



Family Income, Mother's Education and Number of Siblings with Toddler Growth and Development

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ARTICLE INFO

Article history:

Received 11 April 2022
Accepted 21 July 2022
Published 10 September 2022

Keyword:

Family income
mother education, number of sibling
growth and development
toddler

ABSTRACT

Toddler age is a golden period in the cycle of human growth and development. At this time there is a rapid development of the brain and intelligence of children. The role of parents in stimulating growth and development of children in this period is very important to prevent developmental delays. This study aims to analyze the relationship between family income, maternal education and the number of siblings with the growth and development of children under five. The research was conducted at the Posyandu in the working area of the Wundulako Health Center in March 2021. The sample in this study amounted to 207 mothers of children under five who visited the posyandu at the time of the study. The data was collected primarily by using a questionnaire and then analyzed by univariate and bivariate. The results showed a significant relationship between family income and toddler growth and development ($p = 0.014$). Maternal education did not have a significant relationship with growth and development ($p = 0.173$) and the number of siblings also did not have a significant relationship with child development ($p = 0.299$). The results of this research are expected to provide input to the health center regarding the growth and development of children under five in their working area. It is better if cadres actively screen the growth and development of children under five every month so that the growth and development of toddlers do not experience delays.

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Kata kunci:

Pendapatan keluarga
pendidikan ibu
jumlah saudara
tumbuh kembang
balita

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DOI: [10.30604/jika.v7i3.971](https://doi.org/10.30604/jika.v7i3.971)
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ABSTRAK

Usia balita merupakan periode emas dalam siklus pertumbuhan dan perkembangan manusia. Pada masa ini terjadi perkembangan yang pesat pada otak dan kecerdasan anak. Peran orang tua dalam menstimulasi pertumbuhan dan perkembangan anak pada periode ini sangat penting untuk mencegah timbulnya keterlambatan tumbuh kembang. Penelitian ini bertujuan untuk menganalisis hubungan antara pendapatan keluarga, pendidikan ibu dan jumlah saudara dengan tumbuh kembang balita. Penelitian dilaksanakan di posyandu wilayah kerja Puskesmas Wundulako pada bulan Maret 2021. Sampel pada penelitian ini berjumlah 207 ibu balita yang berkunjung ke posyandu pada waktu penelitian. pengumpulan data dilakukan secara primer dengan menggunakan kuesioner kemudian dianalisis secara univariate dan bivariate. Hasil penelitian memperlihatkan signifikansi hubungan antara pendapatan keluarga dengan tumbuh kembang balita ($p=0.014$). Pendidikan ibu tidak memiliki hubungan signifikansi dengan tumbuh kembang ($p=0.173$) dan jumlah saudara juga tidak memiliki signifikansi hubungan dengan tumbuh kembang balita ($p=0,299$). Hasil penelitian ini diharapkan dapat memberikan masukan kepada pihak puskesmas mengenai pertumbuhan dan perkembangan balita di wilayah kerjanya. Sebaiknya kader secara aktif melakukan skrining tumbuh kembang balita setiap bulan agar pertumbuhan dan perkembangan balita tidak mengalami keterlambatan.

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INTRODUCTION

Children's health is very important for parents and this starts when the child is still a toddler. Growth and development in toddlers is always changing from birth to adolescence. The process of growth and development in toddlers will be achieved properly if toddlers are cared for properly and correctly. Treatment for toddlers includes how to breastfeed, how to carry or how to provide nutrition. The role of parents in stimulating the growth process of toddlers is important and has a positive impact. Various efforts to support children's growth and development have been and will continue to be carried out and even developed in a better direction, one of which is through growth and development monitoring activities carried out at the posyandu (Syahputri et al., 2019; Ramadhanti et al., 2019).

