LOW FAMILY INCOME PERCAPITA AS A RISK FACTOR FOR STUNTING ON 6-11 TODDLERS MONTHS IN RURAL AREA OF LAMPUNG

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ABSTRAK : RENDAHNYA PENDAPATAN PERKAPITA KELUARGA SEBAGAI FAKTOR RISIKO STUNTING BALITA 6-11 BULAN DI AREA RURAL LAMPUNG

Latar Belakang: Lebih dari 140 juta balita di dunia mengalami stunting, yang didominasi Benua Asia dan Afrika. Indonesia menjadi negara ketiga se Asia Tenggara yang memiliki anak stunting sebesar 36,5%. UNICEF menyatakan bahwa stunting dapat disebabkan oleh faktor langsung dan faktor tidak langsung serta berisiko mengalami penyakit degeneratif.

Tujuan untuk mengetahui faktor tidak langsung berupa pendidikan ibu, pendapatan perkapita keluarga, akses ke puskesmas, dan kunjungan ibu ke posyandu sebagai faktor risiko terjadinya stunting pada anak usia 6-11 bulan di Lampung Timur.

Metode Penelitian ini menggunakan rancangan observasional analitik dengan desain case control. Jumlah sampel sebanyak 104 responden, terdiri dari 52 kelompok kontrol dan 52 kelompok kasus dengan teknik purposive sampling. Dalam penelitian ini menggunakan analisis multivariat dengan regresi logistik.

Hasil uji regresi logistik menunjukkan bahwa pendapatan perkapita keluarga yang rendah sebagai faktor paling berisiko terjadinya stunting pada anak usia 6-11 bulan (p-value= 0,001 OR= 75,802; CI= 9,253-620,979), ibu yang tidak aktif berkunjung ke posyandu sebagai faktor risiko terjadinya stunting (p-value= 0,001; OR= 42,688; CI= 6,540-278,637), akses ke puskesmas yang kurang terjangkau sebagai faktor risiko terjadinya stunting (p-value=0,036; OR=9,195; CI= 1,157-73,076), dan pendidikan ibu yang rendah bukan sebagai faktor risiko penyebab stunting (p=.0,670; OR=1,571; CI=0,197-12,537).

Kata Kunci: Pendapatan perkapita keluarga, stunting

ABSTRACT

Background: More than 140 million toddlers in worldwide experiencing stunting, dominated by the continents of Asia and Africa. Indonesia is the third country from Southeast Asia which has 36.5% stunting toddlers. UNICEF stated that stunting can caused by direct and indirect factors and the risk of developing degenerative disease. This study was conducted to know indirect factors which are maternal education, family income per capita, access to health center, (Puskesmas), and maternal visit to health center (Posyandu) as a risk factor for stunting in children aged 6-11 months in East Lampung. This study uses observational analytic design with case control. The number of sample was 104 respondents, consisting of 52 control groups and 52 case groups using purposive sampling technique. In this study, used multivariat analyzed with logistic regression. The result of logistic regression in this study indicate low family income percapita is the most risky factor for stunting in children aged 6-11 months (p-value=0.001; OR=75,802; CI= 9,253-620,979), mother's inactivity for visiting health center (Posyandu) as a risk factor occurrence of stunting (p-value= 0,001; OR= 42,688; CI= 6,540- 278,637), health center that has low accressibility (Puskesmas) as a risk for stunting (p-value= 0,036; OR= 9,195; CI= 1,157-73,076), and low maternal education is not the risk factor for stunting (p=.0,670; OR=1,571; CI=0,197- 12,537)

Keywords: family income percapita and stunting.

INTRODUCTION

Stunting is a major problem experienced by children under five years old (toddlers) which reached 140 million (22%). The continents that most influence the incidence of stunting are Asia (53%) and Africa (41%), in 2021 there will be an increase in stunting cases in Africa as many as 7 million children under five. In Indonesia, the prevalence of stunting in 2020 was 31.8%, this figure decreased by 2.7% compared to 2012 (UNICEF, WHO, World Bank, 2021). Meanwhile in Lampung Province, the percentage of stunting toddlers reached 42.64% (Riskesdas, 2018).

Stunting is a condition of failure to thrive in toddlers as a result of insufficient nutrition during the growth process until toddlers experience chronic nutrition (UNICEF, WHO, and World Bank Group, 2021). The adverse effects of stunting are divided into short-term impacts and long-term impacts. The short-term impact that will occur is intellectual, physical and metabolic disturbances due to inadequate nutrition. While the long-term impact is a

decrease in immunity and cognitive of children who are at risk of contracting metabolic and cardiovascular diseases (Mendes PDTT, 2017; WHO, 2013). Factors causing stunting consist of direct and indirect factors. Direct factors include genetics, gender, low birth weight (LBW), food intake and infectious diseases. While indirect factors are family income, mother's education and knowledge, access to health services and to food places, and mother's visits to health facilities (Mekonnen, et al., 2019; UNICEF, 2013).

