



The Relationship Between Education, Knowledge and Parenting Patterns of Mothers Towards The Incidence of Wasting in Toddlers

Rosalina Madai ^{1*}, Nur Al-faida ², Bau Kanang ³

¹⁻³ Sekolah Tinggi Ilmu Kesehatan Persada Nabire, Indonesia

Correspondence email : madairosalina205@gmail.com *

Abstract, Background: Wasting is a condition of acute malnutrition where the weight of a toddler is not in accordance with his height and the z-score value < -2 . Toddlerhood is an important life and needs to be considered by parents. Toddlers need to get nutrients from daily food in the right amount and good quality. Education, maternal knowledge affects children's food choices, good maternal parenting patterns, children will grow and develop well by coming to the integrated health post, monitoring toddler weight is a positive attitude in solving problems. **Purpose:** This study was to determine the level of education, knowledge and maternal parenting patterns on the incidence of wasting in the work area of the Nabarua Health Center UPTD, Nabire Regency. **Method:** The research design used was Cross Sectional. The sample used was 30 toddlers using total sampling. Data analysis used the Statistical Program for Social Science (SPSS) Version 16.0 computer release program and used the chi-square test. **Results:** test of the relationship between maternal education (p value = 0.23), maternal knowledge (p -value = 0.43), and Parenting (p -value = 0.82). **Conclusion:** There is no relationship between maternal education, maternal knowledge, and maternal parenting patterns with wasting incidents. **Suggestion:** It is expected that mothers of toddlers provide daily food in the right amount and good quality, good maternal parenting patterns so that children grow and develop well by coming to the integrated health post to monitor their child's weight.

Keywords: Toddlers, Education, Knowledge, Parenting, Wasting.

1. INTRODUCTION

Wasting can occur due to eating disorders or problems where the BB and Z-score values are lower than -2 SD. Wasting is a common thing occurs in poor and developing countries and requires attention. Toddlers from low-income families are one of the social groups most vulnerable to the effects of wasting. Children at this age no longer receive breast milk, but the intake of nutrients from their food is not enough to meet their nutritional needs, because babies usually have difficulty eating or even snacking. Low nutrient intake can result in stunted growth or even failure. Nutritional intake should be sufficient because at this age children experience rapid and rapid growth changes (Setyawati & Hartini, 2018).

The World Health Organization (WHO) announced that In 2018, around 7.5 million people died worldwide due to wasting.. Cases of malnutrition in infants aged 12 to 59 months based on the 2018 BB/TB index in Indonesia. Finally, the wasting rate in infants increased to 8.3% in 2017 and 8.4% in 2018. The effects of poor or insufficient nutrition in infants can damage brain development and affect their lives in school and preschool. Children who experience malnutrition can fall asleep easily, lack self-confidence, have difficulty learning at

school, and reduce children's cognitive abilities because their brains do not develop properly due to growth (Supariasa et al., 2012).

The development of food problems in Indonesia is a problem that needs to be resolved thoroughly. Based on data in Indonesia, the problem of wasting in Indonesia has not decreased in toddlers, according to data from the Indonesian Nutritional Status Survey (SSGI, 2022) it was recorded that the nutritional status of toddlers wasting (BB/TB) This figure increased from 7.1% in 2021 to 7.7% annually in 2022, underweight (BB/U) will increase from 17.0% in 2021 to 17.1% in 2022. In Papua Province, the number of thin babies (BB/TB) is 10.5% and the proportion of weak babies (BB/U) is 18.7%. Regarding the strength of the toddler population (TB/U) in the state. 34.6% is still very high and the prevalence of overweight toddlers (BB/TB) is 6.7% (SSGI, 2022).

The amount of wasting is influenced by many factors such as education, training, infectious diseases, gender, economic status, number of family members, parenting patterns, history. vaccinations and certain pregnancies (UNICEF, 2013). Food intake also decreases because infections are associated with Lack of energy, protein and other nutrients due to low appetite. (Prawesti, 2018).

The impact of wasting on young children can weaken their immune system, disrupt their mental development, and reduce interaction and socialization abilities with people around them. This can cause changes in brain organization and function, affecting social, cognitive and cognitive levels. If not addressed immediately, infant and child mortality rates in Indonesia are likely to increase (Insani, 2017).

Deficiency of one nutrient can cause deficiencies of other nutrients. For example, deficiencies of iron, magnesium, and zinc can cause decreased appetite, resulting in deficiencies of some of the nutrients, such as protein, protein deficiency can inhibit the growth and development of children, causing long-term problems that can develop over time and cause serious harm. Deficiencies of nutrients also affect brain development and cognitive abilities during critical periods of development, causing decreased intelligence. (Septicasari, 2018).

Malnutrition refers to food consumed with limited amounts of nutrients or does not meet nutritional needs. (Thamaria et al., 2017). Due to family malnutrition and poor child diet (Supariasa, 2016). Infectious diseases, on the other hand, are caused by lack of medical care for children (whose growth and development are never or rarely monitored) and by unclean water pipes at home. In addition, parents can also apply inappropriate parenting patterns that

trigger infections (Thamaria et al., 2017). Infant feeding patterns describe nutrients such as types of food, frequency, amount, and intake schedule (Nurriszka, 2019).

