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The Effect of Formula Milk Consumption on Nutritional Status Toddlers Aged in the Work Area of UPTD Puskemas Yaro Village Jaya Mukti Nabire District

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Abstract A child's life is very important, and parental attention is also important. Babies need to get nutrition from food every day in the right amount and good quality every day. One way to optimize child growth and development is by giving formula milk. Objective: To determine the effect of formula milk consumption on the nutritional status of toddlers in the Working Area of the Yaro Health Center UPTD, Jaya Mukti Village, Nabire Regency. Method: This type of research is quantitative research using observational analysis research design and cross-sectional study design. The population in the study was 65 toddlers and the selected sample consisted of 65 toddlers using total sampling. The research instruments included questionnaires, anthropometric measuring instruments (digital scales and length boards), stationery and documentation tools. The analysis used the Release Statistical Program For Science (SPSS) type 16.0 application. Results: The study showed that the BB/TB index p-value was 0.00 (<0.05), the BB/A index p-value was 0.00 (<0.05) and the TB/A index p-value was 0.00 (<0.05). Conclusion: There is an effect of giving formula milk on the nutritional status of toddlers based on anthropometric measurements using the Body Weight/Height (BW/TB), Body Weight/Age (BW/U) and Height/Age (BH/U) indices. Suggestion: For parents to pay attention to the appropriateness of the dosage, frequency of giving and sanitation of serving formula milk to achieve optimal nutritional status.

Keywords: Toddlers, Milk, Nutritional

1. INTRODUCTION

The Toddler Period is the period after birth until before the age of 60 months. It is important to pay attention to the health of infants and toddlers because their physical and mental growth is very rapid during this period. Infant and child health services include management and communication, nutrition, growth and development monitoring, immunization, rehabilitation and treatment of chronic diseases, primary stimulus and early development, and provision of a healthy and safe environment.(Jayani DH, 2021).

According to the World Health Organization (WHO), formula milk is milk made by industry to meet the nutritional needs of infants. Most formula milk is provided in powder form. It is important to know that breast milk (ASI) is sterile, but baby milk is not. Giving formula milk is recommended for toddlers who do not receive breast milk for any reason. Or as an additional supplement if breast milk products do not meet the toddler's intake. Good use is to ask a nutritionist for advice about formula milk so that it can be used correctly, to be able to measure the baby's nutritional status from time to time. To find out the child's nutritional status against nutritional disorders. (Ministry of Health, 2023).

United Nations International Children's Emergency Fund(UNICEF) estimates that in 2020, 45.4 million children under 5 years of age will suffer from malnutrition.nutritionacute

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(wasting) worldwide. Almostall children suffering from malnutrition are found in areas where the population is at risk of poverty, and has limited nutrition and health services (Jayani DH, 2021).

According to the United Nations International Children's Emergency Fund (UNICEF) estimates that 340 million children under the age of five suffer from one or more micronutrient deficiencies, including deficiencies of vitamin A, iron, iodine and zinc.Governments in various countries must focus on children to prevent malnutrition.(Jayani DH, 2021).

Based on data from the Indonesian Nutritional Status Survey (SSGI) in 2022. The nutritional status in Indonesia is stunting reaching 21.6% of toddlers, malnutrition 7.7% of toddlers, underweight 17.1% of toddlers, and overweight 3.5% of toddlers. The nutritional status in Papua province is stunting reaching 34.6% of toddlers, wasting 10.5% of toddlers, underweight 18.7% of toddlers, and overweight 6.7% of toddlers.

Data from the Nabire Health Service in 2023, the number of toddlers at the Nabire Regency Health Center was 10,185 toddlers and the nutritional status according to weight based on age was very short 62 toddlers, short 287 toddlers, normal weight 2,562 toddlers, and over-risk 131 toddlers. Meanwhile, the nutritional status based on height according to age was very short 122 toddlers, short 327 toddlers, normal 2,563 toddlers, high risk 17 toddlers. Meanwhile, the nutritional status based on weight according to height was malnutrition 67 toddlers, undernutrition 177 toddlers, normal 2,320 toddlers, over-risk 325 toddlers.

