

Education Empowerment: Transformation of Parenting Style with Incidence of Stunting. A Cross Sectional Analysis in One Island, Indonesia

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How to cite this article: Iskandar, Cut Oktaviyana, Rika Andriani. Education Empowerment: Transformation of Parenting Style with Incidence of Stunting. A Cross Sectional Analysis in One Island, Indonesia. International Journal of Nursing Education / Vol. 16 No. 4, October-December 2024.

Abstract

Childhood Stunting is a condition of failure to thrive in children under five as a result of chronic malnutrition so that children become too short for their age. Parenting is an important component that should not be disregarded in the pursuit of better nutritional status, since it has an indirect impact on nutritional. This study aims to determine the relationship between family parenting and the incidence of stunting in Simeulue Island Aceh, Indonesia. This study applied a cross-sectional design involving 86 people who were taken by proportional sampling. Chi-square test showed a relationship between permissive parenting and experienced stunting (p-value, 0.001), a relationship between authoritarian parenting and experienced stunting (p-value, 0.000), and a relationship between democratic parenting with experienced stunting (p-value, 0.002). Therefore, it is expected that respondents, namely families of toddlers, will provide good parenting to toddlers so that they will increase the growth and development of toddlers to prevent stunting.

Keywords: Family Parenting; Stunting ; Island ; Children

Introduction

The success of a nation's development is highly dependent on the success of a nation that can prepare

quality human resources. To prepare quality human resources, one of the government's efforts is to solve nutritional problems in toddlers. Toddlers are babies under five years old, of course, become the next

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Submission date: Mar 16, 2024

Revision date: Oct 3, 2024

Published date: Oct 22 2024

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generation of the nation which is expected to become quality human resources in the future. Healthy children are the base for a healthy nation. Children are quite vulnerable at this growing age and hence are prone to fall victim to many diseases, thus affecting their normal growth and development^{1,19}

Nutritional problems can be characterized by the number of cases of malnutrition in children under five. One of the nutritional cases that can occur in children under five is *stunting*. Globally in 2010 the prevalence of *stunting* in the world was 26.1%.cases of *stunting* most The prevalence *stunting* in children in the world decreased in 2015 by 23.2% and was followed in 2017 to 22.2%. The world estimates that *stunting* will reach 21.8% or 142 million by 2020.²

World Health Organization (WHO) places Indonesia as the third country with the highest prevalence of *stunting* in Asia. The prevalence *stunting* nationally in Indonesia has increased from 27.5% in 2016 to 29.6% in 2018. The prevalence *stunting* in children under five in Indonesia then decreased in 2019 by 27.6%. The Nutrition Status Monitoring (PSG) data for the last three years noted that the prevalence of *stunting* had increased from 27.5% in 2016 to 29.6% in 2018.³

Based on data from the Aceh Provincial Health Office, the percentage of *stunting* in children under five has increased from 2017 by 35.7% to 37.3% in 2018. Meanwhile, in 2019 the number of *stunting* was 104 people the incidence of *stunting* decreased by 34.2%⁴. Then in 2020 in January-September the number of children under five with *stunting* was 138 people (65.7%)¹². One of the regencies that is in second place out of 23 regencies/cities in Aceh that is experiencing *stunting* is Simeulue district. Then according to the Simeulue District Health Office, in 2018 the number of *stunting* in Simeulue Island was 40.2% and increased in 2019 by 67%. Thus, it is necessary for government efforts to reduce the incidence of *stunting* in Aceh, especially in Simeulue Island.⁵

Problem in children under five is the impact of nutrition during the first thousand days of life. This causes impaired physical development, resulting in a decrease in cognitive and motor abilities. children *Stunting* have an average *Intelligence Quotient* (IQ) score of eleven points lower than the average IQ score for normal children. Developmental disorders

develop in children due to malnutrition, if they do not get intervention early on, which will continue into adulthood.⁷

Simeulue Island is the most remote island in Indonesia as a maritime country, has abundant fishery wealth, its marine products can even reach 13 thousand tonnes per year²⁰. But the incidence of *stunting* is increasing, this condition is feared to cause physical development disorders, decreased cognitive and motor abilities, the average *Intelligence Quotient* (IQ) score is eleven points lower than the average IQ score of normal children^{6,7}.