According to research by Vella Rizka et al, 2021 Factors affecting wasting in infants aged 6 to 59 months. There is a relationship between wasting and fever infection. The worse the illness, the greater the loss of nutrients in food. If the baby is sick repeatedly, it will affect his growth and development. Illness in the baby's body can affect the baby's nutritional status, early signs of illness The child's appetite is very low and the child does not accept the food given by the mother. (Vella Rizka et al, 2021).

The highest prevalence of wasting (BB/TB) was in Lanny Jaya Regency 16.9%, Yahukimo Regency 16.4%, Yapen Islands Regency 15.3% and the lowest prevalence of wasting (BB/TB) was in Puncak Jaya Regency only 0.3% while Nabire Regency was in the 11th lowest position at 8.9%. The highest prevalence of underweight (BB/U) was in Asmat Regency at 36.3, Boven Digul Regency 29.9%, Yahukimo Regency 26.5% and the lowest prevalence of underweight (BB/U) was in Deiyai Regency at 1.9% while Nabire Regency was in the 5th lowest position at 3.5%. The highest prevalence of overweight (BB/TB) is in Tolikara Regency, namely 23.3%, Paniai Regency 20.1%, Yahukimo Regency 16.0% and the lowest prevalence of overweight (BB/TB) is in Sarmi Regency, namely 1.3% while Nabire Regency is in the 8th highest position, namely 6.7% (SSGI, 2022).

Data from the 2023 e_PPGBM (Electronic Community-Based Reporting Recording) report in Nabire Regency showed that there was 6.16% malnutrition and 3.1% severe malnutrition (Cendra Paputungan et al, 2023).

Based on the Nabire District Health Office reported in 2023, the number of wasting cases including Nabire was 244 people, with the highest cases in the SP 1 Kalibumi Health Center as many as 38 people, then the Karang Tumaritis Health Center UPTD as many as 26 people and the Nabarua Health Center UPTD 30 people. Based on the above, the author wants to examine the relationship between education and maternal education and maternal parenting patterns on the incidence of wasting in the Nabarua Health Center UPTD work area.

2. METHOD

The type and design of the case study used in this study is a quantitative research design with observational analysis. This study used a cross-sectional study approach which is the independent variable of this study wasting in toddlers while the dependent variables are

their education, knowledge, and parenting patterns collected at once and only carried out at certain times. This study was conducted at the location of the UPTD Nabarua Health Center, Nabire Regency and was conducted from March to June 2024. The sample in this study was 30 people. The instrument used was a questionnaire containing education, knowledge, and parenting patterns of mothers. Researchers also used anthropometric tools, books, pens, and research documentation tools using cellphone cameras. The data used are primary and secondary data.

Data Analysis Processing and Data Presentation using SPSS 16.0 application with the Chi-square test analysis with a significance level or p-value < 0.05 determines that it is a significant relationship.

3. RESULTS AND DISCUSSION

Results

1. Research Location Description

The working area of the Nabarua Health Center Technical Implementation Unit (UPTD) is located in Nabarua Village, Nabire District, Nabire Regency, Central Papua Province. The working area of the Nabarua Health Center UPTD is the place where the research was conducted from March to April 2024 with a total sampling of 30 respondents who were given questionnaires and researchers conducted interviews by attaching the prepared questionnaires. Consecutive field visits to determine whether there is a strong relationship between maternal education and lifestyle and infectious diseases based on the number of wasting incidents in young children aged 6-50 months.

The UPTD of Nabarua Health Center has one Work Area that oversees one Sub-district, namely Nabarua Sub-district. Nabarua Sub-district covers 25 RTs, the geographical conditions are in the form of land with a temperature of 23-31°C which is rice fields and yards whose access is in the area. So that this city can be easily accessed by two-wheeled or four-wheeled vehicles (cars or motorbikes), the Nabarua Health Center Work Area has boundaries, namely the Nabarua Health Center work area borders the main side of the Nabarua Police (Siriwini Sub-district), the south borders the Kaliharapan Sub-district, the east borders the Siriwini Sub-district, and the west borders the Oyehe Sub-district.

2. Respondent Characteristics

Respondent characteristics are an important topic in research, both qualitative and quantitative. In quantitative research, respondents answer the researcher's questions, but in

qualitative research, respondents participate in the interview process (Elmy Tasya Khairally, 2023). The characteristics of respondents in this study were mother's age, mother's education, baby's age, baby's gender, and mother's occupation. The following is a table of characteristics of maternal respondents in this study, mother's age

Age is the length of time to live life from birth until now (Zebua S, 2019). Maternal age is related to healthy and safe reproductive organs, 20 to 35 years, which is related to menopause and decreased endurance and disease caused in that year. Age that should not pose a major risk when pregnancy and childbirth occur at the age of 20 to 35 years, because at this age the uterus is ready to receive pregnancy (Bopak, 2022). In this study, maternal age was categorized based on the Indonesian Ministry of Health in 2009. The following is a table of sample frequency distribution based on maternal age groups:

Table 1 Respondent Characteristics Based on Mother's Age Group in Nabarua Health Center Working Area.

Mother's Age Category f %	
17-25 years	7 33.3
26-35 years	18 60.0
≥36 years	5 16.7
Total	30 100

Source: Primary Data, 2024

Based on table 4.1, it shows that of the 30 respondents studied, the highest maternal age category was in the 26-35 year age group, as many as 18 people or a percentage of 60%, while the lowest was in the ≥36 year age group, as many as 5 people or a percentage of 16.7%.

a. Toddler Age

Age is the length of time to live life from birth until now (Zebua, S. 2019). In this study, the target children were infants. aged 6-59 months. In this study, data related to infants aged 0-59 months were analyzed in groups based on the Directorate General of Nutrition and Maternal and Child Health, 2011.

