

# Relationship of Knowledge, Attitudes and Behavior of Parents About Stimulation with Two-Year-Old Infant Development

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## ABSTRACT

The age of a baby of two years is the golden phase of a child's growth where the brain's capacity is maximally developed. This phase is an essential period in the process of developing children's skills and intelligence which will have a major influence on life as adults. Parents have a responsibility as the main caregivers of children from an early age. This study aims to see the relationship between knowledge, attitudes and behavior of parents about stimulation with the development of a two-year-old baby at the Batahan Health Center. The research design was analytic observational with cross sectional. The population in this study were mothers who had babies aged 21-24 months in June 2022 in the working area of the Batahan Health Center, Mandailing Natal district. The number of samples as many as 61 people obtained using simple random sampling technique, data analysis using Chi-square test. The results obtained on the knowledge variable p-value  $0.574 > 0.05$ , the attitude variable p-value  $0.727 > 0.05$  means that there is no relationship between knowledge and parental attitudes about stimulation of toddlers with 2-year-old toddler development, and the behavior variable p-value  $0.000 < 0.05$  means that there is a relationship between parental behavior regarding toddler stimulation and the development of a 2-year-old toddler. The conclusion of this study is that there is no relationship between knowledge and attitudes of parents about toddler stimulation with 2-year-old child development and there is a relationship between parental behavior regarding.

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## INTRODUCTION

Long-Term National Development focuses on the quality of human resources that are strong and productive. Toddlers as the nation's next generation who are expected to become quality human resources in the future require special attention. Age under five years is the age of formation of

human resources both in terms of physical growth and intelligence. In the first five years of life, the child's growth and development process runs very rapidly and optimally. Experts say toddlerhood is a golden period. This is because the age of 0-2 years, children's brain development reaches 80%. It is at this time that children have the opportunity to develop all aspects of themselves, both physically, cognitively, linguistically, morally, and socially emotional (Widijo, 2017).

UNICEF in 2011 said that the incidence of developmental disorders in toddlers was still high, especially motor development disorders, namely (27.5%) or 3 million children had disorders. The World Health Organization (WHO) reports that 5-25% of children suffer from minor brain dysfunction, including disorders of fine motor development (Widiyasih, 2012).

Progress monitoring records can be monitored in the Mother and Child Health (KIA) book. In this book, the progress monitoring data uses the Development Pre-screening Questionnaire. According to Riskesdas (2018), the proportion of ownership of MCH books for children aged 0-59 months in North Sumatra is only 24.1% of parents who show ownership of MCH books and only 40.5% of MCH books contain monitoring data on children's development. The proportion of developmental monitoring in North Sumatra for toddlers aged 0-5 months is 40.6%, aged 6-11 months is 46.4%, aged 12-23 months is 46.9%, aged 24-35 months is 46.1%, aged 36 -47 months 46.7% and age 48-59 months by 45.9%. Based on these data, it is known that there are still few children under five who receive developmental monitoring.

The Indonesian Pediatric Association recommends parents to be more active in stimulating their children from birth to the age of 3, because that is when the brain continues to form connections between cells. The formation and activity of this intercellular relationship can be intervened by stimulation (stimulation) from the environment. The more varied the stimulation the child receives, the more complex the relationships between brain cells. And, the more frequent and regular the stimulus is received, the stronger the connection between cells. In other words, the stronger and more complex the relationships between cells, the higher and more varied the intelligence level of the child in later life. If parents continue to provide the right stimulation to children, the more likely the child will have a variety of intelligence in the future. (Wisnubrata, 2020).

Children who get a lot of directed stimulation from parents will develop faster than children who get less or even no stimulation (Soetjningsih, 2007). Therefore, parents have an important role in stimulating children's development because they are the closest people to children (Sulistiyawati, 2014).

## RESEARCH METHOD

The purpose of this study was to examine the relationship between knowledge, attitudes and behavior of parents about stimulation with the development of a two-year-old baby at the Batahan Health Center. This research is an analytic observational research with a cross sectional approach. The population in this study were all mothers who had babies aged 21-24 months in June 2022 in the working area of the Batahan Public Health Center, Mandailing Natal district. The number of samples in this study were 61 people obtained using simple random sampling technique. Data analysis was univariate and bivariate. Bivariate data were analyzed using Chi-square test (Notoatmodjo, 2007).

## RESULTS AND DISCUSSIONS

### Results

#### Univariate Analysis

**Table 1.** Frequency Distribution of Parents' Knowledge, Attitudes and Behaviors on Stimulation of Two-year Infant Development

Variable	Positive		Negative		Total	
	f	%	f	%	f	%
Knowledge	36	59	25	41	61	100

Attitude	41	67,2	20	32,8	61	100
Behavior	39	63,9	22	36,1	61	100

Based on the table, it is known that the majority of parents have a positive attitude towards toddler stimulation, namely 41 people (67.2%). In the behavioral variable, the majority of parents behaved positively as many as 39 people (63.9%).

