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Research article

Analysis of the Family's Role on the Status of Weight and Height of Children at Pelita Hati Early Childhood Education

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ABSTRACT

Background: Child health problems are a major problem in Indonesia, especially those related to nutrition in children under five. This can cause barriers to the child's height and weight. This study aimed to analyze the influence of the role of the family on the weight and height status of children.

Methods: This research design is an observational quantitative research with a cross sectional approach with the focus of his research directed at analyzing the independent variable the role of the family on the dependent variable of weight and height status in children at PAUD Pelita Hati Karangrejo Tulungagung using linear regression statistical test with a sample of 35 respondents were taken by using Simple Random Sampling technique.

Results: The results of the study found that almost half of the respondents had a moderate category of family roles as much as 16 respondents (45,7%). Almost half of the respondents have body weight in the normal category as much 16 respondents (45,7%) and most of the respondents have a normal height category of 20 respondents (57,1%). Results of data analysis using *Test Linear Regression* on the weight variable that the *p-value is* 0.00 0 < 0.05 then H_0 is rejected and H_1 is accepted so it can be concluded that there is an influence of the role of the family on the weight status of children in PAUD Pelita Hati Karangrejo Tulungagung. Meanwhile, in the height variable, the *p-value is* 0.045 <0.05, so H_0 is rejected and H_1 is accepted , so it can be concluded that there is an influence of the role of the family on the height status of children in PAUD Pelita Hati Karangrejo Tulungagung.

Conclusion: Parents can monitor their child's growth and also provide foods that are high in fiber such as fruits and vegetables, foods that contain lots of protein such as meat and tempeh, drinks that contain lots of calcium such as milk so that children can grow optimally.

I. Introduction

Child health problems are a major problem in Indonesia, especially those related to nutrition in school-age children. This can cause barriers to growth and development of children. One of the causes of disorders in meeting nutritional needs in school-age children is the lack of family roles due to busyness. When families allocate more time for work outside the home, they will usually reduce the time to manage food in the household by reducing the frequency of cooking and reducing the type of food cooked, which in turn will reduce the nutritional quality of the family members' diet (Benajir, 2014).

The role of the family is very important for school-age children, especially for their nutritional status. The role is as an educator and provider, but in reality there are still many parents who do not pay

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attention to the nutritional status of their children, especially parents who are busy working outside. They only provide pocket money without providing nutritious food from home (Atri, 2014). The lack of a family role in fulfilling nutritional needs allows children to choose food according to their preferences (Sari et al, 2022).

The World Health Organization reports the nutritional status of children in the world with a thin prevalence of around 14.3%. The prevalence of malnutrition in 2013 to 2016 increased from 13.0% to 13.9%. Based on the analysis of Basic Health Research data, it was found that the nutritional status of children aged 5-12 years (according to BMI/age) in Indonesia was 4.0% very thin and 7.2% thin. The problem of obesity in children in Indonesia is also still high with a prevalence of 10.8% fat and 8.8% very fat (obese), while based on height the very short category is 12.3% and short 18.4% (Riskesdas, 2018).

Short prevalence based on TB/age, East Java has the lowest percentage for very short prevalence, at 5%, with the highest percentage in West Papua with 26.2%. The highest prevalence of stunting was in the province of East Nusa Tenggara (32.8%) and the lowest prevalence of shortness was in East Java (10.6%). Meanwhile, in Central Java, the prevalence for very short and short is 14.9% and 19.2%, respectively. As for the prevalence based on BMI/age, Bangka Belitung has the lowest percentage of 2%, the highest is in Riau with a percentage of 2%. 7.6%. For underweight prevalence, the highest prevalence was in West Nusa Tenggara (12.4%) while the lowest was in Bengkulu (5.3%). And the lowest prevalence of obesity is in Maluku (2.1%) and the highest is in Southeast Sulawesi (14.7%). Meanwhile, in East Java, the prevalence for these categories is 5.3%, 8% and 10.9%, respectively. (Riskesdas, 2018).