The results of the 2018 Basic Health Research recording explained that the proportion of monitoring growth in the last year at the age of 0-59 months was 80.6% while the proportion of monitoring development was 88.3%. The proportion of the main reasons families do not weigh their toddlers is because they are busy (28.3%), lazy (15.1%), children are big (14.1%), forget schedule (12.8%) and children have received immunizations (10.8%) The proportion of the main reasons families never measure the length or height of children under five, among others, there is no place of measurement (31.5 %), busy (15.7%) and there is no tool to measure length or height (12.9 %) (Kemenkes, 2019).

The age of toddlers is called the golden age for children (0-3 years) which is very important in the life cycle because at this time there is rapid development of the child's brain and intelligence. During the golden age, children will absorb everything they see, hear, smell, feel and touch from their environment. Children's subconscious is very active at this time so that whatever children get from their environment will easily enter their subconscious. Parents need to pay attention to stimulation from the child's environment and should not say words that have negative connotations to children (Rumahorbo et al., 2020). Children at the golden age of 0-5 years need to get the attention of their parents, especially regarding their growth and development. Do not quickly feel satisfied if at the age of the child is growing well, usually measured by normal weight and height. Gross and fine motor development, speech development, environment, and social behavior need equal attention. By monitoring a child's development, parents can actually detect it early (Jusni et al., 2020)

At the stage of growth and development, every child needs to receive regular care and stimulation, especially at the age of toddlers because at the age of toddlers children are still very dependent on parents, especially on mothers in carrying out important activities such as eating, bathing, urinating or playing. At the toddler stage, the child's development in terms of language and walking is good, but his abilities in other things are still limited. Parents must know the right stimulation for children according to their age because giving good stimulation is a form of mother's concern for children (Nurlaila & Nurchairina, 2014).

The normal pattern of child growth and development between one child and another in the end is not always the same, because it is influenced by interactions by many factors. A study shows that maternal factors that can affect a child's growth and development include the mother's age, education and occupation (Lestari, 2019). Another opinion explains that factors that can affect the growth and development of toddlers include nutritional status, infectious diseases, parents' income, parents' level of knowledge

(Rumahorbo et al., 2020). Mother's ability to assess the development of toddler age children is influenced by mother's education (Adeniyi et al., 2018). Another study states that the number of children affects the nutritional status of children under five. The number of children in the family will have an impact on the availability of food in the family which will certainly have an impact on the growth and development of children (Suryani, 2017).

Growth failure can cause stunting in children. Stunting is a chronic malnutrition problem that occurs due to inadequate nutritional intake for a long time due to feeding that is not in accordance with the needs of children (Black et al., 2016). The incidence of stunting in children aged 0-2 years can interfere with children's cognitive, language and motor development (Muhoozi et al., 2016).

Growth in children can be done through anthropometric measurements including weight, height and head circumference which are carried out regularly and periodically. Development in children is carried out using the Developmental Pre-screening Questionnaire instrument (Nurfurqoni, 2017). Wundulako Public Health Center is one of the implementers of health services in Kolaka Regency. The initial survey conducted by the research team at the Wundulako Health Center in February 2021 obtained data on the number of children under five in 2020 as many as 2,714 people. Data recording for 2020 shows that in the working area of the Wundulako Health Center there are 16 undernourished toddlers (weight/age), 26 short toddlers (height/age) and 9 thin toddlers (weight/height) (*Rekam Medis Puskesmas Wundulako*, 2020). This health center is also one of the stunting loci in Kolaka Regency. The measurement of the growth of toddlers based on height and age is routinely carried out every month at posyandu activities in the working area of the Wundulako Health Center but for measuring the development of toddlers it has not been carried out optimally. According to the information obtained, there has been no previous research conducted regarding the growth and development of toddlers. This prompted the team to conduct research on the relationship between family income, mother's education and the number of siblings with the growth and development of toddlers

METHOD

Research design

This research is quantitative using a cross sectional design which was carried out with the aim of analyzing the effect of the independent variable and the dependent variable together at a certain time on the growth and development of toddlers. The research was carried out in March 2021 at the posyandu in the working area of the Wundulako Health Center. The population in this study were all mothers who had toddlers in the working area of the Wundulako Public Health Center as many as 2,714 people. This research has obtained Ethical Clearance from the Health Research Ethics Commission of IAKMI, Southeast Sulawesi Province No. 05/KEP-IAKMI/III/2021 dated February 25, 2021.