This condition is thought to be closely related to the role of education in changing or improving parenting styles related to preventing *stunting* is still not optimal. so that parenting patterns directly affect nutritional status, this needs to be considered and should not be ignored in efforts to improve children's nutritional status.^{3,15}

Kinds of parenting styles, namely permissive parenting, authoritarian parenting and democratic parenting, these three parenting styles have a role in influencing children's behavior. Permissive parenting that emphasizes the freedom of children and tends not to pay attention to it. The authoritarian parenting style is applying rules and restrictions to toddlers, without giving children freedom. In addition, democratic parenting that gives freedom to children and tends to have an influence on children's behavior, namely children tend to carry the authority of parental authority.⁹

Factors that are not good parenting in the family is one of the causes of nutritional problems such as *stunting*. Parenting includes the ability of families to provide time, attention and support in meeting the physical, mental and social needs of children who are growing in the family. Parenting for children is manifested in several ways in the form of breastfeeding, complementary foods, psychosocial stimulation, hygiene/hygiene practices, environmental sanitation, care for sick children and patterns of seeking health services. Habits that exist in the family such as feeding, psychosocial stimulation, hygiene/hygiene, environmental sanitation and utilization of health services have a relationship with the incidence of *stunting*.¹

Parenting in the family in the form of feeding habits, parenting habits, hygiene habits and the habit of getting health services are related to the incidence of *stunting* under five. Thus, it is necessary to improve good family parenting patterns to reduce the incidence of *stunting* in toddlers^{11,18}. Based on the above problems, researchers need to analyse the role of education in changing or improving parenting styles related to the incidence of *stunting* and statistically measure the relationship between parenting styles and the incidence of *stunting*.

Research Method

This research is a quantitative research, namely research based on the philosophy of positivism to examine a particular population or sample by collecting data using instruments, the data analysis is statistical. The design used in this research is descriptive correlation with a *cross sectional research approach*.

The population in this research were all toddlers aged 1-5 years in the working area of the Simeulue Island Aceh Indonesia, totaling 636 people. The samples was obtained using Slovin's formula with a margin of error of 10%, resulting in a total of 86 samples. They were taken from 18 villages using proportional sampling.

The data collection instrument in this research used a questionnaire sheet. Data analysis used *chi square* with 95% confidence level. The decision of the *chi square* consists of H_a (alternative hypothesis), that is, if $p < (0.05)$, it means that there is a significant relationship between the dependent variable and the independent variable. Then H_0 (zero hypothesis) that is, if $p (0.05)$, it means that there is no significant relationship between the dependent variable and the independent variable. Data Analysis make use of IBM SPSS Version 23 was utilized to analyze the data.

Results

The results of this study showed that most respondents were aged 1-3 years (76.7%), male (54.7%), normal incident *stunting* 47.7%), not good permissive parenting pattern (58.1), not good authoritarian parenting (53.5%) and not good democratic parenting pattern (62.8%). The following is an explanation of the demographic data of the respondents in Table 1 :

Table 1: Characteristic Respondents (n=86)

Characteristic Respondents	f	%
Age		
(1-3 years)	66	76.7
Toddler (4-5 years)	20	23.3
Gender		
Male	47	54.7
Female	39	45.3
Incident Stunting		
Normal	41	47.7
Short	39	45.3
Very short	6	7
Permissive		
Good	36	41.9
Not good	50	58.1
Authoritarian		
Good	40	46.5
Not good	46	53.5
Democratic		
Good	32	37.2
Not good	54	62.8

Bivariate analysis using the Chi-Square test shows a relationship of Parenting Style incident *stunting* between permissive parenting (P value, 0.001), authoritarian parenting (P value, 0.000) and democratic parenting (P value, 0.002). Bivariate analysis is further explained in Table 2:

Table 2 : The Relationship of Permissive Parenting, Authoritarian Parenting, and Democratic Parenting with *Stunting* in Toddlers in Simeulue Island Aceh, Indonesia (n=86)

Parenting Style	Incidence Stunting								P Value*
	Normal		Short		Very short		Total		
	f	%	f	%	f	%	f	%	
Permissive Parenting									
Good	32	88.9	4	11.1	0	0	36	100	0.001
Not good	9	18	35	70	6	12	50		
Authoritarian Parenting									
Good	32	80	7	17.5	1	2.5	40	100	0.000
Poor	9	19.6	32	69.6	5	10.9	46		
Democratic Parenting									
Good	31	96.9	1	3.1	0	0	32	100	0.002
Not good	10	18.5	38	70.4	6	11.1	54		