Data from the Yaro Health Center UPTD in 2023, Jaya Mukti village had 40 toddlers with nutritional status that can be seen according to weight according to age (BB/A) very lacking 1 toddler, lacking 11 toddlers, normal weight 23 toddlers and risk of overweight 5 toddlers. While the nutritional status according to height according to age (TB/A) is very short 0 toddlers, short 3 toddlers, normal 36 toddlers, high risk 1 toddler. And the nutritional status according to weight according to height (BB/TB) is malnutrition 1 toddler, underweight 18 toddlers, normal 8 toddlers, overweight 4 and risk of overweight 9 toddlers.

The indicators used for children in this age group are weight according to age (BB/A) height according to age (TB/A) weight according to height (BB/TB) this index determines the nutritional status of children based on the categories of underweight, short, thin, and obese (Dinkes, 2023)).

The child's nutritional status index needs to be monitored because it is one of the factors that determines the risk of various diseases and health disorders related to nutrition, such as obesity and stunting (Ikhsania AA, 2020).

Current nutritional problems in Indonesia are included in the double burden of nutrition problems. That is, the problem of malnutrition has not been resolved, while the problem of being overweight has emerged. The prevalence of being overweight continues to increase every year in toddlers (Ministry of Health, 2023).

Children's nutritional status is influenced by two factors, namely direct factors and indirect factors. Direct factors related to toddlers' eating patterns include infectious diseases (infections) and children's food consumption. Currently, malnutrition is an indirect factor that affects children's nutritional status. Malnutrition in children affects growth and development and is difficult to treat, resulting in poor learning, function and attitudes in children compared to normal children (Ministry of Health, 2023).

Many researchers explain that the effects of malnutrition in the short term will cause children to become lazy, have difficulty speaking and other growth and development problems, but the long-term cause of malnutrition is a decrease in IQ. Decreased concentration and low self-confidence. Therefore, the problem of malnutrition if not handled properly will endanger people's lives and hinder the growth of the nation's generation in the long term (Ministry of Health, 2023).

This is one of the efforts to improve the growth and development of early childhood is to prepare powdered milk. Formula milk is cow's milk that has been processed to make it easier for babies to digest. Problems caused by formula incompatibility can be caused by rapid reactions or symptoms starting in less than 8 hours. The reaction is slow after 8 hours, even after consuming milk for 5/7 days. Signs and symptoms of depression are similar to the food, this disease attacks all body tissues, especially the digestive organs, skin, respiratory and other organs. (Ministry of Health, 2023).

Based on the background above, the researcher is interested in conducting a study entitled "The Effect of Formula Milk Consumption on the Nutritional Status of Toddlers Aged 0-59 Months in the Working Area of the Yaro Health Center UPTD, Jaya Mukti Village, Nabire Regency"

2. METHOD

The research method used in this study is quantitative design and uses analytical and observational designs with a cross-sectional study approach. Quantitative is a type of data whose results are like numbers or figures that can be connected and measured. The accuracy of the data produced in quantitative data greatly affects the credibility and quality of the research because it is absolute (Al-faida N, 2023).

This research will be conducted in the Working Area of UPTD Puskesma Yaro, Jaya Mukti Village, Nabire Regency. This research will be conducted from April to May 2024.

The sample in this study consisted of all mothers who have children and live in Jaya Mukti Village, Nabire Regency, namely 40 people. The instruments in this study were research questionnaires, Anthropometric Measuring Instruments (Digital Scales), Length Boards, Stationery and Documentation Tools. The types of data used in this study are primary data and secondary data.

Data processing and analysis using Microsoft Excel 2010 and Release Statistical Program For Science (SPSS) version 16.0 with chi-square statistical test with a significance level of 0.05 or α 5%. If the ρ-value α then Ho is accepted which means there is no relationship between the dependent variable and the independent variable.

3. RESULTS AND DISCUSSION

The research was conducted in the Working Area of the Technical Service Unit (UPTD) of the Yaro Health Center from April 17 to May 17, 2024 with a population of 65 respondents selected based on the criteria of 65 sample respondents who were given a questionnaire that had been distributed to determine whether there was a relationship between the provision of formula milk and the nutritional status of infants aged 0-59 months.

