



The analyze toddler growth and development according to family's economic status in Village Limau Manis, Districts Tanjung Morawa[☆]

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Abstract The toddler stage is a golden period and at the same time a critical period for a child, since he / she will experience rapid brain growth and development so that he/ she need sufficient nutrition intake. Toddler's abnormal growth and development are usually found in low economic community because they cannot afford to provide their need for basic food for their toddler's growth and development. The objective of the research was to analyze toddler's growth and development according to family's economic status.

The research used descriptive analytic method with cross-sectional design. It was conducted at Limau Manis Village, Tanjung Morawa Subdistrict, Deli Serdang Regency, from January to June 2016. The population was 1899 toddlers, and 113 of them were used as the samples, taken by using simple random sampling technique. The data were gathered by using questionnaires to find out toddler's growth and development according to family's economic status.

The result of univariate analysis showed that 57 toddlers (50.4%) had abnormal growth and development. The result of bivariate analysis with chi-square test showed that there was the correlation of toddler's growth and development with economic status (p value = 0.004), women's care pattern (p value = 0.028), and environmental sanitation (p value = 0.01). Therefore, empowerment of family's economy through the development of family's nutrition portfolio is necessary.

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Preliminary

Toddlerhood is the golden age of a child. At this time, the child's body and brain become the basic foundation as a determinant of children's growth and development, which of course is influenced by the economic status of the family community. Problems of growth and development of infants are inseparable from the fulfillment of nutrition. One of

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them is maternal nutrition during pregnancy. Malnutrition in women before pregnancy and during pregnancy will affect the condition of babies that can result in babies born with low birth weight (LBW), can even cause death in infants starting in the womb until the age of 2 years.¹ From the Riskesdas² there were (34.3%) children who had never been weighed in the last 6 months that had increased from (25.5%) in 2007. Indonesia is estimated to have around 7.8 million children experiencing stunting, one in every three children of short stature and in poorer families alone one in every four to five children is underweight.

In the 2015–2019 National Mid-Term Security Development Plan (RPJMN), it is said that the indirect factor which influences toddler health efforts is the socio-economic condition of the community. Poverty causes families unable to meet the nutritional needs of toddlers because of the inability to fulfill food so that toddlers experience growth and development disorders.³

From preliminary survey conducted in Limau Manis Village, Tanjung Morawa Subdistrict, of 15 toddlers, found 5 (33.3%) toddlers who had good growth and development, from families with high economic status 3 (20%) toddlers who had growth disorders and 1 (6.6%) toddlers experience developmental growth deficits while in families of low economic status found 4 (26%) toddlers who experience growth disorders and 2 (13.3%) toddlers who experience growth and development disorders.

The purpose of this study was to analyze the growth and development of toddlers in families according to the economic level.

Research methods

This type of research is analytic descriptive with cross-sectional study design. The population were all toddlers totaling 1899 toddlers. Sampling with simple random sampling, then the number of samples obtained 113 toddlers with a category of 57 toddlers from low economic status families and 56 toddlers from high economic status families. Data analysis consisted of univariate and bivariate analyses using the chi-square test.

Results and discussion

The results of the study revealed that the majority of self-employed husband's work is as many as 71 people (62.8%), and the work of the majority wife of housewives is 75 people (66.4%). The education of the majority of high school husbands is 75 people (66.4%) and the education of the majority of high school wives is 72 people (63.7%). Can be seen in the [table 1](#) below for family characteristic. From the results of the study note the majority of respondents aged 24–59 months as many as 48 toddlers (42.5%), the majority of the sex of toddlers are women, as many as 65 toddlers (57.5%).

The results showed that of 57 respondents with low economic status there were 37 toddlers (64.9%) who experienced abnormal growth and development, while of 56 respondents with high economic status there were 20 toddlers (35.7%) who experiencing abnormal growth and development. The relationship between mother's parenting and toddler growth shows that of the 49 respondents

who did not eat well, there were 31 toddlers (63.3%) who experienced abnormal growth and development, while of 64 respondents who did good parenting, there were 26 toddlers (40.6%) who experienced abnormal growth and development. The relationship between utilization of basic health services to growth and development of toddlers shows that of the 56 respondents who made poor use of basic health services there were 29 toddlers (51.8%) who experienced abnormal growth and development, while out of 57 respondents who made good use of basic health services there are 28 toddlers (49.1%) who experience abnormal developmental growth. The relationship of environmental sanitation to the growth and development of children under 5 shows that of 51 respondents who did poor environmental sanitation there were 33 toddlers (64.7%) who experienced abnormal growth and development, while of 62 who did good environmental sanitation there were 24 toddlers (38.7%) who experienced abnormal growth and development.

