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Effect of Parenting on Stunting Incidence in Infant Aged 0-59 Months Old

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ABSTRACT

Introduction: Parenting is a factor most significantly affect and contribute to the incidence of stunting in infants aged 0-59 months. Parenting has recently attracted many attentions since parents are the one who have the most interaction with their own children. Hence, current research was carried out to know the correlation between parenting and the incidence of stunting in infants aged 0-59 months.
Methods: This research was carried out through quantitative method with cross sectional approach. In this case, the samples involved are 169 infants. The data obtained were further analyzed through logistic regression with the assistance of SPSS Version 26.
Results: There is a relationship between parenting and the incidence of stunting in infants aged 0-59 months old with the logistic regression P-value of <0.05.59,8% respondent of them received poor parenting and his education is only senior high school and This finding found that the higher the knowledge of parents, the more it will influence the provision of food to their children with good nutritional value.
Conclusion: Parenting on the incidence of stunting in infants aged 0-59 months old is very important. In this case, knowledge and nutritional intake are necessary to support the growth and development of infants aged 0-59 months.

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INTRODUCTION

Stunting becomes an issue for countries with middle and lower income (1-3). The stunting rate recorded worldwide is aroung 152 million infants or 22.5% of children worldwide (4). In Asia, the rate reaches 81.7 million and more than one third of it is in Africa (4). In this case, the three Asian countries with the highest stunting incidence are India, Pakistan, and Bangladesh (5, 6). It is also confirmed by Indonesia whose stunting incidence increases annually, in which it reached 20.2% in 2017 and became 22.7% in 2018 (7).

Stunting is defined as a condition where a child experiences low growth and being retarded due to bad diet so they are at risk of death (8, 9). It can also be defined as low height that is indicated by height lower than -2 of the standard deviation of WHO. Many factors affecting the incidence of stunting. They are particularly divided into two: those are direct factor and indirect factor. In this case, the indirect factor includes foof nutrition, disease, gender, family characteristics, breastfeeding pattern, and healthcare service (10). The lack of food nutrition contributes to at least 50% of baby mortality (11).

Family is the forefront factor affecting the incidence of stunting on children. This can be seen based on the facts in the field, where many children experiencing stunting come from family with low purchasing ability, dirty environment, and the unavailability of clean water (8). A research project that was carried out in Sambas Indonesia reported the correlation between the incidence of stunting and preterm birth, low birthweight, diarrhea, and

immunization (12). In the research, among 559 children analyzed, 20.8 % of them experienced stunting at the age of 0-59 months old, indicating that the age range is the most susceptible to stunting incident in postpartum period.

Current research focuses on infants aged 0-59 months in Luwu Regency, considering that the prevalence of North Luwu Regency has stunting incidence reaching 29.8% in 2022 (7). According to the data reported electronically in Community-Based Nutrition Record and Report, the number of stunting incidences in February 2023 in Pattimang Village reaches 11.1%. The culture and geographical location of Pattimang village is far from Luwu city, which means that the reach of health workers is often hampered, especially since there are no hospitals or health centers that are complete in terms of infrastructure.

METHOD

The method applied in this research is quantitative with cross-sectional approach, this method is suitable for research that looks at the direct relationship between independent and dependent variables. aiming to know the effect of parenting on the incidence of stunting in infants aged 0-59 months old in Pattimang Village, Malangke District, North Luwu Regency. The samples involved are 169 infants aged 0-59 months old. The sampling was carried out through purposive sampling with the criteria that the infants aged 0-59 months old, lived in Pattimang, Village, and the mother or the parents of the infant can communicate well. The data collected were then processed through editing, coding, processing, and cleaning. Meanwhile, the data analysis was done using SPSS Software. In order to answer the research questions, inferential statistic was conducted through logistic regression. Data that has been analyzed were then described to obtain the results. This research has received ethical approval Number: RK. 155/KEPK/STIK/VII/2023. So, there are several confounding variables such as access to health and economics, but all of these are triggers from parenting patterns.

RESULTS

Table 1. Distribution of Respondents Based on Education and Occupation in Pattimang Village, Malangke District, North Luwu Regency

Characteristics	Number	Percentage (%)
Education		
None	9	5.3
Elementary School	18	10.7
Secondary School	81	47.9
High School	55	32.5
D3/S1/S2	6	3.6
Total	**169**	**100**
Occupation		
Civil Servant	3	1.8
Private Employee	2	1.2
Housewife	109	64.5
Farmer	33	19.5
Laborer	22	13.0
Total	**169**	**100**

Table 1 above shows that the education and occupation. Education is last school level and occupation is daily activities. participants are mostly secondary school graduates by 81 people (47.9%), while the least is D3/S1/S2 by 6 people (3.6%). Furthermore, the respondents mostly worked as housewife by 109 people (64.5%), while the least is private employee by 2 people (1.2%).

