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# The Influence of Mother's Parenting Patterns on Stunting Incidence in Children Aged 0-23 Months in Gorontalo District

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**ABSTRACT:** Parenting is one of the factors that are closely related to the growth and development of children, including several things, namely food, which is a source of nutrition, vaccination, exclusive breastfeeding, treatment when sick, and environmental cleanliness and clothing. This study aimed to determine the effect of maternal care patterns for stunting in children aged 0-23 months in the Gorontalo District. This type of descriptive-analytical research has a population of 1614 mothers under two and a sample of 188 mothers under two. The research results obtained were the effect of parenting style on the Incidence of stunting in children aged 0-23 months (p value=0.022) parenting health and sanitation parenting patterns on the Incidence of stunting in children aged 0-23 months (p-value = 0.000). The most influential factor is the factor of healthy parenting (p-value = 0.001). The conclusion from this study is that there is an influence of the mother's parenting style on the Incidence of stunting in children aged 0-23 months in Gorontalo Regency, with the most dominant influencing factor, namely health parenting factors. Future researchers are expected to be able to conduct further research on stunting outside of other variables besides maternal parenting.

**KEYWORDS:** Eating, Health, Mothers' parenting, Sanitation, Stunting

## INTRODUCTION

The age of 0-23 months, or the clown period, is a significant time because, at this time, the baby's growth is experiencing a rapid improvement. The time between 0 to 23 months will affect a child's future. If its growth and development are disturbed, then it will not be repaired in a later period. Usually, it is due to malnutrition. Nutrition deficiencies that occur in the current 0 to 23 months and are not immediately overcome will settle until the child's adulthood. Children who have malnutrition during this period are also at greater risk of degenerative diseases such as diabetes mellitus, coronary heart disease, osteoporosis, cancer, Alzheimer's, rheumatoid arthritis, and stunting faster than the children's normal nutritional status (Candra, 2020)

## METHODOLOGY

### Place and time of research

This study was conducted from November 2022 to February 2023. The methods and design of the research is a descriptive-analytical study that aims to find out the effect of cause-and-effect between two or more variables; in this study, the researchers want to know the impact of maternal care patterns with the occurrence of stunting in children aged 0-23 months in Gorontalo district. This study uses a case-control approach (case-control) is the study by comparing groups of cases and control groups by seeing causes or variables that affect at the same time Notoatmodjo (2012) (Kattan, 2019).

### Population and Sample

Populations are objects or subjects subject to certain qualities and characteristics the researcher defines. This study's population is the mother with a child aged 0-23 months in 30 Stunting Locus villages totaling 1,614 mothers. The large sample for the case-control analysis aims to find the minimum sample number for each case group and control group. The researchers compared the number of pieces in the case groups, and the control group should not be 1:1 using the Slovin formula obtained. The final sample result is 94 respondents. Compare the number of samples in the case and control groups to 1: 1, so the example in the case group is 94 mothers with stunted children aged 0-23 months. The sample in the control group was taken from as many as 94 mothers with children aged 0-23 months who were not stunted, so the number of pieces was 188.

Case group. The sampling technique in the case group was purposive sampling, namely by taking a sample of mothers with children aged 0-23 months experiencing stunting according to the inclusion and exclusion criteria. The number of pieces used was 94 mothers

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with children aged 0-23 experiencing stunting.

Inclusion criteria

1) Mothers with children aged 0-23 months who are willing to be respondents
2) Mothers whose children are stunted
3) Exclusion criteria
4) A mother whose child is sick
5) Mother and child live apart for at least a week control groups

The control group in this study was to take a sample of mothers who had under-aged children of the same sex and age as the case group. The number of pieces used was 94 mothers with children aged 0-23 months who met the study requirements according to the inclusion and exclusion criteria.

Inclusion criteria

1) Mothers with children aged 0-23 months are willing to be respondents.
2) Mothers whose children are not stunted and have the same age sex as those stunted in the case group.

Exclusion criteria

1) A mother whose child is sick
2) Mother and child live apart for at least a week.

Data analysis

Bivariate analysis determined the relationship between the independent and dependent variables. Because the two variables are categorical, the data can be analyzed using the chi-square test. If at least one cell has an expected count of less than 5, then the chi-square test cannot be carried out, so the Fisher's test must be carried out.