The second characteristictatisti where in relation to each other (Handarni., et al, 387:2020). This study uses the chi-square test to determine whether there is a relationship betweenthe studied statistics. In this study, bivariate analysis, namely the provision of formula milk based on the body weight index according to height (BB/TB), the provision of formula milk based on the body height index according to age (TB/U), and the provision of formula milk based on the body weight index according to age (BB/U), can be seen as follows:

a. The Effect of Formula Milk Consumption on the Nutritional Status of Toddlers Aged 0-59 Months Based on the Body Weight Index According to Height (BW/H)

   The results of data analysis using the Release Statistical Program For Science (SPSS) version 16.0 computer program to determine the effect of formula milk consumption on the nutritional status of toddlers based on the weight index according to height (BB/TB).

Table 1 Effect of Formula Milk Consumption on Nutritional Status of Toddlers Aged 0-59 Months Based on BB/TB Index

Consumption of Formula Milk	Nutritional Status BB/TB								Amount		P (value)
	Good Nutrition		Malnutrition		Malnutrition		More Nutrition				
	f	%	f	%	f	%	f	%	f	%	
No	3	12.5	2	8.3	17	70.8	2	8.3	24	37.0	0.00
Yes	41	100.0	0	0	0	0	0	0	41	63.0	
Total	**44**	**67.6**	**2**	**3.1**	**17**	**26.2**	**2**	**3.1**	**65**	**100**	

Source: Primary Data, 2024

It can be seen that from the results of the analysis that has been carried out, a p-value (0.00) < 0.05 was obtained, meaning that there is an effect of formula milk consumption on the nutritional status of toddlers aged 0-59 months based on the western body index according to height (BB/TB).

b. The Effect of Formula Milk Consumption on the Nutritional Status of Toddlers Aged 0-59 Months Based on the Height-for-Age Index (H/A).

The results of data analysis using the Release Statistical Program For Science (SPSS) version 16.0 computer program to determine the effect of formula milk consumption on the nutritional status of toddlers based on the West Java Body Index According to Height (TB/A).

Table 2 Effect of Formula Milk Consumption on Nutritional Status of Toddlers Aged 0-59 Months Based on Height/Age Index

Consumption of Formula Milk	Nutritional Status TB/A				Amount		P (Value)
	Normal		Short				
	F	%	f	%	f	%	
No	11	45.8	13	54.2	24	37.0	0.00
Yes	41	100.0	0	0	41	63.0	
Total	**52**	**80.0**	**13**	**20.0**	**65**	**100**	

Source: Primary Data, 2024

Based on table 2, it can be seen that from the results of the analysis that has been carried out, a p-value (0.00) < 0.05 was obtained, which means that there is an effect of formula milk consumption on the nutritional status of toddlers aged 0-59 months based on the body weight index according to height (TB/TB).

b. The Effect of Formula Milk Consumption on the Nutritional Status of Toddlers Aged 0-59 Months Based on the Body Weight Index for Age (BB/A)

The results of data analysis using the Release Statistical Program For Science (SPSS) version 16.0 computer program to determine the effect of formula milk consumption on the nutritional status of toddlers based on the body weight index according to age (BB/A).

Table 3 Effect of Formula Milk Consumption on Nutritional Status of Toddlers Aged 0-59 Months Based on BB/A Index

Consumption of Formula Milk	Nutritional Status BB/A								Amount		P (Value)
	Normal		Thin		Very Thin		Fat				
	F	%	f	%	f	%	f	%	f	%	
No	13	54.2	7	29.9	2	8.3	2	8.3	24	37.0	0.00
Yes	41	100.0	0	0	0	0	0	0	41	63.0	
Total	**54**	**83.0**	**7**	**10.8**	**2**	**3.1**	**2**	**3.1**	**65**	**100**	

Source: Primary Data, 2024

Based on table 3, it can be seen that from the results of the analysis that has been carried out, a p-value (0.00) < 0.05 was obtained, which means that there is an effect of formula milk consumption on the nutritional status of toddlers aged 0-59 months based on the body weight index according to age (BB/U).

Discussion

The Effect of Formula Milk Consumption on the Nutritional Status of Toddlers Aged 0-59 Months Based on Body Weight/Height (BB/TB) in the Working Area of the Yaro Health Center UPTD, Jaya Mukti Village, Nabire Regency

Nutritional status is an indicator of a group's standard of living. One way to evaluate a child's nutritional status is by using anthropometric measurements using the WHO 2005 reference book standard to determine their nutritional status (Fera, M. & Yustina, O 2017).

