td>
</tr>
<tr>
<td>Total</td>
<td>73</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Table 4 most of the nutrition in toddlers is 39.7% Normal Nutrition, 35.6% Malnutrition and 24.7% Malnutrition. This nutrition calculation is guided by the Weight / Height Index.

**Table 5. Toddler Weight/Height Index**

<table>
<thead>
<tr>
<th>Nutrition Status</th>
<th>Indeks (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bad</td>
<td>&lt; - 3</td>
</tr>
<tr>
<td>Less</td>
<td>-3 s/d &lt; -2</td>
</tr>
<tr>
<td>Normal</td>
<td>-2 s/d +1</td>
</tr>
<tr>
<td>Overnutrition</td>
<td>&gt;+ 2 s/d +3</td>
</tr>
<tr>
<td>Obesity</td>
<td>&gt;+ 3</td>
</tr>
</tbody>
</table>

**Family Food Security and its Relationship with the Nutritional Status of Toddlers**

The relationship between family food security and the nutritional status of toddlers is shown in Table 6.

**Table 6. Relationship between Family Food Security**

<table>
<thead>
<tr>
<th>Family Food Security</th>
<th>Nutritional Status of Toddlers</th>
<th>Total</th>
<th>Value (X^2)</th>
<th>(P-Value)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Bad</td>
<td>Less</td>
<td>Normal</td>
<td>Total</td>
</tr>
<tr>
<td>Food Resistant</td>
<td>14</td>
<td>10</td>
<td>24</td>
<td>48</td>
</tr>
<tr>
<td>Mild Food Insecurity</td>
<td>12</td>
<td>8</td>
<td>5</td>
<td>25</td>
</tr>
<tr>
<td>Total</td>
<td>26</td>
<td>18</td>
<td>29</td>
<td>73</td>
</tr>
</tbody>
</table>

Table 6 shows that most toddlers experience Normal Nutrition, namely as many as 24 toddlers with Food Resilience, followed by Light Food Prone 12 toddlers with Malnutrition status. Based on the results Chi Square test has obtained the value of \(X^2 = 6.192\) and value \(P-Value = 0.045\) where the value < 0.05 from this value, it means that there is a relationship between Family Food Security and the Nutritional Status of Toddlers in the Tamalate Health Center environment which is located in Kel. Pr Tambung Kec. Tamalate Makassar City.
Discussion

From the results of observations with a total sample size of 73 toddlers, most of the toddlers have normal nutrition status, namely 24 with the Food Resistant category, then 12 toddlers have malnutrition status with the category of Light Food Insecurity. Based on the Chi Square test, the value $X^2 = 6.192$ and value $P-value$ where this value is smaller than $\alpha = 0.05$ so it is concluded that Family Food Security has a close relationship with the nutritional status of toddlers. This is in accordance with research conducted by Sutynawan et al. (2019) family food security has a close relationship with the nutritional status of toddlers because it is proven that if a household has met food security so that it can provide diverse foods and has good nutrition so that this can achieve more optimal nutrition. Similarly, Sutriningsih & Lasri (2017) stated that food security and nutritional status of toddlers are interrelated. Food insecurity that occurs in families is influenced by the level of nutritional adequacy or energy and protein and nutritional status in toddlers (Afiatna & Maryanto, 2021; Housni et al., 2022; Jun et al., 2021; Masthalina et al., 2021).

Family food security is the fulfillment of food in the family in sufficient quantity and quality consistently. If food security in a family is not sufficiently fulfilled or is still classified as low, this will certainly cause the food consumed to be inappropriate portions and result in poor family health. This condition will produce a less qualified generation, which will threaten the future of the country’s resilience (Wado et al., 2019). One of the causes of malnutrition in toddlers is the food security factor that is owned in the family, so that what can be done to overcome it is to increase food security, one of which is to utilize the yard or yard to plant food such as tuber plants, spinach or kale vegetables and so on that can be used as food. The importance of increasing knowledge of family food security aims to support health status, especially in the case of optimal toddler nutrition so that parents or families can utilize their yard as a medium for planting food that can meet family food needs (Afandi et al., 2024; Barai et al., 2023; Rohmawati et al., 2023; Sanggelorang & Malonda, 2021).

Conclusion

From the explanation above, it can be concluded that the importance of maintaining family food security to improve family nutrition not only for toddlers, so in this case the family plays an important role in its processing. The ability of a family to meet their nutritional and dietary needs on a regular and sustainable basis is referred to as family food security. Family food security encompasses a range of characteristics and practices that help families to cope with food insecurity, economic shifts and other unforeseen events. Family food security depends on a family's ability to obtain good food, both geographically and financially. This includes access to markets, supermarkets or local food sources, as well as the ability to purchase food at reasonable prices. Food security requires the availability of a diverse and balanced diet. One of the ways that can be done is by planting food such as tubers, vegetables around the home yard so that if the family is short in terms of costs to buy food for daily consumption, the family still provides other food available in the yard. So that in addition to this reducing expenses, it is also certainly healthier because these plants do not use chemicals so it is safe for consumption by toddlers and other family members.

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Conflicts of Interest

In writing this article, the authors do not have any conflict of interest.

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