Conference Paper

The Relationship Between of Knowledge Parenting and Food Intake on the Incidence of Stunting in Toddlers in Sukabumi Regency

Rima Novianti Utami¹, Santhna Letchmi Pandarugan², Nisha Nambiar²

¹Faculty of Nursing, Lincoln University College
²Sekolah Tinggi Ilmu Kesehatan Sukabumi

Abstract.

Stunting is a condition where the measurement of height does not match or is less than the age of growth and development in children under five. The growth and development of children in infancy is important because brain cells are still growing. This study aims to determine the relationship of the knowledge, parenting, and food intake in stunting toddlers. The population was all stunting toddlers in Sukasari Village Sukabumi Regency, with a sample size of 88 participants. For sampling, purposive random sampling was used. The instrument has been verified and shown to be reliable. The relationship between knowledge with incidence of stunting was significant with p-value 0.000 (add correlation coefficient). The effect of food intake on the incidence of stunting with p-value 0.000. The effect of parenting on the incidence of stunting with p-value 0.000. According to the results of the study, knowledge, parenting, and food intake all affect the incidence of stunting. Expected to optimize nutrition counseling and health promotion to families.

Keywords: knowledge, parenting, food intake, stunting

1. Introduction

The priority of the National Medium Term IV development plan (RPJMN) 2020-2024 is to create qualified and competitive Human Resources. One of the indicators related to the creation of quality community resources is the achievement of targets in the health sector by reducing the prevalence of stunting [1]. The proportion of children under five stunting is very important as a parameter of human resource development, such as reducing maternal mortality, setting the acceleration of stunting reduction as a major project that must be carried out with strategic, effective and efficient steps (Ministry of Health) [2].
Stunting is a condition where the measurement of height does not match the age or z-score is less than 2 SD which is the median standard for growth and development of children under five. Stunting occurs generally in the first thousand days of birth and there are many influencing factors, including food intake, socioeconomic and infection [3]. Growth determination period is set early in life and 70% of stunting is reported during this period [4].

The causes of stunting are chronic malnutrition, lack of psychosocial stimulation from in the womb until after birth and repeated infections for a long time. It is at this time that nutritional interventions are proven to provide opportunities for toddlers to survive and achieve optimal growth and development [5]. The most vulnerable groups are children under the age of five [6]. Therefore, the nutritional status of these children is a very sensitive indicator for the community. Malnutrition can result in high rates of morbidity, mortality, and disability in addition to poor physical conditions that have an impact on growth and development [7].

Growth and development in toddlerhood is the most important period in children, because growth and brain cells are still ongoing, thus requiring adequate intake of nutrients in greater quantity and quality as well as high enough physical activity. If nutritional intake at this time is not met, the physical and intellectual growth of children under five will be disturbed, so that it can cause a lost generation which also has an impact on quality human resources as a result of poor growth and development processes [8].

The stunting rate for children under five in the Sukabumi Regency in 2019 was 2069 cases with an average of 174 cases per month and was experienced by around 29.9 percent of children under the age of 24 months. This figure is lower than the previous year, but still above the average (22 percent) [9]. The same research found that 30.8 percent experiencing stunting in children under five, down from the 37 percent prevalence rate estimated in 2013. The highest prevalence of stunting is in the western and easternmost regions of Indonesia and is more widespread in rural areas than urban areas [10]. The target of stunting prevalence in children under five for 2020 is 24.1% (5,543,000 children under five), from 34 provinces showing that of 11,499,041 children under five whose nutritional status was measured based on height for age (TB/U) there were 1,325,298 children under five with TB/U <-2 SD or it can be said that 11.6% of children under five are stunted [2].
Stunting is influenced by direct factors, including gender, low birth weight, consumption of foods in the form of low protein. Indirect factors are, immunization status is not catchy, parenting parents, parents’ occupations, economic status and knowledge [11]. Lots this research focuses on the education of mothers although, most of them ignore but mom gets dad [12]. Knowledge has a big enough role in fulfilling nutritional needs, especially for children under five. Incorrect feeding at this time can cause children to experience nutritional deficits, frequent illness and impaired growth and development.

Stunting is a major nutritional problem that can have an impact on the social and economic life of the community. In addition, stunting can also have an impact on toddlers in the long term, disrupting their health and productivity in the future. Children under five who are stunted tend to have difficulty achieving optimal growth and development potential both physically and psychomotorically.

2. Method

Study design of research is a correlational study with a cross sectional approach. Sample In this study is all mothers who have toddlers. The instrument in this study used a questionnaire, parenting, nutritional patterns and the incidence of stunting referring to the Likert scale and the knowledge variable referring to the Guttman scale. Data collection procedure in this study is by using a questionnaire. Data analysis using simple linear regression test and multiple linear regression test.

