

# EFFECTS OF NUTRITION AND PARENTING STYLE ON CHILD DEVELOPMENT AT THE AGE OF 3–5 YEARS

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**ORIGINAL ARTICLE****EFFECTS OF NUTRITION AND PARENTING STYLE ON CHILD DEVELOPMENT AT THE AGE OF 3–5 YEARS**Aprillia Ayu SY<sup>1\*</sup>, H. M. Zulkarnain<sup>2</sup>, Ngudiantoro<sup>3</sup><sup>1</sup>Faculty of Public Health, Sriwijaya University, Palembang, Indonesia<sup>2</sup>Faculty of Medicine, Sriwijaya University, Palembang, Indonesia<sup>3</sup>Faculty of Mathematics, Sriwijaya University, Indralaya, Indonesia

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**ABSTRACT**

Child development is basically the changes that occur in children from various aspects. The development is influenced by both internal factors (such as genetics and hormonal) as well as environmental and parental stimulation as an external factor. The objective of this study was to determine the effects of nutrition and parenting style on child development in Wilayah Puskesmas Social District of Palembang. The study included 107 children of age 3–5 years. The children were selected with purposive sampling technique using simple random sampling method and the data was analyzed statistically. The results of the study indicated that there is an influence of parenting style towards child development whereas there is no influence of nutritional status on child development. The study concluded that non-authoritative parenting style may lead to doubting the development of a child six times greater than the authoritative parenting style.

**Keywords:** Child development, nutrition, parenting style.

**1. INTRODUCTION**

The age of infancy is considered to be the most vital and important period of time for parents for building up the foundation for growth and development of their child. Eventually, this period of growth determines the future of a child for both physical and mental behaviors<sup>1</sup>. Child development has successive stages ranging from doing the simple thing to the ability to do the perfect thing with each individual having a different speed of development<sup>2</sup>. Since the rate of growth and development at every stage of life is not the same, it depends on various factors such as heredity, nutritional intake, parental and environmental treatment with the children, etc.<sup>1</sup>

Nutrition is one of the important components in supporting the sustainability of growth and development and if a person's nutritional needs are insufficient then it can hamper this process. Therefore, the diet of a person must have a balanced nutritional value and adequate calories<sup>2</sup>. The factors of nutritional status are also very influential in the process of child's development.

However, the survival and growing process of a child is also affected by the affection and attention given to the child by his/her parents. Similarly, the surroundings of a child (family and community) also play a key role in determining the quality of his personality and will color his life in the future. The active role of parents is a direct effort on the child as their treatment will give an impression on his/her childhood time and may influence the motivation of achievements in the future<sup>3</sup>. A well-groomed parenting style will help parents or educators to know for sure that it is very good for the growth and development of children according to their needs. The present work has been designed to study the effects of nutritional status and parenting style on child development of 3–5 years of age in Puskesmas Social District of Palembang.

**2. METHOD**

The present study is an analytic survey conducted by using cross-sectional and binary logistic regression design to find out whether there are some effects of

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nutritional status and parenting style in child development belonging to 3–5 years of age. The research was conducted from September to November 2016 at ten kindergartens located in the area of Puskesmas Social Palembang.

The simple random sampling method was applied and the samples were obtained directly so that each sampling unit acting as the smallest element of the population gets the same opportunity to be a sample to represent the population. Since ten kindergartens were included in the study, a total of 107 children were selected as a sample after fulfilling inclusion and exclusion criteria. The primary data such as child's biodata and care pattern was collected by interviewing the mothers using the designed questionnaires which included different questions

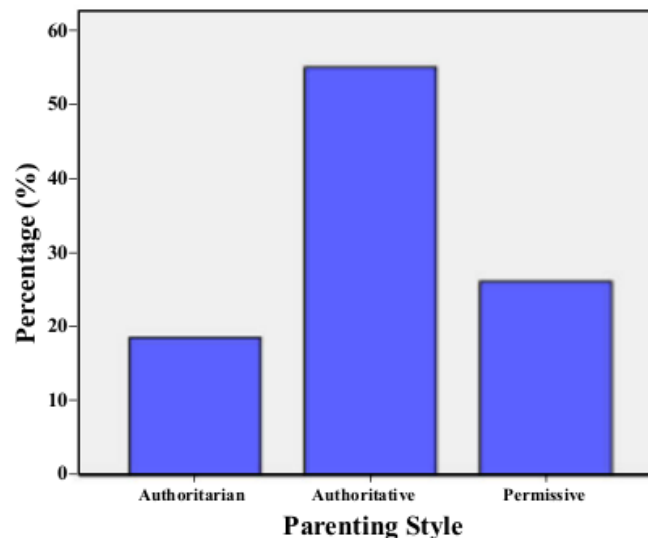
regarding early childhood schooling, their objectives, usefulness, benefits obtained, research procedures, data confidentiality, incentives and additional information, etc. In the end, a developmental test was performed to determine the level of child development using Denver Test Instrument. All statistical calculations were performed using SPSS (version 16).

