THE RELATIONSHIP OF THE MOTHER EDUCATION LEVEL WITH THE GROWTH OF TODDLERS IN POSYANDU RW 12 PUSKESMAS KELURAHAN GEDONG JAKARTA TIMUR

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ABSTRACT

Toddler is a golden period , a window of opportunity and a critical period for the continuity of the child's growth and development.. The mother is the closest person to the toddler, the person who is cared for toddlers and who played a role in making decisions about the child's health condition. The research aims to find the relationship between mother's education level and the growth of children . The study used an analytic survey with cross sectional approach on 88 respondents obtained by the method of consecutive sampling. The results of chi square analysis with p value> 0.05 showed that there was no relationship between mot her's education level and weight end height growth with a value of Pvalue = 0.48 and growth of toddler's upper arm ci rcumference with Pvalue = 0.68. This study recommends research on the analysis of factors that affect toddler growth and development.

Keywords: Growth , Mother's education, and toddlers

INTRODUCTION

The growth of children under five is an important thing that must be considered by parents, society and even by the state. Every child will go through a growth process according to their age. Growth monitoring can be done by parents, health workers, educators, cadres and other workers who are interested in child development. Child growth and development are basically the same for every child, so knowing the characteristics and principles of growth and development will make it easier for parents to provide growth and stimulation as needed (Ministry of Health, Republic of Indonesia, 2014). Growth is an increase in physical size while development is a process where the child experiences an increase in a variety of skills and functions. Assessment of a child's physical growth such as weight and height on an ongoing basis is very important so that growth that is too fast or inadequate can be identified early (Kyle & Carman, 2014). Growth b Alita requires stimulation, stimulation is needed to stimulate the basic abilities of children so that children grow optimally. Stimulation per grows late should be done regularly, as early as possible and continuously by their parents or caregivers of children (Kemenkes RI, 2014).

Based on the results of Riskesdas (2013) toddlers who experience very thin conditions are still quite high 5.3 percent,

12.1 percent thin and 11.9 percent fat, according to WHO (2010) health problems have been said to be serious if the prevalence of thinness between 10.0- 14.0 percent and is considered critical if ≥ 15.0 percent. In 2013 the prevalence of under - fives was still 12.1 percent, which means that underweight problems in Indonesia were still a serious health problem. In 2013 there were 19.6% undernourished children consisting of 5.7% undernourished children and 13.9% undernourished states, the data stated that the number of malnourished children under five rose every year (Hardianti; Dieny & Wijayanti, 2013). There is still a high nutritional problem for children under five in Indonesia, so it requires hard work to reduce health problems in the community. Damanik; Ekayanti; & Hariyadi (2010) in (Todaro & Smith, 2009) suggested that WHO has found five conditions that cause 70% of under-five deaths including acute respiratory infections, diarrhea, chickenpox, malaria and malnutrition, it is estimated that if this trend continues , then in 2020 this condition will cause 30% of child deaths worldwide.

Adequate or deviant child growth can be monitored through measurements of body weight (height) , height (TB) and upper arm circumference (LLA) of children. Based on the Ministry of Health of the Republic of Indonesia (2014) child growth can be seen from body weight (body weight) and height (TB) using the BB / TB table (Directorate of Community Nutrition 2002) the results will be categorized whether the child has physical growth. Fat, Normal, Skinny and Very Thin. Growth and developmental deviations can include speech disorders, cerebral palsy, down syndrome, short stature, hyperactivity and autism disorders . Factors that influence children's growth are influenced by internal and external factors. Internal factors include race, family, age, sex and genetics, while external factors include the conditions of the mother during prenatal, intranatal and postnatal conditions. One of the postnatal factors such as socioeconomic family. Socio-economic includes residence, mother's education level and family wealth index (Kemenkes RI, 2014; IDHS 2012).

Changes that occur continuously on people's behavior are caused by increasing levels of education. Associated with the quality of human life, there is a tendency that the higher level of education is possessed, the more knowledge will become and the result in an increase in the quality of life especially in the health sector (Indonesia Health Profile, 2014).

Based on the 2012 IDHS, maternal education has an inverse relationship with the risk of child mortality. A high level of maternal education is generally associated with a low risk of death, this is because education makes mothers get better information on pregnancy and child care. The infant mortality rate is 77% lower in women who have some college education Compared to children Whose mothers have low education (15 and 66 kema tian per 1,000 births). Based on the results of the survey on the level of maternal education can reduce mortality in children, researchers assume that the mother's education is closely connected with the growth and development of infants, because the mother will get information about the growth and development of children is better than mother experience and upbringing low.

