



The Relationship of Mother's Knowledge and Responsive Feeding Attitude with the Incidence of Stunting in Toddlers in the Central City Health Center Area, Gorontalo City

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ABSTRACT

This study aimed to analyze the relationship between maternal knowledge and responsive feeding attitudes with the incidence of stunting among toddlers in the working area of the Kota Tengah Health Center, Gorontalo City. This research employed a quantitative method with a cross-sectional design. The population consisted of all mothers who had toddlers with growth disorders/stunting, totaling 105 individuals, with a sample of 83 respondents selected using purposive sampling. Data were analyzed using univariate and bivariate analysis with the Chi-Square test.

The results showed that the majority of mothers had a low level of knowledge (59%) and negative attitudes toward responsive feeding practices (63.9%). Furthermore, the prevalence of stunting among toddlers was relatively high at 61.4%. Statistical analysis indicated a significant relationship between maternal knowledge and stunting incidence ($p = 0.000$), as well as between maternal attitudes and stunting incidence ($p = 0.011$), where both p -values were less than 0.05.

In conclusion, maternal knowledge and attitudes toward responsive feeding play an important role in the incidence of stunting among toddlers. Therefore, continuous health education is needed to improve mothers' understanding and promote positive attitudes toward responsive feeding practices in order to reduce stunting rates.

INTRODUCTION

Toddlers are a group of children in the age range of 0-5 years. The toddler period is an important period in the process of human growth and development because growth and development takes place rapidly. The fulfillment of adequate nutritional needs and psychosocial stimuli is very important in this phase so that the child grows and develops optimally. One of the problems that is still widely encountered in toddlers is *stunting* (Hamsah, et al. 2020).

Stunting or short stature is a growth inhibition in toddlers due to chronic malnutrition both prenatal and postnatal, and not due to other causes such as hormonal abnormalities or certain health problems presented with a z-score value of TB/U below -2 SD (standard deviation). This condition not only has an impact on height, but also has an impact on brain development, learning ability, and the risk of chronic diseases in the future (Endiarama, et al. 2023).

In 2020, as many as 22% or around 149.2 million children under five in the world were stunting (WHO, 2020). In addition, data from the *United Nations Children's Fund* (UNICEF) shows that in 2020 the highest prevalence of stunting babies was found in Ethiopia at 53.3% while the country with the lowest prevalence of *stunting* was South Korea at 2.2%. In 2022, as many as 148.1 million or 22.3% of children under the age of 5 worldwide are affected by *stunting* (UNICEF/WHO/World Bank Group, 2023). This prevalence is still classified as high when compared to the standard set by the WHO, which is 20%. According to UNICEF and WHO data, Indonesia ranks 27th highest with a rate of 27% *stunting problems*, out of 154 countries that have stunting data,

which causes Indonesia to be 10th among Southeast Asian countries with a figure of 31.8% (Coordinating Ministry for Human Development and Development, 2023).

Based on data from the 2022 National Nutrition Status Survey (SSGI), the prevalence of *stunting* in Indonesia is 21.6% or 4,558,899 people. In 2017, the *stunting* rate was 37%. In fact, there has been a decrease in *stunting rates* (2017-2022), but the government still needs to strive to achieve the target of 14% *stunting* rate in 2024. Based on the national scale, East Nusa Tenggara is the first province with a *stunting* incidence of 35.3% and the lowest incidence of 8.0% in Bali Province. Gorontalo Province ranks 17th highest in *stunting* at 23.8%. This is still relatively high when compared to the government's standard to reach 14% of the *stunting* rate in 2024.

Based on data obtained through the nutrition sector of the Gorontalo Provincial Health Office, the highest incidence of *stunting* in the province is in Gorontalo City with a figure of 31.2%, then the second highest is in Gorontalo Regency with a figure of 28%, in third place is North Gorontalo Regency with a figure of 25.6%, then in the fourth place is Bone Bolango Regency with a figure of 23%, in the fifth place is Pohuwato Regency with a figure of 18%, and the sixth is Boalemo Regency with a figure of 8% (Health Office, 2025).

Stunting has a serious impact both in the short and long term on children's growth and development. In the short term, children who experience *stunting* tend to have weaker immune systems, so they are susceptible to infectious diseases such as diarrhea and ARI. In addition, their motor and cognitive abilities are also hampered, causing delays in the development of speech, movement, and lack of learning ability. Meanwhile, the long-term impact of *stunting* is more complex and sustainable. Children who grow up with *stunting* are at risk of experiencing low academic achievement, low work productivity as adults, and an increased risk of non-communicable diseases such as diabetes and hypertension. This has an impact on the quality of human resources and can broadly hinder the economic progress of a country (Endiarama, et al. 2023).