The measurement of stunting was carried out using the anthropometric method. Anthropometry is a measurement method that assesses the dimensions of human bones, muscles, and fat tissue (NHANES, 2013). In children, 4 anthropometric measurement indices are used, namely weight for age (W/W), length/height for age (PB/U or TB/U), weight for length/height (BB/PB or BB). /PB), and body mass index for age (BMI/U). To assess stunting, the PB/U or TB/U index was used with the following categories: very short (severely stunted) threshold z-score <-3SD, short (stunted) threshold z-score -3SD to <-2SD, normal with z- score -2SD to +3SD, and high with a z-score >+3SD (PMKRI, 2020).

Education is an act to create a learning atmosphere with the aim of guiding and bringing out self-potential (Ananda Rusydi, et al., 2017). Education is divided into 3 types, namely formal education, non-formal education, and informal education. Formal education is the education that a person goes through from PAUD (TK/RA) to Higher Education (PT). Non-formal education is education outside the scope of formal education that can be carried out in stages or stages. While informal education is education carried out in the family and environment. Mother's education is formal education that mothers have gone through (Laelasari and Rahmawati, 2017). Mother's education level is divided into two, namely higher education (high school graduation and university graduation) and low education (no school, elementary school graduation, elementary school graduation, and junior high school graduation) (UU RI No. 20, 2003).

Capita family income is the average income earned by individuals while working per month (Mulyasari, W. R., 2019). Family income per capita is divided into high family income per capita (> Rp 600,000), medium (Rp 600,000-Rp 300,000), and low (Rp < Rp 300,000) (Asep Maryadi, 2014). The poverty rate in Lampung Province is 12.76% from 34 provinces in Indonesia (Inayah Rahmasari, 2021).

Community Health Centers (Puskesmas) are public health facilities (fasyankes) that organize

Community Health Efforts (UKM) and Individual Health Efforts (UKP) by prioritizing promotive and preventive efforts in the work area. Promotive efforts are in the form of organizing health promotions, while preventive efforts are in the form of activities to control diseases and health problems (PMKRI, 2019). Access to the puskesmas is a road or liaison to health service places that are directly related to the community (Megatsari, H., et al, 2018). Access that is affordable has a distance of 5km from home to the puskesmas, while those who are less accessible are >5km (Primadiah, N., 2012).

Integrated Service Post (Posyandu) is a community institution managed by the community, in order to empower and facilitate the community in obtaining basic health services (Kemenkes RI, 2012). The mother's visit to the posyandu is a visit made by the mother to carry out activities to weigh the baby's weight and measure the child's PB/TB regularly every month (Kemenkes RI, 2012). Mother's visits to posyandu are divided into active and inactive mothers (Sativa Eriza N, 2017).

RESEARCH METHODS

This study uses an analytical observational method with a case control approach. This research was conducted in posyandu and residents' homes in Metro Kibang and Batanghari Subdistricts, East Lampung Regency in May-June 2022. The sampling technique used was purposive sampling with a sample size of 52 control groups and 52 case groups.

Population in this study were mothers with toddlers who lived in Metro Kibang and Batanghari Districts, East Lampung Regency. The sample in this study was examined based on the inclusion criteria and exclusion criteria in each control group and case group. The inclusion criteria in the control group and the case group were mothers with stunted toddlers aged 6-11 months, mothers with stunting toddlers aged 6-11 months living in Metro Kibang and Batanghari Districts, East Lampung Regency, and mothers who were willing to be research respondents. Researchers chose the two sub-districts, because the highest number of stunting in East Lampung was in Metro Kibang and Batanghari Districts. The exclusion criteria in the control group and the case group were mothers and their families who moved domicile.

The independent variables (independent) in this study were family income per capita, mother's visits to posyandu, access to health centers, and mother's education. Meanwhile, the dependent variable in this study is the incidence of stunting in children aged 6-11 months in Metro Kibang and Batanghari Districts, East Lampung Regency.

The research instrument used a questionnaire and an infantometer. The data collection method used primary data, namely the results of measurements and filling out questionnaires. Secondary data is used to find out which villages have stunting children. Data analysis used multivariate analysis with logistic regression test.

