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Article

Relationship Between Stimulation and Fine Motor Development in Children Aged 1-5 Years in 2018

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A B S T R A C T

World health organization reports that 1 in 4 children under five years suffer from minor brain dysfunction, including impaired motor development. Based on data from the Pariaman City Health Office in 2018, toddlers who experienced the highest fine motor disturbances were at the Kurai Taji Health Center (106.6%). The purpose of this study was to determine the relationship between stimulation and fine motor development in children aged 1-5 years in the Posyandu of Marabau village, the working area of the Kurai Taji Public Health Center in 2018. This research was conducted from 21 to 24 September 2018 at the Kurai Taji Public Health Center. This type of research is Analytic. The population in this study was mothers who have children aged 1-5 years in the working area of the Kurai Taji Puskesmas with a sample of 31 people. Data were analyzed by Univariate and Bivariate, sampling techniques using the Total Sampling method. The results of the study were obtained from 31 people more than half 18 (58.1%) of respondents who gave less stimulation, more than half of 19 (61.3%) respondents were not normal. There is a Significant Relationship between Stimulation and Fine Motoric Development in Children Aged 1-5 Years in Posyandu Marabau Village Work Area Health Center Kurai Taji in 2018 because p-value 0.003. It is recommended for health workers can implement monitoring of fine motor development of children in providing midwifery care.

I. INTRODUCTION

World health organization (WHO) reports that 5-25% of children less than five years suffers from minor brain dysfunction, including impaired fine motor development (Widati, 2012). Meanwhile, according to (KayLambkin, et al, 2007) globally reported children who experience disorders in the form of anxiety around 9%, easy emotions 11-15%, behavior disorders 9-15%. Considering that, the number of children under five years in Indonesia is slightly large, which is around 10% of the entire population, then as a candidate for the next generation, the quality of growth and development of toddlers in Indonesia needs serious attention, namely getting good nutrition, adequate and affordable stimulation by quality health services including early detection and intervention deviation of growth and development (MOH RI, 2012). The number of children under five in Indonesia (0-5 years) as many as 12,013,416 people and women as many as 11,347,353 inhabitants, so that when totaled the number of children under five years in Indonesia in 2012 amounted to 23,360,769 people. (Health Profile, 2012).

Comprehensive and quality of child development have been monitoring through the activities of stimulation, early detection and intervention of developmental deviations of toddlers carried out at the "critical period". Doing early detection of growth and development deviations means screening or early detection of growth and development deviations means screening or following up on any complaints from parents about the growth and development of their children (West Sumatra Health Office, 2014)

Based on data from the Pariaman City Health Office in 2017, toddlers who experienced the highest fine motor impairments were at the Kurai Taji Health Center (106.6%). The obstacle that was found was the lack of mothers giving stimulation to their children (Profile of Pariaman City Health Service, 2013). From the results of Yashinta's research on the relationship between mother's level of knowledge about growth and stimulation with fine motor development in children aged 3-5 years, the results of measuring the level of fine motor development in children aged 3-5 years found that most have a good level of fine motor development (47 %).

Improvement have been done to sustain, develop and improve the quality of children's lives is an important force for a better Indonesian future. Efforts to survive develop and improve the quality of children play an important role since early life, namely the period in the womb, infants and toddlers (Maryunani, 2010). Motor development is a process of growth and development of a child's mobility. Whereas fine motor development is an aspect related to the child's ability to observe something, make movements that involve certain body parts and do small muscles, but careful coordination, such as the ability to draw, hold something, etc. (Mary Greece, 2010)

Provision of stimulation will be more effective if we pay attention to the needs of children in accordance with the stages of development and child development tasks. The task of child development is a task that appears at a certain period in one's life, the successful achievement of the developmental task in the past makes someone happy and successful through the next stage of development. Whereas failure causes sadness to individuals, community criticism and difficulties through further work (Maryunani, 2010).

Fine motor development is consistently positively related to cognitive abilities in particular, and becomes a predictor of low learning achievement. There are 3 most important components of fine motor skills: (1) Fine motor skills can shape a child's basic abilities, (2) Fine and reading skills have a clear correlation in meeting all subject needs, (3) Fine motor skills have an emotional impact on child development. (Sudiarto, 2012). To assess fine motor development measured by Denver II which is a development screening tool, this tool helps health workers to find out as early as possible developmental deviations that occur in infants or children from birth to age 6 years (Suwariyah, 2013).