In overcoming this, Indonesia has a number of policies and regulations on *stunting* control, which are manifested in the form of interventions both specific and sensitive. The intervention is in the form of a program for the first 1000 days of life, exclusive breastfeeding, and education on proper feeding for children or what is called responsive *feeding* (Khasanah, et al. 2023).

Responsive feeding is the potential of caregivers to provide responsive and active feeding, including interacting positively, feeding in a safe environment, responding to lack appetite, encouraging children to eat, setting examples of healthy habits, and feeding methods according to age (Endiarama, et al. 2023). The importance of the application of *responsive feeding* in toddlers because this concept emphasizes the active role of mothers in recognizing, responding, and adjusting feeding according to children's needs and signals. *Responsive Feeding* is a guide for mothers or caregivers in feeding toddlers, the success of the implementation of *responsive feeding* is also greatly influenced by the knowledge and attitude of the caregiver or a mother (Purwanti, et al. 2023).

Knowledge is the result of the learning process that a person acquires through education, experience, and information. However, knowledge alone is not enough if it is not accompanied by a supportive attitude in its daily implementation. Attitude is a person's emotional and psychological reaction to an object or situation that reflects readiness to act. Mothers' knowledge and attitudes complement each other in the success of *responsive feeding practices*. Mother's knowledge and attitudes have a positive relationship with children's consumption scores that can improve or improve children's nutritional status. Good maternal knowledge will help understand the concept of correct feeding, while a positive attitude will encourage consistent and appropriate practices (Purwanti, et al. 2023).

Several previous studies have revealed that there is a significant relationship between maternal knowledge and attitudes about *responsive feeding* and *stunting* incidence. Research by Kresnawati *et al* (2022) shows that mothers with a high level of knowledge tend to have children with good nutritional status. Another study by Yogiisworo *et al* (2023) also found that family support and understanding of *responsive feeding* were dominant factors in preventing *stunting* in toddlers. Furthermore, research conducted by Hikmah and Sunarsih (2023) shows that providing health education about *responsive feeding* is able to significantly increase maternal knowledge and attitudes, as well as have a positive impact on feeding practices for *stunting children*.

Based on the results of the preliminary study conducted, the highest *stunting* incidence rate is the city of Gorontalo in 2024 with a number of *stunted* children of 31.2%, then an interview has been conducted in September 2025 at the Puskesmas in the Central City area of Gorontalo City with 10 mothers who have toddlers with a history of *stunting* about knowledge and *responsive feeding attitudes*. The results of the interviews show that most mothers do not fully understand the definition, signs, impacts, and efforts to prevent *stunting*. In fact, 7 out of 10 mothers do not know that the practice of feeding with the principle of *responsive feeding* has a close relationship in reducing the risk of *stunting* in toddlers. This fact shows that the lack of knowledge and attitude of mothers towards *responsive feeding* practices is still a problem that needs to be considered in *stunting prevention*.

Based on the description above, this makes the researcher interested in conducting research with the title "The relationship between maternal knowledge and responsive feeding attitudes and the incidence of *Stunting* in toddlers in the Puskesmas area of Kota Tengah, Gorontalo City"

RESEARCH METHODS

Research Design

The type of research used in this study is a type of quantitative research with a *cross sectional research design*. *Cross sectional* is observing independent and dependent variables simultaneously at the same time. The *cross sectional design* was used because this study aimed to determine the relationship between maternal knowledge and attitudes about *responsive feeding* and the incidence of *stunting* in toddlers, where the measurement of independent variables (maternal knowledge and attitudes) and dependent variables (stunting events) was carried out simultaneously at one observation time. The selection of *cross sectional design* in this study was based on considerations of time efficiency, cost, and suitability with the purpose of the study, namely to determine the relationship between maternal knowledge and attitudes about *responsive feeding* and the incidence of *stunting* in toddlers in the working area of the Kota Tengah Health Center, Gorontalo City.

Location and Time of the Research

The location of this research was carried out in the working area of the Puskesmas Kota Tengah Gorontalo City. The time for this research was carried out by the researcher on November 6, 2025 -January 14, 2026.

Population and sample

In this study, the population used was all mothers who had toddlers with growth disorders/stunting in the Kota Tengah Health Center area with a total of 105 *stunted* toddlers. The sampling technique of this study is using *purposive sampling*. *Purposive Sampling* is a sample determination technique with certain considerations. This means that sampling is based on certain considerations or criteria that have been formulated in advance by the researcher (Ani, 2021).

Data Analysis Techniques

Univariate Analysis

Univariate analysis is used to describe descriptively the frequency distribution and proportion of each variable studied, both independent and bound variables. Univariate analysis aims to explain or describe the characteristics of each research variable (Irwan, 2022). Univariate analysis in this study was used to identify the frequency distribution of variables of knowledge, attitudes, and stunting incidence.

