Analysis of the Role of Parents on Children's Physical Growth of 4-5 Years at Dharma Wanita Tosaren II Kediri City

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ABSTRACT

Physical growth in children is influenced by various factors such as heredity (ethnicity, race, sex), nutrition, culture, environment, socioeconomic status, climate, physical activity, health, hormones, and particularly the role of parents in fulfilling nutritional needs. This study aimed to examine the influence of parental roles on the physical growth of children aged 4–5 years at Kindergarten Dharma Wanita Tosaren II, Kediri. Using a correlational analytic design with a cross-sectional approach, the study involved 70 parents selected through total sampling. Data on the independent variable (parental role) and dependent variable (physical growth indicators) were collected via questionnaires and observation sheets, and analyzed using the Spearman correlation test. Findings showed that 47.1% of parents had a sufficient role, 50% of children had appropriate weight, 46.7% appropriate height, 42.9% appropriate head circumference, 45.7% had less-than-adequate upper arm circumference, and 41.4% had less-than-adequate chest circumference. These results indicate that parental involvement significantly affects children's physical growth. It is recommended that parents enhance their knowledge regarding proper nutritional intake to support optimal growth in early childhood.

Keywords: children, physical growth, the role of parents

BACKGROUND

Growth is an increase in the size and number of cells and intercellular tissue, it is quantitative so it can be measured in units of length or weight (Conita, 2014). Children's growth is observed using the toddler's "Healthy Card" (KMS) which functions as a tool to monitor growth movements (Arisman in Locitasari, 2015). KMS is a card containing a growth chart to record and monitor the growth of toddlers every month, from birth to 5 years old. The program is referred to as monitoring children's nutritional status every month in the hope that any nutritional status disorders will be detected immediately.

According to UNICEF, the incidence of growth disorders in children under five is 27.5% or 3 million children (Sri, 2016). Around 16% of toddlers in Indonesia are reported to have problems (Ministry of Health of the Republic of Indonesia in Sri, 2016). In East Java, Early Detection of Growth and Development (DDTK) examinations for toddlers and preschoolers have been carried out on 63.48% of toddlers (Wardani, 2015). Detection of baby growth and development in East Java is set at 80%, but coverage is 40-59% and 0.14% experience suboptimal development (East Java Province Level I Health Office in USU, 2008). In the Kindergarten Tosaren II Dharma Wanita, Kediri City in 2018, data was obtained on 6 children (60%) with learning disorders.

Data on the problem of physical growth disorders is shown by the results of the 2013 Riskesdas, which was assessed using weight per height (BW/BH) values in Indonesia, including very thin 5.3% which decreased from 6.0% in 2010, 11.9% fat, decreased from 2010 which was 14.0%, thin 12.1% also decreased from 2010 of 7.3% (Health Research and Development Agency, 2013). Still according to Riskesdas 2013, there are 19.6% of toddlers who are malnourished, consisting of 5.7% of toddlers who are malnourished and 13.9% who are undernourished (Karuniawati, 2016).

According to the East Java Province Health Profile (2014), the incidence of growth or malnutrition is 12.3% (underweight 10.3% and very underweight 2.0%). In Kediri City in 2016 the number of BGM (Below the Red Line) cases reached 24% and in 2018 it was 23%. Meanwhile, based on the BW/U indicator until 2018, the nutritional status category was very poor at 12%, and less at 17%, normal at 60%, over or obese at 11%. at Kindergarten Dharma Wanita Tosaren II, Kediri City in 2018. Until 2018, Kediri had a very poor nutritional status of 14%, which is the first rank (Kediri District Health Office Nutrition Report, 2018).

The results of a preliminary study on April 14 2025 at Kindergarten the Dharma Wanita Tosaren II, Kediri City, found that 8 children (26.7%) were very thin, 5 children (16.7%) out of 30 children were very thin.

The presence of growth disorders in children can be influenced by several factors, including heredity (ethnicity, race and gender), nutrition, culture, environment, social and economic status, climate, exercise, health and hormonal factors. Physical growth for children is related to the role of parents in meeting nutritional needs. Parents play an important role in meeting all children's needs, including the need for physical growth (Marmi *et al*. in Locitasari, 2015).

The impact of growth disorders or malnutrition, especially in children, will hinder the child's growth and development process in efforts to achieve optimal health status to improve the nation's quality of life (Atika, et al., 2014). Malnutrition in children can also cause death, increase morbidity rates, and can even result in a decrease in the level of intelligence in children if not treated immediately (Puspitasari, 2014).

