MOTHER'S KNOWLEDGE LEVEL ABOUT GROWTH AND DEVELOPMENT WITH THE GROWING DEVELOPMENT IN INFANTS AGED 6-12 MONTHS

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ABSTRACT

Introduction: The age of an infant is an essential age for growth. Its development is high-speed, follows a particular pattern, and varies between individual. An infant is still vulnerable to various health problems. The infant's development will be optimal if the mother's knowledge level is right and appropriate social interaction with the needs of the baby at its development stage.
Purpose: This study aims to analyze the relationship between mother's knowledge levels about growth development with the compatibility of growing development in infants aged 6-12 months.
Method: This study used an observational analytic method with a cross-sectional design. Statistical analysis used the Chi-Square test to determine the correlation followed by a contingency coefficient. Samples were taken according to the criteria of age 6-12 months as much as 55 respondents. data on the mother's knowledge level was collected using a questionnaire. The research evaluate growth using a baby scale of height, weight, head circumference, and to evaluate development progress using a prescreening developmental questionnaire (KPSP). This study was conducted on July 5 - August 1, 2019, at the Gotong Royong Pratama Clinic in Surabaya.
Results: The relationship of mother's knowledge level about growth development with the compatibility of growing development in infants aged 6-12 months obtained significant results with a p-value of p = 0,000 (p <0.05). Contingency coefficient test results with a value of 0.436 which shows that the strength of the relationship is strong enough. the relationship between mother's knowledge level about growing development with the compatibility of growing development in infants aged 6-12 months obtained significant results with a p-value of p = 0.007 (p <0.05). Contingency coefficient test results with a value of 0,343, which shows that the strength of the relationship is strong enough.
Conclusion: There is a significant relationship between the mother's knowledge levels about growing development with the compatibility of growing development in infants aged 6-12 months.

Keywords : Mother's knowledge, baby's growth and development

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INTRODUCTION

The process of growth and development occurs synchronously for each individual. Growth is related to change in a person's physical size, while development is related to maturation and addition of function or ability.[1]

According to the Health Ministry Republic of Indonesia (Kemenkes RI), in 2011, the incidence of developmental disorders toward infants in Indonesia is 13-18% who experience developmental delays. Basic health research in 2013 stated that short children incidence in Indonesia was 37.2%, an increase compared to 2010 (35.6%).[2,3]

A mother has many roles in children's' growth and development process because it is useful to motivate children to be prepared as well as possible to face various challenges in the globalization era.4 Also, mother's knowledge is very influential toward children's' growth and development process because it is very necessary for maintaining, preventing, and overcoming various health problems that occur with children development. Additionally, growth and development process at the age of 0-12 months experience acceleration, and infants' growth peak around period 6-12 months. The acceleration process is suitable with the pattern on the path and speed of each baby individual from physical changes and organ function maturity for example; height, body weight, head circumference changes, nerve maturation, and organs maturity in infants.[5,6]

Based on preliminary research results in Kemayoran village Surabaya, in the initial survey based on direct interview results with health cadres, 30 infants aged 0-1 years, found 70% of mothers who have not been maximal in providing stimulatory actions for infants development. Besides, the rest obtained 30% of mothers have provided stimulatory actions for their infants development.[7]

The baby's growth and development have a relationship with the mothers' role from the description above. Therefore, mother's knowledge is vital for a baby's growth and development. The purpose of this research is to find out about the "Correlation of Mother's Knowledge Level about Growth and Development with Compatibility of Growing Development in Infants Aged 6-12 Months."

METHOD

This research used an observational analytic method with a cross-sectional design. Populations in this research were mothers' baby aged 6-12 months who visited the Surabaya Pratama Gotong Royong Clinic from July to August 2019.

The number of samples obtained were 55 people. The sampling technique was non-probability sampling : purposive sampling. Inclusion criteria were mothers who brought healthy infants aged 6-12 months, mothers who were willing to participate in this research, infants born, and normal weight.

Exclusion criteria were infants with congenital abnormalities, infants with cerebral palsy, and intrauterine growth restriction. The Independent variable in this research was the mother's knowledge level—data obtained through interviews using a questionnaire instrument. The dependent variable in this research was the baby's growth and development. Baby's growth was determined from length/height, weight, and head circumference, according to WHO. The measuring tool used is the Digital Baby Scale and head measuring tape. Baby's development was being seen from motor functions (rough and smooth), personal-social abilities, and language skills. The measuring instrument used a prescreening developmental questionnaire (KPSP). Data were analyzed univariately and bivariate. Data analyzed univariately were infants' gender, baby's age, mother's education, mother's occupation, and mother's knowledge, bivariately were independent variables of mother's knowledge level. The dependent variable was the infants' growth and development. A statistical test , Chi-Square test was used, to determine the relationship of mother's knowledge level about growth and development with the compatibility of growing development in infants aged 6-12 months and continued with contingency coefficient test to determine the closeness of two variables.

