

Correlation of Education Level with Mother's Knowledge About the Nutritional Status of Stunted Toddlers

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ABSTRACT

Chronic malnutrition due to prolonged malnutrition resulting in stunted growth and development. Educated and knowledgeable mothers have a big influence on the pattern of regulating balanced food needs for the growth and development of toddlers. The research was directed at determining the correlation between educated and knowledgeable mothers on the nutritional status of stunted toddlers in the Namorambe Community Health Center work area. Quantitative descriptive research was conducted cross-sectionally. The population was 32 mothers who had stunted toddlers (0-59 months) and the total was the sample. Univariate and bivariate analyzes were carried out to describe the frequency distribution of respondents' characteristics and determine the correlation between educated and knowledgeable mothers regarding the nutritional status of stunted toddlers. The results showed that mothers ranged from 20-30 years old and had upper secondary education as many as 25 (78.1%) and 21 (65.6%); toddler age 37-60 months, male gender, stunted toddler, and poor maternal knowledge were 16 (50%), 17 (53.1%), 22 (68.8%) and 23 (71.9%); and as many as 21 (65.6%) and 12 (37.5%) respondents had high school education and poor knowledge; as well as the Chi-square analysis results of $p\text{-value} = 0.038$, respectively. In the research, there was a correlation between educated and knowledgeable mothers on the nutritional status of stunted toddlers in the Namorambe Community Health Center work area.

Keywords: Education, knowledge, stunting toddlers

INTRODUCTION

Stunting is chronic malnutrition due to poor nutritional intake over a long period of time due to consumption of non-nutritious food which is influenced by the level of nutritional knowledge (Wati et al., 2021). Stunting as an indicator of short height compared to other people of the same age. Nutrition as a measure of growth and development. Age 0 to 24 months is a period that determines the quality of life which is usually called the golden period, a sensitive period because the conditions that occur are permanent, irreversible, and adequate nutritional adequacy is required (Rahayu et al., 2018). Continuous malnutrition has an impact on the growth and development of the brain, physique, intelligence and metabolic system. Toddler stunting as an indicator of chronic malnutrition (Basri & Sididi, 2021).

If the height ratio or body length to age ratio (TB/U or PB/U) for their age is below the 2006 Multicentre Growth Reference Study (MGRS) standards according to WHO, they are declared stunting. Temporary Indonesian Ministry of Health, states that stunting occurs if the toddler is very short or stunted respectively with a z value lower than 2SD and 3SD (Secretariat of the Vice President of the Republic of Indonesia, 2017). Stunting occurs due to failure to grow due to chronic malnutrition. This occurs not only after birth, but occurs in the womb and appears as stunting after the age of 2 years. It would be good to pay special attention to the First Thousand Days of Life (HPK), because this period is a benchmark for growth, both physical, intelligence and future productivity of toddlers (Deli Serdang Regency Health Office, 2023).

Data predicts that 165 million under 5 years of age are malnourished in the world, resulting in failure of linear growth (stunting). Identification of this condition is a major public health priority with a specific target of reducing stunting by 40% in the period 2010 - 2025. In 2012 it is predicted by *World Health Organization* (WHO) exists 162 million children under five are stunted. If efforts to reduce this condition are sustainable, it is predicted that there will be 127 million children under five with stunting in 2025 (Indonesian Ministry of Health, 2016).

Data from the 2022 National Nutrition Status Survey (SSGI) states that in Indonesia, the prevalence of stunting is around 21.6%; decreased compared to the previous year (24.4%). However, this figure is still high, because the stunting prevalence target in 2024 is around 14%, below the WHO standard of 20% (Indonesian Ministry of Health, 2023). According to WHO, prevalence data in 2020, ranked first to fifth in Southeast Asia, respectively Timor Leste (48.8%), Indonesia (31.8%), Laos (30.2%), Cambodia (29.9%) and finally Singapore (2.8%) (Hatijar, 2023).

North Sumatra Province ranks 9th after Central Java Province and the highest rank is Aceh Province according to nutritional status, both very short and short from data based on provinces throughout Indonesia (Candra, 2020). In 2020, Namorambe Village had 1.8% stunted toddlers based on analysis data at the Deli Serdang level (Deli Serdang Regency Health Office, 2020).