RESEARCH RESULT

Characteristics of respondents in the form of gender and domicile can be seen in table 1 below:

Table 1 above shows the characteristics of the respondents in the form of gender and sub-district of each case group and control group. In the case group, most of the cases were male, namely 29 toddlers and 23 female toddlers. In the control group, most of them were male, ie 27 toddlers and 25

toddlers were female. In the case group and control group, the majority were in the domicile of Metro Kibang, which were 32 cases and 36 controls.

Table 1.
Characteristics of respondent

Characteristic	Case	Control
Gender		
Male	29	27
Female	23	25
Domicile		
Metro Kibang	32	36
Batanghari	20	16

Multivariate Analysis

The following are the results of the multivariate analysis in this study

Table 2
Multivariate Results Between Family Per capita Income, Mother's Visits to Posyandu, Access to Health Centers, and Education of Mothers with Stunting

Variable	Stunting (Case)		Normal (Control)		p value*	OR*	95% CI	
	n*	%	n*	%			Min	Maks
Family Per capita Income								
Low	46	88.5	5	9.5	0,001	75,802	9,253	620,979
High	6	11.5	47	90.5				
Mother's Visit to Posyandu								
Not Active	46	88.5	6	11.5	0,001	42,688	6,540	278,637
Active	6	11.5	46	88.5				
Access to Puskesmas								
Less Affordable	31	60	18	35	0,036	9,195	1,157	73,076
Affordable	21	40	34	65				
Mother's education								
low	44	86	25	45	0,670	1,571	0,197	12,537
high	8	14	27	52				
Konstanta					0,001	0,005		

Logistic regression
*n= sum
 OR= *odds ratio*

Based on table 2 above, the variables that partially influence the incidence of stunting are family income per capita (OR = 75,802, 95% CI = 9,253-620,979), access to health centers (OR = 9,195, 95% CI = 1,157-73,076) and visits mother to posyandu (OR= 42,688, 95% CI= 6,540-278,637). The magnitude of the effect is indicated by the value of EXP (B) or also called the Odds Ratio (OR). So it can be concluded that the strongest relationship strength is family income per capita (OR=75,802), and the smallest relationship strength is access to posyandu (OR=9,195). Meanwhile, low maternal education is

not a risk factor for stunting because the value of p = 0.670 (p>0.05).

DISSCUSION
Family's Income PerKapita

Based on the results that have been described, it is known that in the stunting group (cases) the proportion of income per capita of the family is lower (86%) compared to the high income per family (14%). Meanwhile in the normal group

(control), the proportion of family income per capita is higher (52%) compared to the low income per capita family (48%). Family income per capita has a value of p = 0.001, OR = 75.802, and CI = 9.253-620.979. This makes the family income per capita as the indirect factor most at risk of causing stunting in toddlers aged 6-11 months in Metro Kibang and Batanghari Districts, East Lampung Regency. These results are in accordance with research conducted by Marbun et al (2019), namely, the high percentage of stunting events tend to have low income (82.9%) with p value = 0.000 and OR = 5.6. This shows that low per capita income has a 5.6 times higher risk of having stunted children compared to those with high per capita income. Pedraza and Menezes (2013) also assume that there is a significant relationship between family income and the incidence of stunting (p = 0.0003) and a low income per capita has a risk of having stunting children of 2.93. Based on the results of Risksedas in 2018, 17.7% of children under five still experience nutritional problems caused by low community income, but food prices are very high.

However, this study is not in line with Fatimah Siti (2020) which shows the results of p = 0.104. This opinion is supported by research by Hapsari (2018) and Ibrahim and Faramita (2014) who think that family income per capita is not directly related to the incidence of stunting, so it does not show the high risk that people with low incomes face.

Mother's Visit to Posyandu

Based on the results that have been described, it is known that in the stunting group (cases) the proportion of maternal visits to posyandu is more inactive (88.5%) compared to active mothers to posyandu (11.5%). Meanwhile, in the normal group (control), the proportion of mothers' visits to posyandu were more active (88.5%) compared to mothers' visits to inactive posyandu (11.5%). Mother's visit to posyandu had p value = 0.001, OR = 42.688, and CI = 6.540-278.637. This makes mother's visit to posyandu the most risky indirect factor after family per capita income which causes stunting in toddlers aged 6-11 months in Metro Kibang and Batanghari Districts, East Lampung Regency.

