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THE RELATIONSHIP BETWEEN THE NUMBER OF CHILDREN AND BIRTH SPATCH WITH THE NUTRITIONAL STATUS OF TODDLERS DISTRICT ROKAN HILIR REGENCY RIAU PROVINCE IN 2026

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ABSTRACT

Background: The nutritional status of toddlers is an expression of a state of balance in the form of certain variables, or the manifestation of nutrition in the form of certain variables, for example, endemic is a state of imbalance between the intake and output of iodine in the body.**Objectives:** To determine the relationship between birth spacing and the number of children with the nutritional status of toddlers in Suka Makmur Village, Tanjung Medan District, Rokan Hilir Regency, Riau Province in 2026.**Methods:** Descriptive correlation, with a cross-sectional research design. The population in this study were all mothers who had toddlers in Suka Makmur village, Tanjung Medan sub-district, Rokan Hilir district, Riau province. The sample taken using the Slovin formula was 32 samples. The data obtained in this study were processed using the Chi-Square statistical test.**Results:** The results of this study indicate that the ideal number of children (31.3%%), poor birth spacing 65.8%%) and good nutritional status of toddlers 68.8%%) with a p value = 0.003 for the number of children, and p = 0.0 01, for birth spacing. This shows that the p value < α = 0.05.**Conclusions:** From the results of this study, it can be concluded that there is a significant relationship between the relationship between birth spacing and the number of children with the nutritional status of toddlers in Suka Makmur village, Tanjung Medan sub-district, Rokan Hilir district, Riau province. It is hoped that mothers who have toddlers will pay more attention to their children's health conditions to avoid all diseases due to lack of nutritional intake for children which causes poor nutritional status of toddlers.

Keywords: Birth Distance; Number of children; Nutritional Status of Toddlers

INTRODUCTION

WHO in 2014 estimated that there were 161 million toddlers experiencing nutritional problems. The biggest nutritional problems occurred in toddlers, reaching 51 million toddlers. Toddler deaths due to nutrition amounted to 2.8 million people and experienced micronutrient deficiencies amounted to 2 billion Based on the results of the Basic Health Research, the nutritional condition of children has shown improvement(Biomed Sci, 2023). In the problem of stunting, there was a decrease in prevalence in toddlers from 37.21% in 2013 to 30.79% in 2018. Likewise, when compared with the data on stunting prevalence in toddlers in 2016 (Sirkesnas), which was 33.60 percent The number of cases of malnutrition and severe malnutrition is actually greater, like an iceberg phenomenon, because not all toddlers are familiar with integrated health posts (posyandu) quoted from(Anderson and Maryasari, 2022)

Based on data from Global Nutrition (2020), there are many problems with toddler nutrition in the world, including 8% of toddlers experiencing wasting (thin), 23% stunting, 17.3% overweight(Herna Rinaynti *et al.*, 2020). According to World Health Organization (WHO) data from 2020, there were 48 million toddlers (26.9%) in Southeast Asia (WHO, 2020). In Indonesia, in 2019, there were nutritional problems among toddlers, including 3.9% malnutrition, 13.8% undernutrition, 11.5% very short, and 19.3% stunting (Ministry of Health, 2020). In North Sumatra (2019), there were also nutritional problems among toddlers, including malnutrition (0.13%), undernutrition (1.98%), stunting (2.61%), and wasting (2.13%) (Harefa, Putri and Damanik, 2020). The percentage of malnutrition care for toddlers in North Sumatra Province has not reached 100% in 3 districts/cities.

Factors influencing toddler nutritional status include direct and indirect factors. Direct factors include infectious diseases, a history of low birth weight (LBW), and protein deficiency. Indirect factors include the number of children, spacing between pregnancies, economic status, and parenting styles.(Widjanarko, Sriningsih and Septi, 2024) The large number of children is closely related to the quantity and quality of food and nutritional intake in children, which has an impact on the nutritional status of toddlers.(Susanti *et al.*, 2023)

Nutritional status is an indicator of the quality and quantity of food and drink

consumed. Children with good nutritional status tend to be healthier and fitter, as they have better immunity and experience good growth and development(Clarita *et al.*, 2025) Toddlers with poor nutritional status are at risk of experiencing mental and emotional health problems, decreased IQ and even problems with growth and development(Miranda, 2024)