### 3. RESULTS

The results of the study showed most respondents with normal nutritional status i.e. 83.2% while in 16.8% cases the nutritional status did not appear to be normal (Table 1). The majority of the respondents showed authoritative parenting style (i.e. 55.1%) while 26.2% and 18.7% were found permissive and authoritarian in nature, respectively (Fig. 1).

**Table 1.** Frequency distribution of nutritional status of children of 3–5 years of age in the working area of Puskesmas Social Palembang

Nutritional Status	Number of Respondents	%
Normal	89	83.2
Abnormal	18	16.8
<b>Total</b>	<b>107</b>	<b>100</b>



**Fig. 1.** Parenting style.

The results of the correspondence analysis (Table 2) showed that most children with dubious development have the abnormal nutritional status of 44.4% ( $p$ -value 0.323, CI 95%, OR 1.938). Hence

no statistically significant relationship between nutritional status and child development has been observed (Table 2).

**Table 2.** Effects of nutrition status on child development

Nutrition Status	Child Development					
	Dubious		Normal		Total	
	N	%	N	%	N	%
Abnormal	8	44.4	10	55.6	18	100
Normal	26	29.2	63	70.8	89	100
<b>Total</b>	34	31.8	73	68.2	107	100

$p$ -value = 0.323, class interval = 95%, odds ratio = 1.938 (0.688–5.462).

#### 4. DISCUSSION

Nutritional status or fulfillment of nutritional needs is one of the factors that greatly influence child development. If nutritional needs are less or not fulfilled then it can inhibit the process of growth and development. A person with good nutritional status shows its reflection in the form of normal growth and development level according to his age and body and becomes easily adaptable to the environment<sup>4</sup>. The results of the present study have not been found in agreement with a previous study that indicated that there is a significant correlation between nutritional status and child development ( $p$ -value = 0.039, with correlation coefficient value of 0.225)<sup>5</sup>. The results of the previous study indicated that the level of income of a family can determine the quality of life of its members. The more is the money better will be the food consumed<sup>5</sup>.

Parenting style can affect the development of a child's soul. This is because children may learn many things from the attitudes and behaviors that are exemplified by their parents. Parents' attitude is very important in educating their child, giving punishment or reward for their actions and how they give attention or response to their child's needs<sup>6</sup>. Similarly, negative effects of parental

attitudes and behaviors also have an impact on child's personality<sup>7</sup>. Authoritarian parenting patterns are more likely to determine everything related to the child by the parents and children only acts as executors. This may cause children to be limited in adapting well to their friends and environment and may also develop reduced creativity. In such cases, children are found to have difficulty in understanding their own identity, often behave inappropriately and become very passive<sup>8</sup>. Therefore, it has been suggested that children with non-authoritative parenting will result in dubious child development at six times higher than children with authoritative parenting. This finding is in accordance with a previous study where children with democratic/authoritative parenting have appropriate or normal child development<sup>8</sup>.

Conversely, parents who apply authoritative or democratic parenting style tend to produce children who are more responsible for themselves by knowing what to and not to do, adapt and socialize well with their friends and environment. This is because the child has been given an opportunity to develop his internal control by always explaining the cause of the consequences of something that is allowed or prohibited<sup>9</sup>.

## 5. CONCLUSION

The conclusion of this study is that the nutritional status of children does not significantly affect but the pattern of care by the parents towards their child has a significant influence on the development of children. Children with non-authoritative parenting style will lead to dubious child's development six times higher than children with authoritative parenting. However, permissive or democratic parenting style may encourage the child to build up self-confidence and good moral values so that he/she may interact well with their friends and society and perform their duties with a high sense of responsibility and devotion.

## FUNDING

None mentioned.

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## CONFLICT OF INTEREST

The authors declare no conflict of interest.

## ETHICAL APPROVAL

The study was performed after the approval from the Ethics Committee of Sriwijaya University. A prior consent was taken from the parents and authorities of the kindergartens located in the area of Puskesmas Social Palembang.

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