Bivariate Analysis

Data analysis in this study uses bivariate analysis. bivariate analysis is an analysis that is carried out with the aim of explaining the relationship between independent variables and bound variables (Irwan, 2022). This study uses *the chi-square test* to see the relationship between knowledge and attitudes and stunting incidence because the variables analyzed have a categorical data scale, namely the variables of knowledge and maternal attitudes (ordinal scale) and stunting incidence (nominal scale). This test is used to find out whether there is a statistically significant relationship between two category variables. The use of *the Chi-Square test* is also in line with the *cross-sectional approach* commonly used in the study of relationships between variables (Darojat, *et al* 2023).

RESULTS

Characteristics of Respondents Based on Mother's Age

Table 1 Distribution of frequency of respondents by age of mother.

Yes	Age	Frequency N	Introduce yourself %
1	Late teens (19 years old)	1	1,2
2	Early adults (22-29 years)	32	38,6
3	Late adults (30-39 years)	41	49,4
4	Early elderly (40-53 years old)	9	10,8
Total		83	100

Source : Primary data, 2025

Based on Table 1, the frequency of respondents' age characteristics showed variation. The age of 19 years is 1 respondent (1.2%), u sia 22-29 years there are 32 respondents (38.6%), the age of 30-39 years there are 41 respondents (49.4%), and the age of 40-53 years there are 9 (10.8%) respondents of mothers under five.

Characteristics of Respondents Based on Age of Toddlers

Table 2 Distribution of respondent frequencies based on the age of toddlers.

Yes	Age	Frequency (n)	Introduce yourself (%)
1	1 -2 years	49	59,04
2	3-4 years	33	39,76
3	5 years	1	1,20
Total		83	100

Source : Primary data, 2025

Based on Table 2, the frequency of age characteristics of toddlers shows variation. Ages 1-2 years are 49 toddlers (59.04%), 3-4 years old there are 33 toddlers (39.76%), 5 years old there are 1 toddler (1.20%).

Univariate Analysis

Frequency Distribution of Knowledge Level of *Responsive Feeding* Mothers in Toddlers in the Puskesmas Area, Kota Tengah, Gorontalo City.

Mother's knowledge of *responsive feeding* is one of the important factors in feeding practices for toddlers. A good level of knowledge can influence the way mothers understand the child's hunger and satiety signals, as well as determine the right feeding patterns. Therefore, in this study, a descriptive analysis was carried out to determine the distribution of the level of knowledge of mothers regarding *responsive feeding*.

Table 3 Frequency Distribution of *Knowledge Level of Responsive Feeding Mothers in Toddlers in the Central City Health Center Area, Gorontalo City.*

Knowledge	Frequency (n)	Introduce yourself (%)
Good	26	31,3
Enough	8	9,6
Less	49	59,0
Total	83	100

Source : Primary data, 2025

Based on Table 3, most mothers have a good level of knowledge about *responsive feeding*, which is 26 people (31.3%). However, there are still 49 mothers with a lack of knowledge (59.0%), which shows that most respondents have less knowledge related to *stunting*.

Distribution of Frequency of *Responsive Feeding Attitudes of Mothers in Toddlers in the Working Area of the Central City Health Center, Gorontalo City.*

Table 4. Distribution of Frequency of *Responsive Feeding Attitudes of Mothers in Toddlers in the Working Area of the Central City Health Center, Gorontalo City.*

Attitude	Frequency (n)	Introduce yourself (%)
Positive	30	36,1
Negatives	53	63,9
Total	83	100

Source : Primary data, 2025

Based on Table 4, most of the mothers had a negative attitude as many as 53 people (63.9%), this shows that the respondents still have negative traits in *stunting prevention*.

Distribution of *Stunting Incidence Frequency* in Toddlers in the Work Area of the Central City Health Center, Gorontalo City.

Table 5 Distribution of the Frequency of *Stunting Incidence* in Toddlers in the Work Area of the Central City Health Center, Gorontalo City.

Stunting Status	Frequency (n)	Introduce yourself (%)
<i>Stunting</i>	51	61,4
Not <i>Stunting</i>	32	38,6
Total	83	100

Source : Primary data, 2025

Based on Table 5, as many as 51 toddlers (61.4%) were *stunted*, while 32 toddlers (38.6%) were not *stunted*. These results show that the incidence of *stunting* is still quite high in the work area of the Kota Tengah Health Center, Gorontalo City.

Bivariate Analysis

The Relationship between *Responsive Feeding Knowledge* and *Stunting Incidence* in the Working Area of the Central City Health Center of Gorontalo City.