Toddlers are the term for children aged 0-59 or 0-5 years (Ministry of Health, 2024). The toddler age group is divided into 5 groups, namely 0-6 months, 6-8 months, 9-11 months, 12-23 months, and 24-59 months based on the Directorate General of Nutrition and Maternal and Child Health in 2011. The following is a table of frequency distribution of choices depending on the age of the child.

Table 2 Respondent Characteristics Based on Toddler Age Group

Toddler Age	f	%
0-6	7	23.3
6-8	10	33.3
9-11	7	23.3
12-23	4	13.3
24-59	2	6.7
Total	30	100.0

Source: Primary Data, 2024

Based on Table 4.3, it is stated that of the 30 respondents studied, the highest age group of toddlers was in the 6-8 month age group, totaling 10 people or a percentage of 33.3%, while the lowest percentage was in the 24-59 month age group, totaling 2 people or a percentage of 6.7%.

b. Toddler Gender

Gender is the biological difference between men and women from birth, the biological differences and biological functions between men and women are not different, both exist in the roles of men and women on earth (Hungu, 2016).

Gender is a characteristic of women and men, such as work practices, Relationships between groups of men and women that are socially constructed. Gender varies from one social group to another and can change frequently over time (WHO, 2020). Here is a Table of Toddler Gender Characteristics.

Table 3 Respondent Characteristics Based on Type Group Toddler's Genitals

Gender	f	%
Male	16	53.3
Female	14	46.7
Total	30	100

Source: Primary Data, 2024

Based on Table 4.4, it is stated that of the 30 respondents studied, the largest gender group was male, 16 people or 53.3%, while female, 14 people or 46.7%.

c. Mother's Job

Work is a social activity in which a person or a group tries and sometimes waits in a place at a time. reward money supply to achieve certain goals (or in other forms), without waiting for compensation, but with authority over others. (Wiltshire, 2016).

A mother has many roles in the family. (Copyright, 2021). The following is a table of characteristics of respondents' mother's occupation

Table 4 Respondent Characteristics Based on Mother's Occupation

Mother's Job	f	%
Not Working Housewife	23	76.7
Employee	6	20.0
Farmers/Fishermen/Laborers	1	3.3
Total	30	100.0

Source: Primary Data, 2024

Based on table 4.7, it shows that out of 30 respondents, the majority of mothers' jobs were unemployed, as many as 23 mothers or 76.7%, then there was 1 mother who worked as a farmer or as many as 3.3%.

3. Univariate Analysis

Unique analysis is a description of the things used in a variable with the aim of understanding and identifying the characteristics of the variable (Yuvalianda, 2020).

Univariate analysis is an independent analysis method of a single variable that is carried out by adding targets before describing the opposite variables studied (Rahmawati, A., et al, 2022). Each variable in this study has a unique analysis of the following:

a. Mother's Education

Education is a preparation or preparation to do a job or activity that is useful (Ahmad Nurhakim, 2023). Education has a major impact on human behavior. So the school environment, both physical and social, has a strong influence on community welfare (Pakpahan. M, 2021). The following is a table of sample frequency distribution based on maternal education groups:

Table 5 Frequency Distribution Based on Mother's Last Education in the Nabarua Health Center Work Area

Mother's Education	f	%
---------------------------	----------	----------

Tall	25	83.3
Low	5	16.7
Total	30	100.0

Source: Primary Data, 2024

Based on table 4.2, it is known that the percentage of mothers' last education is mostly mothers with higher education, namely 25 people with a percentage of 83.3% and the lowest is mothers with low education, namely 5 people with a percentage of 16.7%.

b. Knowledge

Knowledge is a very important part of the formation of human behavior. Related to maternal knowledge, this leads to the formation of steps for implementing healthy parenting and family life, including the role of In terms of improving the nutritional status of children, mothers are the ones who know this best, so mothers can educate, guide and discipline their children properly and appropriately (Adiningrum, 2016). The following is a table of sample frequency distribution based on the level of maternal knowledge:

Table 6 Frequency Distribution Based on Mother's Knowledge Level In the Working Area of the Nabarua Health Center UPTD

Knowledge f %
Lack of Knowledge 29 96.7
Enough Knowledge 0 0
Good Knowledge 1 3.3
Total 30 100

Source: Primary Data, 2024.

Based on table 4.7, it shows that from the total of 30 respondents, the results obtained regarding the level of knowledge regarding the use of maternal and child health guidebooks, with the largest number of respondents with a poor level of knowledge being 29 people or a percentage of 96.7% and including the highest number of respondents with a good level of knowledge. including 1 person the percentage is 3.3%..

c. Mother's Parenting Pattern

Parents are role models for their children, namely the attitude of parents towards their children, education, guidance and support for children to achieve maturity and shape children according to the rules, customs and good living habits (Fitriyani, 2015).

Being a parent is the best way for parents to raise children as a form of responsibility for their children (Arjono, 2017). The following is a table of sample frequency distribution based on Parenting Patterns.

Table 7 Frequency Distribution Based on Mother's Parenting Patterns in the Working Area of UPTD Nabarua Health Center.