The prevalence of malnutrition above the national prevalence ranges from 21.2% to 33.1%, the highest is in East Nusa Tenggara Province and Jambi Province is the lowest prevalence of malnutrition(Hailu *et al.*, 2025). Meanwhile, North Maluku Province is ranked eleventh. For the prevalence of malnutrition based on RISKESDAS 2013 data quoted from The results of this study support the results of the study conducted that most respondents have > 2 toddlers in their families, this is caused by several factors including, lack of knowledge regarding the number of children recommended by the government (2 children are enough, boys and girls are the same), the level of education of respondents and families who do not reach higher education, as well as the belief that respondents still have the view that many children bring many blessings, without seeing the justification for this belief(Fitriyaningsih, 2024)

The research results show that the number of toddlers has no correlation with their nutritional status. This is due to several factors, including mothers' good knowledge about nutritious food intake for children, which leads to good parenting patterns in feeding children. Furthermore, the economic status of most families is middle class, so families are able to provide and give nutritious food to their children(Alamo and Martínez-varea, 2024)

Based on the results of the statistical test described by (Kundre, 2015), a p value of 0.000 was obtained, which means that there is a relationship between birth spacing and the nutritional status of toddlers with OR = 8.255, which means that there is an 8 times better chance of good nutritional status with a birth spacing of <3 years. The results of the statistical test obtained a p value = 0.90 which means there is no relationship between the number of children and the nutritional status of toddlers. physical growth and nutritional status because it is easy to see changes in a short time which provides an overview of the current nutritional status Based on initial data taken by researchers in Suka Makmur Village, Tanjung Medan

District, Rokan Hilir Regency, Riau Province, that from 2019 there were 1193 toddlers and there were 33 with less nutritional status, 8 with poor nutrition, 381 with good nutrition and 35 with more nutrition. This is what makes researchers interested in researching the relationship between birth spacing and the number of children and the nutritional status of toddlers.

METHODS

The design used in this study is descriptive correlation using a quantitative approach with a cross-sectional method. Using a propositional sampling technique with a total of 32 respondents. The research location is in Suka Makmur Village, Tanjung Medan District, Rokan Hilir Regency, Riau Province.

The research period was from January 8 to May 10. The instrument variables used in this study were observation sheets, for questionnaire A to find out the mother's name, age, education and number of family members, for questionnaire B the birth spacing, for questionnaire C the number of children, while for questionnaire D, namely the observation

sheet to find out the nutritional status of toddlers obtained through measuring the nutritional status of toddlers, direct weighing of the toddler's weight and height (BB/TB) and calculations were carried out using the nutritional status measurement formula, compared to the % Harvard Standard (SH) according to the same age statistical data processing software.

This stage ends with data interpretation through precise mathematical formulations to produce valid, reliable conclusions that are in accordance with the established study scope.

A validity test is an index that shows that a measuring instrument actually measures what it is intended to measure. A questionnaire is said to be valid if the questions in the questionnaire are able to reveal what the questionnaire is intended to measure. The questionnaire used in this study is a standard questionnaire that has been researched using this questionnaire before.

RESULTS AND DISCUSSIONS

Table 1
General Characteristics of Respondents in Suka Makmur Village, Tanjung Medan District, Rokan Hilir Regency, Riau Province

Umur	Frekuensi(n)	Persen(%)
17-25 tahun	12	37,5
26-35 tahun	19	59,4
36-45 tahun	1	3,1
Total	32	100,0
Pendidikan		
SMP	3	9,4
SMA	25	78,1
S1	4	12,5
Total	31	100,0
Jumlah Anak	63	100,0
Ideal	10	31,1
Tidak Ideal	22	68,8
Total	32	100,0
Jumlah Kelahiran	64	100,0
Kurang Baik	21	65,8
Baik	11	34,4
Total	32	100,0
Status Gizi Balita	64	100,0
Baik	22	68,
Sedang	10	31,3
Total	32	100,0