Causes of stunting include low knowledge of the health and nutrition of pregnant women, limited health services and poor quality learning, poor food nutrition and poor sanitation (Bintang, 2020). Mothers with good nutrition knowledge are able to prepare the right food, both quality and quantity so that children grow and develop optimally, apply their knowledge as caregivers, nurses and maintainers of balanced nutrition to avoid stunting (Suhailah & Susilawati, 2022). Adequate nutritional intake and absorption as well as the use and selection

of food ingredients cause the body's condition in certain circumstances to be expressed by a person's nutritional status at a certain level, so it can be said that nutritional status is a description of the body's balance condition on certain variables, so nutritional status provides an illustration of good or bad health. from someone (Nurmaliza & Herlina, 2018).

A mother with a higher education can have a toddler who has a better chance of living and growing than one with a low education. Highly educated mothers more easily accept changes, whether economic, educational, health or other changes that are positive for their children and families, especially the health of their toddlers. The risk of stunting is around 5.1 times for toddlers with low-educated mothers (Rahayu et al., 2018). Kresnawati et al (2022) emphasizes that the level of education influences the nutrition consumed through the choice of food ingredients.

In essence, knowledge is the output of the activity of knowing something and as a person's mental wealth stored in the mind and heart regarding objects from various events.(Octaviana & Ramadhani, 2021). The level of education is a door to access to how far a mother is able to absorb the information received, so of course there is a relationship with increased knowledge (Ni'mah & Muniroh, 2015).

A preliminary survey at the Namorambe Community Health Center in October 2022 found indications of poor nutrition, namely short toddlers. This description motivated researchers to analyze the correlation between education level and knowledge on the nutritional status of stunted toddlers from mothers in the Namorambe Community Health Center work area.

METHODS

The research conducted was cross-sectional and quantitative descriptive provide an overview of the phenomena at that time (Sugiyono, 2013). Data is collected with instruments and analyzed with the aim of testing the established hypothesis. The aim research was to analyze the level of education and knowledge of the nutritional status of a mother's stunted toddler in the Namorambe Community Health Center work area Jl. Besar Namorambe, Central Kuta Village, Namorambe District in October 2022.

Secondary data was obtained from searching through books and interviews with the head of the Community Health Center Namorambe, while primary data was obtained through responses to questionnaires given by respondents. The population There were 32 mothers with

toddlers aged 0-59 months in stunted conditions who came from the Namorambe Community Health Center work area and all of them were sampled.

Data were analyzed both univariately and bivariate, respectively to obtain an illustration of the frequency distribution of respondent characteristics with education and knowledge variables, and to explain or determine the correlation between educated and knowledgeable mothers regarding the nutritional status of toddlers in stunting conditions. Variable measurement uses an ordinal scale with respondents answering correctly or incorrectly given a score of 2 or 1 respectively. Good and poor knowledge categories are given a score of 31-40 and 20-30 respectively. Chi-Square test using SPSS serial 21.0 and results in tabular and narrative form (Priadana & Sunarsi, 2021; Yusuf, 2016).

RESULTS

The results of the univariate analysis in Table 1 provide a description of the characteristics of respondents in research conducted at the Namorambe Public Health Center.

Table 1. Description of Respondent Characteristics

| Characteristics | Frequency (f) | Percentage (%) |
|----------------------|---------------|----------------|
| Mother's Age (years) | | |
| 20-30 | 25 | 78.1 |
| 31-40 | 7 | 21.9 |
| Mother's Education | | |
| Base | 1 | 3.1 |
| First Continuation | 10 | 31.3 |
| Top Cont | 21 | 65.6 |
| Toddler Age (months) | | |
| 1-12 | 2 | 6.3 |
| 13-24 | 7 | 21.9 |
| 25-36 | 7 | 21.9 |
| 37-60 | 16 | 50.0 |
| Gender | | |
| Male | 17 | 53.1 |
| Female | 15 | 46.9 |
| Stunting | | |
| Very short | 22 | 68.8 |
| Short | 10 | 31.3 |
| Mother's Knowledge | | |
| Good | 9 | 28.1 |
| Not good | 23 | 71.9 |

According to the data presented in Table 1, mother's age ranged from 20-30 years, high school education for each respondent was 25 (78.1%), 21 (65.6%). Toddler age 37-60 months, male gender, short stature stunting, and poor maternal knowledge were 16 (50%), 17 (53.1%), 22 (68.8%) and 23 (71%) respondents respectively (9%).