Sampling procedures

The research sample was 207 mothers of children under five who were determined using purposive sampling. The inclusion criteria in this study were mothers of children

under five who visited the posyandu during the research, were willing to be research respondents and were able to read and write (Siyoto, 2015).

Measuring Instrument

The data collection technique in this study is structured interviews, namely the method of collecting data through direct meetings or face-to-face meetings (personality administered questionnaires) because the specified sample can be reached personally, by preparing a list of written questions whose alternative answers have also been prepared which are used to obtain information. regarding the respondent's assessment of the object of research. Data was collected primarily by using a questionnaire containing the characteristics of children under five, the characteristics of mothers of children under five and measurement of growth and development of children under five. Secondary data was obtained from the Wundulako Health Center regarding the number of children under five in the working area of the puskesmas. Growth is related to changes in size, number, size or dimensions at the level of cells, organs and individuals which can be measured in kilograms, length/height in centimeters. Measurement of growth is based on the WHO/NCHS standard reference assessment of nutritional status in boys and girls 0-59 months according to body weight and age. Development is an increase in ability in more complex body structures and functions in a regular and predictable pattern, as a result of the maturation process, measured based on the developmental pre-screening questionnaire (KPSP) which is appropriate for the child's age consisting of 10 questions. If the respondent answered correctly, it was given a score of 1, if the respondent's answer was wrong, it was given a score of 0 (zero), so the total score was 10. The measurement of family income is based on the 2021 Southeast Sulawesi Provincial Minimum Wage (UMP) of Rp. 2,552,014.52. Mother's education is based on the last formal education level taken by the mother of children under five, while the parity amount is based on the 2009 BKKBN standard (low parity: 0-2 children and high parity 3 children).

Data analysis

The data that had been collected from the research respondents was then analyzed. Univariate analysis was conducted to determine the frequency of toddler age, gender, number of siblings, mother's education, family income, growth and development of toddlers. Bivariate analysis used the chi square test with a significance level of $p < 0.05$ to analyze the correlation between family income, mother's education, number of siblings with toddler growth and development.

RESULTS AND DISCUSSION

The research results are presented in the form of descriptive and inferential statistics. The characteristics of toddlers in table 1 show that most of the toddlers (12-36 months) are 90 people (43.5), male sex is 110 people (53.1%) and most of them have siblings < 4 as many as 159 people (76.8 %). Table 2 shows that most of the mothers have higher education (high school graduation to college) as many as 85 people (41.0%) and most of them have low incomes as many as 120 people (58.0%).

The results of measuring the growth of toddlers in table 3 show that most of the data have good nutritional status as many as 189 people (91.3 %). The results of the measurement of development obtained that most of the toddlers had normal development as many as 114 people (55.1 %). In measuring the growth and development of toddlers, it was found that most of the toddlers had normal growth and development as many as 116 people (56.0%).

The results of statistical tests in table 3 show a significant relationship between family income and growth and development of toddlers ($p = 0.014$), there is no significant relationship between mother's education and growth and development of toddlers ($p = 0.173$) and there is no significant relationship between the number of siblings and growth and development. toddlers ($p = 0.927$).