3. Results

Characteristics of respondents that most of them are aged 26-35 years as many as 43 people (48.9%), most of the respondents have high school education as many as 45 people (50.6%), and most of the respondents have jobs as many as 57 people (64.0%).

Based on table 1 shows that the average value of the knowledge variable is 42.85 (5.352), the average value of the parenting variable is 45.13 (8.850), the average value of the food intake variable is 49.06 (8.781), the average value on the variable incidence of stunting in toddlers is 1.66 (0.475).

Based on table 2 shows that knowledge affects the incidence of stunting in toddlers (b = 0.030 p = 0.001, R2 = 0.117), parenting affects the incidence of stunting in toddlers (b
= 0.018, p = 0.001, R2 = 0.110), the food intake affects the incidence stunting in toddlers (b=0.033, p=0.000, R2=0.364).

Based on table 3 that knowledge, food intake and parenting have an effect on the incidence of stunting in toddlers (p=0.000, R=0.613, R2=0.376 with the regression equation Y=0.242+0.010X1+0.016 X2+0.010X3).

**Table 1: Univariate Analysis.**

<table>
<thead>
<tr>
<th>Variable</th>
<th>f</th>
<th>%</th>
<th>Mean</th>
<th>SD</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Knowledge</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>73</td>
<td>82.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>15</td>
<td>17.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Food intake</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appropriate</td>
<td>40</td>
<td>45.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not exactly</td>
<td>48</td>
<td>54.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Parenting</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Authoritarian</td>
<td>21</td>
<td>23.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Permissive</td>
<td>12</td>
<td>13.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Democracy</td>
<td>37</td>
<td>41.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Combination</td>
<td>18</td>
<td>20.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Stunting Incident</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stunting</td>
<td>58</td>
<td>53.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Stunting</td>
<td>30</td>
<td>46.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table 2: Simple Linear Regression.**

<table>
<thead>
<tr>
<th>Variables</th>
<th>P-Value</th>
<th>Unstandardized Coefficients B</th>
<th>R</th>
<th>R2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowedge</td>
<td>0.001</td>
<td>0.361</td>
<td>0.030</td>
<td>0.342</td>
</tr>
<tr>
<td>Parenting</td>
<td>0.001</td>
<td>0.857</td>
<td>0.018</td>
<td>0.332</td>
</tr>
<tr>
<td>Food intake</td>
<td>0.000</td>
<td>0.060</td>
<td>0.033</td>
<td>0.604</td>
</tr>
</tbody>
</table>

**Table 3: Multiple Linear Regression.**

<table>
<thead>
<tr>
<th>Variables</th>
<th>P-Value</th>
<th>Unstandardized Coefficients B</th>
<th>R</th>
<th>R2</th>
<th>P-Value Anova</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>0.242</td>
<td>0.613</td>
<td>0.376</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>Knowedge</td>
<td>0.000</td>
<td>0.010</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parenting</td>
<td>0.000</td>
<td>0.016</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food intake</td>
<td>0.000</td>
<td>0.010</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
4. Discussion

The results of this study indicate that there is an influence of knowledge with the incidence of stunting in toddlers. The results of this study are in line with the research of Purnama AL et al., (2021) [13] which states that there is an influence of mother's knowledge on the incidence of stunting in toddlers. This research is supported by Amalia et al., (2021) [14] that there is an influence of mother's knowledge on the incidence of stunting.

Knowledge is the result of knowing, and occurs after someone has sensed a certain object. Knowledge can also be obtained from the knowledge of others, such as hearing, seeing directly, and through communication tools such as television, radio books and others. Knowledge is closely related to exposure to information obtained by someone [15]. Good knowledge will create a good attitude, which then if the attitude is judged appropriate, then good behavior will appear [16]. Parents who have extensive knowledge are very likely to be able to update and add to existing knowledge. So that mothers can more easily accept new information that will be provided as long as the information is in accordance with the facts and has a reliable source [17].

Parental knowledge can help improve the nutritional status of children to achieve growth maturity. Inadequate knowledge, lack of understanding of good eating habits, and poor understanding of stunting determine the attitudes and behavior of parents in providing food for their children, including the right type and amount so that children can grow and develop optimally [13]. Knowledge is closely related to the incidence of stunting in toddlers. Mothers who have the ability in themselves will increase good and sufficient knowledge to make efforts to prevent stunting. [18] stated that parents who have received information about stunting must understand, interpret and remember the messages conveyed from the information obtained so as to form good knowledge [19].

The results also show that there is an influence of parenting on the incidence of stunting in toddlers. The results of this study are in line with research by Bella et al., (2019) [20]which states that there is an influence of parenting on the incidence of stunting in toddlers. This study is supported by the results of research by Rosuliana et al., (2022) [21]which states that there is an effect of parenting on the incidence of stunting in toddlers. Parenting patterns are all forms and processes of interaction that occur between parents and children that can have an influence on the development of
the child’s personality. The interaction of parents in a learning determines the character of the child later [22].