Parenting	f	%
Good	24	80.0
Enough	4	13.3
Not enough	2	6.7
Total	30	100

Source: Primary Data, 2024

Based on table 4.8, it shows that from the total of 30 respondents, the highest parenting pattern was obtained, namely good, as many as 24 mothers (80.0%). While the lowest parenting pattern was poor parenting, as many as 2 mothers (6.7%).

d. Waste

Waste is a condition where the child's weight decreases over time when the weight drops below the growth restriction standard or below the weight according to height (decreased) and indicates a serious (acute) illness (Clara Astiyah, 2022). The following is a table of characteristics of the results of the wasting variable analysis:

Table 8 Distribution of Respondents Based on Wasting Incidents in the Work Area of the Nabarua Health Center UPT

Waste	f	%
Malnutrition (-2SD)	19	63.3
Malnutrition (<-3SD)	11	36.7
Total	30	100

Source: Primary data 2024

Based on table 4.10, it shows that out of 30 respondents studied, the number of toddlers diagnosed with malnutrition was 19 people or 63.3%. Furthermore, the number of toddlers diagnosed as very thin was 11 people or 36.7%.

4. Bivariate Analysis

Pairwise analysis is an analysis carried out to find a meaningful relationship between variables. (Rahmawati, A., SiT, S., & M PH, A. 2022). In this study, the chi-square test was

used for bivariate analysis. Bivariate analysis In this study, the Chi-square test was used to determine whether there was a relationship between the two maternal knowledge, maternal patterns and wasting incidents.

a. Relationship between Education and Wasting Incidents in Toddlers in the Working Area of UPTD Nabrua Health Center

Education is a process in which a person gains general knowledge through formal non-formal education. to create a learning atmosphere and learning process, the level of education affects the way a person thinks, behaves, and the level of awareness and understanding of autism (Zebua. S, 2019).

Education has a big impact on human behavior. So the school environment, both physical and social, can greatly affect the lifestyle and health of the body and mind of the community (Pakpahan, M, 2021), The following is a table of the Relationship between Maternal Education and Wasting Incidents

Table 9 Relationship between Mother's Education and Wasting Incidents in Toddlers in the Working Area of the Nabarua Health Center UPTD

		Waste		Malnutrition Total Malnutrition		
Mother's Education	f	%	f	%	f	P-Value
Height	17	68.0	8	32.0	25	83.3
Low	2	40.0	3	60.0	5	16.7
Total	19	63.3	11	36.7	30	100

Source: Primary Data 2024

Based on table 4.10, it states that from the analysis results obtained p-value (0.23) >0.05 which means there is no relationship between level of maternal education on the incidence of wasting in toddlers in the UPTD Nabarua Health Center area.

a) The Relationship Between Mother's Knowledge and the Incidence of Wasting in Toddlers in the Working Area of the Nabarua Health Center UPTD

Knowledge is a view in the human mind that is created using the five senses, not beliefs, superstitions, and false explanations (Soekanto, 2003)

The results of data analysis using the computer program release of the Social Science Statistics Program (SPSS) version 16.0 to determine the relationship between the level of maternal education and the occurrence of Wasting. The following is a table of the Relationship between Mother's Knowledge and the Occurrence of Wasting.

Table 10 Relationship between Mother's Knowledge and the Incident of Wasting in Toddlers in the Work Area of the Nabarua Health Center UPTD

		Waste		Malnutrition Total Malnutrition			
Knowledge	f	%	f	%	f	%	<i>P-Value</i>
Enough	18	60	11	36.7	29	96.7	0.43
Less	1	3.3	0	0	1	3.3	
Total	19	63.3	11	36.7	30	100	

Source: Primary Data, 2024

Based on table 4.11 it states that from the results of the analysis that has been done, the p-value obtained is $(0.43) > 0.05$, which means there is no relationship between the level of maternal knowledge and the incidence of wasting in toddlers in the UPTD Nabarua Health Center area.

b) The Relationship Between Mother's Parenting Patterns and the Incidence of Wasting in Toddlers Region Work of UPTD Nabarua.

Family parenting is Education, also known as parenting, is the practice of educating children from birth to adulthood. (Women's Empowerment Service, 2020). The following are the results of data analysis with the computer release Statistical Program for Social Science (SPSS) version 16.0 to determine the relationship between parenting patterns and wasting events. The following is a table of the Relationship between Parenting Patterns and Wasting Events.

Table 11 Relationship between Parenting Patterns and the Incidence of Wasting in Mothers in the Work Area of the Nabarua Health Center UPTD Toddlers in the Work Area of the Nabarua Health Center UPTD

		Waste		Malnutrition Total Malnutrition			
Parenting Patterns	f	%	f	%	f	%	<i>P-Value</i>
Good	15	62.5	9	37.75	24	80	0.82
Enough	3	75.0	1	25.0	4	13.3	
Less	1	50.0	1	50.0	2	6.7	
Total	19	63.3	11	36.7	30	100	

Source: Primary Data, 2024

Based on table 4.12, it can be seen that the results of the analysis that have been carried out obtained a p-value (0.82) > 0.05, which means that there is no relationship between maternal parenting patterns and the incidence of wasting in toddlers in the UPTD Nabarua Health Center area.

Discussion

1. The Relationship Between Mother's Education and the Incidence of Wasting in Toddlers in the Working Area of the Nabarua Health Center UPTD

Education is a learning process that aims to develop abilities and skills so that everyone can work well in society. Education also contributes to the formation of attitudes, values, and norms that form the basis of social behavior (Fitri Endang, et. al 2024).