Differences in growth and development of toddlers based on family economic status

The results of the study showed that there were significant differences between the growth and development of children under 5 based on the family's economic status, with a value of $p=0.004$ ($p<0.05$); $RP=1.818$ this shows that respondents with low economic status tend to have toddlers with abnormal growth and development of 1.818 compared to respondents with high economic status.

Relationship between mother's parenting against toddler growth and development

The results of the study show that there is a significant relationship between parenting and growth and development of toddlers, with a value of $p=0.028$ ($p<0.05$); $RP=1.557$ this means that respondents who practice poor parenting tend to have toddlers with abnormal growth and development of 1.557 compared to respondents who practice good parenting.

The relationship between utilization of basic health services to toddler growth and development

The results of the study showed that there was no significant relationship between the utilization of basic health services with the growth and development of children under 5, with a value of $p=0.924$ ($p>0.05$).

Relationship of environmental sanitation to toddler growth

The results of the study showed that there was a significant relationship between parenting practices and growth and development of infants, with p values <0.05 ; $RP=1.672$, this means that respondents who do poor environmental sanitation tend to have toddlers with abnormal growth and development of 1.672 compared to respondents who do good environmental sanitation.

Table 1 Independent variables (economic status, maternal care patterns, utilization of basic health services, and environmental sanitation) against dependent variables in toddler growth and development.

Variabel	Toddler growth				Total		P value	RP (95% CI)
	Abnormal		Normal					
	n	(%)	n	(%)	n	(%)		
<i>Family economic status</i>								
Low	37	(64,9)	20	(35,1)	57	100	0,004	1,818 (1,218-2,711)
High	20	(35,7)	36	(64,3)	56	100		
<i>Eating parenting</i>								
Not good	31	(63,3)	18	(36,7)	49	100	0,028	1,557 (1,081-2,243)
Well	26	(40,6)	38	(59,4)	64	100		
<i>Self-care pattern</i>								
Not good	28	(63,6)	16	(36,4)	44	100	0,041	1,514 (1,061-2,161)
Well	29	(42,0)	40	(58,0)	69	100		
<i>Utilization of basic health services</i>								
Not good	29	(51,8)	27	(48,2)	56	100	0,924	1,054 (0,731-1,520)
Well	28	(49,1)	29	(50,9)	57	100		
<i>Environment sanitation</i>								
Not good	33	(64,7)	18	(35,3)	51	100	0,01	1,672 (1,151-2,427)
Well	24	(38,7)	38	(61,3)	62	100		

Differences in growth and development of toddlers based on family economic status

Chi-square statistical test results p value <0.05 shows that there is a significant difference in the growth and development of children under 5 years based on family economic status. Families with high economic status will have the nutritional status of children under 5. Conversely, families with low economic status, the nutritional status needs of infants are lacking so that the growth and development of infants is abnormal or disrupted. This study is in accordance with the results of Pratama and Listiowati⁴ which states that there is a relationship between family income and the development of children under 5 with a value of $p=0.038$. In this study the majority of mothers work as housewives, namely (66.4%). This will affect family income because only husbands work, and the majority husbands work as entrepreneurs, as many as (62.8) who do not have a fixed income each month and the wife is only a housewife. Both of these things that greatly affect the family for the selection of food consumed, so the food provided is not varied and does not provide distilled food to toddlers, which certainly will affect the growth and development of toddlers. Socio-economic is a factor that influences the growth and development of children under 5, and malnutrition in children is determined by the level of family income.