Table 6 The Relationship between *Responsive Feeding Knowledge* and the Incidence of *Stunting* in the Working Area of the Central City Health Center, Gorontalo City.

Knowledge	Stunting		Not Stunting		Total	p=value
	n	%	N	%		
Good	0	(0,0)	26	(100,0)	26	0,000
Enough	2	(25,0)	6	(75,0)	8	
Less	49	(100,0)	0	(0,0)	49	
Total	51		32		83	

Source : Primary data, 2025

Based on Table 6, the results of the *Chi-Square* test showed a value of $p = 0.000$ ($p < 0.05$), so it can be concluded that there is a significant relationship between maternal knowledge about *responsive feeding* and the incidence of *stunting* in toddlers in the working area of the Kota Tengah Health Center.

The Relationship between *Responsive Feeding Attitudes of Mothers* and *Stunting Incidence* in the Work Area of the Central City Health Center , Gorontalo City.

Table 7 The Relationship between *Responsive Feeding Attitudes of Mothers* and *Stunting Incidence* in the Work Area of the Central City Health Center, Gorontalo City.

Attitude	Stunting		Not Stunting		Total	p=value
	N	%	N	%		
Positive	13	(43,4)	17	(56,7)	30	0,011
Negatives	38	(71,7)	15	(28,3)	53	0,011
Total	51		32		83	

Source : Primary data, 2025

The results of the *Chi-Square test* in Table 7 showed a value of $p = 0.011$ ($p < 0.05$), which means that there is a significant relationship between maternal attitudes about *responsive feeding* and the incidence of *stunting* in toddlers.

The Relationship between Knowledge and *Attitude of Responsive Feeding* of Mothers with Stunting Incidence in the Working Area of the Central City Health Center, Gorontalo City.

Table 8 The Relationship between Knowledge and *Attitude of Responsive Feeding* of Mothers with Stunting Incidence in the Work Area of the Central City Health Center, Gorontalo City.

Variable	Categories	Stunting n (%)	No Stunting n (%)	Total	p-value
Knowledge	Good	0 (0,0)	26 (100,0)	26	0,000
	Enough	2 (25,0)	6 (75,0)	8	
	Less	49 (100,0)	0 (0,0)	49	
Attitude	Positive	13 (43,4)	17 (56,7)	30	0,011
	Negatives	38 (71,7)	15 (28,3)	53	
Total		51	32	83	

Source : Primary data, 2025

Based on Table 8, the results of the bivariate analysis show that there is a significant relationship between maternal knowledge and attitudes about *responsive feeding* and the incidence of *stunting* in toddlers in the working area of the Puskesmas Kota Tengah, Gorontalo City. This is shown by the p-value of each variable, namely knowledge ($p = 0.000$) and attitude ($p = 0.011$), both of which are smaller than $\alpha (0.05)$.

DISCUSSION

Knowledge Level of *Responsive Feeding* of Mothers in Toddlers in the Work Area of the Central City Health Center, Gorontalo City.

Based on the results of research that has been conducted on mothers who have toddlers in the work area of the Kota Tengah Health Center, Gorontalo City, the level of mother's knowledge about *responsive feeding* was obtained. The distribution of the results showed that 49 mothers (59%) were in the category of lack of knowledge. In addition, as many as 26 (31.3%) mothers were in the category of good knowledge. Meanwhile, only 8 (9.6%) mothers were in the category of sufficient knowledge.

Based on the results of this study, 49 maternal respondents (59%) with the category of lack of knowledge with the results of an item data questionnaire about definition indicators that most respondents do not understand that *responsive feeding* is a two-way interaction between mother and child that emphasizes the recognition of hunger and satiety signals. In addition, on the component indicator item, many respondents are wrong in understanding the sign of satiety of children and still think that children should be forced to finish food. Errors in the answers on both indicators caused some respondents to obtain a score of ≤ 5 out of a total of 9 questions ($<60\%$) so that they were categorized as lacking knowledge.

According to Notoatmodjo's theory (2021), knowledge is the result of the process of sensing an object which then forms understanding and becomes the basis for the formation of a person's behavior. Lack of knowledge will affect the way we think and make decisions, including in the practice of child feeding. In the context of *responsive feeding*, mothers with low knowledge tend not to understand the importance of two-way interaction between mother and child during the feeding process, so that the feeding behavior carried out has the potential to be not in accordance with the needs of children's growth and development.

As a result of this study, the researcher argues that the lack of knowledge category is the most common category in mothers under five in the working area of the Central City Health Center. Mothers with less knowledge had the highest percentage compared to the category of sufficient and good knowledge. This shows that most mothers do not have an adequate understanding of the concept of *responsive feeding*.