Based on bivariate analysis, SPSS statistics were tested on the test of maternal education on the incidence of wasting in the Nabarua Health Center Work Area on the incidence of wasting in the Nabarua Health Center Work Area (p = value 0.23) which means that there is no relationship between education and the incidence of wasting in toddlers in the Nabarua Health Center Work Area, this is because some mothers of toddlers have relatively low education, as many as 25 people or 83.3%.

This study is in line with the study conducted by Haliza Henfa Dela Cruz, (2023) with the title: Factors Related to the Incidence of Wasting in Toddlers Aged 6-59 Months in the Work Area of the Susunan Baru Health Center, West Tanjung Karang District, Bandar Lampung City. In this study, the number of case groups was 44 people and a total of 44 people were selected as samples using the purposive sampling method, the sample size of this study was 88 respondents, including 44 case groups and 44 control groups with low maternal education (36.4%), working mothers (45.5%), and low family income (65.9%), Data analysis using the chi-square test showed that there was no relationship between maternal education level (p = 0.506) and the incidence of wasting in infants aged 6 to 59 months at the Susan Baro Health Center.

Researchers hypothesize that maternal education influences young children's eating habits. Educated infants and mothers have good nutritional status because the mother's knowledge and motivation in preparing delicious food have an effect (Utami, 2018). Maternal education is related to the impact of wasting, and infants with low maternal education are 4 times more likely to be wasted. A mother's level of education affects her ability to obtain information, because mothers with higher education are more likely to receive good nutritional information than mothers with lower education. (Sodarsono and Somarami, 2021).

Highly educated mothers are older and more likely to know information about nutrition and use information about child care, including practicing in raising children (Rahayu et al., 2018).

Based on the results of Akombi's research (2017), the relationship between maternal education and child health means health awareness through formal education and literacy, which includes research on health issues that affect children, including acceptance and participation in the world. In Indonesia, most of the childcare work is done by mothers, so the mother's education level has a greater influence on the child's nutritional status than the father's education level (Cruz, 2023).

A mother's education is the foundation of good nutrition for young children. Highly educated mothers are more easily able to obtain information from outside than lowly educated mothers. The education level of poor families is mostly in the low category, because they cannot continue their education to a higher level due to the financial problems they experience.

Level Education affects a person's ability to receive information. Highly educated people have easier access to information than lowly educated people. Parents use this information to protect their babies. in everyday life.

The results of this study are supported by Anindita in 2018 with the title Level of maternal education, family income on the occurrence of Wasting showed that there was no relationship between the level of maternal education and the occurrence of wasting, obtained a p value > 0.581 . This study is similar to Hendriati's study (2013) shows that there is no relationship between maternal education regarding food and the occurrence of sexual activity in young children.

This is because the majority of respondents are housewives, making it difficult to obtain information about health and nutrition, because their daily work is only done as housewives at home. Good knowledge about food allows one to prepare a list of appropriate foods to eat. Literature studies show that most mothers of toddlers have a good understanding of wasting disease. (Burhani, 2016; Pratas, 2020).

Level A mother's education is related to the ease of obtaining information on maternal nutrition and health from outside. Mothers with higher education receive more external information than mothers with lower education. Less educated, most poor families have a low level of education, because of the financial problems they face, they cannot continue their studies at a higher level. In this study, mothers with lower levels of education did not give

birth to babies with more severe diseases more often than mothers who were affected by having higher education (Cholifatun Ni'mah, 2015).

This study is not in line with the study conducted by Cholifatun Ni'mah, 2015 entitled *The Relationship between Education Level, Knowledge Level and Parenting Patterns of Mothers with Wasting and Stunting in Toddlers from Poor Families* and the results of the analysis using the chi-square test obtained 0.05. The conclusion is that the level of education contributes to wasting in toddlers from poor families in Balen District, Bojonegoro Regency.

This is because the mother's education level is the main cause of malnutrition, There are many other factors involved in this problem. food insecurity, especially waste in poor families (Cholifatun Ni'mah, 2015).

Education also determines how easy it is for someone to understand and comprehend the nutritional knowledge they have acquired. This can be used as a basis for defining appropriate management practices. Because of the importance of fostering a family, community knowledge is needed to overcome nutritional problems in the family. This is in line with research by Astuti and Taurina (2012) who reported that there was no relationship between the level of maternal education and the nutritional status of elementary school children and elementary school children in Gudian District against BB/TB infections. According to research by Anindita (2012), there was no relationship between the level of maternal education and low infant growth (Notoatmodjo, 2007).

Education has a major impact on human behavior. So the school environment, both physical and social, has a significant impact on people's lifestyles and maintaining physical and mental health (Pakpahan, M, 2021).

This study is not in line with the research conducted by Wanda Lestari, 2021 with the title *Factors Influencing Wasting in Toddlers at the UPTD Siduaori Health Center, Siduaori District, South Nias Regency*. Mother's education was obtained from high school (41.1%) of toddlers and college (5.4%) of toddlers. Mother's performance was met for working mothers (86.2%) of babies who were able to survive and for non-working mothers (13.8%) of babies who were able to survive, some of whom were babies with special needs.

Education is a way for people to gain general knowledge through formal and non-formal education. To create a learning atmosphere and learning process, the level of education affects the way a person thinks, behaves, and the level of awareness and understanding of autism (Zebua. S, 2019).