Considering that a child's physical growth is largely determined by the nutrition they receive, mothers are advised to provide adequate nutrition for their physical growth. Nutritional needs will be met by providing adequate food according to the child's age. Therefore, it is important for parents or mothers who have babies aged 0-6 months to

continue to be given exclusive breast milk until the baby is more than 6 months old, provide adequate nutrition, monitor their growth every month to reduce and reduce the risk of underweight or malnutrition in babies which will have an effect on growth (Puspitasari, 2014). The aim of this research is to determine the influence of the role of parents on the physical growth of children aged 4-5 years at the Kindergarten Dharma Wanita Tosaren II, Kediri City.

METHODS

Correlational analytical research design with approaches *cross sectional*. The population of all parents who accompany children aged 4-5 years at Kindergarten Dharma Wanita Tosaren II, Kediri City with a sample of 70 respondents was taken using a total sampling technique. The independent variable is the role of parents and the dependent variable is the child's physical growth collected using questionnaires and observation sheets. Data were analyzed using the Spearman Correlation test.

RESULTS

Subject Characteristics

Table 1. The characteristics of respondents in this study consisted of maternal age, maternal education, occupation, parity, parental role, child's weight, child's height, child's head circumference, upper arm circumference and child's data circumference.

No	Characteristics	ΣN	S%
1	**Mother's age (years)**		
	<20	10	14,3
	20-35	47	67,1
	>35	13	18,6
2	**Education**		
	Elementary school	16	22,9
	Junior High School	38	54,3
	Senior High School	12	17,1
	University	4	5,7
3	**Work**		
	Not working/housewife	25	35,7
	Farmer	27	38,6
	Private	15	21,4
	Civil servants	3	4,3
4	**Parity**		
	Primigravida	12	17,1
	Multigravida	38	54,3
	Grande multigravida	20	28,6
5	**The role of parents**		
	Not enough	24	34,3
	Enough	33	47,1
	Good	13	18,6
6	**Child's weight**		
	Not enough	24	34,3
	In accordance	35	50
	More	11	15,7
7	**body height**		
	Not enough	27	45
	In accordance	28	46,7

	More	5	8,3
8	**Head circumference**		
	Not enough	27	38,6
	In accordance	30	42,9
	More	13	18,6
9	**Upper head circumference**		
	Not enough	32	45,7
	In accordance	28	40
	More	10	14,3
10	**Chest size**		
	Not enough	29	41,4
	In accordance	19	27,1
	More	22	31,4
	Total	**70**	**100**

Source: Results of data analysis

Statistical Test Results

Table 2. Results of the Spearman Correlation Test on the Influence of Parental Roles on the Weight Growth of Children Aged 4-5 Years at Kindergarten Dharma Wanita Tosaren II, Kediri City April 28-April 30 2025

Variable	*Correlation Coefficient*	*p value*
Parental role– BW	0,307	0,010
N = 70		
α = 0.05		

Based on table 2, it is known that there is an influence of the role of parents on the weight growth of children aged 4-5 years at the Kindergarten Dharma Wanita Tosaren II, Kediri City (Spearman *p value* 0.010 < 0.05 then Ho is rejected). The level of influence is in the rather low category and the direction of influence is positive (*Correlation Coefficient* +0.307), meaning that the better the role of parents in providing food and drink to children, the better their physical growth will be seen from the Body Weight (BW) indicator for toddlers aged 4-5 years and vice versa.

Table 3. Spearman Correlation Test Results: Influence of Parental Role on Height Growth of Children Aged 4-5 Years at Kindergarten Dharma Wanita Tosaren II, Kediri City April 28-April 30 2025

Variable	*Correlation Coefficient*	*p value*
The role of parents– TB	0,700	0,000
N = 70		
α = 0.05		

Based on table 3, it is known that there is an influence of the role of parents on the height growth of children aged 4-5 years at the Kindergarten Dharma Wanita Tosaren II, Kediri City (Spearman *p value* 0.000 < 0.05 then Ho is rejected). The level of influence is in the quite strong category and the direction of influence is positive (*Correlation Coefficient* +0.700), meaning that the better the role of parents in providing food and drink to children, the better their physical growth will be seen from the Height (TB) indicator for toddlers aged 4-5 years and vice versa.

Table 4. Spearman Correlation Test Results of the Influence of Parental Role on Head Circumference Growth of Children Aged 4-5 Years at Kindergarten Dharma Wanita Tosaren II, Kediri City April 28-April 30 2025.

Variable	Correlation Coefficient	p value
The role of parents–	0,798	0,000
N = 70		
α = 0.05		

Based on table 4, it is known that there is an influence of the role of parents on the growth of the head circumference of children aged 4-5 years at the Kindergarten Dharma Wanita Tosaren II, Kediri City (Spearman *p value* 0.000 < 0.05 then Ho is rejected). The level of influence is in the quite strong category and the direction of influence is positive (*Correlation Coefficient* +0.798), meaning that the better the role of parents in providing food and drink to children, the better their physical growth will be seen from the Head Circumference (Lika) indicator for toddlers aged 4-5 years and vice versa.