RESULTS

Table 1. Research subject charactheristic

Variables	Number of Respondents (n)	Percentage%
Gender		
Male	26	47,3
Female	29	52,7
Infants' age		
6 months	9	18,2
7 months	7	12,7
8 months	7	12,7
9 months	10	18,2
10 months	7	12,7
11 months	8	14,5
12 months	6	10,9

Mothers' Education		
Elementary School	**5**	**9,1**
Middle School	**12**	**21,8**
High School	**30**	**54,5**
College	**8**	**14,5**
Mother's job		
Housewife	35	63,6
employees	10	18,2
entrepreneur	7	12,7
Government employees	2	3,6
Labor	1	1,8
Mother's Knowledge		
Well	34	61,8
Low	21	38,2

Based on Table 1 above, it showed that the gender of respondents' infants were 26 males (47.3%) and 29 females (53%). The ages of most infants were nine months for about ten people (18.2%). Mother's education was mostly high school for about 30 people (54.5%). Mothers' occupations were dominantly Housewives for about 35 people (63.6%). Mothers' knowledge mostly were mothers who had well-knowledge for about 34 people (61.8%)

Bivariate Analysis

Table 2. Relationship analysis of mother's knowledge level about growing development with the compatibility of growth in infants aged 6-12 months in Surabaya Pratama Gotong Royong Clinic 2019.

Knowledge level	Growth				Total n (%)	P*
	Normal		Abnormal			
	(n)	(%)	(n)	(%)		
Good	25	73,5	9	26,5	34 (100)	0,000
Not good	5	23,8	16	76,2	21 (100)	
Total	30	54,5	25	45,5	55 (100)	

Based on the analysis, correlation of mother's knowledge level about growing development with the compatibility of growth in infants' aged 6-12 months, Chi-Square statistical test results obtained p = 0,000 (p <0.05) thus it could be concluded that there was a significant relationship between mothers' knowledge and growing development in infants aged 6-12 months, with contingency coefficient with value of 0.436 which indicates a strong relationship.

Table 3. Relationship analysis of mother's knowledge level about growing development with the compatibility of development in infants aged 6-12 months in Surabaya Pratama Gotong Royong Clinic 2019.

Knowledge level	Development				Total n (%)	P*
	Normal		Abnormal			
	(n)	(%)	(n)	(%)		
Good	28	82,4	6	17,6	34 (100)	0,007
Not good	10	47,6	11	52,4	21 (100)	
Total	38	69,1	17	30,9	55 (100)	

Based on the analysis, correlation of mother's knowledge level about growing development with the compatibility of development in infants' aged 6-12 months, Chi-Square statistical test results obtained p=0,007 (p <0.05) thus it could be concluded that there was a significant relationship between mothers' knowledge and growing development in infants aged 6-12 months, with contingency coefficient value of 0,343 which indicates a strong correlation.

DISCUSSION

Basic Characteristics of Research Subjects

In this research, it was found that the percentage of mothers with good knowledge about growth and development in Surabaya Pratama Gotong Royong Clinic was 61.8%. This indicated mothers' awareness about growth and development in infants was good. While the results of previous research conducted by Endah in 2015, in RW 6 Perak Utara Village Surabaya Region, the percentage of mothers with good knowledge was 50%.8

This research found that most mothers' jobs were housewives for about 63.6%, and the majority of most mothers' education is high school for 54.5%. This is suitable with Lilik and Maya's research on 2011 which obtained data in mothers' job, mostly housewives, 22 respondents 44%, and mothers' education is mostly high school for about 23 respondents 46%.9 Education that mothers have is one of the most important factors toward infants' growth and development, because with a better education mother can receive all information about how to take good care of an baby toward the infants' growth and development.

The availability of mother's time to provide growth and development stimulation is very closely related to their job because the mother must return to work after giving birth so that mothers who have jobs cannot provide growth and development stimulation to their infants. In contrast, mothers who do not have jobs such as only mothers' households can provide growth and development stimulation to their infants more optimally. Therefore they can know all their children's activities.[10,11]

Correlation Analysis of Mother's Knowledge Level about Growth and Development with the Compatibility of Growing Development in Infants Aged 6-12 Months.

In this analysis results using Chi-Square statistical test, the statistical results tests show the correlation of mother's knowledge level about growing development with the compatibility of growth in infants aged 6-12 months obtained significant results with a p-value of p = 0.00 (p <0.05). It is in agreement with a study of child growth conducted by Sulistiawati in 2016 in Banaran Village. The working area of Galur II Health Center, Kulon Progo, Yogyakarta, which showed that there was a significant relationship between mother's knowledge level and growth in infants.[12]

On the other hand, results of Chi-Square statistical test, show the correlation of mother's knowledge level about growing development with the compatibility of development in infants aged 6-12 months obtained significant results with a p-value of p = 0.007 (p <0.05). It is similar to the study of child development conducted by Sudarti and Fauziah in 2010 in Jinten Integrated Healthcare Center, Badran, Jetis Yogyakarta. It was found that there was a significant relationship between mother's knowledge level infants' development.[13]

Mother's knowledge is fundamental for a child's growth and development; if the mother can receive much information about growth and development stimulation, then the child will grow up accordingly.

CONCLUSION

We can conclude that there is a significant relationship between mother's knowledge level about growth and development with the compatibility of growing development in infants aged 6-12 months.

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