According to Amineh et al 2014 exclusive breastfeeding and formula milk are associated with differences in nutritional status and infant mortality. Although formula milk is similar to breast milk, it is not the same as breast milk. Babies who are breastfed grow faster, especially in terms of body weight, but toddlers who receive formula milk are more susceptible to various infectious diseases.

Toddlers who consume breast milk have normal nutritional status, while children who receive formula milk have lower nutritional status or higher nutritional status.

According to the World Health Organization (WHO) quoted by Roesli (2008), formula milk is the most appropriate and best food for a baby's body. One of themtatist to optimize the growth and development of infants by consuming breast milk as a substitute. Good powdered milk does not cause digestive problems such as diarrhea, vomiting and constipation. ExpertsStatistic and the general public believe that formula milk can be as good or better than breast milk. This is because formula milk has more protein and minerals for babies, so babies get more nutrition. Giving formula milk to babies under six months of age can affect the child's nutritional status.Giving formula milk to six-month-old babies can affect the nutritional status of the child. Giving formula milk to babies, the nutrients absorbed by the baby's body will be reduced, and if the formula milk is too thick and too much can cause the nutrients absorbed by the baby's body to be more (Sasmiati, 2017).

In the study based on table 4.7, toddlers who were given breast milk had good nutritional status as many as 3 toddlers (12.5%), malnutrition 2 toddlers (8.3%), undernutrition 17 toddlers (70.8%) and overnutrition 2 toddlers (8.3%). While toddlers who were given formula milk had good nutritional status 41 toddlers (100.0%). This study shows that there is an effect of formula milk consumption on nutritional status based on body weight index according to height (BB/TB) with a p-value of 0.00 (<0.05).

Based on the researcher's opinion, mothers who give formula milk have children with good nutritional status compared to mothers who give breast milk. The nutritional value of powdered formula milk meets the needs of toddlers. From several respondents' opinions, it was stated that they gave breast milk and also formula milk because they understood that breast milk alone was not enough for the daily intake needs of toddlers so they were also given formula milk, and there were also those who stated that they were busy working so they did not have time to give breast milk to their toddlers.

This study is in line with the study conducted by Sasmiati, S., & Fitriyanti, E. 2017 with the title "The Relationship between Formula Milk Consumption and Toddler Nutritional Status at the Piyungan Bantul Yogyakarta Health Center". This shows that the results of the chi square test reached a Fisher's exact test value

of 0.00, which means that Ho is rejected and Ha is accepted, so there is a relationship between formula milk consumption and toddler nutritional status in the Piyungan Health Center work area.tatisstatistics2017. In this study, 18 people (66.7%) consumed formula milk. The best nutrition for children is the content of formula milk that meets the needs of toddlers. Therefore, malnutrition in children is caused by other factors that affect the nutritional status of toddlers, namely parental income, food consumption, and others.

This research is in line with research conducted byGizi, SSS, & Laila, FN2022 with the title "The Relationship between Mother's Knowledge of Nutrition, Parental Income and Provision of Formula Milk on the Nutritional Status of Toddlers at the Integrated Health Post in Welahan Village, Jepara Regency". This method uses a random sampling method for the population.The statistic in this study was 363 people, and the sample used in this study was 79 respondents with inclusion and exclusion criteria. The instrument used in this study wasnutritional education, parents' income and formula milk production. Nutritional status index using anthropometry and nutritional status index BB/TB. Bivariate analysis using Spearman rank test. The results showed that there was a relationship between formula milk provision and toddler nutritional status with a p-value of 0.00.

This research is in line with research conducted byDaworis, ATDAT2021 with the title "The Relationship Between Mothers' Behavior Regarding Providing Formula Milk and the Nutritional Status of Toddlers Aged 6-24 Months at the Integrated Health Service Post in Dinoyo Village, Malang City" The data collection method was carried out by sending a questionnaire about mothers' attitudes in providing formula milk and the results of measuring the nutritional status of toddlers aged 6 to 24 months were tested onSPSS statistics and Spearman Rank correlation test. The results of the study showed that cross tabulationtattoo betweenThe relationship between maternal behavior towards giving formula milk and toddler nutritional status is significant with a p-value of 0.00 < 0.05. Therefore, there is a relationshipstatistic between the right behavior of mothers in providing good formula milk to toddlers aged 6 to 24 months at the Dinoyo District Integrated Health Post in Malang City. Among the 60 respondents,tatis half of the mothers who have toddlers aged 6 to 24 months who visit the Dinoyo Subdistrict Health Post in Malang City have good behavior,