Table 5. Results of the Spearman Correlation Test on the Influence of Parents' Role on the Growth of Upper Arm Circumference in Children Aged 4-5 Years at Kindergarten Dharma Wanita Tosaren II, Kediri City April 28-April 30 2025.

Variable	Correlation Coefficient	p value
Parental roles–	0,749	0,000
N = 70		
α = 0.05		

Based on table 5, it is known that there is an influence of the role of parents on the growth of upper arm circumference in children aged 4-5 years at Kindergarten Dharma Wanita Tosaren II, Kediri City (Spearman *p value* 0.000 < 0.05 then Ho is rejected). The level of influence is in the quite strong category and the direction of influence is positive (*Correlation Coefficient* +0.749), meaning that the better the role of parents in providing food and drink to children, the better the physical growth seen from the Upper Arm Circumference (Lila) indicator for toddlers aged 4-5 years and vice versa.

Table 6. Spearman Correlation Test Results of the Influence of Parental Role on Chest Circumference Growth in Children Aged 4-5 Years at Kindergarten Dharma Wanita Tosaren II, Kediri City April 28-April 30 2025.

Variable	Correlation Coefficient	p value
The role of parents–	0,761	0,000
N = 70		
α = 0.05		

Based on table 6, it is known that there is an influence of the role of parents on the growth of chest circumference in children aged 4-5 years at Kindergarten Dharma Wanita Tosaren II, Kediri City (Spearman *p value* 0.000 < 0.05 then Ho is rejected). The level of influence is in the quite strong category and the direction of influence is positive (*Correlation Coefficient* +0.761), meaning that the better the role of parents in providing food and drink to children, the better their physical growth will be seen from the Chest Circumference indicator for toddlers aged 4-5 years and vice versa.

DISCUSSION

Based on table 4.5, it is known that almost half of the respondents have a sufficient parental role, namely 33 respondents (47.1%) out of a total of 70 respondents.

Role means a set of expected levels possessed by those in society (Big Indonesian Dictionary, 2008). Role is a complex of human expectations regarding the way individuals should behave and act in certain situations based on their social status and function. The role of the community in implementing treatment is very important, in this case the family as the smallest unit of society is expected to be able to make the program a success (Nadirawati, 2011). Role is a concept regarding what an individual can do which is important for the social structure of society, role includes norms developed by a person's position or place in society, role in this sense is a series of rules that guide a person in social life (Notoatmodjo, 2014). Roles are influenced by knowledge and attitudes, experience, beliefs, social, cultural and physical facilities. The influence is internal and external. According to Lawrence Green includes predisposing factors (*predisposing factors*), enabling factors (*enabling factors*), and driving factors (*reinforcing factors*). Predisposing factors are internal factors that exist in individuals, families, groups or communities that make it easier for individuals to behave such as knowledge, attitudes, values, perceptions and beliefs. Enabling factors are factors that enable behavior, availability of resources, affordability, referrals, and skills. Reinforcing factors are factors that strengthen behavior, such as attitudes and skills, peers, parents and employers (Suliha, 2009).

Almost half of the respondents have a parental role in the sufficient category because there are still many respondents who do not carry out their role and only carry out a few roles in providing food and drink to children. According to the research results, it can be seen that several roles are not implemented, including the role of mothers in preparing food menus for children according to the principles of healthy food (rice, vegetables, protein and fat), of the 70 respondents who have never implemented this, there are still 28 mothers (40%), regarding the role of mothers in trying to provide food to children in various ways if the child refuses it, of the 70 respondents who have never implemented this, there are still 16 mothers (22.9%). The same thing also happens with other roles where there are still mothers who do not carry them out fully. If studied further, this could happen because in principle the role is influenced by many factors related to experience, knowledge, intentions, motivation and others.

If the implementation of the role is evaluated based on age, based on the results of the analysis it is known that most respondents are 20-35 years old with the role of parent being in the sufficient category. Age, as stated by Mubarak (2016), influences a person's experience and maturity. In this case, with an age range of 20-35 years, it can be said that psychologically a person is mature enough, mature enough, experienced enough, although not yet optimal, so that they already know more or less about their role in meeting the food and drink needs of their children who are still toddlers. Therefore, his ability to carry out his role in providing food and drink for his children who are still under five is also only in the sufficient category.

Physical Growth

Based on table 4.6, it is known that half of the respondents have physical growth in the appropriate category, namely 35 respondents (50%) out of a total of 70 respondents.