The results of this study are in line with the research conducted by Melliana Nurfitri *et al.* (2021) and Kresnawati *et al.* (2022) which both emphasized that the level of mother's knowledge about *responsive feeding* and child feeding practices has an important role in the quality of parenting and nutritional status of toddlers. Melliana Nurfitri *et al.* (2021) explained that mothers with a low level of knowledge tend not to understand the basic concept of *responsive feeding*, especially related to the ability to recognize and respond to children's hunger and satiety signals, so they often apply feeding practices that are coercive, less responsive, and have little positive interaction. Meanwhile, Kresnawati *et al.* (2022) added that low maternal knowledge is also related to a misconception of feeding success, where mothers tend to judge success from the amount of food consumed by the child, rather than from the comfortable eating process that suits the child's needs. Kresnawati *et al.*'s research also showed that mothers with low knowledge are more at risk of implementing improper parenting patterns repeatedly and continuously, thus increasing the chance of chronic nutritional problems, including stunting. The two studies emphasized that the low knowledge of mothers is not only caused by limited access to health information, but also influenced by eating habits that are inherited from generation to generation and have not been adjusted to the latest health recommendations.

The researchers' assumption is that the dominance of knowledge is less influenced by the lack of sustainable nutrition education and feeding habits that are inherited from generation to generation without adjustment to the latest health recommendations.

The second category with the most is the good knowledge of 26 (31.3%) female respondents. As a result of this study, mothers in this category were able to answer most questions related to the concept, objectives, and application of *responsive feeding*. Generally, respondents were able to answer correctly on the definition item indicator, but were still wrong on the component indicators, especially items 6 and 9 related to the sign of satiety of children and the prohibition of forcing food. In addition, in the practice indicators, there are still inappropriate answers in responding to children who refuse to eat. Respondents in this category obtained a score of 6–7 out of a total of 9 questions (60–79%), so they were classified as sufficient knowledge because they were not able to answer all indicators correctly consistently.

According to the theory of knowledge level, mothers with good knowledge have been at the evaluation stage, which is the highest stage in the cognitive realm, where individuals are not only able to know and understand a concept, but also to be able to assess, choose, and apply the information appropriately in daily life (Jevison, et al. 2022). At this stage, mothers have the ability to distinguish feeding practices that are appropriate and inappropriate for the child's needs, and are able to adjust feeding patterns to the child's age, condition, and response. Mothers with good knowledge understand that *responsive feeding* is not only related to the type and amount of food given, but also involves positive interactions, recognition of hunger and satiety signals, and the provision of appropriate responses without coercion. Good knowledge allows mothers to make more rational and appropriate decisions in the feeding process, so that they can create a safe, comfortable, and supportive eating environment for children's growth and development.

The results of this study are in line with the research conducted by Darajat *et al.* (2023) which states that mothers with a good level of knowledge about *responsive feeding* tend to have children with normal nutritional status. In her research, it was explained that mothers who understand the principle of *responsive feeding* as a whole are able to implement feeding practices that are more consistent, responsive, and in accordance with the needs of the child, so that it has a positive impact on nutritional intake and child growth. Darajat *et al.* also found that well-informed mothers are less likely to adopt coercive feeding practices and are more likely to create a pleasant eating atmosphere, which supports the child to eat optimally.

The researchers assume that mothers with good knowledge are likely to have better access to health information, experience in counseling, or a high awareness of the importance of child nutrition.

The least category is sufficient knowledge (9.6%). The results of this study showed that the category of good knowledge was obtained because respondents were able to correctly answer almost all questions on the three questionnaire indicators. Respondents in this category generally answered correctly on the definition indicators related to the definition and basic principles of *responsive feeding*, component indicators regarding children's hunger and satiety signs and the prohibition of forcing food, and practice indicators related to how to respond to children when eating and create a comfortable eating atmosphere. Respondents who were able to answer 8–9 of the total 9 questions ($\geq 80\%$) were categorized as good knowledge because they had understood the concepts, elements, and application of *responsive feeding* thoroughly in all questionnaire indicators.

In theory, mothers with sufficient knowledge still experience confusion in determining the portion of meals that are appropriate to the child's age, a regular eating schedule, and how to deal with children who refuse to eat without having to force them. This condition shows that the mother is at the stage of *comprehension* but has not fully reached the application stage). Knowledge that has not been applied consistently causes feeding practices to not be optimal (Ridwan, 2021).