This research is not in line with the research conducted by Muharramah, A., & Fadila, W. 2018 with the title "The Relationship Between Formula Milk Provision and Family Income on Toddler Nutritional Status at Ganjar Agung Metro Barat Health Center in 2018". The results of the survey data were obtained from 30 toddlers who were used as samples, 19 people (100%) had good nutritional status, 0 (0.0%) had poor nutritional status. In toddlers who did not receive formula milk, 9 people (81.8%) had poor nutritional status, and 2 people (18.2%) had poor nutritional status. With a p-value = 0.12, it shows that there is no relationship between formula milk provision and the nutritional status of toddlers with an OR value of 0.321 (0.188-0.551).

The Effect of Formula Milk Consumption on the Nutritional Status of Toddlers Aged 0-59 Months Based on the Height/Age Index (H/U) in the Working Area of the Yaro Health Center UPTD, Jaya Mukti Village, Nabire Regency

Knowing the nutritional status of toddlers is important to determine whether toddlers have eating disorders. Eating disorders affect growth and development in infancy and beyond, so they need attention because babies and toddlers are the next generation of the nation (Ministry of Health 2023).

According to Erilia, E 2023 In developing countries such asStatistically, children aged 0 to 5 years are the group most susceptible to malnutrition. Meanwhile, food shortages in the long termtatist can cause stunting.

Powdered formula milk is a substitute for breast milk specially formulated for babies under 12 months of age. Formula milk is powdered milk dissolved in water which is then put into a milk bottle. Regular milk is produced from cow's milk or soy milk, just like breast milk. Raw powdered milk contains pure whey and casein as sources of protein, a mixture of vegetable oils as a source of fat, lactose as a source of carbohydrates, a mixture of vitamins and minerals and other nutrients according to the milk manufacturer (Wilipedia 2024)

In the study based on table 4.8, toddlers who were given breast milk had normal nutritional status of 11 toddlers (45.8%), and short 13 toddlers (854.2%). While toddlers who were given formula milk had normal nutritional status of 41 toddlers (100.0%). This study shows that there is an effect of formula milk consumption on nutritional status based on the Height/Age (TB/U) index with a p-value of 0.00 (<0.05).

Based on the researcher's opinion, mothers who give formula milk have children with good nutritional status compared to mothers who give breast milk. Because the nutrients in formula milk meet the needs of toddlers. From several opinions of parents of toddlers, they stated that they give breast milk and also formula milk because they understand that breast milk alone is not enough for daily intake needs so they are also given formula milk, and there are also those who stated that they do not have enough time to breastfeed their toddlers.

This study is in line with the study conducted by SJMJ, SAS, et al 2020 entitled "The Relationship between Exclusive Breastfeeding and Stunting in Toddlers" The results of the study used the chi-square test and correlation test. The results of the chis square test obtained a p value = 0.00 (0.00 <0.05), which indicates a relationship between exclusive breastfeeding and stunting. While the odds ratio test shows OR = 61 which means that toddlers who do not receive exclusive breastfeeding are 61 times more susceptible to stunting than toddlers who receive exclusive breastfeeding.

This study is in line with the study conducted by Saputra, A, I, & Sahreni, S., 2019 entitled "The Effect of Providing Additional Recovery Food on Changes in the Nutritional Status of Malnourished Toddlers at Tfc Fajar UPTD Puskesmas Saigon, Pontianak City in 2018". The results of the Spearman Rank Correlation test showed a significant relationship between the provision of PMT-P and changes in the nutritional status of malnourished toddlers based on the TB/U index indicated by a p-value of 0.05 and a correlation. The coefficient value is -0.008

This study is in line with the study conducted by Matalia v, j,. et al. 2017 entitled "The Effect of Milk Intake on Height and Weight of Elementary School Children" The results of the independent t-test obtained a sig. (2-stailed) <0.05, meaning that the increase in height in the treatment group and the control group had a significant difference, so it can be said that milk consumption is important for height.