Note : *) *Chi Square Test*

Discussion

Relationship between Permissive Parenting Patterns and *Stunting*

The analysis results show a significant relationship between permissive parenting and the incidence of *stunting* in children under five in the working area of the Simeulue Island Aceh Indonesia ($p\text{-value} = 0.001$). *Stunting* as a condition of malnutrition related to the nutritional status of children under five. Nutritional status is indirectly influenced by various factors such as food availability which is influenced by economic factors and parenting patterns. Parenting patterns directly affect nutritional status, so parenting needs to be considered and should not be ignored in an effort to improve nutritional status, especially for toddlers so that *stunting*⁶.

Permissive parenting is where guardians feel they do not care and tend to donate openings and wide flexibility to their children. It is characterized by the opportunity given to children to act concurring to their own wishes. Children don't know whether their behavior is right or off-base since guardians never legitimize or fault. As a result, children carry on concurring to their claim wishes. Another circumstance in this child rearing design is that children are free to act and do as they wish.¹³

Permissive parenting behavior in children is as a rule given conflictingly with the rules that have

been connected and employments bribes such as blessings in case the caregiver's wishes are satisfied. In expansion, caregivers deliver children more opportunity than duty and results of their behavior. Lenient children's individual characteristics are ordinarily forceful, incapable to participate with others, and troublesome to alter. As a result, children carry on agreeing to their claim wishes which can lead to hindering¹¹.

Individuals with a permissive parenting style often allow their children to chew until they are full before eating. This tendency often leads to children delaying or even ignoring mealtimes²¹. In this case nurses need to educate parents with "Set Clear Rules" Authoritative parents have clear household rules. They make sure children know their expectations in advance and explain the reasons behind the rules. So instead of saying, "Eat because I said so," say, "Eat so you can help your body and brain grow." When your child understands the safety concerns, health hazards, moral issues, or social reasons behind your rules, they will develop a better understanding of life. They will also be more likely to follow the rules when you are not there to enforce them.

This study found an association between permissive parenting and the incidence of *stunting* in toddlers. In this research, mothers who provided poor permissive parenting tended to experience more *stunting*, as many as 35 respondents (70%). This

is because the act of permissive parenting in which families tend to give freedom to toddlers without applying a sense of responsibility. Caregivers tend to give freedom and pay less attention to toddlers such as the toddler's diet where children are free to choose the desired food ingredients and adjust the schedule and frequency of eating according to the child's wishes.

Then the caregiver gives the toddler the freedom to maintain his personal hygiene such as playing outside the house in a dirty environment. The more often caregivers provide permissive parenting that is not good above, it will have an impact on bad habits carried out by toddlers. These bad habits can have an impact on impaired growth and development of toddlers such as the emergence of *stunting*.

Relationship between Authoritarian Parenting Patterns and *Stunting*

The analysis results show a significant relationship between authoritarian parenting and the incidence of *stunting* in children under five in the working area of the Simeulue Island Aceh Indonesia ($p\text{-value} = 0.000$).

Based on authoritarian parenting theory, every word, statement, and wish is used as a standard (rule) that the child must follow. Authoritarian parenting is a way of educating children by parents by setting their own rules and boundaries that absolutely must be obeyed by children without compromise and taking into account the child's circumstances. It is the parents who have the power to determine everything for the child and the child is only the implementing object. If the child argues, the parents will not hesitate to give punishment.¹⁴

Authoritarian parenting has the potential to form various habits in children, such as sacrificing the child's ability to recognise hunger and fullness because of the meal schedule that is always determined by parents, the child is obese or malnourished, has no enthusiasm for food or eating activities, and the child becomes increasingly anxious when meal time is approaching²¹. In this case nurses need to educate parents with 2 (two) things, namely, (1) listen to children: be a good listener, giving positive attention to their children will be very helpful in preventing behavioural problems, especially changes in

children's appetite. (2) recognise children's emotions: Authoritative parents recognise their children's feelings. They help children label their emotions and they teach them to recognise how their feelings affect their behaviour. So, next time when your child is upset, avoid minimising his feelings by saying, "It's no big deal," or "Stop crying. There's no reason to be upset." To them, it might be a big deal. Validate their emotions by saying, "I know you're really sad right now." Then, "Let's enjoy this meal dear, so you can grow up big and smart".