In 2014 it was found that 1.8 million children had poor nutritional status, 2.3 million in 2015 suffered from malnutrition. Meanwhile, as of March 2016, 27% of children in Indonesia were malnourished. However, to achieve the 20% target in 2017, data from the East Java Health Office noted that around 18 thousand children suffer from malnutrition, as many as 17,150 children in East Java. One of the originators of nutritional problems in East Java is the difficult behavior of eating in children from economic factors which also need more intensive efforts by increasing the availability of food around the household, improving parenting patterns and improving basic health services (Rodríguez-Sánchez, 2011).

In a preliminary study conducted by researchers on November 15, 2018 at SDN 2 Jeli, Karangrejo District, Tulungagung Regency, data was obtained that 16 out of 20 children at Jeli Tulungagung Elementary School had problems with nutrition where they often ate foods that were not known for their hygiene and were rich in nutrients. nutrition or not. The food that is bought and consumed is food that is sold by sellers around the school where the food contains a lot of carbohydrates and preservatives and dyes. This behavior causes 13 out of 20 children to experience weight less than BMI and the body looks thin, while 3 of them are overweight because they consume too much food that is not easily reabsorbed by the body. From the 16 respondents, it is known that they are not supervised in choosing the food to be consumed, parents seem to let their children choose what they like, they choose it because children always force to borrow the food. So that parents seem to obey what their children ask as long as the child does not cry and wants to go to school.

Nutritional status is a measure of success in fulfilling nutrition for children as indicated by the child's weight and height. Nutritional status is also defined as health status resulting from a balance between nutrient requirements and inputs. Nutritional status research is a measurement based on anthropometric and biochemical data and dietary history (Pramesty, 2019).

Nutrition problems are increasingly being recognized as one of the inhibiting factors for the national development process. Nutrition problems are increasingly being recognized as one of the inhibiting factors for the national development process. Nutritional problems that arise can have various impacts, including increasing infant and child mortality, impaired growth and decreased workability, impaired mental development and intelligence of children and the presence of certain diseases caused by lack of nutritional intake (Purba, 2020). Nutritional problems, especially in children, are a classic problem in Indonesia because every year the number of children affected by malnutrition has increased.

The high number of undernourished children can be caused by various factors. Theoretically influenced by two factors, namely food consumption and health. Food consumption includes nutritional factors in food, the presence or absence of feeding outside the family, family purchasing power and eating habits. While health factors include health care, physical and social environment (Supariasa, 2012). The main factor causing malnutrition and lack of parenting is the low parenting style of unhealthy children. The impact is that children's nutritional intake is less, even though they are able to fulfill it. The next impact is that the child's brain development will be hampered because the brain grows during toddlerhood, starting from the fetus at 30 weeks to 18 months of age (Muslihah, 2016).

The purpose of this study was to analyze the influence of the role of the family on the weight and height status of children at PAUD Pelita Hati Karangrejo Tulungagung

II. METHODS

Analytical quantitative design with a pre-experimental approach, which is a study to study the dynamics of the correlation between risk factors and effects, by approaching, observing or collecting data all at once (point time approach), meaning that each research subject is only observed once and measurements are made to the status of the character or subject variable at the time of examination. This does not mean that all research subjects are observed at the same time. This study will analyze the influence of the role of the family on the weight and height status of children in PAUD Pelita Hati Karangrejo Tulungagung with a population of 39 respondents and a sample of 35 respondents who were taken using the Simple Random Sampling technique.

The participants were assured that their engagement was voluntary, and that anonymity, privacy, and confidentiality of the data were guaranteed. Furthermore, they were informed about the purpose and the method of the study before signing a written informed consent. The questionnaires were distributed to eligible participants at the PAUD Pelita Hati Karangrejo Tulungagung, and respondents were asked to complete and return them in the same time.

III. RESULTS

Table 1 *Regression Statistics Test Results linear* the influence of the role of the family on the weight and height status of children at PAUD Pelita Hati Karangrejo Tulungagung which was held on 13-15 December 2019 with a total of 35 respondents

N o	variable _	Sig	R
1	Weight	0 000	0.747
2	Height _	0.045	0.899

a. Role of Family on Weight

Based on the results of the *Linear Regression analysis* , it shows that the *p-value is* 0.000 < 0.05, so $H_{0\ is}$ rejected and H_{1} is accepted, so it can be concluded that there is an influence of the role of the family on the weight status of children in PAUD Pelita Hati Karangrejo Tulungagung with a magnitude of 74.7. %.

b. Role of Family on Height

Based on the results of the *Linear Regression analysis*, it shows that the *p-value is* 0.045 <0.05, so $H_{0\ is}$ rejected and H_{1} is accepted. So it can be concluded that there is an influence of the role of the family on the height status of children in PAUD Pelita Hati Karangrejo Tulungagung with a magnitude of 89.9. %.