The Concept of Toddler Growth

1. Definition of Growth

Growth is an increase in the size and number of cells and intracellular tissue or increase in physical size and body structure in parts or in whole and can be measured in units of length and weight (Kemenkes RI, 2014) .

2. Toddler Growth

The most prominent picture in childhood is physical growth . During development, various tissues in the body experience changes in growth, composition and structure. Height development in children is almost entirely due to skeletal growth and is considered a measure of stable general growth (Wong. 2008). In newborns up to 6 months the growth of body weight increases from 140 to 200 grams of birth weight to be doubled at the end of the first 4 to 7 months. Weight gain in infants aged 6 to 12 months gained 85 to 140 grams of birthweight three times at the end of the first year. At the age of toddler and pre-school weight gain 2 to 3 kilograms each year. In infants aged 0 to 6 months, height increases about 2.5 cm each month and ages 6 to 12 months increase around 1.25 cm and 6 to 8 cm in the 2nd and 3rd year. the body of the child is twice the length of birth and at the age of 5 years the body height increases from 5 to 7 , 5 cm (Wong, 2008).

3. Weight Measurement (BB) :

   a. Using baby scales.

   1)Baby scales are used to weigh children up to 2 years of age or while the child is still able to lie down / sit quietly.

   2) Place the scale on a flat table and not easily sway.

3) Look at the position of the needle or the number must point to the number 0.

4) Babies should be naked, without hats, socks, gloves.

5) Lay the baby carefully on the scale.

6) Look at the needle scale until it stops.

7) Read the number indicated by the scale needle or the scale number.

8) If the baby continues to move, pay attention to the movement of the needle, read the number in the middle between the movement of the needle to the right and left.

b.   Using the stampede scales.

1) Place the scales on a flat floor so it is not easy to move.

2) Look at the position of the needle or the number must point to the number 0.

3) Children should wear thin everyday clothes, not wear footwear, jackets, hats, watches, necklaces, and not hold anything.

4) The child stands on the scale without holding it.

5) See the needle scale until it stops.

6) Read the number indicated by the scale needle or the scale number.

7) If the child continues to move, pay attention to the movement of the needle, read the number in the middle between the movement of the needle to the right and left.

c. Measurement of Body Length (PB) or Height (TB) and Upper Arm Circumference (MUAC) :

1) How to measure by lying down.

2) How to measure in a standing position.

4. **Use of Table BB / TB (Directorate of Community Nutrition 2002).**

a. Measure the height / length and weigh the child's weight, according to the method above.

b. Look at the child's Height / Length column that matches the measurement results.

c. Select the Weight column for male (left) or female (right) according to the sex of the child, look for the body weight closest to the child's weight.

d. From this weight figure, see the top of the column to find out the Standard Deviation (SD) number (BB / TB table in the appendix)

e. BB / TB Interpretation: Normal: - 2 SD to 2 SD, Thin: < - 2 SD to - 3 SD, Very thin: < - 3 SD and Fat: > 2 SD.

5. **MUCH measurement**

Lila measurement is an indirect measurement of muscle mass. The way to do the measurement is by placing the meter vertically, along the posterior part of the upper arm to the acromial process and to the olecranon process half of the measurement length is the midpoint. Interpretation of LILA <11 cm in lean children, .11-14 cm in normal children and> 14 cm in fat children.

6. **Mother's Education**

Education in the Big Indonesian Dictionary (2008) is the process of changing attitudes and behavior of a person or group of people in an effort to mature humans through teaching and training efforts. According to Arikunto (2002) the education level category is divided into two, namely elementary school to junior high school education while higher education starts from high school to university level. Based on the 2012 IDHS, maternal education has an inverse relationship with the risk of child mortality. A high level of maternal education is generally associated with a low risk of death, this is because education makes mothers get better information on pregnancy and child care. The infant mortality rate is 77% lower in mothers with tertiary education compared to children whose mothers have low education (15 and 66 deaths per 1,000 live births).

RESEARCH METHODS

The design of this research is descriptive analytic design with *cross sectional* research approach . Study *cross sectional* / cross-sectional is a type of non-experimental observational study where Researchers conducted observations / measurements of variables at a particular moment. In this study, researchers wanted to find the relationship between the independent variable as a risk factor and the dependent variable as the effect by taking a momentary measurement. The independent variable (risk factor) in this study is the level of mother's education. The dependent variable in this study is toddler growth. The reason the researcher used this design was to identify the presence or absence of a relationship between the independent variable (mother's education level) and the dependent variable (toddler growth) at the same time as one measurement using a questionnaire, a scale and meter.