2. The Relationship Between Mother's Knowledge and the Incidence of Wasting in Toddlers in the Working Area of the Nabarua Health Center UPTD

Knowledge is a human response to natural environmental stimuli through contact with sensory objects, and knowledge is a result that occurs after experiencing something specific (Pudjawidjana Siti, 2018).

Based on bivariate analysis, SPSS statistics were tested on the test of maternal knowledge about healthy eating. on the incidence of wasting in the Nabarua Health Center Work Area ($p = \text{value } 0.43$) which means there is no relationship between maternal knowledge about balanced nutrition and the incidence of wasting in toddlers in the Nabarua Health Center Work Area, this is because some mothers of toddlers have knowledge about balanced nutrition which is still said to be poor nutritional knowledge.

This study is in line with previous research conducted by Pratas (2018), entitled Overview of maternal knowledge levels on stunting, and wasting, the results of the study have insufficient knowledge about balanced nutrition. With a percentage (54.8%), respondents with medium nutritional status regarding infant nutritional status amounted to 28 respondents (65.1%), based on the results of statistical tests and Spermman ratings, a p -value of 0.370 was obtained so that it can be said that there is no relationship between maternal intelligence and the nutritional status of young children, lack of knowledge about nutrition reduces the ability to use information in everyday life, one of which is the cause of food problems.

Knowledge is the result of human ability to understand, through knowledge, understanding, and understanding (Salam, 2003). Written or written evidence includes answers to provocations in the form of oral and written questions (Notoatmodjo, 2014).

Levelmother's literacy height of a person does not necessarily determine the child's eating habits. Highly educated mothers should be able to use their knowledge in everyday life. However, in addition to the influence of education level, behavior is also influenced by other factors such as socio-economic and environmental factors (Notoatmodjo, 2005).

This study is in line with previous research conducted by Cholifatun Ni'mah, 2015 entitled The Relationship between Education Level, Knowledge Level and Parenting Patterns of Mothers with Wasting and Stunting in Toddlers from Poor Families. Wasting problems occur more in mothers with low education (16.7%), Data were analyzed using the chi-square test for knowledge level (cognitive) $p = 0.43$. The conclusion is that knowledge does not contribute to wasting among infants from poor families in Balan District, Buzhongoro

Regency. According to research by Hendayati (2013), it was reported that there was no relationship between maternal knowledge about food and infant mortality. According to Solastri (2012), there is no correlation between education level. Title Relationship of Education with Diet and Waste Practices in Mujurayong Village, Wongo District, Madiun Regency.

Level High maternal literacy does not guarantee that her child has the right to good food. Highly educated people should be able to apply their knowledge. However In daily life, apart from the influence of education level, behavior is also influenced by other factors such as the economy and the environment.

The risk of disease in young children is related to the food intake of young children. The daily nutritional intake consumed by babies depends on their mothers, so mothers play an important role in changing the amount of food for babies. Their mothers who know more, know more about how to care for their children, especially how to prepare food based on the nutrients needed by babies, so that babies do not need it. suffer from malnutrition. In this study related to the problem of waste, the better the mother's education level, the less waste is produced by educated mothers even though all their babies are normal. This may be because even though the mother's status is working well, in poor families it is difficult to meet daily needs and there is no income, so the status of the parents does not affect the occurrence of wasting problems (Cholifatun Ni'mah, 2015)

Level a person's education influences their attitude and behavior in determining food choices, ultimately affecting community food security. Mother's knowledge is one of the reasons. influences the eating habits of young children and is the most significant intervention and measure. The concept of baby food, nutritious food, balanced food and the benefits of baby food (Istiono Wahyudi, et al 2009).

Knowing how to cook at the family level is important to support better nutrition. Mothers' knowledge of how to cook, serve and prepare food, what types of food and all types of food can cause boredom, then what foods and what types of food can be indicators of eating problems. The results of the study showed that the knowledge and attitudes of mothers who have young children in preparing complementary foods are the weakest part in the development of toxic substances in young children.

One of the factors that affect the health of early childhood is parental knowledge in choosing and preparing food due to parental knowledge involved in cooking for young children, how to eat and eat properly, choosing the right types of food and their priorities.

Food in the family The amount of parental knowledge about food is important for behavior and attitudes in choosing food for children. Food quality determines the highest percentage of food security at the national level. Not knowing the right food can lead to poor food choices and malnutrition related to this food, poor or weak eating habits in children (Apriliana et al, 2020).

This study is in line with the study conducted by Haliza Henfa Dela Cruz, (2023) with the title: Factors Related to Wasting Incidents in Toddlers Aged 6-59 Months in the Work Area of the Susunan Baru Health Center, West Tanjung Karang District, Bandar Lampung City, the level of maternal knowledge is low about balanced nutrition, the frequency of respondents according to diet is low-energy babies (40.9%), have less Carbohydrates (35.2%), low protein (17%), low fat (19.3%). Data analysis using chi-square, there is no relationship between the level of maternal education of 0.013 with the percentage of babies 6-59 months in the workplace of the Susunan Baru Health Center. (Cruz, 2023)

Lack of maternal knowledge about healthy eating patterns for young children has an impact on providing healthy food. so that it has a big influence on the occurrence of Wasting. A mother's knowledge can have an impact on examples of toddler kitchen sustenance. Lack of response from the mother can have an impact on the low price of toddler food. This study is also an additional examination of the essence that there is a relationship between the response from the mother about kitchen alms and the price of toddler food. This condition is useful if the more loyal the behavior of kitchen alms that are carried out, the story will be more loyal the price of toddler food (Sari & Ratnawati, 2018).