IV. DISCUSSION

The Role of Children's Families in PAUD Pelita Hati Karangrejo Tulungagung

The results showed that some almost half of the respondents have a family role in the moderate category as many as 16 respondents (45.7%). In addition, a total of 11 respondents (31.4%) had a family role in the less category. While a number of 8 respondents (22.9%) have a good family role category.

Children are assets, heirs, and the next generation of the nation. Children are expected to grow and develop as well as possible so that they will become adults who are physically, mentally, socially

and emotionally healthy, thereby achieving optimal development of their potential and becoming quality human resources (Purba, 2020).

The process of growth and development which is the main process, essential and positive in children, is something that is important for these children. The process of growth and development takes place at the time of conception, namely the union of the mother's egg with the father's spermatozoa, until the end of adolescence through the prenatal, infant, preschool, elementary and adolescent periods. The first years are an important period for physical growth and development, the development of intelligence, motor and social skills, emotions, runs so fast, that it can be said that the success of the first years largely determines the future of the child, if not detected in real terms. will reduce the quality of human resources in the future.

Good parenting from parents will improve optimal nutritional status conditions. Because the condition of the nutritional status of toddlers is not optimal, it has the potential to be bad for children's growth and development (Hastuti, 2018).

Family roles can be specific behaviors expected by someone in the family context. So the role of the family describes a set of interpersonal behaviors, traits, activities related to individuals in certain positions and situations. The role of the individual in the family is based on the expectations and behavior patterns of the family, group and society (Maimunah, 2018).

The role of a good family in children by meeting the nutritional needs of children starting from the food to be given and the food to be avoided. In addition, the family also plays a role in monitoring the growth and development of children properly and correctly. In this case in research, there are still many found where parents are less concerned with the food consumed by children, ranging from parents often giving instant food to children several times, rarely giving vegetables and fruit to children to parents also rarely paying attention to their children eating well. hygienic conditions or not. The lack of parental roles can be caused by various things, but parents should be able to monitor and take care of everything that is consumed by the child so that it does not affect the nutritional adequacy of the child and does not cause the child to be thin or short.

According to the researcher, the number of respondents who have a family role in the less category is due to the lack of family experience in monitoring the development and good growth of children. So that the family feels that what they have done is enough. Families must give a good role to the child rather later can be a healthy and intelligent child.

Children's Weight in PAUD Pelita Hati Karangrejo Tulungagung

The results showed that almost half of the respondents have weight in the normal category as many as 16 respondents (45.7%). In addition, a total of 11 respondents (31.4%) were underweight category. In addition, a number of 5 respondents (14.3%) had a very thin body weight category. While a number of 3 respondents (8.6%) had body weight in the fat category.

The toddler period, especially under five years, is a period of growth and development that is the most rapid compared to other age groups. The growth of a child's weight starts from birth until the child is eighteen years old and is influenced by several factors which can be broadly classified into two, namely genetic and non-genetic factors, such as environment, nutrition, and disease. (Septikasari, 2018).

Growth and development begins at birth, so growth monitoring begins early. Every child follows a general pattern of weight growth in which the size and rate of growth may differ. Health and nutrition interventions must be given optimally during this period to ensure the survival and development of children. (Muslihah, 2016).

Monitoring of body weight can be carried out by the community through posyandu activities and by teachers at schools. Thus, knowledge about early detection of children's growth and development needs to be owned by parents, teachers, and the community. To find out the interpretation of the growth curve, according to the World Health Organization (WHO), using the NCHS standard book is the most appropriate for assessing nutritional status on growth. (Purba, 2020).

Changes in body weight can change in a short time caused by a lack or excess of nutrients. The speed of growth rate is faster for girls than boys in toddler age. However, the growth of girls stops faster

than boys. (Soetjingsih, 2018). Generally, malnutrition occurs in toddlers, because at that age children experience rapid growth and are included in the nutritionally vulnerable group, because at that time it is a transitional period between being weaned and starting to follow the diet of adults.