**Table 2.** Distribution of the frequency of development of a two year old baby

Variable	In Accordance		Not in accordance		Total	
	f	%	f	%	f	%
Development	44	72,1	17	27,9	61	100

Based on the table above, it is known that the majority of child development in the appropriate category is 44 people (72.1%) and the minority of child development in the inappropriate category is 17 children (27.9%).

### Bivariate Analysis

**Table 3.** The relationship between knowledge, attitudes and behavior of parents about stimulation with two-year-old baby development

Variable	Category	Two year old baby development						p-Value
		In Accordance		Not in accordance		Jumlah		
		N	%	N	%	N	%	
1. Knowledge	Positive	35	89,7	4	10,3	39	63,9	0.000
	Negaitve	9	40,9	13	59,1	22	36,1	
2. Attitude	Positive	29	70,8	12	29,2	41	67,2	0,727
	Negative	15	75	5	25	20	32,8	
3. Behavior	Positive	35	89,7	4	10,3	39	63,9	0,000
	Negative	9	40,9	13	59,1	22	36,1	

Based on the results of the chi square test, the p-value  $0.574 > 0.05$  means that there is no relationship between parental knowledge about toddler stimulation and the development of a 2-year-old toddler. parental attitudes about toddler stimulation with 2-year-old toddler development. Based on the results of the chi square test, the p-value of  $0.000 < 0.05$  means that there is a relationship between parental behavior regarding toddler stimulation and the development of 2-year-old toddlers in the working area of the Raja Batahan Health Center Mandailing Natal in 2022.

### Discussion

Children have a characteristic that is always growing and developing from conception to the end of adolescence. Children show the characteristics of growth and development in accordance with their age. Growth is an increase in the size and number of cells and intercellular tissue so that the physical size increases with units of length and weight (Soetjningsih, 2008). Development is an increase in abilities (skills) in complex body structures and functions in a regular and predictable pattern, as a result of the maturation process (Soetjningsih, 2008). Development can also mean a process related to the function of more complex organs in the ability of gross motion, fine motion, speech and language as well as socialization and independence. Development is the result of the interaction of the maturity of the central nervous system with the organs it affects. (Ministry of Health, 2016). The most rapid growth and development process is the embryonic period and the fetal period and is more focused on brain development. When a child is born, the child's brain weight is about 25%, at the age of the first 6 months of life the child's brain weight has reached 50% of the adult brain and by the time the child reaches the age of 2 years his brain weight has reached 75% of the adult brain (Hockenbery, 2007).

The brain in children at birth has 100-200 billion nerve cells. Brain growth reflects the growth of the ganglion that envelops and protects nerve cells, and provides supporting structures, regulates nutrients and repairs nerve cell tissue. Some ganglion cells are responsible for the important task of myelination, where parts of the nerve cells are covered by a number of layers of fat. The covering membrane is known as Myelin. Insulation of each part of the nerve cell makes the nerve cell more efficient in transmitting or transmitting information. Nerves are always in motion, moving to their final place. Through a process in the body, nerve cells move to various places in the brain. This movement of nerve cells ensures that all parts of the brain are served by a sufficient number of nerve cells. (Hidayat, 2009).

Seventy percent of brain cell division occurs in the fetal period, for the formation of cell membranes, large amounts of fat are needed in special forms, namely arachidonic (AA) and docosahexanoic acid (DHA). After the baby is born, the structure, organization and function of brain cells develop rapidly. Ibi milk contains many important fatty acids AA and DHA, which are found in the retina of the eye and brain. Deficiency of DHA in fetuses and infants results in the risk of neurodevelopmental disorders, negative impacts on intelligence development and retinal development disorders (Trahms, 2004).

Agostoni et al., (2001) investigated the duration of breastfeeding for 6 months or more and milk fat content at 6 months was associated with higher developmental scores at 1 year of age. The results showed that among the milk fat factors, the weight of fat at the age of 6 months, showed a high relationship with the Psychomotor Development Index value and the highest value on the Bayley Mental Development Index. While prolonging the duration of breastfeeding during the weaning period can affect the achievement of better development in children aged 12 months. This may be related to the supply of fat that supports energy and affects brain compositis.

## CONCLUSION

The results showed that the knowledge variable  $p\text{-value } 0.574 > 0.05$ , the attitude variable  $p\text{-value } 0.727 > 0.05$  means that there is no relationship between knowledge and parental attitudes about stimulation of toddlers with the development of toddlers 2 years old, and the behavior variable  $p\text{-value } 0.000 < 0.05$  means that there is a relationship between parental behavior regarding toddler stimulation and the development of a 2-year-old toddler.

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