Table 2. Distribution of parenting on the respondents in Pattimang Village Malangke District North Luwu Regency

Parenting	Total	Percentage (%)
Poor	101	59.8
Good	68	40.2
Total	**169**	**100**

Based on table 2 above parenting is methods in guiding, the distribution of poor parenting on the respondents is 101 children (59.8%), while those received good parenting is 68 children (40.2%).

Table 3. Distribution of Stunting Incidence on Infants aged 0-59 months old in Pattimang Village Malangke District North Luwu Regency

Stunting	Total	Percentage (%)
Yes	33	19.5
No	136	80.5
Total	**169**	**100**

Based on table 3, stunting is growth condition is not in line with age it shows that the incidence of stunting on infants aged 0-59 months old occurred on 33 infants (19.5%), while those who were not stunting are 136 infants (80.5%).

Table 4. Test Results of Parenting on the Incidence of Stunting on Infants Aged 0-59 months old in Pattimang Village Malangke District North Luwu Regency

Variable	B	S.E	Wald	Df	Sig	Exp(B)
Parenting	1.406	0.572	6.036	1	0.014	4.079

Based on the results presented on Table 4 of the logistic regression analysis, it shows that parenting affect the incidence of stunting with p-value below 0.05, that it 0.014 with Exp (B) value of 4.079.

DISCUSSION

Parenting and the Incidence of Stunting

The results of this research indicate that parenting affects the incidence of stunting in Pattimang Village of Luwu. In this case, among 169 respondents involved, 101 or 59.8% of them received poor parenting, showing that the rate is quite high. Furthermore, based on the identification results on the level of education of the respondents, most of the mothers are high school graduates by 81 people or 47.9%. Related to this fact, previous study has stated that the low level of education is an inhibiting factor of receiving knowledge leading to the incidence of stunting on children (13). In this case, the knowledge refers to the those applied when feeding the children with food containing rich vitamin and nutrition (14). Such cases frequently occur in lower- and middle-income countries (3).

Another previous research (15) also reported that parents' role and parenting contribute to the incidence of stunting, such as the research carried out by Pertiwi that reported that negative parenting can increase the risk of stunting by three times (16). Parenting is a part of the complexity of socio-economy, environment, and demography (17). In addition, parenting has also become the most significant part to handle stunting in current era, thus certain policy from the government is needed to handle the incidence of stunting, especially those related to stunting.

The Incidence of Stunting on Infants Aged 0-59 months Old

The results of this research also show that 33 infants or 19.5% of the respondents involved at the age of 0-59 months old experienced stunting. This age is surely susceptible to the incidence of stunting as reported by the research conducted by Patriota that the age range of 50-59 months old is susceptible and needs special attention

(18). In addition, the results of this study are also supported by the survey carried out by Adhikari in Nepal (19) and Research by Khan in Pakistan (11).

In the context of Indonesia, Sari (15) has conducted relevant research on the main cause of stunting on 0-59 months old infants in Indonesia, in which the imbalance between the income of family living in the rural area and urban area becomes one of the factors contributing to the rate of stunting. This reason is assured by the fact that most of the mothers in this research working as housewife by 109 people or 64.5%, followed by farmers by 33 people or 19.5%.

Infants at the age of 0-59 months old must also have special attention and concern from the parents in order to prevent the risk of stunting on the children. The involvement of family and support from the government are significant in preventing the incidence of stunting. Therefore, all parties need to take their own respective roles.

Effect of Parenting on the Incidence of Stunting on Infants at the Age of 0-59 months old

Based on the statistical analysis of this research, there is a correlation between the variables with P value below 0.05, that is 0.014 with Exp (B) value of 4.079. The results of this research are also supported by the previous research carried out by Mulyaningsih (2021) in Indonesia which found that the economy status of household and the education level of parents are the significant covariate of higher stunting risk (1).

Parenting is also significantly correlated with the characteristics of family household, that includes individual factors (gender, diarrhea history and birth place), family factor (head of family, mother, socio-cultural orientation, and family system factor) (10, 20).

Parenting takes an essential role in preventing stunting. Currently it has become a concern for many people since parents are the closest ones who have the most interaction with their children (21-24).

This research has limitations in samples that have the same location, in the future we recommend that research reach a wider population. From the method there needs to be further interview data to explore the mother's experience so it is recommended to use a mixed method. Further research is expected to see wider subjects, such as environmenta, economy factor, etc.

CONCLUSION

Based on the results of this research, it can be summed up that there is a significant correlation between the parenting and incidence of stunting on infants aged 0-59 months old. All authors contributed to this research starting from compiling the research, writing the manuscript and processing the research results. The researcher also realized that there were shortcomings and obstacles that could certainly influence the research results and there was another element, namely culture, which we suggested to be continued with a qualitative ethnographic design.

CONFLICT OF INTEREST

No Conflict of interest

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