Weight in children, especially at preschool age (3-5 years) is usually expected to look fat or parents will be happier if their children look fat or at least normal. However, in reality, many children are underweight or even very thin, where this can be caused by factors in the consumption of food and the nutrients contained in the food they consume. Underweight conditions can cause health conditions to decline and can make it easy for children to experience certain diseases.

The child will not know which one is good for him and which one is bad for him, in this case parents play an important role in maintaining and meeting all the needs of the child. The family's relationship with weight gain or loss is very important where all the needs of children are still fully met by the family. Families must be able to offer children to eat with high nutritional adequacy and monitor their growth regularly.

Children's Height at Pelita Hati PAUD Karangrejo Tulungagung

The results showed that most of the respondents have normal height category as many as 20 respondents (57.1%). In addition, a number of 8 respondents (22.9%) had a very short height category, in addition a number of 5 respondents (14.3%) had a short height category. While a number of 2 respondents (5.7%) have a high category height.

Basically, health is the most important human need as a basic measure of quality of life and that must be met by everyone, because health will enable everyone to carry out activities in order to meet other life needs. Health is a human right and at the same time as an investment, so it needs to be strived for, fought for and improved by every individual and by all components of the nation, so that people can enjoy a healthy life, and in the end can realize optimal public health degrees (Kemenkes, 2018).

Adequacy of nutrition in children can be seen from the manifestation of the child's growth. Assessment of children's growth can be done in various ways, one of which is anthropometric measurements. The anthropometric measurement parameters used in the assessment of physical growth are height, weight, head circumference, skin folds, upper arm circumference, arm length, body proportions, head circumference and leg length (IDAI, 2011). In addition to anthropometric examinations, to assess growth, laboratory and radiological examinations can also be carried out.

Body weight and height are the most frequently used parameters in nutritional anthropometric measurements to assess physical growth or nutritional status. Weight and height will be more meaningful when taken into account with age, weight/un, TB/U and weight/TB are the three main nutritional anthropometric indicators that are widely used to determine nutritional status in toddlers (Febrikaharisma, 2013).

The height of a child at productive ages should be paid more attention because during these times it is easy to shape the child's height so that it can be taller by providing food and drinks that contain lots of nutrients and especially calcium with balanced activity patterns. good. However, based on the results of the study, it was found that many children had height in the short category.
when compared with previous studies the cause of short or tall height is due to genetic factors. However, based on this research, height can be associated with the role of the family where the family can monitor and provide nutrients that can support the growth of bones and joints in children. However, not all families know well how to monitor children's growth, so there are still many who have not ideal height.

The Influence of the Role of the Family on the Weight Status of Children in PAUD Pelita Hati Karangrejo Tulungagung

Based on the results of the *Linear Regression analysis* , it shows that the *p-value is* 0.000 < 0.05, then $H_{0\ is}$ rejected and H_1 is accepted, so it can be concluded that there is an influence of the role of the family on the weight status of children in PAUD Pelita Hati Karangrejo Tulungagung. with a magnitude of influence 74.7%.

Body weight is the most important anthropometric measure in infancy and toddlerhood. Body weight is the result of an increase or decrease in all the tissues in the body. Body weight is used as the best indicator at this time to determine the nutritional status and growth of children, sensitive to slight changes, objective measurements and can be repeated. The nutritional state is a state resulting from a balance between consumption and absorption of nutrients and the use of these nutrients, or a physiological state resulting from the availability of nutrients in the body's cellular (Supariasa, 2012).

Nutritional status is a measure of success in fulfilling nutrition for children as indicated by the child's weight and height. Nutritional status is also defined as health status resulting from a balance between nutrient requirements and input (Pramesty, 2019). According to Supariasa (2012), the state of the body is said to be at an optimal nutritional level, if the body tissues are saturated with all nutrients, it is called optimal nutritional status. This condition allows the body to be free from disease and have a high resistance. If a person's nutritional consumption of food is not balanced with the body's needs, there will be nutritional errors that include excess and lack of nutrients

The group of infants and children under five is one of the age groups that are susceptible to malnutrition, therefore the best indicator to measure the nutritional status of the community is by measuring the nutritional status of children under five (Supariasa, 2012). Malnutrition in children under five is not easily recognized by the government or the community and even families. This means that if in a village there are a number of children who suffer from malnutrition and do not immediately become a concern because the child does not appear sick. Factors arising from malnutrition in children under five are more complex, so efforts to overcome them require an integrated approach from various aspects of children's lives. This means not only improving aspects of food but also the children's living environment such as in nursing homes, mother's education, clean water and environmental health, quality of health services and so on (Supariasa, 2012).

