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المؤتمر الدولي

2nd ICTE'22

INTERNATIONAL CONFERENCE ON TEACHER EDUCATION 2022

" BOLSTERING THE TEACHERS OF TOMORROW, TODAY "

VOLUME 4

10th -11th October 2022

Grand Riverview Hotel, Kota Bharu, Kelantan

e ISBN 978-967-18002-8-7

PROCEEDINGS OF THE ICTE'22
INTERNATIONAL CONFERENCE ON TEACHER EDUCATION 2022

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e ISBN 978-967-18002-8-7

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Proceedings ICTE 2022 Vol 4
e ISBN 978-967-18002-8-7

THE EFFECT OF CARING ENVIRONMENT, FAMILY INCOME, AND NUTRITIONAL STATUS ON PSYCHOMOTOR DEVELOPMENT OF CHILDREN UNDER THREE YEARS OLD

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ABSTRACT

The objective of this research is to obtain information concerning the effects of caring environment, family income, and nutritional status on psychomotor development of children under three years old. This research was conducted at sub-District in North Sulawesi. The sample is 120 children and the data were collected by using cluster sampling. While the data of this research was analyzed by using path analysis. The findings of the research are as follows (1) there is a direct effect on caring environment; (2) there is a direct effect family income on nutritional status; (3) there is a direct effect of caring environment on nutritional status; (4) there is a direct effect of family income on psychomotor development; (5) there is a direct effect on caring environment on psychomotor development; and (6) there is a direct effect of nutritional status on psychomotor development. The results of the research have implication on children under three years old by effort to increase the caring environment, family income, and nutritional status by means of giving special training on family and community.

Key Word: Caring Environment, Family Income, And Nutritional Status On Psychomotor , Development

INTRODUCTION

Early childhood education is a coaching effort aimed at children from birth to the age of six which is carried out through the provision of educational stimuli to help physical and spiritual growth and development so that children have readiness to enter further education. Early childhood education is the most basic education occupies a strategic position in the development of human resources.

The range of children aged from birth to six years is a critical and strategic age range in the educational process that can affect the process and results of education at a later stage. This means that this period is a period conducive to the development of various physical, cognitive, linguistic, socio-emotional and spiritual abilities.

The various forms of policies and agreements, both national and international, have prompted the Indonesian government to formulate various programs related to early childhood care, education and development. As a concrete manifestation of the government's commitment, the basic policy of the National Program for Indonesian Children (PNBAI) until 2015, the contents of which are as follows: 1) realizing healthy children, growing and developing optimally through community empowerment, increasing sectoral cooperation, improving the environment, improving quality and outreach for health efforts, increasing resources, financing and health management, as well as developing knowledge. Children occupy a strategic position in the development of future human resources. The first and foremost development of children occurs in the family, A mother has a very big role and share in the development of children. Therefore, to prepare the child to become a quality human being, it must be

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started from an early age through the role of the mother and good parenting. Good parenting is very important to ensure optimal child development. The child care environment in terms of daily behavior such as feeding, health care, mental and psychomotor stimulation as well as emotional and affectionate support will make a significant contribution to the nutritional status and developmental level of children. Good parenting is very important to ensure optimal child development. The child care environment in terms of daily behavior such as feeding, health care, mental and psychomotor stimulation as well as emotional and affectionate support will make a significant contribution to the nutritional status and developmental level of children.

Children under three years old (toddlers) are family members who need special attention from their parents or people close to them and are very dependent both physically and emotionally, so they need help in various activities. Toddlers are the population group that is most vulnerable to health and nutrition problems because the child's immune status, diet and psychology are immature or still in the developmental stage. The survival and quality of life of children is very dependent on adults, especially mothers or parents.

The factor of fulfilling nutritional needs that can be provided by parents or caregivers greatly determines the nutritional status of toddlers. Malnutrition at this time, in addition to causing stunted physical growth, can also interfere with child development. In order for the nutritional status of toddlers to take place normally, a good feeding practices can be seen from the high quality the food provided and the quantity of food that meets the nutritional adequacy of toddlers, need attention. In addition, maintaining good health status also supports the achievement of good nutritional status.

Viewed from the point of view of developmental psychology, toddlers or 2 - 3 years old have potentials from various aspects of development. From the aspect of motor development, children are experiencing an active period of movement. Children also like to doodle, learn to hold a pencil, learn to do self-help activities. The age of 2 - 3 years is also a period of exploration where in this condition stimulation or environmental stimulation becomes very important so that children will show useful basic movements and other potentials that can be supported. At this age is the right time to lay the initial foundation for children in laying strong educational foundations so that children can continue their next development well.

FORMULATION OF THE PROBLEM

Formulation of the problem as follows::

1. Does family income have a direct effect on toddlers nuturing environment?
2. Does family income have a direct effect on nutritional status of toddlers?
3. Does the parenting environment have a direct effect on the nutritional status of toddlers?
4. Does the family income directly affect on toddlers psychomotor development?
5. Does the parenting environment directly affect on the nutritional status of toddlers?
6. Does nutritional status directly affect on the psychomotor development of toddlers?