Tabel 1.
Characteristics of Toddlers

Characteristics	n	%
Age (Months)		
Infant (0-11)	79	38,2
Toddler (12-36)	90	43,5
Pre school (37-59)	38	18,4
Gender		
Man	110	53,1
Woman	97	46,9
Number of Siblings		
Big (≥ 3)	89	43,0
Small (< 3)	118	57,0

Table 2.
Characteristics of Mother Toddler

Characteristics	n	%
Education		
No school	1	0,5
Finished Elementary	26	12,6
School		
High School Graduate	59	28,5
Finished High School	85	41,0
Graduate College	36	17,4
Family Income		
Low ($< 2.552.014,52$)	120	58,0
High ($\geq 2.552.014,52$)	87	42,0

Table 3.
Toddler Growth and Development

Characteristics	n	%
Growth		
Good Nutrition	189	91,3
Malnutrition	11	5,3
More Nutrition	2	3,4
Development		
Normal	114	55,1
Caution	69	33,3
Abnormal	24	11,6
Growth and Development		
Normal	116	56,0
Caution	76	36,7
Abnormal	15	7,2

Table 4.
Correlation Between Family Income, Mother's Education, Number of Siblings with Toddler Growth and Development

Variable	Toddler Growth and Development						p-value
	Normal		Caution		Abnormal		
	n	%	n	%	n	%	
Family Income							
Low	58	28,0	54	26,1	8	3,9	0.014
High	58	28,0	22	10,6	7	3,4	
Mother's Education							
Low	48	23,2	35	16,9	3	1,4	0.173
High	68	32,9	41	19,8	12	5,8	
Number of Siblings							
Big	45	21,7	38	18,4	6	2,9	0,299
Small	71	34,3	38	18,4	9	4,3	

Family Income with Toddler Growth and Development

This study shows that there is a significant relationship between family income and growth and development of children under five ($p = 0.014$). This is in line with studies which say that family income significantly reduces the likelihood of under-fives experiencing malnutrition. High economic conditions allow families to give proper attention to the nutritional intake of toddlers. The level of family income can affect the adequacy and quality of food for toddlers so that if the income is high, the quality of food will also be good and have an impact on the nutritional status of toddlers (Rahmawati & Daerobi, 2019). The results of this study are also in line with studies which explain that there is a relationship between growth and development with family income (p value = 0.000). This is because the income received can be fully used to buy basic food needs. A high level of income can guarantee good nutritional status in toddlers (Handayani et al., 2022).

Family income is an important factor in the growth and development of toddlers related to the family's purchasing power to meet the needs of children. Families with low socioeconomic status and having many children result in a lack of family ability to provide primary needs such as clothing and food. (Soetjiningsih, 2012). Low-income households can meet their food needs if the household members are few. Low-income households use most of their income to buy food. An increase in individual income causes changes in the composition of food. Food consumption has a direct effect on the nutritional status of children under five. The pattern of food consumption for children under five depends on the pattern of family food consumption. The pattern of food consumption serves to direct that the pattern of food utilization nationally can meet the rules of quality, nutritional content, safety and halalness, as well as for food efficiency in preventing wastage. The more diverse food consumption, the better the nutritional status of children under five (Triastuti, 2018).

This study found 120 families with income below the average minimum wage of Southeast Sulawesi province. Most of the families live in rural areas with large areas of land. They use the land to grow various types of vegetables and fruits to meet their daily needs. This can reduce family expenses and allow families to provide nutritious food for toddlers

Mother's Education with Toddler Growth and Development

In this study, the results showed that there was no significant relationship between mother's education and toddler's growth and development ($p = 0.173$). The results of this study are in line with studies which say that there is no relationship between maternal education and the nutritional status of children under five. A person's level of education can be obtained formally or non-formally. Non-formally mothers of children under five can obtain information about the nutritional status of children through counseling carried out by health workers. Counseling on balanced nutrition can increase the knowledge of mothers of toddlers about the food that can be given according to the age of the toddler (Lupiana et al., 2018).

The results of this study are not in line with studies which say that knowledge and level of education will determine attitudes and behavior in providing good stimulation to their children so that later they can grow and develop optimally (Soedjatmiko et al., 2018). Mother's educational status is related to appropriate feeding. Mothers who have a good education have a good understanding of nutrition compared to mothers with low education or no formal education. Educated mothers can read books, magazines or leaflets and have a better chance of seeking better information about nutrition through other media (Demilew et al., 2017).