According to researchers, the weight of a child will greatly support its growth and development in the future. Children are expected to have an ideal body because it can trigger their intelligence and activeness in developing. A child's weight is generally influenced by the nutrition he consumes, whether it is sufficient or lacking, if the nutritious and fibrous food he consumes is lacking, balanced by being given food that contains a lot of protein, it is also likely that the child will have a thin physical condition while the child who is overweight given high nutrition and protein, it can allow children to become fatter or at least ideal for their age. So that according to the results of the study where there is a significant influence of the role of the family on the weight status of children in PAUD Pelita Hati Karangrejo Tulungagung.

The Influence of the Role of the Family on the Height Status of Children in PAUD Pelita Hati Karangrejo Tulungagung

Based on the results of the *Linear Regression analysis* , it shows that the *p-value is* 0.045 <0.05, then $H_{0\ is}$ rejected and H_1 is accepted, so it can be concluded that there is an influence of the role of the family on the height status of children in PAUD Pelita Hati Karangrejo Tulungagung with a magnitude of 89.9%.

Growth is related to the problem of changes in the size, number or dimensions of the level of cells, organs and individuals, which can be measured by weight (grams, kilos), length (centimeters, meters), bone age, and metabolic balance (reviewer). body calcium and nitrogen). The growth of toodler-age children is the average weight gain of 1.8 to 2.7 kg per year. The average height of a 2 year old child is 86.6 cm. The rate of increase in head circumference slows in late infancy, and head circumference usually equals chest circumference by 1–2 years of age. Chest circumference continues to increase in size and exceeds head circumference during toodler years (Septikasari, 2018).

Height provides an overview of the growth function seen from the state of thinness and shortness of the body. Height is very good for seeing past nutritional conditions, especially those related to low birth weight and malnutrition in infancy. Height is expressed in the form of the TB/U Index (height for age), or also the BB/TB index (weight for height) is rarely done because changes in height are slow and

usually only done once a year. The state of this index generally provides an overview of unfavorable environmental conditions, poverty and chronic unhealthy consequences (Kemenkes, 2018).

Body weight and height are important parameters to determine human health status, especially those related to nutritional status. The use of the BW/U, TB/U and BW/TB indexes are indicators of nutritional status to see if there are disturbances in growth function and body composition (Sepriani, 2018).

According to researchers, families really crave to have a child who has a high posture, because with a high posture it can make it easier to achieve his dreams in the future. Children with high posture will later be able to make it easier to enter college or in a state servant unit. A child's height is generally influenced by heredity (genetic) where if the parents are short, the child will tend to be short and vice versa where if the parents are tall, the child will tend to be tall, but this can be different as long as the child can be given the appropriate stimuli. can optimize the child's height such as being given sufficient calcium, given training (exercise) that can train the joints and bones to develop easily. The point is that this is closely related to the role of parents, children who at that time did not know anything about their future experiences in dire need of direction and guidance from parents so that their growth and development could be optimal. In accordance with the research above which there is a significant influence of the role of the family on the height status of children in PAUD Pelita Hati Karangrejo Tulungagung.

V. CONCLUSION

Almost half of the respondents have a family role in the moderate category as many as 16 respondents (45.7%). Almost half of the respondents have weight in the normal category as many as 16 respondents (45.7%). Most of the respondents have a normal height category as many as 20 respondents (57.1%).

There is an influence of the role of the family on the weight status of children in PAUD Pelita Hati Karangrejo Tulungagung with a p value of 0.000 with a magnitude of effect of 74.7%. There is an influence of the role of the family on the height status of children in PAUD Pelita Hati Karangrejo Tulungagung with a p value of 0.045 with a magnitude of influence of 89.9%.

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