THEORETICAL DESCRIPTION

Psychomotor Development

Development is a long-term life process in growth and the changes that lead to the maturity of a child, which will be experienced rapidly in childhood and adulthood. A child's genetic growth and life experiences will determine this development.

Gallahue (1943:243) says that basic motor skills are divided into: three categories: 1) locomotor ability; used to move the body from one place to another or to lift the body up such as jumping, which is walking, running skipping; 2) non-locomotor abilities; done on the spot, without adequate space for movement. Locomotor abilities consist of: bending and stretching, pushing and pulling, lifting and

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lowering folding and twisting and others; 3) Manipulative ability; developed when the child has mastered various objects. This ability involves more hands and feet. Object manipulation is far superior to eye, foot and hand coordination. Eyes are important for step movement in space. Manipulative forms of movement; pushing movement, catching the ball, bouncing the ball and dribbling the ball.

From the description above, it can be synthesized that psychomotor development is the ability of movements that are carried out by involving most parts of the body and require a lot of energy (gross motor) and movements that involve certain body parts and require little power (fine motor). Psychomotor development in this study is the development of controlling movements ranging from gross motor movements and fine motor movements, namely the value obtained from the Bayley test. The test is made in the form of playing (practice), with a total of 40 games.

Family Income

Sajogyo (1994:78) suggests that income in one family will affect family activities in meeting family needs. The economic situation of the family plays a role in the development of children and determines the welfare of the family.Suhardjo, (1996:56) income does not always mean that all family income is only to meet food needs, there are some of them who use their income to increase savings and investment. Furthermore, (Suhardjo 1996:40) said that an increase in individual income causes changes in the composition of food, but spending more money on food does not guarantee more variety in food consumption.

According to Berg, (1986:39) an increase in income will lead to an increase in total expenditure, including spending on food. The greater food expenditure will result in more food to be purchased. In developing countries, 80 percent of household income is spent on food and in developed countries only 45 percent. Thus, income is the most important factor determine the quality and quantity of food. Berg further stated that families with high income levels can buy food with more diverse and in greater numbers compared to low income levels.

Based on the description above, adequate family income will be able to support the psychomotor development of toddlers compared to parents who have low family incomes.

Parenting Environment

Gunarsa (2003:61-63) Child care environment in the family as seen from the parenting provided is the entire interaction between subject and object in the form of guidance, direction and supervision of daily object activities that take place regularly so as to form a pattern and is an effort directed to change behavior in accordance with the wishes of the educator or caregiver. Good and directed parenting can encourage optimal child development.

Semiawan, (2002:79) suggests that the family environment is the first and main media that directly or indirectly influences behavior in child development. Several key aspects of nutritional parenting include psychosocial care, food preparation, personal hygiene and environmental sanitation, household health practices and health livelihood patterns. There are six characteristics needed for good parenting, namely: (1) affectionate relationship; (2) attachment or closeness of relationship; (3) unbroken relationship; (4) interactions that provide stimulation; (5) relationship with one person; (6) take care of children at home.

From the description above, it can be concluded that the child care environment is the entire interaction between the subject (caregiver) and the object (children aged 1-3 years) which is held in the family in the form of acceptance of children's emotions and words, acceptance of children's behavior, organization physical environment, provision of play equipment, parental involvement with children

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and opportunities obtained by children through stimulation provided by parents as measured by a score made from correct answers from a set of HOME questions for children aged 1-3 years with a total of 45 questions answered describe quality child environment.

Nutritional Status

Riyadi (2001:14) defines nutritional status as the state of health of a person or group of people caused by consumption, absorption and use of utilization) food nutrients are determined based on a certain size. Khomsan (2002:75) suggests that to consume less or too much food, both can cause disease. That's why nutritional problems can be falls to anoyne, both the poor and the rich. Family food security is the ability of the family to meet the food needs of all its members in sufficient quantities of food, both in quantity and nutritional quality. Parenting is the ability of families and communities to provide time, attention, and support for children in order to grow and develop as well as possible physically, mentally and socially. Health service and health environment is the availability of clean water and basic health care facilities that are affordable for every family in need. These three factors are interrelated.

Parenting patterns in the form of attitudes and behavior of mothers or other caregivers in terms of their proximity to children, feeding, caring for, cleaning, giving affection and so on. All of them relate to the mother's condition in terms of health (physical and mental), nutritional status, general education, knowledge about good child care, roles in the family or in society, the nature of daily work, family customs, society and so on from the mother or caregiver.

Based on the above opinion, nutritional status is a person's health condition that occurs due to the consumption of food that is absorbed and utilized by the body.

