

The Relationship Between Mother's Knowledge About Nutrition Provision With An Improvement Of Stunting Children's Weight

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ABSTRACT

Purpose: The purpose of the study was to determine the relationship between mothers' knowledge about nutrition and weight gain of stunting children in the Lumbung Public Health Center, Ciamis Regency. **Methods:** The quantitative research method uses a correlational analytic design with a retrospective approach. The population in this study were all mothers who had to stunt children under five in the Lumbung Health Center working area of as many as 65 research samples. The data collection method used a questionnaire, with chi-square data analysis. **Results:** The results showed that 33 children experienced weight gain with the criteria of good maternal knowledge, with a statistical test p-value of $0.000 < 0.05$. **Conclusion:** There is a Relationship between Mother's Knowledge about Nutrition Giving and Wight Loss for Stunting Children in the Lumbung Health Center Work Area.

Key words : Knowledge, Body Weight, Stunting

Introduction

Toddlers are babies who are in the age range of 0-35 months or under three years where a child's growth requires more attention from the surrounding environment because this age is the best age for the formation of intelligence or motor skills, in other words the golden period or the golden age. The attention of parents in providing nutrition at toddler age greatly affects the growth and development of children in the future (Gunawan & Ash Shofar, 2018). In addition to obtaining energy, nutrition is useful as a factor in the success of the baby's growth and development. Provision of nutrition must be in accordance with existing provisions to avoid high stunting rates (Anggryni et al., 2021).

Stunting is a complicated problem of child development that has a major influence on life in the future (Rahayu, Sukmawati, Heryani, Rahmawati, & Ridla Firdaus, 2022). These problems start from a lack of nutrition during pregnancy, the incidence of anemia when the

mother is a teenager, and stunting will become apparent when the child turns two years old. The impact that toddlers will experience when they grow up will be very different from other normal toddlers (Abas et al., 2021).

This problem cannot be ignored because the impacts that will occur are quite serious, including related to an increase in toddler mortality, inhibiting toddler motor growth, and high toddler morbidity rates in old age due to impaired immune systems (Izah et al., 2020).

According to WHO the incidence of stunting is a problem of inadequate nutrition that is being discussed by the world because it occurs in many toddlers each year, so that the stunting rate in 2017 reached 22.2%, which means there are 150.8 million children with nutritional disorders in various countries. The results of the 2018 Basic Health Research showed that Indonesia was ranked third in the Southeast Asia region with the highest prevalence of toddler stunting, namely 30.8%, and according to SSGBI in 2019 toddler stunting, namely 27.7% (Ministry of Health, 2018).

Based on data from the Badan Kependudukan dan Keluarga Berencana Nasional (BKKBN), in West Java 129.9% or 12.7 million toddlers have been recorded as stunted (Suminar et al., 2021). According to data from the Ciamis Health Office, the prevalence of stunting in Ciamis in 2020 is around 6.4%, while in 2021 it is around 4.7% or as many as 3,356 toddlers. Based on the results of the 2019 Nutritional Status Monitoring, although there has been a decrease in the problem of stunting, Ciamis Regency is the location for the second phase of stunting focus for 2021 because it is still within the tolerance limit set by WHO, which is 20% of all children under five. In 2021, Lumbung Subdistrict, Sukaraharja Village, is designated as the highest stunting focus location in Ciamis Regency with 72 toddlers. The purpose of this study was to determine the relationship between mother's knowledge about providing nutrition and increasing the weight of stunting children in the Working Area of the Lumbung Health Center, Ciamis Regency.

Based on Septamarini's research (2019) the important role of a mother in the process of child development is having more knowledge related to food management to give to children. Mother's ability when feeding children, especially toddlers, must use unique tips and tricks so that children can easily accept the food cooked by their mother. The knowledge that must be honed by the mother includes that in choosing nutrition the mother must adjust the age of the child, the mother must be a role model so that the child always lives a clean life, provides food in a comfortable place for the child, and the intelligence of the mother in communicating so that the child does not have difficulty eating (Sukmawati et al. al., 2020). This will encourage a mother to always provide the best nutrition for her child and can be a protective factor, especially for toddlers.

Research conducted by (Rustini & Azhri, 2020) in the Sri Wahyunia Study (2016), concluded that there was an increase in children's weight by 73%, which means that there is a link between increasing children's weight and nutrition management at Posyandu Desa Pakahano, Jagolan, Klaten. This research makes mothers who have toddlers understand more and more that the importance of giving exclusive breastfeeding for 2 full years and giving MP-ASI after the child is 6 months old can help the child's growth and development process become optimal (Rahayu et al., 2020). The toddler's weight has also increased because the mother's knowledge in providing nutrition is in the good category. Breastfeeding babies until they are 24 months old or more means there is nutritional stability which makes toddlers' immune systems stronger. Lack of nutritional knowledge, especially for mothers, is one of the causes of undernutrition in toddlers (Said et al., 2021).

