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RESEARCH ARTICLE

ANALYSIS OF MATERNAL EDUCATION RISK FACTORS ON STUNTING INCIDENTS AMONG TWO YEAR OLD BABYIN PANGKEP REGENCY

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ABSTRACT

Stunting is a chronic nutritional problem in children caused by a lack of nutritional intake for a long time, resulting in growth disorders. The purpose of this study was to analyze the risk factors of maternal education on stunting in two year old baby. The type of research used is quantitative with an observational analytic approach with Case Control research design. The population is mothers who have two year old baby and the sample is 46 people consisting of 23 cases and 23 controls and the sampling technique is purposive sampling. Data from the questionnaire will be processed using the SPSS program. Univariate analysis to determine the frequency distribution, bivariate analysis using chi-square test. The education of mothers who are at high risk and stunting are 13 two year old baby(59.1%) and those who are at high risk and normal are 15 two year old baby(62.5%), while the education of mothers who are at low risk and stunting are 9 two year old baby(40.9 %) and 9 children with low and normal risk (37.5%). The results of the Bivariate analysis show that the p-value is 1,000, which means that there is no relationship between maternal education and the incidence of stunting in two year old baby OR = 0.867, which means that low maternal education is a protective factor against stunting in two year old baby. The formal educational background of pregnant women is not a risk factor for stunting, but it is necessary to educate the level of knowledge related to pregnancy problems and two year old baby child care.

INTRODUCTION

Stunting is a chronic nutritional problem in children caused by a lack of nutritional intake for a long time, resulting in growth disorders, namely height lower than age. Stunting that is not handled properly will have an impact on brain development. Globally, 149.2 million children under the age of 5 are stunted, 45.4 million are underweight, and 38.9 million are overweight. Where 53% came from Asia and 43% from Africa (UNICEF/WHO/World Bank Joint Child Malnutrition Estimates, 2021). Data from Basic Health Research (Riskesdas) in 200 Indonesia's stunting prevalence rate was 36.8%, in 2010 it was 35.6%, and in 2013 the prevalence increased to 37.2%, consisting of 18% very short and 19.2% short. Riskesdas data in 2018 shows the prevalence of stunting under five in Indonesia is 30.8% (Kemenkes RI, 2018). Based on WHO limits, Indonesia is in the category of high stunting problems (Khairani, 2020). Based on the results of the prediction of the stunting rate which is a joint work between the Health Research and Development Agency and BPS, it shows that stunting in South Sulawesi was 21.18% in 2019 and 19.73% in 2020, there has been a decrease of 1.45%, but it is still relatively high. (Ministry of Health of the Republic of Indonesia, 2021).

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The prevalence rate of stunting in Pangkep district in 2020 is 16.25% and Taraweang is 28.83% (E-ppgbm, 2020).One of the factors that influence stunting in children indirectly is mother's education. If the mother's education level is high, it is more likely to differentiate and practice appropriate child nutrition, hygiene, and health care that can improve the nutritional status of her children compared to a low level of maternal education (Abeway *et al*., 2018). The purpose of this study was to analyze the risk factors of maternal education on stunting in two year old baby.

METHODS

The type of research used is quantitative with an observational analytic approach with a Case Control research design, namely to determine the risk of maternal education factors on stunting in children under two. This research was conducted in Taraweang Village, Pangkep Regency. The population is mothers who have Baduta and the sample is 46 people consisting of 23 cases and 23 controls and the sampling technique is purposive sampling with inclusion criteria of respondents who live in the research location and can read and write and two year old babymothers who have KMS while the exclusion criteria two year old babydid not suffer from infectious diseases in the last 3 months. Data from the questionnaire will be processed using the SPSS program. Univariate analysis to determine the frequency distribution, bivariate analysis using the chi-square test.