This study is not in line with the study conducted by Triatmaja N, T, 2017 entitled "Nutritional Status of Infants Aged 6-12 Months in Bogor City in 2015 Reviewed from Feeding and Sociodemographics of Mothers". In this study, the provision of formula milk to infants aged <6 months was not significantly relatedstatistic not with the nutritional status of infants based on BB/U, PB/U, or

BB/PB indices. Most short and thin babies are more than babies who are breastfed under six months. Short growth can be caused by various reasons, one of which is the lack of exclusive breastfeeding. Giving formula milk before the age of 6 months reduces breastfeeding. A study in Ethiopia found that bottle-feeding increased the risk of stunting 3.8 times higher.

The Effect of Formula Milk Consumption on the Nutritional Status of Toddlers Aged 0-59 Months Based on the Weight/Age Index (BB/U) in the Working Area of the Yaro Health Center UPTD, Jaya Mukti Village, Nabire Regency

Nutritional status according to the World Health Organization (WHO) is used as a criterion to evaluate the growth and nutritional needs of children. Diet can be interpreted as a healthy state because there is a similarity between the child's nutritional needs and nutritional intake. Nutritional status assessment is carried out to determine the results of the comparison between the weight and height of toddlers with predetermined anthropometric standards. Children's nutritional status can vary according to various factors such as gender, age,weight, height, and head circumference (Adityasari, M, P, 2023).

According to the ministrytatistic 2023 in a study, it was reported that children who consume formula milk have a higher risk than children who consume breast milk. This happens because formula milk has a higher protein and mineral content for human children, so that children get too much nutritional intake. Consuming formula milk in children under the age of 6 can affect the child's nutritional status. If powdered formula milk is too runny, the baby's body may need less food, and if the formula milk is too thick and high, the baby will experience excess nutrition.

According to the organizationWorld statistics stated in an article that powdered milk is a suitable and good milk forbaby's immune system. Good formula milk does not cause digestive problems such as diarrhea, vomiting or constipation. Expertsstatistics and the general public still believe that formula milk can be as good or better than breast milk. In fact, formula milk poses a high risk tostatistics of human children in the future. Not only short-term and medium-term risks, but also long-term risks.tatist from the use of formula milk (Ministry of Health 2023).

In the study based on table 4.9, toddlers who received breast milk (ASI) had normal nutritional status of 13 toddlers (54.2%), underweight 7 toddlers (29.9%), very underweight 2 toddlers (8.3%) and risk of overweight 2 toddlers (8.3%).

While toddlers who were given formula milk had good nutritional status of 41 toddlers (100.0%). This study shows that there is an effect of formula milk consumption on nutritional status based on the weight index according to age (BB/A) with a p-value of 0.00 (<0.05).

Based on the researcher's opinion, mothers who give formula milk to their children can meet good nutritional status compared to mothers who give breast milk (ASI). This is because the nutrients in formula milk meet the needs of toddlers' intake. Some parents stated that they gave breast milk and formula milk because they understood that breast milk alone was not enough for daily intake needs so they also gave formula milk, and there were also those who admitted that they were too busy to breastfeed their toddlers.

This research is in line with research conducted byAzzubaidi, JAS,*et al*.2023 with the title "Comparison of Nutritional Status of 6-12 Month Old Infants Consuming Exclusive Breast Milk with Formula Milk Consumption" Based on a review of 6 journals, it was found that there was a significant difference in the nutritional status of infants according to the weight of infants given breast milk and special formula milk. The provision of Exclusive Breast Milk and powdered formula milk has a significant effect on the difference in nutritional status of infants according to (BB/A)

This study is in line with the study conducted by Olii, N,. 2019 entitled "Differences in Weight Gain in 6-Month-Old Babies Given Exclusive Breast Milk and Formula Milk in the Tapa Health Center Work Area, Beno Boango Regency". Research results; p value = 0.01, and implementation of the hypothesis $\chi 2$ count (11.429)> $\chi 2$ in the table (3.841) and p value (0.00) <α (0.05) which means Ho is rejected and Ha is accepted.

This study is in line with the study conducted by frelestanty, E. & Haryanti, Y. 2018 entitled "The Relationship between Breastfeeding and Formula Milk with the Nutritional Status of Infants Aged 0-6 Months". The results of the test analysisThe statistic was obtained using chi-square, the p-value was obtained = 0.00 < (0.05), so Ho was rejected and Ha was accepted, so there was a significant relationship between the provision of breast milk and formula milk with the nutritional status of infants aged 0-6 months in the Dara Juanti Sintang Health Center area.