Methods

This research method is to use a quantitative method of correlational analytic design with a retrospective approach. The population is all mothers who have toddlers in the stunting category in the working area of the Lumbung Health Center, Ciamis Regency, with a total population of 72 respondents. The sampling technique uses Total Sampling by adding 10% to anticipate dropping out so that the total sample is 65 people.

Primary data collection was carried out by measuring the child's height and weight using a dacin scale and a microtoise. Secondary data in this study was conducted by collecting data from the Ciamis District Health Office for Maternal and Child Health, and from the book of Recapitulation of Annual Reports for the Work Area of the Lumbung Health Center in Ciamis Regency. The instruments used were questionnaires, dacin scales, microtoise, and KMS.

Analysis using univariate and bivariate. Processing data using the chi-square statistical test with a significant level of confidence or alpha (α) 5% or 0.05% to see whether or not there is a relationship between the two variables is done by looking at the p-value if the value is $< \alpha$ value of 0.05, meaning H_a accepted H_0 rejected which means there is a significant relationship.

Results

Table 1. Frequency Distribution of Mother's Age

No	Age	Frequency	%
1	<21 year	8	12,3
2	21-35 year	32	49,2
3	>35 year	25	38,5
Total		65	100

Based on table 1. it can be seen that the highest frequency of respondents' characteristics based on age is found in the age range of 21-35 years as many as 32 mothers (49.2%).

Table 2. Frequency Distribution of Mother's Education

No	Education	Frequency	Percentage
1	Elementary school	27	41,5
2	Junior high school	22	33,8
3	Senior High School	13	20,0
4	College	3	4,6
Total		65	100

Based on table 2. it can be seen that the highest frequency of respondents' characteristics based on education was found in respondents with elementary school education of 27 mothers (41.5%).

Table 3. Frequency Distribution of Mother's Occupation

No	Work	Frequency	Percentage
1	Housewife	57	87,7
2	Civil Servant	3	4,6
3	Self- Employed	5	7,7
4	Other	0	0
Total		65	100

Based on table 3. it can be seen that the highest frequency of job characteristics is found in the work of housewives as many as 57 mothers (87.7%).

Table 4. Distribution of Children's Age Frequency

No	Age	Frequency	%
1	0-12 Months	1	1,5
2	13-24 Months	11	16,9
3	25-36 Months	53	81,5
Total		65	100

Based on table 4. it can be seen that the highest frequency of children's age is found in respondents aged 25-36 months as many as 53 children (81.5%).

Table 5. Distribution of Child Gender Frequency

No	Age	Frequency	%
1	Man	33	50,8
2	Woman	32	49,2
Total		65	100

Based on table 5. it can be seen that the highest frequency of child sex was found in male respondents with 33 children (50.8%).

Table 6. Frequency Distribution of Mother's Knowledge about Nutrition

No	Knowledge	Frequency	%
1	Good	34	52,3
2	Enough	10	15,4
3	Not enough	21	32,3
Total		65	100

Based on table 6. it can be seen that the highest frequency of mother's knowledge about providing nutrition is found in mothers with good knowledge of 34 mothers (52.3%).

Table 7. Frequency Distribution of Stunted Children's Weight Increase

No	Increasing Stunted Children's Weight	Frequency	%
1	Weight Gain	36	55,4
2	Fixed Weight	9	13,8
3	Weight Loss	20	30,8
Total		65	100

Based on table 7. it can be seen that the frequency of increasing the weight of stunting children at toddler age is as many as 36 (55.4%) the children's weight has increased and 20 (30.8%) the children's weight has decreased.

Table 8. The relationship between mother's knowledge and the increase in the weight of stunted children

Mother knowledge	Stunting Children's Weight Gain						Total		<i>p value</i>
	Weight Gain		Fixed Weight		Weight Loss		F	%	
	F	%	F	%	F	%			
Good	33	50,7	0	0	1	1,5	34	52,4	0,000
Enough	3	4,7	6	9,2	1	1,5	10	15,3	
Not enough	0	0	3	4,7	18	27,7	21	32,3	
Total	36	55,4	9	13,9	20	30,7	65	100	0

Based on table 8. of the chi-square test concerning the relationship between mother's knowledge about providing nutrition and increasing the weight of stunted children in the Working Area of the Lumbung Health Center, it can be seen that of the 65 respondents, the increase in the weight of stunting children at toddler age was mostly found in children with mothers who had good knowledge, namely 33 children with weight gain and 1 child with weight loss, mothers with sufficient knowledge there are 3 children with increased weight, 6 children with fixed weight, and 1 child with decreased weight, and mothers with less knowledge there are 3 children with fixed weight, 18 children with weight loss and no children who experienced weight gain.