Growth is an increase in the size and number of cells and intercellular tissue, it is quantitative so it can be measured in units of length or weight (Conita, 2014). Good child growth characterized by changes in the size and shape of the body or body parts, such as increased physical growth (Ministry of Health RI, 2018). Physical growth reflects the current nutritional state and can be a sensitive indicator of malnutrition (Sylvia, 2017). Physical growth according to Supariasa, et al. (2012) is the most important and most frequently used

anthropometric measure and is the main choice. A child's physical growth can be influenced by various factors such as lack or excess of food, lack or excess of activity and ease of life, psychological factors, genetic factors, food consumption patterns, culture, hormonal factors, environmental factors and health factors (Sylvia, 2017).

The research results showed that half of the respondents had physical growth in the appropriate category. This can be due to the current condition of children being generally raised by parents of mature age, namely the majority of respondents aged 20-35 years, the majority of respondents have junior high school education, almost half of the respondents are farmers and the majority of respondents are multigravida. This condition will generally support parents' ability to meet the need for food and drink for their children who are still under five, who still need a balanced nutritional intake of carbohydrates, protein, fat, vitamins and other minerals.

The results of further analysis showed that most respondents were aged 20-35 years with physical growth in the appropriate category. This is because with an age range of 20-35 years, parents are psychologically mature enough, have enough experience, so they are able to provide various adequate food and drink needs for their children who are still toddlers. Parents realize that children need food with balanced nutrition, children need special attention when eating, if they have difficulty eating then they need special strategies so that children continue to eat and so on.

The Influence of Parental Roles on the Physical Growth of Children Aged 4-5 Years

Based on table 4.16, it is known that there is an influence of the role of parents on the physical growth of children aged 4-5 years at the Kindergarten Dharma Wanita Tosaren II, Kediri City (Spearman *p value* 0.010 < 0.05 then Ho is rejected). The level of influence is in the rather low category and the direction of influence is positive (*Correlation Coefficient* +0.307), meaning that the better the role of parents in providing food and drink to children, the better their physical growth will be seen from the physical growth indicators for toddlers aged 4-5 years and vice versa.

Growth is an increase in the size and number of cells and intercellular tissue, it is quantitative so it can be measured in units of length or weight (Conita, 2014). Children's physical growth is observed with the toddler's "Healthy Card" (KMS) which functions as a tool to monitor growth movements (Arisman in Locitasari, 2015). The presence or absence of disturbances in a child's physical growth can be influenced by several factors ranging from heredity (ethnicity, race and gender), nutrition, culture, environment, social and economic status, climate, exercise, health and hormonal factors. Physical growth for children is related to the role of parents in meeting nutritional needs. Parents play an important role in meeting all children's needs, including the need for physical growth (Marmi *et al*. in Locitasari, 2015).

The influence of the role of parents on the physical growth of children aged 4-5 years is due to the mother's role in preparing a food menu for the child according to the principles of healthy food (there is rice, vegetables, protein and fat), the mother's role in providing food to the child in various ways if the child refuses it, and other roles that will have a positive influence on the child's growth. Nutritional needs will be met by providing adequate food according to the child's age. Therefore, parents or mothers who have babies aged 0-6 months should continue to be given exclusive breast milk until the baby is more than 6 months old, provide adequate nutrition for the next period until toddler age, monitor their growth every month to reduce and reduce the risk of underweight or malnutrition which will have an effect on subsequent growth. This condition is supported by the mother's age, which based on the results of the analysis shows that most respondents are 20-35 years old with the role of parents in the sufficient category. Age, as stated by Mubarak (2016), influences a person's experience and maturity. In this case, with an age range of 20-35 years, it can be said that psychologically a person is mature enough, mature enough, experienced enough, so that more

or less he already knows his role in meeting the food and drink needs of his toddler child. Therefore, his ability to carry out his role in providing food and drink for his children well enough will support his children's growth.

CONCLUSION

1. Almost half of the respondents had a sufficient parental role, namely 33 respondents (47.1%) out of a total of 70 respondents.
2. Half of the respondents had a weight in the appropriate category, namely 35 respondents (50%) out of a total of 70 respondents.
3. There is an influence of the role of parents on the physical growth of children aged 4-5 years at Dharma Wanita Tosaren II Kindergarten, Kediri City (Spearman *p value* 0.010 < 0.05 then Ho is rejected). The level of influence is in the rather low category and the direction of influence is positive (*Correlation Coefficient* +0.307), meaning that the better the role of parents in providing food and drink to children, the better their physical growth will be seen from the physical growth indicators for toddlers aged 4-5 years and vice versa.

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