Population and Sample

Sampling in this study using *consecutive sampling* method is to take all the samples found and meet the specified requirements until the specified amount is met. The

subject criteria (inclusion criteria) in this study are: Age of toddlers ie 3-60 months , Mothers who have toddlers and are willing to be respondents and can communicate well verbally , while exclusion criteria in this study are toddlers who come to Posyandu but age has exceeded 60 months and refused to be a respondent.

Data analysis

Data analysis in this study is univariate analysis, the purpose of this analysis is to describe the characteristics of each studied variable, which consists of independent variables covering the level of maternal education and the dependent variable also performed univariate analysis which is age, sex and toddler growth ie BB / TB and LLA . The second stage is to conduct a bivariate analysis by looking for the relationship between the two variables. This analysis was carried out after univariate analysis and the characteristics of each variable were known. The purpose of this analysis is to prove whether there is a relationship between the independent variable consisting of the level of mother's education to the dependent variable, namely the growth of infants .

RESULTS RESEARCH

The presentation of the results of this study will be displayed in two stages of presentation, namely the presentation of the results of univariate analysis and the results of bivariate analysis. Univariate analysis describes a description of the variables studied including the level of maternal education, age of children under five, sex of children under five, BB / TB and LLA.

Table 1. Frequency Distribution of Mother Education Level for Toddler Children in Posyandu RW 12, Puskesmas Kelurahan Gedong, East Jakarta.

No	Mother Education Level	Frequency	Relative Frequency (%)
1	No school	2	2.27%
2	Elementary school	11	12.50%
3	Middle School	24	27.27%
4	High school	42	47.72%
5	PT	9	10.22%
total		88	100%

From the table above shows the level of education of mothers of children under five is the majority graduated from high school, which is 46.73% of the number of mothers of children under five 88 who are respondents in this study. While there are 2.17% of mothers of children under five who have never attended formal education. If categorized as low education level, mothers of toddlers are around 42.04% mothers of toddlers with low education and

57.94% mothers of toddlers with high education. The low education level here is mothers who don't go to school, elementary and junior high school, while mothers with high education levels are mothers who have graduated from high school /vocational level, Diploma I, II and III as well as Bachelor.

Table 2. Frequency Distribution of Mother Educational Levels of Toddler Children in Posyandu RW 12, Puskesmas Kelurahan Gedong, East Jakarta.

No	Mother Education Level	Frequency	Relative Frequency (%)
1	Low Education Level	37	42.04%
2	Higher Education Level	51	57.94%
Total		88	100%

The education level of mothers of children under five in the Gedong region was 57.94% with high education and low education with 42.04%. Based on the growth and development factors of a child can be influenced by external factors, one of which is the mother factor. The mother factor here is related to mother's education and mother's knowledge about caring for her toddler. Mother's education has an important role in preventing *underweight* in toddlers. A mother can determine how to determine the parenting style she will

choose especially in choosing food for her nursery (Damanik; Ekayanti; & Hariyadi, 2010).

Table 3. Distribution of Toddler Sex in Posyandu RW 012 Puskesmas Kelurahan Gedong

No	Toddler Sex	Frequency	Relative Frequency (%)
1	Man	49	55.68%
2	Girl	39	44.31%
total		88	100%

From the table above illustrates the sex of children under five in RW 012 Kelurahan Gedong is male as much as 55.4% while the sex of toddler as many as 44.5%. The sex of a child's growth also affects the growth of a child. The growth of girls is faster than boys of all ages (Wong, 2008).

Table 4. Distribution of Toddler Age Frequency at Posyandu RW 12, Puskesmas Kelurahan Gedong, East Jakarta.

No	Toddler age	Frequency	Relative Frequency (%)
1	Infants (1 - 12 Months)	24	27.27%
2	Toddler (13 - 36 Months)	31	35.23%
3	Preschool (37-60 Months)	33	37.50%
total		88	100%

Based on the frequency table above, it illustrates that preschool age is prioritized

with 40.21% followed by toddler and infant age. Infancy is a period of rapid motor, cognitive and social development with the baby's mother forming the basis of trust in the world and the basis of interpersonal relationships in the future. At toddler age is a time of great physical and personality development and requires broader social relationships , and studying the role standards for that growth of toddler age is important to always be monitored.

Table 5. Weight / Height Distribution of Toddler in P osyandu RW 012 Puskesmas Kelurahan Gedong.

No	Toddler Nutrition Status (BB / TB)	Frequency	Relative Frequency (%)
1	Thin	3	3.41%
2	Normal	84	95.45%
3	Fat	1	1.13%
total		88	100%

Based on the frequency table above the nutritional status of children under five in Posyandu RT 012 Puskesmas Gedong Village a percentage of 3.41% of children under five have underweight nutritional status, 95.45% have normal nutritional status and 1.13% under five have underweight nutritional status. Weight and height is one indicator in determining nutritional status, proportionally normal and healthy toddlers get older and are followed by weight gain. Likewise, increasing height increases body weight and increases the size of a toddler's upper arm circumference.