The results of the bivariate analysis in Table 2 are about the correlation between educated mothers and knowledge of toddler nutrition on stunting conditions at the Namorambe Community Health Center.

Table 2. Correlation of Education Level with Mother's Knowledge about Nutrition of Stunting Toddlers

| Education | Knowledge | | | | Total | | P-value |
|--------------------|------------|-------------|----------|-------------|-----------|--------------|---------|
| | Not enough | | Good | | f | % | |
| | f | % | f | % | | | |
| Base | 1 | 3.1 | 0 | 0.0 | 1 | 3.1 | 0.038 |
| First Continuation | 10 | 31.1 | 0 | 0.0 | 10 | 31.1 | |
| Top Cont | 12 | 37.5 | 9 | 28.1 | 21 | 65.6 | |
| Total | 23 | 71.9 | 9 | 28.1 | 32 | 100.0 | |

Table 2 shows that 21 respondents (65.6%) had high school education with 12 respondents (37.5%) having poor knowledge. Chi-square analysis obtained a p-value of 0.038, providing information that there is a positive correlation between the level of education and nutritional knowledge of a mother's stunted toddler at the Namorambe Community Health Center.

DISCUSSION

The results of this study show that mothers aged 20-30 years with high school education have poor knowledge of the nutritional status of toddlers, toddlers who are stunted aged 37-60 months, male gender, and stunted with short stature. Research shows that there is a correlation between educated mothers and knowledge about the nutritional status of toddlers in cases of stunting in the Namorambe Community Health Center work area with p of 0.038.

However, in research Shodikin et al. (2023) it was found that the level of education did not make a real difference regarding stunting, the real difference occurred in good parenting due to better socio-economic conditions so that the incidence of stunting was lower (Shodikin et al., 2023) emphasizes that higher education does not always have high knowledge. A mother is highly educated, but still has low knowledge of balanced nutrition and parenting patterns, so the incidence of stunting in toddlers is higher. On the other hand, if mothers have lower education and have better socio-economic conditions, their parenting patterns will be better, so that toddlers will avoid stunting.

Researcher Rahayu et al. (2018) states that the level of education is a reflection of the extent to which a mother is able to receive the information absorbed related to increasing her knowledge. Study Nurmaliza and Herlina (2018) it was found that there was a correlation between education

and knowledge and even the nutritional status of toddlers. The pattern of care for feeding toddlers is a reflection of efforts to reduce the incidence of malnutrition in Indonesia and Riau Province. Adequate nutritional intake and absorption as well as the use and selection of food ingredients cause the body's condition in certain circumstances to be expressed by a person's nutritional status at a certain level, so it can be said that nutritional status is a description of the body's balance condition on certain variables, so nutritional status provides an illustration of good or bad health. from someone. According to Chandra (2020), the condition of height below normal according to age and gender is stated as Stunting. Body height is an anthropometric test that provides information about nutritional conditions. Stunting provides information on chronic malnutrition. The diagnosis of stunting is obtained from comparing the z value of height for each age from the child's growth and development chart.

Education level as an indicator of developing abilities, attitudes and forms of behavior in receiving information related to increasing one's knowledge (Rahayu et al., 2018). Similar research has been conducted and there is a correlation education level on the incidence of stunting, where the level of education increases there is a decrease in stunting cases (Husnaniyah et al., 2020). Study Mardiana (2021) shows that there is a correlation between the level of education, knowledge and nutritional status on stunting cases.