The results of the chi-square statistical test obtained a p -value of 0.000 $< \alpha$ value of 0.05, meaning that H_a is accepted H_0 is rejected which means "There is a relationship between mother's knowledge about nutrition and increasing the weight of stunted children in the working area of the Lumbung Health Center.

Discussion

1. Mother's Knowledge of Nutrition

The results of the analysis of mothers' knowledge about nutrition showed that the highest frequency of respondents was 32 people (49.2%) with an age range of 25-35 years. This age is a mature age, so the more mature a person's life experience will be more and more easily accept changes in behavior, because this age is the most ideal age to play a role, especially in the formation of health activities. The more old a person is, the level of maturity and strength will be more mature in thinking and working.

This research is in line with Notoatmodjo's theory in (Anik Rustini & Azhri Rustam, 2020) that age affects a person's comprehension and mindset. With increasing age, the mindset and understanding will develop so that the knowledge gained will be more and more. Unlike the case with mothers who are <21 years old, their mindset and experience are immature because this age range is the age of the early stages in a family, especially caring for children.

The results of the research analysis showed that the highest frequency of respondents' education level in the Working Area of the Lumbung Health Center was mothers with elementary school education as many as 27 people (41.5%). Based on the data obtained during the research, it is possible that respondents with basic education were also able to answer questionnaire questions with good results. This is because knowledge can be obtained through mass media information such as print, electronic, internet media or directly obtain information from local health workers regarding nutrition provision. This is in line with research conducted by (Probowati, Wibowo, Prihatini, & Ratnawati, 2021) which states that a mother can learn to provide nutritious food independently or self-taught. Knowledge about nutrition can be obtained by mothers through informal education which is also influenced by social factors.

According to the results of the research analysis shows that the majority of mothers who have good knowledge are mothers with high school and college backgrounds. This research is directly proportional to Notoatmodjo's theory (Septamarini, 2019), the higher a person's education level, the greater the opportunity for that person to obtain information. Thus, there is a close relationship between the level of education attained and the level of knowledge possessed. Secondary education allows respondents to obtain more information than respondents with lower education, because respondents know how to obtain information in the current era of globalization.

In addition to educational factors, another factor that can affect a person's knowledge is work. The results of the analysis show that the majority of respondents in the Working Area of the Lumbung Health Center are housewives without any formal work outside which can take up their time as many as 57 people (87.7%) with the criteria of good knowledge. Mothers who have daily activities as housewives have a lot of free time to care for, care for, and directly monitor the growth and development of children, mothers can participate in posyandu activities regularly so that the child's weight is controlled according to age, increase knowledge by watching demonstrations of food preparation recommended by health service workers to be applied at home in providing nutrition to children. Therefore, a formal job that generates a large income is not related to the quality of the mother's knowledge about nutrition.

This is in accordance with Notoatmodjo's statement (2007) that income does not directly affect one's knowledge, but if someone has a large enough income, then he will be able to provide or buy information resource facilities. Knowledge can be said as an experience that

leads to intelligence and will increase interest and attention. The better individual knowledge about health problems will be very helpful in preventing nutritional problems in children.

Knowledge is very important for the survival of every individual. In this case, the better the mother's knowledge about providing nutrition, the better the provision of interventions in an effort to increase the child's weight. A good mother's knowledge is a mother who understands nutritional needs and is able to prepare a menu that will be given to her child, so that the child has enough nutrition.

Mother's nutritional state is an important factor for child growth, because the period 0-36 months is a period that determines the quality of life, so it is called the golden period. This period is very sensitive because the consequences for the baby in the future are permanent and cannot be corrected because it requires adequate nutrition.

2. Increasing BB of Stunted Children

The results of the research listed in table 1.7 show that there are 36 children (55.4%) who experience an increase in body weight for stunting children in the Working Area of the Lumbang Health Center. Increasing children's weight according to age will improve health so that normal nutritional status will affect the quality and quantity of children's growth and development as well as increased intelligence. Children will be a healthy and quality generation because at the age of 1-3 years children are in optimal growth and development. The increase in children's weight is also influenced by the mother's compliance in providing additional food from health service workers. Some respondents said that children did not like PMT food because its mush-like texture made it difficult for children to consume this food. Therefore the increase in body weight depends on the nutrients that enter the child's body.