Table 6. Distribution of Toddler Upper Arm Circular Frequency at Posyandu RW 12, Puskesmas Kelurahan Gedong, East Jakarta.

No	Upper arm circumference	Frequency	Relative Frequency (%)
1	Thin	1	1.13%
2	Normal	25	28.40%
3	Fat	62	70.45%
total		88	100%

Bivariate analysis is used to analyze the relationship between the independent variable and the dependent variable. This study uses a chi-square test with an alpha value of 0.05 to find out whether there is a relationship between maternal education level and the growth of children under five. Variables tested by bivariate analysis were: the level of education of mothers with under-five growth in the BB / TB and LLA components.

Table 7. Analysis of the relationship between the Mother level of education and BB / TB for toddlers in Posyandu RW 012 Puskesmas Gedong Kelurahan 2017 (n = 88)

NO	Mother's Education Level	Toddler Growth BB / TB						Total		P. Value
		Thin		Normal		Fat				
		N	%	N	%	N	%	N	%	
1	Low	1	2.7	35	94.6	1	2.7	37	42.04	.478
2	High	2	3,9	49	96.1	0	0	51	58:00	
Total		3	3.4	74	95.5	1	1.1	88	100	

Table 8. Analysis of the relationship between the Mother levels of education end toddler LLA in Posyandu RW 012 in Gedong 2017

NO	Education Level	Toddler Growth LLA								Total	P. Value
		Thin		Normal		Fat					
		N		N		N		N		0.682	
		%		%		%		%			
1	Low	0	0.0	11	29.7	26	70.3	37	100		
2	High	1	2.0	14	27.5	36	70.6	51	100		
total		1	1.1	25	28.4	62	70.5	88	100		

DISCUSSION

This research categorizes mother's education levels into two namely low and high education levels. The results of this study indicate the level of education of mothers under children under five in the Gedong village health center as many as 51 mothers or 58% have toddlers with normal BB / TB growth of 96.1%, while mothers with low education levels are 37 people or 42.04%. Statistical test results show the value of P Value = 0.428 so it can be concluded that there is no relationship with the level of education of mothers with the growth of BB /TB toddler. Unlike the case with the results of research Waqidil and Adini (2014) the results of the study with the title of the relationship between the level of education of mothers with the development of toddlers aged 3-5 years. The study resulted in a relationship between mother's educational level with the development of toddler found p: 0,000 <α: 0.05. Normal growth is not only influenced by one factor. Factors that can affect the growth of children under five, especially body weight and height are maternal factors

including education and work status of the mother , family income, nutritional knowledge, sanitation hygiene, and health services (Arini, 2018). Unlike the case with the results of research conducted by Damanik; Ekayanti; & Hariyadi (2010) low maternal education balitannya chance to experience *Stunting* 1:27 times compared with infants whose mother's education level is above junior or setin g kat. Mother's education plays an important role in determining the level of nutritional adequacy. The prevalence of stunted children as an indicator of undernourished children is lower in mothers of higher education levels with any income.

The results of this study indicate the level of education of mothers under five in the Gedong village health center as many as 51 mothers or 58% have toddlers with normal LLA growth of 27.5%, and 70.6% overweight while mothers with low education levels of 37 people or 42.04% have toddlers with Normal LLA growth is 29.7% and Fat is 70.3%. Statistical test results show the value of P Value = 0.682 so it can be concluded there is no relationship between the mother's education level and the growth of toddler LLA.

CONCLUSION

1. Obtained a picture of the age of children under five and sex of children under five in Gedong Village where the age of toddlers who come to Posyandu Kelurahan Gedong is 40.01% is preschool age ie ages 3 to 5 years. As for the sex of toddlers most are male with a percentage of 55.40%.

2. Obtaining overview of education mother toddler in Gedong village where education level is most highly educated mothers with a percentage of 57.63%, ie at least high school and educated Bachelor maximum.

3. Obtained a picture of growth in body weight (BB) , height (TB) and Upper Arm Circumference in toddlers in Gedong Village where the growth of toddlers seen from the height of the highest body weight is at normal or around 95.45%.

4. Obtain an overview of the relationship between mother's education level and the growth of children under five in the Gedong Village Health Center, East Jakarta. This study resulted in no relationship between maternal education level with the growth of BB / TB under five and LLA under five with a P value of 0, 478 for the relationship of maternal education level with the growth of BB /

TB and the results of P value 0, 682 LLA of children under five.

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