Stimulation of growth and development in toddlers is influenced by many factors, one of which is mother's education. Mother's education is one of the factors that influence the stimulation of growth and development. Mother's knowledge related to stimulation and knowledge about toddler growth is very important. This will affect the mother's efforts to prevent early developmental disorders. Low formal education of parents can increase the proportion of developmental disorders and stunting. Mothers who have a good education have the opportunity to have good jobs. Thus it can increase revenue. In addition, mothers will have knowledge about health and good parenting for toddlers, and will make more use of health services to improve children's health (Pei et al., 2014).

In this study found 48 mothers under five (23.2%) with low educational status but normal growth and development of toddlers. A person's knowledge can be obtained from information obtained from the work environment, experience, social, and mass media. If someone gets a lot of information then he tends to have broader knowledge

(Wawan & M.D., 2010). The researcher assumes that the mother of the toddler actively participates in the posyandu every month and gets a lot of information from counseling or outreach about nutrition conducted by health workers so that they can prepare food that can meet the nutritional needs of their toddler.

Number of Siblings with Toddler Growth and Development

This study showed that the number of siblings did not have a significant relationship with the growth and development of children under five ($p = 0.299$). This result is in line with the study conducted by Khalida et.al which showed that the number of siblings did not have a significant relationship with the growth and development of toddlers aged 36-60 months (Khalida & Ningtyas, 2018). The results of this study are also supported by a study which explains that there is no significant relationship between the number of siblings under five and the developmental status of children under five. The results of the research are not meaningful, it can be caused by the distribution of the fulfillment of love and attention needs so that every aspect of development can run well (Makrufiyani et al., 2020).

The number of children who are too large can affect the nutritional intake in the family. The incidence of malnutrition is more common in families with a larger number of children. Families with more than two children require greater effort and sometimes parents have difficulty dealing with the different characters and moods of their children, resulting in the unpreparedness of parents in caring for their children (Simbolon, 2017).

The large number of children in families whose socioeconomic conditions are sufficient will result in reduced attention and affection received by children, in addition to the basic needs of children are also not met. This will have an impact on the development of the child (Soetjningsih & Ranuh, 2015). The risk factor for having 3 children in the family is related to developmental delays in toddlers. Number of children 3 in the family at risk of 1.87 times experiencing developmental delays (M et al., 2012).

In this study, it was found 45 mothers of children under five (21.7%) who had more than 2 children but their growth and development was normal. The researcher assumes that there are other factors that can support the supply of household needs such as income. Even though the number of children is large but supported by high incomes, the family can meet the needs of their children.

LIMITATION OF THE STUDY

This study has limitations on the data collection process. Data collection was carried out during posyandu so that it could affect the mother's concentration when interviewed. To minimize this limitation, the researcher conducted interviews when the mother of the toddler had finished weighing her child.

CONCLUSIONS AND SUGGESTIONS

This study shows a significant relationship between family income and the growth and development of children under five. Mother's education and the number of siblings

have no significance with the growth and development of toddlers. Posyandu cadres should be given training related to measuring the growth and development of toddlers so that each posyandu implementation is measured for growth and development. In addition, parents of toddlers need to be given an understanding of how to stimulate the growth and development of toddlers so that the growth and development of toddlers is in a normal state.

Acknowledgment

The research team would like to thank the chairman of the LP2M-PMP University of Sembilanbelas November Kolaka who has provided research recommendations and the Head of the Investment Agency and One Stop Integrated Service who has given permission to carry out the research. We would also like to thank the head of the Wundulako Health Center and the Coordinator Midwife of the Puskesmas who have facilitated the implementation of this research.

Funding Statement.

The authors did not receive support from any organization for the submitted work.

Conflict of Interest Statement

The author declares that there is no potential conflict of interest in relation to the authorship and publication of this article.

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