This study is not in line with the study conducted by Muharramah, A, & Fadila, W,.2018 "The Relationship Between Formula Milk Provision and Family Income on Toddler Nutritional Status at the Ganjar Agung Metro Barat Health Center in 2018" This shows that formula milk does not affect the nutritional status of toddlers. Because it was found that more than 100% of babies who received formula milk had normal nutritional status. Because eating well is not just a habit, the baby's eating patterns can also be caused by other foods such as fruits, vegetables, meat and other foods containing carbohydrates.

4. CONCLUSION

Based on the results of the research that has been conducted, the following conclusions can be drawn:

1. Based on the Body Weight/Height (BB/TB) index, there is an effect of providing formula milk on the nutritional status of toddlers in the Working Area of the Yaro Health Center UPTD, Jaya Mukti Village, Nabire Regency because a p-value of 0.00 (<0.05) was obtained.
2. Based on the Body Weight/Age (BB/U) index, there is an effect of providing formula milk on the nutritional status of toddlers in the Working Area of the Yaro Health Center UPTD, Jaya Mukti Village, Nabire Regency because a p-value of 0.00 (<0.05) was obtained.
3. Based on the Height/Age (TB/U) index, there is an effect of providing formula milk on the nutritional status of toddlers in the Working Area of the Yaro Health Center UPTD, Jaya Mukti Village, Nabire Regency because a p-value of 0.00 (<0.05) was obtained.

5. SUGGESTION

1. For UPTD Yaro Health Center

   To always provide motivation/counseling that is interesting and easy to understand so that parents can provide formula milk properly and correctly to achieve normal nutritional status.

2. For Parents of Toddlers

   For parents to pay attention to giving formula milk, formula milk that is too thin will result in malnutrition and poor nutrition, and if too much formula milk is given it will result in excess nutrition.

3. For Further Researchers

   For further researchers, they should conduct further research with different variables and methods and a larger population so that better results can be obtained.

REFERENCES

Aditiyasari, MP (2023). Understanding nutritional status according to WHO and how to calculate it.https://www.nutriclub.co.id/article/tumbuh-kembang/1-tahun/status-gizi-menrut-who. (Accessed on July 20, 2024).

Azzubaidi, JAS, Safitri, A., Karsa, NS, Laddo, N., & Makmun, A. (2023). Comparison of Nutritional Status of 6-12 Month Old Infants Consuming Exclusive Breast Milk with Formula Milk Consumption. Fakumi Medical Journal: Journal of Medical Students, 3(2), 130-137.

Al-faida, N. (2023). Research Methodology. PT Nasya Expanding Management. Central Java.

Aminah, TC, Ratnawati, LY, & Sulistiyani, S. (2014). Differences in Nutritional Status and Infection Status of Infants (6-11 Months) Given Exclusive Breast Milk and Those Given Formula Milk (Study in the Working Area of Arjasa Health Center, Jember Regency) [The Differences of Nutritional Status and Infection Status beetwen Exclusive B. Pustaka Kesehatan, 2(2), 293-299.

Agency, ONPPB (2019). 6-Month-Old Babies Given Exclusive Breast Milk and Formula Milk in the Work Area of the Tapak Regency Bolango Health Center. Journal of Health Sciences (Jnik)[Internet], 2(1), 52-8.

Cahyaningrum. (2023). Pursuing the Independence of the National Milk Industry.https://www.kompas.id(Accessed on January 27, 2024) .

Databoks. (2019). 17.7 toddlers in Indonesia still experiencehttps://databoks.katadata.co.id (Accessed on January 27, 2024).

Daworis, ATDAT (2021). The Relationship Between Mother's Behavior Regarding Formula Milk Provision and Nutritional Status of Toddlers Aged 6–24 Months. Media Husada Journal Of Nursing Science, 2(3), 103-114.

DINKES. (2023). Data on nutritional status of toddlers in Nabire (Accessed on February 2, 2024)

DEPKES. (2009). Age Category Menueurt Department of Health of the Republic of Indonesia 2009.

Frelestanty, E., & Haryanti, Y. (2018). The Relationship Between Breastfeeding and Formula Milk and the Nutritional Status of Infants Aged 0-6 Months. Jurnal Medika Usada, 1(2), 13-20.

Gizi, SSS, & Laila, FN (2022). The relationship between maternal knowledge about nutrition, parental income and provision of formula milk on the nutritional status of toddlers at the Posyandu, Welahan Village, Jepara Regency.