This research is in line with Chomaria's theory in research (Ringgi & Keuytimu, 2022) explaining that growth has a direct and indirect effect on toddler development. Weight gain and loss should be noted at this age. Increased body weight indicates good nutritional status. Good nutritional status can be achieved if the body obtains enough adequate nutrients to allow physical growth to occur.

There are several factors that can influence the increase in body weight in stunted children, including knowledge of the mother, sex and age of the child. In this study, the increase in stunting children's weight occurred more in children with male sex, where based on further questionnaire analysis conducted by researchers, it was found that there were 33 children who experienced an increase in male sex.

These results are in line with Sulistyawati's theory in research (Hariani, Ruliati, & Rosyidah, 2021) which says that gender can affect weight gain and reproductive function, boys grow faster because they have more activity compared to girls so it can affect weight. While the motor development of girls is more responsive than boys, but after going through puberty the growth of boys is faster than girls. Another factor that can affect stunting children's weight gain is the child's age.

This study also found other factors causing an increase in body weight in stunted children, namely the child's age. In this study, the highest frequency of stunting was aged 25-36 months, with 53 children (81.5%). Some respondents said that children's weight had progressed when they were more than 24 months old accompanied by balanced nutritional intake. At that age, children are able to determine their own food according to their wishes, in contrast to children aged <24 months, child feeding is classified as passive because the food the child receives depends on the food that the mother gives.

This case is in accordance with research (Chabibah, Khanifah, & Kristiyanti, 2021) that good nutritional status can be achieved if the body gets enough adequate nutrients, thus enabling physical growth, accelerating a balanced growth process for the transport of oxygen

and nutrients so that cells can grow to carry out their functions normally. Therefore stunted children experience weight instability if the mother does not pay attention to the nutritional intake consumed by the child.

This research is in line with research (Lailiyah, Ariestiningsih, & Supriatiningrum, 2021) which shows that stunted children experience a weight instability of 6 kg each year, inversely proportional to normal children. This shows that stunted children tend to have a higher BMI trajectory. This happens because in children who are stunted, there is a decrease in the resting metabolic rate, because malnutrition results in the body's efforts to increase metabolic efficiency, where the body will tend to save energy or often called metabolic adaptation.

The sex and age of the child have quite an effect on the increase in body weight in stunted children. If the mother knows these factors from an early age, prevention by consulting related to nutrition, routinely controlling the child's weight with the nearest health worker can reduce stunting rates in toddlers.

3. Mother's knowledge about nutrition with an increase in the weight of stunted children

Research on the relationship between mother's knowledge about nutrition provision in the work area of the Lumbung Health Center was carried out by analyzing data using the chi-square technique with a significance level of 95%. In this study, a p -value of 0.000 ($p < 0.05$) was obtained, meaning that there was a relationship between the mother's knowledge of nutrition in the working area of the Lumbung Health Center. The results of this study are in accordance with research conducted by toddlers, namely that the knowledge of toddler mothers shows a significant relationship to the provision of nutritional intake when viewed from the suitability of the value of energy intake and protein intake consumed in the last month. Mothers who have good knowledge tend to be 3.64 times more suitable in providing nutritional intake according to the calorie needs of toddlers.

This is supported by Ni'mah's research in (Chabibah et al., 2021) which shows that only 38% of toddler mothers who experience stunting have good knowledge of toddler nutrition. This study concluded that one of the factors associated with the incidence of stunting was the mother's knowledge of toddler nutrition. So it is necessary to increase in order to form appropriate feeding behavior in infancy, toddlers and preschool age children.

The results of this study are in line with research conducted by Ali Rahmad in 2010 in (Simanjuntak & Georgy, 2019) showing that there is a very significant relationship between maternal knowledge of nutrition and stunting. This shows the mother's knowledge in giving baby food in terms of timeliness of administration, frequency, type, amount of food ingredients and method of preparation.

Mother's knowledge about providing nutrition is very closely related to increasing the weight of toddlers where a mother's actions will be influenced by her knowledge. This is because the mother has consideration, interest, and positive motivation in efforts to provide food to meet the nutritional adequacy of her child, especially in achieving maximum weight and height. The positive attitude shown by the mother included discipline in providing nutrition according to directions from cadres and health workers who can meet the nutritional needs of stunted children.

Conclusion

Based on the results of the study, it can be concluded that the mother's knowledge about providing nutrition is at most 34 respondents (52.4%) with good knowledge. The increase in weight of stunted children is at most 36 (8.5%) children's weight gain. There is a relationship between mothers' knowledge about providing nutrition with an increase in the weight of stunting children with a p -value of 0.000.

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