Stimulation is needed to maximize the full potential of the child from the womb. When a child is born, stimulation must be carried out continuously, varied, and with an atmosphere of play and affection because, stimulation provided by parents can stimulate all the potential possessed by the child. Children are given stimulation by not in a hurry or forcing the will of caregivers or parents (Fida & Maya, 2012).

From the results of Yashinta's research on the relationship between mother's level of knowledge about growth and stimulation with fine motor development in children aged 3-5 years, the results of measuring the level of fine motor development in children aged 3-5 years found that most have a good level of fine motor development (47 %).

Based on the results of the 2013 Helmy Bety Kosegeran research that parental knowledge about early stimulation in children aged 4-5 years in the village of Ranoketang in 2013 generally has a development in accordance with the stage of development and there is a significant relationship between the level of parental knowledge about early stimulation with development 4-5 years old children in the village of Ranoketang Atas.

A lot of stimulation can be done to stimulate a child's fine motor skills. One Muslimat study (2007) prioritizes stimulation in the form of brain gym increasing the fine motor skills of students (4-5 years old) in Raudotul Athfal Baitul Mu'minin (Muslimat 17) Gunungrejo, Singosari Subdistrict, Malang Regency, there is a difference in motor level increase fine children aged 4-5 years between the treatment group and the control group.

The factors that influence development in children under five are very varied, according to Wong, (2010) there are several factors namely heredity, neuroendocrine, interpersonal relationships, socioeconomic level, disease, environmental hazards, stress on children, and the influence of mass media. According to Hidayat, (2011) factors that influence child development include hereditary factors, prenatal and postnatal environmental factors which consist of culture, socioeconomic, nutrition, climate / weather, sports / physical exercise, position of the child in the family, status health and hormonal factors.

Based on the Preliminary Study in the area of Kurai Taji Puskesmas, in the Posyandu, Marabau village, the area of Kurai Taji Health Center, the number of toddlers aged 1-5 years who visited the Posyandu amounted to 40 people. While from the results of an initial survey conducted by researchers in the area there were 3 children who experienced impaired speech and walking delays, 1 of whom was unable to say the words mama and papa in children aged 1 year and 2 children had a delay in walking at age 2 year.

II. METHODS

This research was cross sectional design in which data from independent variables and dependent variables are taken at the same time to find out the relationship between stimulation and fine motor development in the Posyandu of Marabau Village in the area of Kurai Taji Public Health Center in 2018. This research was conducted in Marabau Village in the area of Kurai Taji Public Health Center on 21 to 24 September 2018.

The population in this study were all mothers who had children aged 1-5 years and children aged 1-5 years in the Posyandu of Marabau village, the working area of the Kurai Taji Public Health Center, amounting to 31 people. Samples were taken using the Total Sampling method, which is the object studied by all populations as samples. Data collection tools used in this study were questionnaires made by researchers that were compiled based on literature review and the Denver II Questionnaire. The analysis was done by univariate and bivariate using SPSS for Windows applications.

III. RESULT

3.1 Growth Stimulation

Table 1
Growth Stimulation

	N	%
Not Good	18	58.1
Good	13	41.0
Total	31	100

Based on Table 1 we know that from 31 respondents, as much as 18 (58.1%) were not good in giving growth stimulation to their children.

3.2 Fine Motoric Development

Table 2
Fine Motoric Development

	N	%
Not Normal	19	61.3
Normal	12	35.5
Total	31	100

Based on Table 2 we know that from 31 respondents 19 (61.3%) respondent were having a child under five who have not normal fine motoric development.

3.3 Relationship between Growth Stimulation and Fine Motoric Development

Table 3
Relationship between Growth Stimulation and Fine Motoric Development

Growth Stimulation	**Fine Motoric Development**				**Total**	**%**	**p-value**
	Not Normal		Normal				
	n	%	N	%			
Not Good	15	83.3	3	16.7	18	100	0.003
Good	4	30.7	9	69.3	13	100	

Based on Table 3 we know that from 18 respondents who did not provide enough stimulation, there were 15 (83.3%) respondents whose abnormal motor skills were abnormal. Based on statistical tests show that there is a significant relationship between stimulation and fine motor skills of children aged 1-5 years because the p value of 0.003.