The results of this study are in line with research conducted by Hikmah and Sunarsih (2023) which states that increasing maternal knowledge through health education carried out in a planned and sustainable manner has an important role in helping mothers understand and implement correct feeding practices in accordance with the principles of *responsive feeding*. In her research, it was explained that health education provided on a continuous basis not only improves maternal knowledge cognitively, but also encourages changes in maternal attitudes and behaviors in the process of feeding children. Mothers who receive regular health education become more aware of the importance of recognizing children's hunger and satiety signals, are more patient in dealing with children who refuse to eat, and are able to create a positive and pleasant eating atmosphere. Hikmah and Sunarsih (2023) found that mothers with a sufficient level of knowledge have great potential to improve the quality of feeding practices if they receive appropriate and sustainable assistance, because mothers in this category already have a basic understanding that can be developed into consistent behavior. These findings strengthen the results of this study which shows that mothers with enough knowledge still need to be strengthened through practical education to be able to apply the principle of *responsive feeding* optimally in daily life.

The researcher assumes that mothers in this category need to strengthen more practical information in order to be able to implement *responsive feeding* consistently

Responsive Feeding Attitude of Mothers in Toddlers in the Work Area of the Central City Health Center, Gorontalo City.

Based on the results of the study, it is known that maternal attitudes are dominated by the negative attitude category of 63.9%, while positive attitudes of 36.1% are only owned by a small number of mothers. These results show that in general, mothers' attitudes towards the implementation of *responsive feeding* still do not support optimal feeding practices for toddlers.

The results of this study were obtained from the negative attitude category obtained because respondents tended to give answers that disagreed or hesitantly to positive statements and agreed to negative statements in questionnaires. On cognitive indicators, some respondents do not fully believe that *responsive feeding* is important to support children's growth. On the *affective indicators*, respondents showed a lack of acceptance of the importance of patience and comfort when feeding. In addition, on the *conactive* indicator, there are still respondents who agree with the act of forcing children to finish food or scolding children when they refuse to eat. The answers to these indicators caused the total score to be in the <60% category, so it was classified as a negative attitude towards the implementation of *responsive feeding*.

According to attitude theory, attitude consists of three main components, namely *cognitive* (knowledge), *affective* (feeling), and *conative* (tendency to act). Negative attitudes indicate that although some mothers may already know basic information about child feeding, they have not been affectively accepted by the concept of *responsive feeding* and have not had the motivation to implement it. This imbalance between knowledge and attitudes leads to unresponsive feeding behaviors (Marissa, 2022).

The results of this study are in line with the research of Darajat *et al.* (2023) which shows that mothers with negative attitudes towards feeding have a greater tendency to adopt improper parenting, thereby increasing the risk of nutritional problems in children. Another study by Kresnawati *et al.* (2022) also states that maternal attitudes are significantly related to feeding practices and children's nutritional status.

The researchers' assumption is that negative attitudes are influenced by mothers' anxiety about the child's condition, emotional distress when children have difficulty eating, and lack of family support in the parenting process.

The results of this study showed that the positive attitude category was obtained because respondents gave answers that agreed or strongly agreed with positive statements and disagreed with negative statements in the questionnaire. On *cognitive* indicators, respondents believe that *responsive feeding* is important to support children's growth and development. On the *affective* indicators, respondents showed acceptance and awareness that feeding should be done patiently and create a comfortable atmosphere. In addition, the *conactive indicators* of respondents showed supportive behavioral tendencies, such as not forcing the child to finish food and staying calm when the child refused to eat. The answers to all of these indicators resulted in a score of $\geq 80\%$, so it was categorized as a positive attitude towards the implementation of *responsive feeding*.

According to behavioral theory, attitude is a predisposing factor that plays an important role in shaping a person's behavior. A positive attitude will increase the likelihood of forming consistent and sustainable behaviors, because individuals have a tendency to act in accordance with their beliefs and views (Marissa, 202). In the context of *responsive feeding*, the mother's positive attitude will encourage the mother to consistently implement responsive feeding practices, such as respecting the child's desires, providing healthy food choices, and creating a regular eating routine.

The results of this study are in line with research conducted by Hikmah and Sunarsih (2023) which stated that mothers with a positive attitude towards child feeding are better able to create a comfortable, safe, and optimal child growth eating environment. In her research, it was explained that mothers with a positive attitude tend to have better interactions with children during the eating process, so that children feel valued and more cooperative in receiving food. In addition, the positive attitude of mothers also contributes to improving the quality of children's food intake and helping children develop healthy eating habits.

The researchers assume that mothers with positive attitudes have better emotional readiness and understanding in dealing with variations in children's eating behavior.

Incidence of Stunting in Toddlers in the Work Area of the Central City Health Center, Gorontalo City.

Based on the results of the study, out of a total of 83 toddlers who were respondents, it was known that as many as 51 toddlers (61.4%) were *stunted*, while 32 toddlers (38.6%) were not *stunted*. These results show that the proportion of *stunted* toddlers is higher than non-stunted toddlers. The stunting rate, which reached almost half of the number of respondents, indicates that *stunting* is still a serious health problem and needs special attention.