Multivariate analysis using logistic regression, the Wald test tests whether the independent variable influences the dependent variable, partially compares the value of Wald's statistic by comparing the value of Wald's statistic with the chi-square value with degrees of freedom (db) = 1 alpha 5% or by comparing the values comparatively significant (p-value) which is smaller than alpha indicates that the hypothesis is accepted or the independent variable has a significant effect on Widarjono (2010) in Ulfah (2014)

## RESULTS AND DISCUSSION

The influence of parenting patterns on eating, parenting health, and parenting sanitation on the Incidence of stunting

**Table 1.** Frequency Distribution Effect of parenting style on the Incidence of stunting in Children aged 0-23 Months in Gorontalo District

| Feeding Parenting | *Stunting* events | | | | Total | | P | OR |
|---|---|---|---|---|---|---|---|---|
| | No *Stunting Occurs* | | *Stunting* Happens | | | | | |
| | F | % | F | % | F | % | | |
| Not good | 14 | 33.3 | 28 | 66.7 | 42 | 100 | p = 0.022 | 1,475 |
| Good | 80 | 54.8 | 66 | 45.2 | 146 | 100 | | |

Table 1 shows that there were 42 respondents with destructive parenting patterns, 14 of whom were not stunted, while 28 were checked, and there were 146 respondents with good parenting patterns, 80 of whom were not restricted, while 66 were stunted. Based on the results of statistical tests using chi-square, a p-value = 0.022 <0.05 was obtained. It was concluded that there was a significant influence between parenting and eating patterns and the Incidence of stunting in children aged 0-23 months in Gorontalo Regency.

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**Table 2.** Frequency Distribution Effect of Healthcare Style on the Incidence of Stunting in Children Aged 0-23 Months in Gorontalo District

| Health Parenting | *Stunting* events | | | | Total | | P | OR |
|---|---|---|---|---|---|---|---|---|
| | No *Stunting Occurs* | | *Stunting* Happens | | | | | |
| | F | % | F | % | F | % | | |
| Not good | 3 | 12.5 | 21 | 87.5 | 24 | 100 | p = 0.000 | 1966 |
| Good | 91 | 55.5 | 73 | 44.5 | 164 | 100 | | |

Table 2 shows that 24 respondents were implementing destructive healthcare patterns, 3 of whom did not experience stunting. At the same time, 21 occurred stunting, and 164 respondents implemented good health care patterns, 91 of whom were not restricted, while 73 occurred stunting. Based on the chi-square statistical test results, a p-value = 0.000 <0.05 was obtained, so it was concluded that there was a significant influence between healthcare patterns on the Incidence of stunting in children aged 0-23 months in Gorontalo Regency.

**Table 3.** Frequency Distribution Effect of sanitation parenting style on the Incidence of stunting in children aged 0-23 months in Gorontalo District

| Sanitation Parenting | Stunting events | | | | Total | | P | OR |
|---|---|---|---|---|---|---|---|---|
| | No Stunting Occurs | | Stunting Happens | | | | | |
| | F | % | F | % | F | % | | |
| Not good | 4 | 22.2 | 14 | 77.8 | 18 | 100 | p = 0.000 | 1966 |
| Good | 90 | 52.9 | 80 | 47.1 | 170 | 100 | | |

Table 3 shows that 18 respondents were implementing bad sanitation parenting, 4 of them did not have stunting, 14 had stunting, and 170 respondents implemented good sanitation parenting; 90 of them did not have stunting, and 80 had stunting. Based on the results of the chi-square test, p = 0.000 <0.05, it can be concluded that there is a significant influence between sanitation parenting styles on the Incidence of stunting in children aged 0-23 months in Gorontalo District.

After conducting bivariate analysis in the previous stage, the results obtained from the chi-square test showed that the variables of parenting to eat, parenting to health, and parenting to sanitation significantly influenced the Incidence of stunting. In this section, multivariate analysis will be tested. In testing multivariate analysis, the statistical method used is the logistic regression technique. Logistic regression techniques are used to test which factors significantly influence the Incidence of stunting. The factors involved in the multivariate analysis were the factors that had significant results in the bivariate analysis test, namely parenting to eat, parenting to health, and parenting to sanitation. Table 4.15 presents the results of logistic regression.