RESULTS

Based on table 4.1, it shows that there are 28 male two year old baby (60.9%) and 18 female two year old baby(39.1%). Based on table 4.3 shows that the stunting incidence of very short two year old babyis 9 two year old baby(19.6%), short is 13 two year old baby(28.3%) and normal is 24 two year old baby (52.2%). Based on table 3 shows that the most type of education is junior high school with 15 (32.6%) people and the least is D3 as much as 1 (2.2%). Based on table 2 shows the education of mothers who are at high risk and stunting are 13 two year old baby(59.1%) and those who are at high and normal risk factor against stunting in two year old babyare 15 two year old baby(62.5%), while the education of mothers who are at low risk and stunting is 9 Baduta children. (40.9%) and 9 children with low and normal risk (37.5%). The results of the Bivariate analysis show that the p-value is 1,000, which means that there is no relationship between maternal education and the incidence of stunting in two year old babyand OR = 0.867, which means that low maternal education is a protective

Table 1. Distribution of Respondents by Gender of two year old babyin Taraweang Village, Pangkep Regency in 2022

Variable	Number	%
Sex		
Male	28	60,9
female	18	39,1
Stunting Occurrence		
Very short	9	19,6
Short	13	28,3
Normal	24	52,2
Education		
Basic sc	13	28.3
Junior high sc	15	32.6
Senior high sc	14	30.4
Diploma	1	2.2
Bachelor	3	6.5
Total	46	100

Source: Primary Data

Table 2. Risk Factors of Maternal Education on Stunting Incidents in two year old babyin Taraweang Village, Pangkep Regency in 2022

Mother education	Stunting Incidents				Total		*p* Value	CL 0,95 OR Lower – Upper
	Stunting		Normal					
	n	%	n	%	n	%		
High Risk	13	59,1	15	62,5	28	60,9	1.000	0,867 (0,265-2,836)
Low risk	9	40,9	9	37,5	18	39,1		
Number	22	100	24	100	46	100		

DISCUSSION

The mother's education level affects the level of knowledge, the higher the education, the better the mother's knowledge related to pregnancy and infant health and vice versa. However, in this study, the low level of maternal education became a protective factor in the incidence of stunting with the results of Bivariate analysis showing OR = 0.867 and p-value = 1,000. This is because the small number of samples and the high level of maternal education are not followed by high knowledge about stunting in two year old baby. The lack of access to information for mothers related to child health is due to the lack of attending counseling in health services. Knowledge about proper feeding of toddlers in improving the nutritional status of children can be obtained from counseling and counseling conducted by health workers. Several studies have shown that mothers/caregivers who are given intensive nutrition education and counseling can increase the frequency of eating and the quality of children's food (Imdad *et al*., 2011), (Palwala *et al*., 2009), (Sunguya *et al*., 2013). (Nyamasege *et al*., 2021). The results of this study are in line with research conducted by Ni'mah which states that based on the relationship test, it was found that p wasting = 0.581, and p stunting = 0.605, p wasting and p stunting > meaning that there was no relationship between maternal education level with wasting and stunting in children under five from poor families in Balen District, Bojonegoro Regency (Lailatul & Ni'mah., 2015). The results of this study are also in line with those of Astuti and Taurina who stated that there was no relationship between maternal education level and the nutritional status of preschool and elementary school children in Godean District based on the BB/TB index (Astuti, 2018). The BB/TB index reflects the current nutritional status, while the TB/U index reflects the nutritional status of children under five in the past.
Mother's education is the basis for achieving good toddler nutrition. The level of education of the mother is related to the ease with which the mother receives information about nutrition and health. Mothers with lower levels of education have fewer opportunities to receive information about growth, developmental nutrition, and other child health information (Rigg & Neville, 2021). Statistically, it does not show a significant relationship, but there are 59.1% of underprivileged children who are stunted have mothers with low levels of education. Mothers with lower levels of education have a 2.8 times greater risk of having stunted children (aged 24-59 months) than those with higher education. This result is similar to a study in South Jakarta, which showed that the level of mother's education had a significant effect on stunting in children under five (Utami *et al*., 2019). Three studies in Ethiopia also found that maternal education level was associated with stunting in children aged 12-59 months (Takele *et al*., 2019), ages 6-59 months (Kahssay *et al*., 2020), and ages 5-59 months. month (Tariku *et al*., 2017). Maternal education is positively correlated with the linear growth of children in some lower-middle countries, such as Mozambique, Nigeria, Ghana, and Congo, but not Kenya (Amugsi *et al*., 2019). Increasing the education level of mothers can increase their knowledge about breastfeeding, complementary feeding practices, and child growth.

CONCLUSIONS AND RECOMMENDATION

The value of OR = 2.059 means that the age of the mother during pregnancy <20 years and >35 years has a 2.059 times chance of having a child under the age of five who is stunted compared to the mother's age between 20 years and 35 years. The formal educational background of pregnant women is not a risk factor for stunting, but it is necessary to educate the level of knowledge related to pregnancy problems and two year old babycare.

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