Study Ikhsania (2022) also stated that nutrition plays a very dominant role in the growth and development of children under five. If the nutritional needs of toddlers are not met properly, it will have a negative impact on growth and development and will be visible until adulthood. According to Nurmaliza and Herlina (2018), improving the nutrition of the toddler group is a top priority for the Government, because this group really needs high nutrition for growth and development. The mortality rate is very high in malnourished children compared to those with sufficient nutrition

Other research was conducted by Nugrahwati (2023) the results were dominated by education at the High School level, followed by Middle School and finally Elementary School with the results stating that there was a strong correlation between educated mothers and knowledge about stunting cases in toddlers. Study Sari and Hariyani (2023) it was found that there was a dominance of educated respondents. On the other hand, there was also a strong correlation between those who were educated and knowledgeable about nutritional conditions in stunting cases. Study Septina et al. (2023), the results of bivariate analysis were obtained which provided information that there was a correlation between education and knowledge of stunting cases.

Knowledge is information that a person knows and is aware of, so it is an indicator that someone is knowledgeable if they already know and are aware of it. So the element of knowledge consists of knowing, being known and being aware. Therefore, knowledge of the existence of the subject is required to know the object at hand, so it can be stated that knowledge is the output of all human activities in understanding a particular object (Rachmawati, 2019). A mother's low education and knowledge are the main factors causing malnutrition, especially protein. This relates to the mother's role in taking care of her family and children. The mother's level of education and knowledge has a very significant effect on the level of family management ability to provide balanced nutrition. Low education can be the cause of low understanding of the needs that must be prepared for children's optimal development (Rahayu et al., 2018).

Other researchers also stated that the mother's level of education and knowledge influences the ability to manage adequate nutritional needs. Low education causes a lack of understanding of the nutrition needed for children's optimal growth and development (Mardiana, 2021; Simanullang & Laia, 2022). Shodikin et al (2023) which states that the level of education does not make a real difference regarding stunting, the real difference occurs in good parenting due to better socio-economic conditions so that the incidence of stunting is lower.

Kresnawati et al (2022) emphasize educated mothers tend to choose quality food ingredients. The higher the knowledge, the positive correlation it has with children's nutrition and the acceptance and development of knowledge and technology, the easier it is for productivity and family welfare. Likewise, other research, obtained the results of bivariate analysis which provides information that there is a correlation between being educated and knowledgeable in cases of stunting (Septina et al., 2023).

A person's attitude will arise from good knowledge, as well as good behavior because someone has behaved well. A person's good knowledge is obtained from the entry of information both formally and informally, from electronic and non-electronic media, for example: internet, YouTube, Tik Tok, Facebook, Instagram, newspapers, etc (Mustamin et al., 2018). Attitude is a response to the surrounding reactions which begins by directing and guiding the behavior of each person in their environment. This illustrates the mental condition and ability to think that is ready to respond to objects, these responses are organized based on experiences that directly or indirectly influence a person's actions (Rachmawati, 2019). Health, sensory state, gender, experience and age are internal factors; education, work and socio-cultural environment are

external factors that influence a person's knowledge. Classification of knowledge levels into three, namely: poor, sufficient and good.

Previous research provides strong support for researchers, because it provides results in the same direction. This shows that the results of the research carried out are in line with previous researchers, which stated that there was a correlation between educational level and maternal knowledge about the nutritional conditions of stunted toddlers. Therefore, mother's education plays an important role in a toddler's growth and development. Increasing education has a positive impact, this is an investment in quality human resources, resulting in an increase in the nutritional status of toddlers and ultimately increasing the opportunities for toddlers to become quality human resources in the future.

CONCLUSION

Education level influences knowledge of the nutritional status of a mother's stunted toddler at the Namorambe Community Health Center. A low level of knowledge has an impact on the growth and development of toddlers, because mothers with good nutrition knowledge are able to prepare the right food ingredients, both in type and quantity, for optimal growth and development. A mother's knowledge of toddler stunting is very important, especially the causes and risks. The analysis providing information that there is a positive correlation between the level of education and nutritional knowledge of a mother's stunted toddler at the Namorambe Community Health Center

LIMITATION

Educated mothers are certainly capable of being caregivers, nurses and gatekeepers of balanced nutrition to avoid stunting. If a mother's knowledge about nutrition plays a role in cases of stunting, because this case is a chronic nutritional problem as a result of malnutrition over a long period of time because nutritional intake does not match her needs, a mother with good nutritional knowledge will be able to prepare food with quality and quantity appropriate for growth. and optimal development. The limitation of this research is that it only discusses stunting toddlers, it does not discuss the relationship between the factors that cause stunting and the incidence of stunting.

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