IV. DISCUSSION

The results of this study were also strengthened by research conducted by Wirahmahdi in 2015. The results of the study found an association between stimulation and fine motor development in children aged 1-5 years. From the results of the study, the majority of respondents in the West Panyang Rantau Gampong Posyandu, Meurebo District, Aceh Barat District provided good categories of stimulation to children with an assessment of normal fine motor development of 11 people (35.5%).

Stimulation is an activity to stimulate the basic abilities of children aged 1-5 years so that children grow and develop optimally. Every time the child needs to get regular stimulation as early as possible and continuously at every opportunity. Stimulation of child development is carried out by the mother and father who are the closest people to the child, a surrogate mother or child caregiver, other family members and community groups in their respective households and in everyday life.

Actions of stimulation are carried out with the principle that stimulation is an expression of affection, playing with children, carried out gradually and continuously (Suherman, 2000). Stimulation can be done by parents, especially mothers every chance or everyday

According to the analysis of researchers, in achieving child motor development, of course, is influenced by various things, one of which is stimulated from parents, especially mothers. Stimulation is important in children's growth and development. Children who get targeted and regular stimulation will develop more quickly than children who have less or no stimulation. However, many parents do not understand the importance of stimulation done to children, especially aged 1-5 years.

To assess fine motor development measured by Denver II, which is a development screening tool, this tool helps health workers to find out as early as possible developmental deviations that occur in infants or children (Suwariyah, 2013)

The results of this study indicate that from the results of the assessment of fine motor development using the Denver II sheet most of the fine motor development of children is in the normal category which means the child can carry out development tasks according to the age line. As at the age of 40 months children can perform developmental tasks of building towers, drawing, scribbling, wiggling the thumb and copying.

According to the researchers' analysis, it is importance of the active role of parents in providing stimulation (stimulation) to a child's development. Parents as caregivers have an important role in controlling, guiding and accompanying their children to maturity. In reaching maturity, parents have an obligation to fulfill what are the child’s rights. For this reason, good

knowledge is something that needs to be achieved because it can be one of the factors supporting stimulation of child development.

Based on statistical tests using the chi-square test obtained from 18 respondents who did not provide enough stimulation, there were 15 (83.3%) respondents whose abnormal fine motorbikes were caused due to the lack of parents in providing appropriate stimulation and good nutrition that affected their fine motor skills.

The results of this study are almost the same as the results of research by Helmy Bety Kosegeran in 2013, namely the knowledge of parents about early stimulation in children aged 4-5 years in the village of Ranoketang in 2013 in general has a development in accordance with the stages of parental development of early stimulation with the development of children aged 4-5 years in the village of Ranoketang Atas

Stimulation will be more effective when paying attention to the needs of children in accordance with the stages of development and child development tasks. In order to grow and develop optimally, in addition to good nutrition and adequate affection, babies and toddlers also need proper stimulation. Children who get a lot of stimulation will develop faster than children who are lacking or not even getting stimulation. The earlier and the longer the stimulation is carried out, the greater the benefits to the child's growth and development. The task of child development is a task that appears at a certain period in a person's life, the successful achievement of developmental tasks in the period through the next developmental stage. Whereas failure causes sadness to individuals, community criticism and difficulties through further work (Maryunani, 2010)

Stimulation is carried out from the baby in the womb until birth and carried out continuously with great affection. Will create smart children, can grow and develop optimally, be independent, have stable emotions, and are easy to adapt (Septiari, 2012).

According to the analysis of researchers the relationship of stimulation with fine motor in children aged 1-5 years showed that respondents who provide sufficient stimulation were also not always respondent's children have normal fine motor caused by other factors such as family support or parents who understand about providing good stimulation so that children do not experience subtle motor impairment.

V. CONCLUSION

Fine motor development is consistently positively related to cognitive abilities. Fine motor development requires stimulation from parents, teachers, and health workers. Stimulation in accordance with the stages of development is needed by children less than five years for fine motor development according to age. It is recommended for health workers can implement monitoring of fine motor development of children in providing midwifery care.

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