This study is not in line with the study conducted by Fika Apriliana et al, 2020 entitled The Relationship between Knowledge and Attitudes of Mothers of Toddlers Regarding Providing Additional Food with the Incidence of Toddlers at Risk of Wasting at the Getasarabi Village Posyandu, low maternal awareness of the risk of smoking below the red line in infants aged 7 years (43.8%), good maternal awareness and the risk of thinness above the red line in infants aged 9 years (100.0%), maternal knowledge is low and the risk of wasting is near the ninth red line (56.2%). The results of the statistical test using the chi-square test. $P = 0.05$. These results indicate the middle. maternal knowledge to provide complementary foods and breast milk. the risk of toddler death in Getasarabi village in 2020. The study was also supported by Maharani et al (2019), showing that 83.7% of mothers had negative information for breastfeeding babies with poor nutritional status. Meanwhile, highly educated mothers contributed 61.6% of babies through statistical test results $p = 0.000$ indicating a significant

relationship between nutritional status, both maternal knowledge about complementary foods and nutritional status of babies in the Pir Batte Puteh Health Center Working Area, Woyla Barat District, West Aceh Regency.

The emergence of diseases in young children is related to food intake and given to young children. The food given to babies every day depends on the mother, so the mother has an important role in preparing food that is suitable for babies. (Sari, 2022).

3. The Relationship of Mother's Parenting Patterns to the Incidence of Wasting in Toddlers in the UPTD Nabarua Health Center Work Area.

The main characteristic is concern for the mother or other caregiver in the form of attitudes and behavior related to closeness to the child, cooking, cleaning, giving affection, and all factors related to the mother's condition in terms of physical and mental health, nutritional status, general education, knowledge about good child care, family and community functioning, etc. (Septiani, 2014).

The results of the bivariate analysis that have been tested using SPSS statistics on the test of the relationship between parenting patterns and wasting incidents in the Nabarua Health Center work area ($p = \text{value } 0.82$) which shows that there is no relationship between parenting patterns and wasting incidents in the Nabarua Health Center Work Area, from the results of the SPSS analysis shows that mothers of toddlers have good parenting patterns (80%), but toddlers are still diagnosed with Wasting.

This study is in line with previous research conducted by Cholifatun Ni'mah, (2015) entitled *The Relationship between Education Level, Knowledge Level and Parenting Patterns of Mothers with Wasting and Stunting in Toddlers from Poor Families*. In terms of parenting patterns, the problem of wasting occurs most often in mothers with positive parenting patterns, which is 25%. poor families. in Balen District, Bojonegoro Regency (Cholifatun Ni'mah, 2015).

The problem of wasting in infants indicates a short-term and recent nutritional deficiency experienced by infants. The prevalence of wasting in young children from poor families is not influenced by the mother's education level.

Maternal learning is the behavior of mothers in caring for young children. Maternal parenting behavior can contribute to infant mortality because feeding of infants is largely determined by the mother. Mothers who have healthy children tend to have good eating patterns compared to mothers tend to eat poorly, but in this study mothers with good

parenting did not have fewer infants with substance abuse problems than mothers with poor parenting.

This may be because even though a mother's employment situation is good, poor families have obstacles in meeting daily needs, so that the mother's labor has no effect on the emergence of waste problems.

This study is not in line with the study conducted by Noorjanah (2022) entitled *The Relationship between Exclusive Breastfeeding, Complete Basic Immunization and Mother's Parenting Patterns with the Incident of Wasting in Toddlers in the Berangas Health Center Work Area, Barito Kuala Regency*. This study is not in line, the data on the number of toddlers measured in 2020 were 199 toddlers (10.06%) compared to the number of toddlers in 1979 and 2021 as many as 162 toddlers. (12.37%) in 2020. The results of the chi-square test analysis (p -value = 0.05) (Noorjanah, 2022). The conclusion of this study shows that there is a relationship between Parenting Patterns and the incidence of wasting.

Maternal factors contribute to obesity in infants because the nutrition in infant food is controlled entirely by the mother. Healthy mothers give birth to babies with better nutritional status than mothers with poor nutritional status. However, this study did not include mothers who had positive parenting patterns, fewer babies experienced drug abuse problems than mothers with low parental role models.

This may be because even though mothers are good role models in raising children, there are problems in small families in meeting daily needs, so that the main role model is mothers in dealing with the emergence of waste problems (Cholifatun Ni'mah, 2015).

Parental nutrition is part of the parenting model that focuses on how a mother feeds her child. The main example related to children's eating habits is the mother's habits and attitudes in caring for and feeding, such as paying attention to children's nutritional needs and inviting children to eat (Rofiqoh et al., 2021).

Infants are one of the age groups that need to focus on trying to improve the diet of this group of children who have very important nutritional needs for their growth and development. Infants who are malnourished or underweight are more likely to be overweight to die than infants who are not malnourished. God 2019, according to parents, food, environmental cleanliness and hygiene and health protection. Therefore, parental role models are very important, in terms of children's eating, because parents take a lot of care of providing food, so parents do not take their babies seriously when eating, depending on the

nature of the food, such as food, then problems will arise. Death and loss of food (Noorjanah, 2022).

According to parents, food, Environmental cleanliness and hygiene and health maintenance. Therefore, parental role models are very important for children's nutrition, because parents play a major role in providing nutrition, so if parents pay less attention to their babies when eating, problems will arise depending on the nature of the food, such as eating disorders and loss of food (Firdaus (2019).