Stunted toddlers are more commonly found in mothers with low knowledge and negative attitudes. Unresponsive feeding practices, such as forcing children to eat and not paying attention to satiety signals, can lead to inadequate nutritional intake in the long run.

The high proportion of stunted toddlers in this study shows that chronic nutrition problems still occur in the working area of the Puskesmas Kota Tengah, Gorontalo City. *Stunting* is a condition of failure to grow in children characterized by substandard height according to age, which occurs due to nutritional deficiencies over a long period of time (Ekawati, 2022).

According to the theory of nutrition and child growth and development, stunting does not occur suddenly, but is the result of the accumulation of inadequate nutritional intake and inappropriate parenting patterns in the long term, especially in the first 1,000 days of life. Unresponsive parenting can cause children to not get the amount and quality of food that suits their needs. In addition, stress during eating and an unpleasant eating atmosphere can reduce children's appetite, so that energy intake and micronutrients become insufficient (Ekawati, 2022).

The results of this study are in line with the research of Melliana Nurfitri et al. (2021), Kresnawati et al. (2022), and Darajat et al. (2023) which states that low maternal knowledge and negative attitudes in child feeding are significantly related to the increase in *stunting* incidence in toddlers. Mothers play a major role in determining the type, amount, and method of feeding children, so that limited knowledge and unsupportive attitudes cause feeding practices not to be in accordance with the principles of *responsive feeding*.

The researchers' assumption is that the high incidence of *stunting* is influenced by improper and continuous feeding practices.

On the other hand, 32 toddlers who did not experience *stunting* in this study amounted to 32 toddlers (38.6%), which shows that some mothers have been able to meet their children's nutritional needs and implement better parenting. Toddlers who are not stunted generally come from mothers who have more positive knowledge and attitudes towards *responsive feeding*. Mothers in this group tend to better understand the importance of recognizing children's hunger and satiety signals, not forcing children to eat, and creating a comfortable and pleasant eating atmosphere.

In theory, proper and responsive feeding practices are one of the important components in meeting children's nutritional needs and growth and development. *Responsive feeding* emphasizes the two-way interaction between mother and child during the feeding process, where the mother plays an active role in providing nutritious and age-appropriate food, while the child is given the opportunity to determine the amount of food consumed based on the hunger and satiety signals he has. This approach is based on the theory of child behavior and growth and development which states that the fulfillment of children's biological needs cannot be separated from psychosocial aspects. A positive, attentive, and non-coercive eating atmosphere will help children develop a good appetite, increase acceptance of food, and support children's self-regulation in regulating their food intake. Conversely, unresponsive feeding practices, such as forcing children to eat or ignoring child signals, can decrease appetite, disrupt the emotional relationship between mother and child, and have an impact on low nutritional intake in the long term, which risks causing growth disorders such as *stunting*.

The results of this study are in line with the WHO (*World Health Organization*) and UNICEF (*United Nations Children's Fund*) reports in 2020 which emphasized that responsive feeding is one of the key strategies in preventing stunting in children under five. WHO and UNICEF state that *stunting prevention* depends not only on the availability of food, but also on the way of feeding and the quality of interaction between caregivers and children during the feeding process. Children who are raised with a *responsive feeding* approach tend to have a more regular diet, a more stable appetite, and a better ability to consume food according to their needs. This approach has been proven to contribute to improving children's nutritional status and supporting optimal growth, making it one of the main recommendations in maternal and child nutrition improvement programs in various countries. The researcher assumes that the application of *responsive feeding* consistently contributes to maintaining the nutritional status of children to be normal.

The Relationship between Responsive Feeding Knowledge and Stunting Incidence in the Work Area of the Central City Health Center, Gorontalo City.

Based on the results of bivariate analysis using the *Chi-Square test*, a p value of < 0.05 was obtained which showed that there was a significant relationship between the level of maternal knowledge about *responsive feeding* and the incidence of *stunting* in toddlers in the work area of the Puskesmas Kota Tengah, Gorontalo City.

The results of the cross-tabulation showed that *stunted* toddlers were more found in mothers with less knowledge than mothers with good knowledge. On the other hand, *non-stunted* toddlers are more likely to come from mothers with good knowledge. This reinforces the previous univariate finding that maternal knowledge is still dominated by the lack category.

Based on the results of the questionnaire, mothers with low knowledge did not understand the basic principles of *responsive feeding*, such as recognizing the child's hunger and satiety signals and the importance of positive interactions when eating. This lack of understanding has an impact on feeding practices that tend to be coercive or not according to the needs of the child. This practice, if it lasts for a long time, can cause inadequate nutritional intake.