Relationship between mother's parenting against toddler growth and development

Mother's parenting in this study consisted of parenting and parenting self. The results showed that there was a relationship between parenting practices and growth and development of toddlers with a p value <0.05 meaning that good parenting practices would produce normal growth and

development of toddlers, compared with poor parenting practices. The results of this study show that parenting for toddlers to eat tends to be good but this is not accompanied by implementation at home, where from the results of research for toddlers aged 0–6 months the mother has provided complementary food ASI as many as (35.0%) which causes growth and development of infants disturbed and as many as (40%) mothers do not provide varied food to toddlers due to the low economic status of the family. The pattern of self-care in this study shows there is a relationship between self-care patterns to the growth and development of children under 5 where the p value <0.05 . Self-care patterns related to bodily hygiene, food hygiene, and also the environment that plays a role in maintaining toddler health to prevent infectious diseases that will ultimately affect the growth and development of infants. This study is in line with research and Munarni⁵ states that personal hygiene affects the growth and development of infants. The results of the research in the field that parenting self-care of toddlers is almost on average mothers do not get toddlers to wear sandals/shoes when playing that is as much as (49.6%) and mothers do not get toddlers to wash their hands after playing both of these are factors that will not directly affect toddlers growth and development such as intestinal worms, diarrhea, infections so that eventually toddlers will be susceptible to disease and will certainly interfere with the growth and development of toddlers.

The relationship between utilization of basic health services to toddler growth and development

The results showed that there was no relationship between the use of basic health services to the growth and development of children under 5 years with a p value >0.05 meaning that the p value of utilizing basic health services either did not necessarily mean growth and development of normal

children. This study is not in accordance with the research by Kamarina⁶ which states that if access to basic health services is not affordable, the growth and development of infants will be disrupted because access to health services is far. According to the researchers' assumptions, the utilization of basic health services does not affect the growth and development of toddlers because based on the results of research in the family field the utilization of basic health services is not good but the growth and development of toddlers is good as seen from the immunization of toddlers 1% so that toddlers do not get sick easily and because mothers already have experience about disease prevention and providing medicines at home so toddlers do not get sick easily and giving vitamins to toddlers.

Relationship of environmental sanitation against toddler growth

The results showed that there was a relationship of environmental sanitation to the growth and development of children under 5 with a p value <0.05 meaning that environmental sanitation was good, so the growth and development of normal children under 5 compared to poor environmental sanitation. Environmental sanitation includes latrine sanitation, provision of drinking water, garbage disposal and waste water disposal. The research of Waal⁷ inadequate environmental sanitation can cause infectious diseases in infants so that infants are susceptible to diseases that cause growth and development of infants is not optimal. In line with the opinion of Zulaikhah⁸ which states that the development of infants is influenced by the environment, both internal and external environment with a value of $p=0.039$. The results of the research in the field found that almost 50% of respondents did not have a closed spalk and a pool of wastewater around the house, a trash can that does not have a lid, and garbage disposal in front of the house it will become a place for the growth of bacteria or vectors such as mosquitoes, flies, rats that will carry infectious diseases so that the incidence of infectious diseases will be higher, as is the case with rubbish where in the field it is found that the rubbish is not piled up and is not covered, causing the trash bin to become a place of flies, which causes typhoid, polio cholera which will certainly affect the growth and development of toddlers as in typhoid disease which causes toddlers to experience impaired absorption, digestive tract and absorption system in the body which will affect the appetite of toddlers so that toddlers will experience growth and development disorders.

Suggestion

It can be concluded that the variables which are proven to have a relationship to the growth and development of infants are economic status, maternal parenting, environmental sanitation while the use of basic health services is proven to have no relationship with growth and development of infants. Economic status and parenting are proven to be the most related factors to the growth and development of toddlers, the growth of toddlers in the low economic status of the majority is thin as many as 23 (39.7%) while in the high economic status as much as 13 (23.2%), and development the

majority of children under 5 are found to be impaired in low economic status such as gross motor, fine motor, speech and language disorders, and socialization and independence.

It is recommended for the Deli Serdang District Government through Bappeda (Regional Development Planning Agency) as a party involved in the prevention and prevention of toddlers' growth problems in order to give attention and emphasis to the family economy (low) made efforts to get out of economic problems by empowering the family economy through the development of home yards to increase the availability of family food for parenting, encourage micro small and medium businesses by providing credit with low interest rates and forming community cooperatives.

For health workers, still found under 5 children with underweight and overweight when viewed based on the index (BB/TB) and abnormal toddler development, because it needs to increase awareness of mothers through health education in order to improve the development of toddlers in the village especially regarding the benefits of colostrum and complementary foods ASI (MPASI), and the development of toddlers in accordance with the age of toddlers and counseling on clean and healthy living behaviors about environmental sanitation such as garbage disposal and waste water disposal.

For further researchers to be able to conduct more specific research on other variables that are proven to be related to the development of toddlers.

Conflict of interest

The authors declare no conflict of interest.

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