According to Mendes PDTT (2017) Posyandu is a form of health effort from, by, and for the people. Posyandu was formed to make it easier for the community to find the nearest health service. Mother's visit to posyandu has a significant relationship with the incidence of stunting in toddlers aged 24-59 months with p value = 0.000. Hutasoit, et al (2021) stated that the frequency of maternal visits to the posyandu among children under five was

associated with the incidence of stunting (p=0.000; OR=0.389). Mothers who regularly visit posyandu with their children can have good knowledge related to stunting prevention (Rahmawati, 2020).

The mother's visit to the posyandu greatly facilitates the mother in monitoring the child's growth and development. Through the measurement of anthropometric methods, it can be known whether the child is experiencing growth faltering. If there is a change in body weight that does not match the target, the health worker will immediately deal with it. The presence or absence of changes in eating patterns and the type of food consumed can also be known by health workers (Rahayu, et al., 2021).

In addition to mothers who have to be active in posyandu to monitor child growth and development and the health of pregnant women, postpartum mothers, and breastfeeding mothers, the role of family doctors is also needed in solving family health problems. In a study conducted by Larasati Ta, et al (2020) explained that there is a new model related to the family approach called the "GENOGRAM Model". The model consists of seven dimensions and 25 items in the form of: a) Family Profile; b) Environment and lifestyle; c) The role of the family; d) Communication; (e) Activation and Empowerment; (f) Multilevel prevention; and g) Home visits. The model is expected to help doctors in overcoming health problems in the family.

Accsess to Puskesmas

Based on the results obtained by the researcher, it is known that in the stunting group (cases) the proportion of access to health centers that are less affordable (60%) is higher than access to affordable health centers (40%). Meanwhile in the normal group (control), the proportion of access to health centers that are affordable (34%) is higher than that of access to health centers that are less accessible (18%). Access to puskesmas has a value of p = 0.036, OR = 9.195, and CI = 1.157-73.076. This indicates that access to puskesmas is the most risky indirect factor after family per capita income and maternal visits to posyandu which cause stunting in children aged 6-11 months in Metro Kibang and Batanghari Districts, East Lampung Regency.

Suriati (2022) and Dewi (2019) are in line with the results obtained by researchers, namely there is a relationship between access to health centers and the incidence of stunting. Access to affordable health services is known to be free from malnutrition, in good health, and with guaranteed growth and development. The farther the distance between a person's residence and health facilities, the more difficult and time it will take to reach these health

facilities (Dewi, 2019). For pregnant women, Yankes is a preventive service to monitor maternal health and prevent complications in the mother and fetus (Suriati, 2019).

Mother's Education

Based on the results that have been described, it is known that in the stunting group (cases) the proportion of maternal education is lower (86%) compared to high maternal education (14%). Meanwhile, in the normal group (control), the proportion of mothers with higher education (52%) was higher than that of mothers with low education (48%). The mother's education variable got a p value = 0.670 which indicates that low maternal education is not a risk factor for stunting in toddlers aged 6-11 months in Metro Kibang and Batangahari Districts, East Lampung Regency. Furthermore, maternal education has an OR value of 1.571 and CI = 0.197-12.537. These results are in accordance with the research of Astuti et al (2021) who think that there is no relationship between maternal education and the incidence of stunting (p-value = 0.720). Rukmana et al (2016) also thought the same thing as Astuti (p = 0.26). This is because on average mothers who have stunted children and have low education work as housewives (IRT), so mothers have free time to seek their own knowledge compared to mothers who have jobs (Astusi et al., 2021; Rukmana et al., 2016)

There are several researchers who are not in line, namely Roesardhyati R and Kurniawan D (2020), Fajrina Nurul (2016), Taufiqoh. S et al (2017), Fatemi et al (2018), and Paudel et al (2012). The researchers assumed that low maternal education was a risk factor for stunting (p-value <0.05). Mother's education is closely related to the knowledge gained by the mother. Sahroni, et al (2020) stated that there was no relationship between maternal knowledge about nutrition and stunting (p=0.075) and assumed that the possible causes of stunting in children were other factors such as poor parenting or family socioeconomics. There are two factors that affect a person's knowledge, namely internal and external knowledge. Internal factors include education, occupation, and age. While external factors are the environment and socio-cultural area (Wawan, et al., 2011). If the internal factors are weak, then the knowledge gained by the mother will also decrease, as a result the application of the knowledge gained by the mother is not conveyed to the child perfectly. This is what is thought to cause stunting in toddlers (Sahroni, et al., 2020).

CONCLUSION

The conclusion of this study is that stunting in toddlers 6-11 months is at risk of occurring in families with low per capita income, mothers who do not actively visit posyandu, and access to health centers that are less affordable as indirect factors, in Metro Kibang and Batanghari Districts, East Lampung Regency.

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