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 (Doctoral dissertation, Bosowa University).

Ikhsania, AA (2020). List of nutritional needs for toddlers aged 1-5 years that must be met.https://www. Generasimaju.co.id (Accessed on February 7, 2024).

Jayani, DH (2021). As many as 45.4 toddlers in the world suffer from acute malnutrition.https://databoks.katadata.co.id(Accessed on January 29, 2024).

Ministry of Health. (2023). Consumption of formula milk affects children's nutritional status.https://yankes.kemkes.go.id. (Accessed on January 26, 2024).

Matali, VJ, et al., (2017). The Effect of Milk Intake on Height and Weight of Elementary School Children. eBiomedik, 5(2).

Meliyanti, F., & Oktarida, Y. (2017). Factors of Formula Milk Provision and Family Income Related to Toddler Nutritional Status at the Sukaraya OKU Health Center UPTD in 2017. Cendekia Medika: Al-Maarif Baturaja Health College Journal, 2(2), 47-56.

Muharramah, A., & Fadila, W. (2018). The Relationship Between Formula Milk Provision and Family Income on Toddler Nutritional Status at Ganjar Agung Health Center, West Metro in 2018. Aisyah Nutrition Journal, 1(2), 94-104.

Nahak, KA (2021). Factors Related to the Provision of Formula Milk to Infants Aged 0-6 Months at the Oeolo Health Center, North Central Timor Regency in 2018. Journal of Economics, Social & Humanities, 2(08), 134-145.

Notoatmodjo. (2012).CHAPTER III_2.pdf (Accessed on February 29, 2024).

Olii, N,. (2019). Differences in Weight Gain of 6-Month-Old Babies Given Exclusive Breast Milk and Formula Milk in the Tapa Health Center Work Area, Beno Boango Regency"

Yaro Health Center. (2023). Data on the number of toddlers in the working area of the Jaya Mukti Village Health Center UPTD. (Accessed on February 21, 2024).

Purba, S. et al., (2023). The Relationship between Exclusive Breastfeeding and Growth and Development in Infants Aged 7-12 Months at the BP Nauli Health Center, Siantar Marihat District, Pematang Siantar City in 2023. OBAT: Journal of Pharmaceutical and Health Science Research, 1(6), 48-58.

Rahmawati, A., et al., (2022). The Relationship between the Use of Maternal and Child Health Books (KIA) by Mothers and the Incidence of Stunting in Toddlers at the Danurejan I Health Center, Yogyakarta City (Doctoral dissertation, Poltekkes Kemenkes Yogyakarta).

Sasmiati, S., & Fitriyanti, E. (2017). The Relationship Between Formula Milk Consumption and Toddler Nutritional Status at Piyungan Bantul Health Center, Yogyakarta (Doctoral dissertation, Aisyiyah University, Yogyakarta).

Saputra, AI, & Sahreni, S. (2019). The Effect of Providing Additional Recovery Food on Changes in the Nutritional Status of Malnourished Toddlers at TFC-FAJAR UPTD Saigon Health Center, Pontianak City in 2018. Journal of Medical Nursing Research, 2(1), 45-53.

Sari, E. (2017). Nutritional status of toddlers at the Mawar Posyandu, Dormokali Village, Surabaya. Nursing Journal.https://jurnal.stikeswilliambooth.ac.id (Accessed on January 27, 2024).

SJMJ, SAS, et al., (2020). The relationship between exclusive breastfeeding and the incidence of stunting in toddlers. Sandi Husada Scientific Journal of Health, 11 (1), 448-455.

Sudarma, IM, et al., (2022). Health research methodology. Denpasar: Our Writing Foundation. Retrieved fromhttps://kitamenulis.id/2021/05/08/metodologipenelitian-kesehatan/ (Accessed on February 9, 2024).

Triatmaja, NT (2017). Nutritional Status of Infants Aged 6-12 Months in Bogor City in 2015 Reviewed from Feeding and Maternal Sociodemographics. Indonesian Bulletin of Health Research, 45(1), 37-44.

Yustianingrum, LN, & Adriani, M. (2017). Differences in nutritional status and infectious diseases in toddlers who are exclusively breastfed and non-exclusively breastfed. Amerta Nutrition, 1(4), 415-423.