2026
STIKes MITRA HUSADA MEDAN

Table 2
Distribution of Respondents by Number of Children with Under-Five Nutritional Status In Suka Makmur Village, Tanjung Medan District, Rokan Hilir Regency, RiauProvince

Jumlah anak	Status gizi balita				Jumlah		*P Value*
	Baik		Sedang				
	n	%	n	%	n	%	
Tidak Ideal	19	86,4	3	13,6	22	100	0,003
Ideal	3	30,0	7	70,0	10	100	
Jumlah	22	68,8	10	31,3	32	100	

Table 3
Distribution of respondents by birth interval and nutritional status of toddlers in Suka Makmur Village, Tanjung Medan District, Rokan Hilir Regency, Riau Province

Jarak kelahiran	Status gizi balita				Jumlah		*p Value*
	Baik		Sedang				
	n	%	n	%	n	%	
Kurang baik	19	90,5	2	9,5	21	100	0,003
Baik	3	27,3	8	72,7	11	100	
Jumlah	22	68,8	10	31,3	32	100	

Respondents who have an ideal number of children compared to those who have good nutritional status of toddlers are 3 respondents (30.0%). This is because the mother always takes care of the baby's health regularly and this is because of the knowledge obtained from the health center or the existence of integrated health posts that support mothers to maintain the health of toddlers and this is because of the family planning program from the government to keep mothers and babies away from disease. Meanwhile, respondents who have an ideal number of children compared to those who have moderate nutritional status of toddlers are 7 respondents (70.0%).

This is due to other factors, such as the provision of nutritional intake that supports infant growth, resulting in infants experiencing poor or moderate nutritional status. The Chi-square test results obtained a p-value of 0.003, indicating $p \leq 0.05$. These results indicate a relationship between the number of children and the nutritional status of toddlers at the Bontoramba Community Health Center in Jeneponto Regency.

Juwaher's research (2009) quoted from (Walyani Siwi.E, 2015), shows that mothers who have low parity <2 mostly do pregnancy checks compared to mothers who have high parity >2. This is because low parity mothers have pregnancy which is something they really hope for. So they really take care of their pregnancy by doing routine pregnancy checks to maintain the health of their fetus. Respondents who have good birth spacing with those who experience good toddler nutritional status are 3 respondents (27.3%).

This is because a long birth interval allows time for the uterus and uterus to

fertilize, ensuring a healthy baby. This is supported by other factors such as economic factors and health services.

Meanwhile, respondents with good birth intervals (72.7%) had moderate toddler nutritional status. This is due to moderate knowledge, economic factors, adequate health services, and mothers' moderate awareness of providing adequate nutrition to their toddlers. The chi-square test results obtained a p-value of 0.001, indicating $p \leq 0.05$. These results indicate a relationship between birth intervals and toddler nutritional status in Suka Makmur Village, Tanjung Medan District, Rokan Hilir Regency, Riau Province. Short birth intervals can affect the health status of both the mother and the child. In addition to increasing the risk of infant mortality, a woman who gives birth consecutively within a short period of time does not have time to recover.

This is because after giving birth, she must divide her attention between both children simultaneously. Furthermore, she must wean the older child to breastfeed the newborn. Therefore, it can be concluded that children born close together tend to have a relatively higher risk of death.

CONCLUSIONS

Based on the results of research conducted in Suka Makmur Village, Tanjung Medan District, Rokan Hilir Regency, Riau Province, the researcher concluded that there is a relationship between the number of children and birth spacing on the nutritional status of toddlers in Suka Makmur Village, Tanjung Medan District, Rokan Hilir Regency, Riau Province.

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AUTHOR CONTRIBUTIONS

Syahrin Sakinah Haslim : conceptor, investigation, methodology, supervision, writing review and editing; Dr.Herna Rinayanti Manurung,S.Keb.,Bdn.,M.Kes: methodology, writing original draft; Dr.Siti Nurmawan Sinaga,SKM.,M.Kes : methodology; formal analysis, writing original draft; Lisa Putri Utami Damanik,S.Keb.,Bdn.,M.Tr.Keb: formal analysis, resources; Ferly Fazrin Haslim: writing original draft, writing review and editing.

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