Parenting is a behavior in caring for or looking after their children [23]. Parenting methods used by parents to children become factors that determine the potential and character of a child, including the categories of parenting are democratic parenting, authoritarian parenting and permissive parenting. Democratic parenting is that parents actively encourage children to eat without using orders and provide guidance to children in terms of eating. Authoritarian parenting is parents who give high food demands, ordering children to eat, but not guiding children in terms of eating. And in permissive parenting parents, parents give little demands to eat but not in the form of orders and give children the freedom to choose food [24].

Yudianti & Saeni (2016) [25] states that the better the parenting pattern, the fewer children with stunting, while the worse the mother’s parenting pattern, the more parents will have stunting children. Good parenting will affect how mothers practice, behave or behave in caring for children. The intended behavior of the mother is how the mother’s behavior is in providing nutritional intake, maintaining cleanliness or hygiene for children, maintaining environmental sanitation for children and how mothers use health facilities related to the needs of their children [26]. Parenting patterns are closely related to the incidence of stunting in children. Parenting is very influential on the growth and development of children. Parents can adapt to the type or method of parenting that is applied according to the situation and conditions in order to maintain normal nutritional status in children [27].

The results of the study also showed that there was an influence of the food intake on the incidence of stunting in toddlers. The results of this study are in line with the research of Pujiati et al., (2021) [28] which states that there is an influence of the food intake on the incidence of stunting in toddlers. This study is supported by the results of research by Dayuningsih et al., (2021) [29] which states that there is an influence of the food intake on the incidence of stunting in toddlers.

Food intake can provide an overview of nutritional intake including the type of food, the amount of food, and the schedule for fulfilling nutrition. The pattern of feeding must be guided by balanced nutrition which includes adequate nutritional intake according to needs and consuming a variety of foods in order to achieve normal nutritional status. The right feeding pattern is a feeding pattern that is in accordance with the type of food, the amount of food and the food schedule. These results indicate that most of the
respondents have not provided the right feeding pattern to their children [30]. Good nutrition patterns will make it easier to meet nutritional needs with the ability to manage healthy food for toddlers is very important. Food that can meet the nutritional standards of toddlers must have a balanced nutritional pattern, meaning that the food must have the right portion, not excessive and adapted to the needs of the toddler’s body [31].

In accordance with the theory that in a state of good nutrition and healthy (balanced) a child’s growth will be normal. Conversely, if the child is in a state of unbalanced nutrition, the child’s growth will be disrupted, such as short, thin, and fat children. The problem of malnutrition in toddlers is still quite high, one of which is because the quality of food for most Indonesians, especially for children under five who are still not nutritionally balanced, will have an impact on lack of nutritional intake, one of which is stunting [32].

Food intake is closely related to the incidence of stunting in children. Toddlers who suffer from stunting are caused by lack of nutritional intake and poor nutritional patterns. The practice of feeding children is very important and has a big influence on the growth of children. Providing a comfortable atmosphere for children when eating, knowing good appetites in children, being patient and attentive when giving food can certainly establish intimacy between the two so that children are expected to be able to finish the food given. Children under five whose diet is not good, have a significantly higher proportion in the stunting group than in the non-stunted group. Diet is related to meeting the nutritional needs of toddlers, which means it is also related to toddler food intake [32].

The results also show that knowledge, parenting and food intake simultaneously affect the incidence of stunting. Parents who have good knowledge tend to have good parenting and food intake for toddlers so that together they will push towards preventing stunting. On the other hand, if the knowledge of parents is not good, it will encourage parenting and food intake for toddlers to be less good.

5. Conclusion

There is an influence of mother’s knowledge, food intake and parenting on the incidence of stunting. Good knowledge will create a good attitude, which then if the attitude is judged appropriate, then good behavior will appear. Parenting can have an influence on the development of the child’s personality. Food that meets the nutritional standards of toddlers must have a balanced nutritional pattern, where the food must have the right
portion, not excessive and adapted to the needs of the toddler’s body. The interaction of parents in a learning determines the character of the child later. Becoming input for Puskesmas to further improve stunting prevention efforts by increasing education and counseling related to the importance of nutrition for toddlers.

6. Funding

This work was supported by the Sukabumi School of Health Sciences

Acknowledgement

Thank you to the Health Center for granting research permission. Puskesmas cadres who assist in the data collection process in the field and respondents who have participated in the initial study and research. Colleagues who have helped in the process of this research.

Conflict of Interest

The author have no conflict of interest to declare.

References

[5] UNICEF. Undernutrition contributes to nearly half of all deaths in children under 5 and is widespread in Asia and Africa. 2018.