4. CONCLUSION

Resultsresearch on the relationship between maternal knowledge, maternal parenting patterns, and infectious diseases with the incidence of wasting in the working area of the Nabarua Health Center UPTD, Nabire Regency, Central Papua Province is as follows:

1. There is no significant relationship between maternal education and the incidence of wasting in toddlers with a p-value of 0.23 (>0.05).
2. There is no significant relationship between maternal knowledge and the incidence of wasting in toddlers with a p-value of 0.43 (>0.05).
3. There is no significant relationship between parenting patterns and the incidence of wasting in toddlers with a p-value of 0.82 (>0.05).

5. SUGGESTION

1. For Researchers

Conduct research with other variables that can affect the nutritional status of toddlers.

2. To the Institute of Education

It can increase knowledge as a reference for students to become this research can be used as additional information, scientific development and library references, so that it can be used as reading material for students in the future.

3. Suggestions for Health Centers

Increase activities in the health center and integrated health post areas by focusing on counseling mothers who have toddlers, always paying attention to the health of toddlers and monitoring the development of toddlers.

4. Advice to Mothers of Toddlers

It is expected that mothers of toddlers will provide daily food in the right amount and good quality, provide good maternal care patterns so that children grow and develop well by coming to the integrated health post to monitor their child's weight.

5. Suggestions for Health Services

As input for the Nabire District Health Office to create a Health Center policy in procuring PMT to improve toddler nutritional problems.

BIBLIOGRAPHY

Al-faida, N. (2023). Nutrition Research Methodology. NEM Publisher.

Almatsier, S. (2005). Basic Principles of Nutritional Science. PT. Gramedia Pustaka Utama, Jakarta.

Arisman, (2004). Assessment of individual nutritional status in Nutrition in the Life Cycle. Jakarta: EGC

Asniah, FN (2024). The Relationship between Mother's Activeness and Knowledge of Mother's Parenting Patterns in Posyandu Affects Toddler Nutritional Status. Indonesian Midwifery, 718.

Cendra Paputungan et all, (2023) The Influence of Knowledge on the Level of Macronutrient Adequacy in Preschool Children in the Work Area of the Nabarua Nabire Health Center, Central Papuafile:///C:/Users/asus/Downloads/1441+ARTICLES+CENDRA+30839-30846%20(1).pdf

Cholifatun Ni'mah, (2015), the relationship between education level, knowledge level and maternal parenting patterns with wasting and stunting in toddlers in familiespoorfile:///C:/Users/asus/Downloads/admin,+14.+article+cholifatun+ni'mom%20(6).pdf

Haliza Henfa Dela Cruz, (2023). Factors Related to the Incidence of Wasting in Toddlers Aged 6-59 Months in the Working Area of the Susunan Baru Health Center, West Tanjung Karang District, Bandar Lampung City 16-17

Handayani, C. (2020). Overview of Exclusive Breastfeeding and Nutritional Status of Infants Aged 0-6 Months in Several Locations in Indonesia from 2005 to 2019. Bosowa University Makassar.

Henfa (2023). Factors related to the incidence of wasting in toddlers aged 6-59 months in the working area of the New Structure Health Center, West Tanjung Karang District, Bandar Lampung City.

Hidayanti Lilik, Maywati Sri. (2013), Food Security of Poor Families with Undernourished Toddlers in Rural and Urban Areas of Sriwijaya University, [Thesis]. Postgraduate Program in Agribusiness, Faculty of Agriculture, University of Lampung, Bandar Lampung.

- Indonesian Dietetic Association (AsDi), (2015). *Children's Diet Guide*. Jakarta: Faculty of Medicine, University of Indonesia.
- Khomsan, Ali. (2000). *Nutrition Knowledge Measurement Techniques*. Department of Community Nutrition and Family Resources. IPB: Bogor
- Ministry of Health of the Republic of Indonesia. *Community Nutrition Development Work Plan*. Jakarta: Directorate of Nutrition Development. (2013).
- Noflidaputr, R. (2022). Determinant Factors Causing Wasting Incidents in . *Human Care*, 496-507.
- Noorjanah. (2022). The Relationship Between Exclusive Breastfeeding, Basic Immunization Completeness and. *Faculty of HealthPublic*., 1-2.
- Purwani E., Maryam., (2013). Feeding Patterns with Nutritional Status of Children Aged 1-5 Years in Kabunan Taman Pematang in 2013. (*Journal of Child Nursing*) Faculty of Nursing and Health Sciences, UNIMUS.
- Rakhmawati, NZ, (2014). The Relationship between Mother's Knowledge and Attitude with the Behavior of Feeding Children Aged 12-24 months. *Journal of Nutrition College*. 3: 43 –
- Sari, FA (2020). Relationship between Knowledge and Attitude of Mothers of Toddlers About . *Nursing Profession*, 82-92. <https://doi.org/https://doi.org/10.1111/mcn.12685>.
- Wulandar, Y. (2020). The Relationship Between Knowledge, Environmental Sanitation, . *Bhakti Husada Mulia Madiun Health College*, 1-89.
- Yuliarti, N. (2010). The Miracle of Breast Milk "The Best Food for the Health, Intelligence and Agility of Your Little One". Yogyakarta: Andi Publisher <https://doi.org/https://doi.org/10.1111/mcn.12685>.