According to Notoatmodjo (2021), knowledge is a predisposing factor that affects the formation of health behaviors. Mothers with good knowledge will be better able to determine the type, amount, and method of feeding that is appropriate to the child's age and needs. On the other hand, limited knowledge can cause mothers to use less appropriate methods in feeding.

The results of this study are in line with the research of Kresnawati et al. (2022) which states that mothers' knowledge of responsive feeding is significantly related to the nutritional status of toddlers. Research by Nurfitri

and Handayani (2021) also shows that mothers with low knowledge have a higher risk of having stunted toddlers than mothers with good knowledge. The two studies emphasized that maternal understanding plays an important role in determining the quality of feeding practices and fulfilling child nutrition.

The researchers' assumption is that low knowledge causes feeding practice errors to be repeated and continuous. This condition contributes to the unmet nutritional needs of children in the long term, increasing the risk of *stunting*.

The Relationship between Responsive *Feeding* Attitudes and Stunting Incidence in the Work Area of the Central City Health Center, Gorontalo City.

The results of the bivariate analysis showed a p value of < 0.05 , which means that there is a significant relationship between maternal attitudes towards *responsive feeding* and the incidence of *stunting* in toddlers.

Based on cross-tabulation, *stunted* toddlers are more found in mothers with negative attitudes, while *non-stunting toddlers* are more in mothers with positive attitudes. These findings are consistent with univariate results showing that maternal attitudes are dominated by negative categories.

The results of the questionnaire showed that mothers with negative attitudes tended to force their children to eat, lacked patience when children refused to eat, and paid less attention to children's comfort during the eating process. This attitude affects the eating atmosphere to be unpleasant and has the potential to reduce children's appetite. If this condition persists, then the child's nutritional intake can be disrupted.

In theory, attitude is a bridging factor between knowledge and practice. Even if the mother has enough knowledge, without a supportive attitude, *responsive feeding* behaviors will not be applied consistently. A positive attitude reflects the mother's emotional readiness and willingness to apply the principles of feeding that are in accordance with the child's needs (Marissa, 2022).

The results of this study are in line with the research of Hikmah and Sunarsih (2023) stating that maternal attitudes towards feeding have a significant relationship with the nutritional status of toddlers. Research by Sari *et al.* (2022) also found that negative attitudes, such as forcing children to finish food and being irritable when children refuse to eat, are associated with an increased risk of nutritional disorders, including *stunting*. These studies reinforce that mothers' attitudes play a direct role in determining the quality of feeding practices.

The researchers' assumption is that negative attitudes cause low consistency in the implementation of *responsive feeding*. These inconsistencies have an impact on the fulfillment of child nutrition that is not optimal in the long term, increasing the risk of *stunting*.

CONCLUSION

The level of mother's knowledge about *responsive feeding* in the work area of the Kota Tengah Health Center, Gorontalo City was in the category of less than 49 respondents (59%), the good category of 26 respondents (31.3%) and the sufficient category of 8 respondents (9.6%).

Mothers' attitudes about *responsive feeding* in the work area of the Puskesmas Kota Tengah Gorontalo City were in the negative category of 53 respondents (63.9%) and the positive category of 30 respondents (36.1%).

The incidence of *stunting* in the work area of the Kota Tengah Health Center in Gorontalo City was in the *stunting category* as many as 51 toddlers (61.4%), and in the non-stunting category as many as 32 toddlers (38.6%).

There was a relationship between maternal knowledge about *responsive feeding* and the incidence of *stunting* in toddlers in the working area of the Puskesmas Kota Tengah, Gorontalo City, with *the results of the Chi-Square* test showing a p value of $p < 0.05$.

There was a relationship between maternal attitudes about *responsive feeding* and the incidence of *stunting* in the work area of the Kota Tengah Health Center, Gorontalo City, with *the results of the Chi-Square* test showing a p value of < 0.05 .

SUGGESTIONS

Health workers, especially community nurses and child nurses, are expected to use the results of this study as a reference in providing education about *responsive feeding* practices. Continuous education will help reduce *stunting rates* in toddlers, especially in the working area of the Kota Tengah Health Center, Gorontalo City.

The public is expected to be more active in seeking information about nutrition and parenting of children, especially related to *responsive feeding*. Collective awareness of the importance of responsive diets can be a joint effort in reducing the prevalence of *stunting* in Gorontalo City and other areas.

Mothers of toddlers are expected to increase their knowledge and positive attitudes towards *responsive feeding practices*. A good understanding of feeding according to children's hunger and satiety signals and positive interactions will support stunting prevention in toddlers

This research can be used as a reference for further studies on the factors that cause *stunting* that can be modified from the family environment. The researcher is then expected to expand the research variables by adding aspects of family support, parenting, and socio-economic conditions, so that the research results obtained are more comprehensive and provide a more comprehensive picture of *stunting prevention efforts*.

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