Authoritarian parenting is also one of the most important forms of parenting in children's growth and development. Authoritarian parenting behavior in children is usually given with certainty by following all the rules set by the caregiver regardless of the child's condition. In addition, the caregiver has the power to determine everything for the child and give punishment if the child does not want to obey his orders. Children who get authoritarian parenting tend to have a doubtful nature, and experience a decline in cognitive function. As a result, children will experience growth and development disorders such as *stunting*.^{10,11}.

This study found an association between authoritarian parenting and the incidence of *stunting* in toddlers. In this research, mothers who provided unfavorable authoritarian parenting tended to experience more *stunting*, as many as 32 respondents (69.6%). This is because the actions of authoritarian parenting in which the family tends to provide rules according to the wishes of the caregiver regardless of the child's condition. Then the caregivers tend to regulate and make their own decisions, such as the toddler's diet where the caregiver chooses the food ingredients and regulates the child's eating schedule and frequency, regardless of the child's condition. If the child does not follow the rules of the caregiver, the caregiver will punish the toddler. Children who get an authoritarian parenting style that is not good tend to experience mental disorders that can inhibit their growth and development, causing *stunting*.

According to Ramadhani et al, authoritative parenting may influence optimal nutritional status and the risk of *stunting* in toddlers is very low, whereas authoritarian and permissive parenting may influence poor nutritional status and cause a high risk of *stunting* in toddlers.

The Relationship between Democratic Parenting Patterns and *Stunting*

The analysis results show a significant relationship between democratic parenting and the incidence of *stunting* in children under five in the working area of the Simeulue Island Aceh Indonesia ($p\text{-value} = 0.002$). Based on the theory of democratic parenting is a combination of permissive and authoritarian parenting with the aim of balancing thoughts, attitudes and actions between children and parents. Democratic parenting is characterized by parental recognition of children's abilities and able to develop control over their own behavior with good things^{12,14}. Democratic parenting is also one of the most important forms of parenting in the child's growth and development process so that *stunting*. Democratic parenting behavior for toddlers is usually given by aligning the interests of the caregivers and the interests of the children.^{11,16}

This research is in line with research conducted by Bella in 2020, where the results of the bivariate analysis obtained $p\text{-value} = 0.000$ ($p < 0.05$), which indicates that there is a significant relationship between democratic parenting patterns and the incidence of *stunting* in children under five from poor families. This shows statistically that mothers with poor democratic parenting habits for their toddlers have a 5.71 times greater tendency to have *stunting* than mothers with good democratic parenting habits for their toddlers.

This study found an association between democratic parenting and the incidence of *stunting* in toddlers. In this research, mothers who provided poor democratic parenting tended to experience more *stunting*, as many as 38 respondents (70.4%). This is due to the action of democratic parenting in which families tend to align the interests of caregivers and the interests of toddlers. Caregivers give tolerance to toddlers when they make mistakes and provide education to toddlers so they don't make mistakes again. Caregivers work more closely with toddlers to achieve a good goal. In this case, caregivers tend to organize and make decisions with toddlers such as eating schedules and the amount and amount of food consumed. In addition, caregivers tend to guide children to adopt good behavior¹⁷. However, in this research there are still many caregivers who

are not good at providing democratic parenting to toddlers. Thus it will have an impact on growth and development disorders of toddlers which can cause *stunting*.

The role of parents in parenting children, especially stunted children, is very important. A tentative hypothesis that can be proposed is that if the parenting of parents (especially mothers) is poor, especially in terms of child feeding, it will affect the prevalence of *stunting*. When a mother in her twenties is malnourished, even during pregnancy and breastfeeding, her child's body and brain will suffer greatly. In this case, nurses need to educate parents by providing full support that children with *stunting* are also gifts from God, and it is the responsibility of parents and the family environment to provide time, attention, love, and support.

Conclusion

Based on the results of the research conducted by the researchers incidence of *stunting* in toddlers in the working area of the Simeulue island Aceh, Indonesia, it can be concluded that: the relationship between permissive parenting, authoritarian parenting, democratic parenting and the incidence of *stunting*. This can be a recommendation for community and health centers to increase education empowerment as transformation of parenting style with incidence of *stunting*.

Conflict of interest: The authors declare no conflict of interest.

Funding: This study was independently funded by researchers.

Ethical clearance: The Ethical Clearance was obtained from the Research Ethics Committee of the Faculty of Health, Abulyatama of University on February 22, 2021 with code number 113801290823.

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