**Table 4.** Multivariate analysis of the effect of parenting to eat health parenting to sanitation parenting in children aged 0-23 months in Gorontalo District

| | Variable | B | SE | Wald | df | Sig. | Exp (B) |
|---|---|---|---|---|---|---|---|
| Step 1 | Feeding Parenting | -.526 | .396 | 1,760 | 1 | .185 | .591 |
| | Health Parenting | -1,952 | .648 | 9067 | 1 | 003 | .142 |
| | Sanitation Parenting | -1,018 | .623 | 2,669 | 1 | .102 | .361 |
| | Constant | 3.106 | .865 | 12,890 | 1 | .000 | 22,322 |
| Step 2 | Health Parenting | -2,045 | .643 | 10.125 | 1 | 001 | .129 |
| | Sanitation Parenting | -1,118 | .614 | 3.318 | 1 | .069 | .327 |
| | Constant | 2,863 | .824 | 12064 | 1 | 001 | 17,510 |

Table 4., shows that in the last stage, Step 2, the results obtained were that the most dominant factor influencing the Incidence of

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stunting was the Parenting Health pattern, with a p-value = 0.001 <0.005. The sanitation parenting factor p-value = 0.069 > 0.005, Health parenting style is the first factor that most dominantly influences the Incidence of stunting, with the highest Wald statistical value, 10.125. The second factor influencing the Incidence of stunting is sanitation parenting, with a Wald statistical value of 3.318. The most influential factor in the Incidence of stunting. According to the research results, it was found that the most dominant factor influencing the Incidence of stunting in children aged o-23 months was the factor of health care, with a p-value = 0.001.

According to researchers, the health care pattern factor is the most dominant factor influencing stunting in children aged 0-23 months in Gorontalo Regency. Mothers with children under two should diligently monitor their children's growth and development in health facilities to detect them early. These children's health problems so that early prevention can be carried out in these children, and they will not experience stunting.

The parenting style the mother gives to her child is a form of love and attention. During the toddler period, children are not yet independent; they cannot do it independently; they need parental care by caring for, educating, and fostering them. Infection is the most common disease suffered by children. Children who are sick will be disrupted by their absorption of nutrients, thereby affecting the nutritional status of children. The measured healthcare pattern is a preventive effort, such as giving immunizations or parenting when the child is sick (Anita et al., 2021).

Many factors lead to a high incidence of stunting in toddlers, including direct causal factors related to stunting, namely (1) food intake (2) health status, while indirect factors related to stunting, namely (1) parenting patterns (2) health services (3 ) maternal factors (4) household environment Soetjiningsih (2012) in Isman (2019)
A child's personality will be influenced by the parenting style given by parents in the family because parenting is related to the interaction process between children and parents. Cases of wasting and stunting depend on the role and abilities of the toddler's mother in caring for the toddler due to the regulation of the intake given by the mother. How mothers care for toddlers impacts their nutritional status; Malnutrition in toddlers is caused by the mother's lack of attention to parenting (Lailatul et al., 2015).

Mothers of toddlers who pay less attention to their toddler's health, including nutritional intake due to busy work, wrong parenting, poor food intake, and lack of knowledge and education, can cause health problems in toddlers, recurrent illnesses, and cleanliness. Bad sanitation Conditions like this will increase the risk of chronic stunting. Marini et al. (2005) in Elizabeth et al. (2021). The results of this study were supported by several studies, namely those conducted by Pratiwi et al. in 2016 at the Belimbing Health Center in Padang City with a cross-sectional study design involving 163 respondents to find out the relationship between parenting style and the nutritional status of toddlers. Concluding that there is a significant relationship between health services and the Incidence of stunting in children aged 6-23 months (p = 0.006) (Pratiwi, 2016) and research by Nasrul in 2019 in Palu City, Poso, Sigi, and Banggai Regencies with a cross-sectional research design involving 384 respondents who aimed to analyze the risk factors for Baduta stunting, which shows that the variable that has the most dominant risk factor for stunting is not washing hands OR=5.359 (1.758-16.341) and not having a latrine with OR=7,398 (2,072-30,714), (Nasrul, 2019). Similar to the research conducted by Elisabet et al. in 2019 at Pandan Health Center in Sintang Regency with a cross-sectional research design involving 257 respondents to know the risk factors for stunting events where the result is that there is a relationship between stunting events in toddlers and parenting (p= 0.011) (Elisabet, 2021). However, these results are in contrast to the effects of research by Astuti et al. (2014) at the Walanakan Health Center, Minahasa Regency; there is no relationship between a mother's parenting style and the nutritional status (weight/age and height/age) of children aged 1-3.

## CONCLUSION

the most dominant factor influencing the Incidence of stunting in children aged 0-23 months in Gorontalo Regency is the factor of health care, with a p-value = 0.001

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