Framework of Thinking

Effect of family income on the parenting environment

High-income families will have the ability to provision of game tools that support the achievement of a good parenting environment for toddlers. Low-income families will have limitations in providing children's play equipment. Thus, it is suspected that there is a direct influence of family income on the environment for caring for toddlers.

Effect of family income on nutritional status

Family income will determine the type and amount of nutrients that can be consumed provided for family members including toddlers. Families who have high incomes will be able to provide quality and safe food in sufficient quantities for all household members which will ultimately affect the achievement of good nutritional status. Thus, it is suspected that family income affects the nutritional status of toddlers.

The influence of the nutruring environment on the level of psychomotor development

The first three years or toddler age is the foundation for further development. If at that age adults do nothing to children, then they will experience difficulties in the future. This is the most important reason for the need for providing a nurturing environment that provides stimulation from an early age. Children who get a good and directed nurturing environment will develop faster than children who lack a nurturing environment.

Conditioning an effective parenting environment will develop children's basic abilities well. One of the functions of providing an effective parenting environment for children is for the

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psychomotor development of children itself. With a good nurturing environment, for example by providing educational games, children have the opportunity to do activities that involve body movements that make the child's body healthy and the child's muscles grow to be strong. In this case, movement and body coordination are also needed, such as hand, foot and eye coordination, all of which support the development of fine motor and gross motor skills.

Based on the explanation above, it can be assumed that there is an influence of the parenting environment on psychomotor development among toddlers.

The influence of family income on the level of psychomotor development

The size of the family income will determine the quality of a child care environment, especially in terms of organizing the physical environment and providing game tools that support the psychomotor development of toddlers. Thus, it can be assumed that family income has a direct effect on the level of development of toddlers.

Effect of parenting environment on nutritional status

One indicator of a good parenting environment is the good opportunity for variations in parenting, especially when children eat with their parents at least one meal a day. The habit of eating together between parents and children is a direct way for parents to pay attention to the nutritional status of their children through the quality and quantity of food consumed by children. The better the child care environment, for example, the more often children get the opportunity to be cared for while consuming food, the better the nutritional status of children will be. Based on this, it is suspected that there is a direct influence of the parenting environment on the nutritional status of toddlers.

Effect of nutritional status on the level of psychomotor development

Children with good nutritional status will have a healthy and strong body so that they can carry out activities that support psychomotor development well. On the other hand, children with poor nutritional status will get sick easily and will have a weak body so that they cannot function properly. Thus, it can be assumed that there is a direct influence of nutritional status on psychomotor development among toddlers. The period under three years of age (toddlers) is a vulnerable period, because if If a child is malnourished, it will be easy to get sick and will result in impaired nutritional status and development.

The development of toddlers is not only directly influenced by nutritional status, but also by the quality of the care environment provided. The determining indicator for the child care environment apart from the provision of play equipment is the organization of the physical environment and the involvement of parents in the child through the stimulation provided. Effective stimulation is needed because at this toddler age children's activities are increasing. Children who get stimulated play will be able to carry out activities or coordinate body movements, both gross motor movements and fine motor movements. Conversely, children who do not get stimulation to play effectively will be able to result in their psychomotor development not developing optimally.

D. Submission of Research Hypotheses

1. Family income affects the nurturing environment.
2. Family income affects nutritional status
3. Parenting environment affects nutritional status
4. Family income has a direct effect on psychomotor development

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5. Parenting environment has a direct effect on psychomotor development
6. Nutritional status affects the level of psychomotor development

RESEARCH METHODOLOGY

1. This study aims to obtain answers, test and analyze the effect or causal relationship between exogenous variables and endogenous variables or X1, X2 and X3 as exogenous variables with X4 as endogenous variables.
2. Describe the testing of the model designed using path analysis preceded by requirements testing.
3. Testing the effect of the independent variables on the dependent variable, namely a) the direct influence of family income on the parenting environment; b) direct influence family income to nutritional status; c) the influence of the parenting environment on nutritional status; d) direct influence of family income on the level of psychomotor development; e) the direct influence of the nurturing environment on the level of psychomotor development; f) direct influence of nutritional status on the level of psychomotor development.

Population and Sampel

The population in this study were all toddlers aged 24-36 months, there are 603 toddlers and domiciled in Lolayan District, Bolaang Mongondow Regency. The sample in the study amounted to 120 toddlers, the sampling was taken *randomly cluster sampling*. The sample size for each unit is taken proportionally.

Research Results

Test requirements analysis aims to test whether the research data meet the requirements to be analyzed by parametric statistics. This must be done, so that the next steps can be accounted for. Based on the theoretical model of the research above, there are six path coefficients, namely: p21, p31, p32, p41, p42 and p43. The results of the study can be seen below:

1. Path Coefficient of Structure 1

Table 1 Correlation Coefficient Matrix between structural variables 1

Variable	X1	X2	X3	X4
X1	1	0,424	0,408	0,624
X2	0,424	1	0,301	0,485
X3	0,408	0,301	1	0488
X4	0,624	0,485	0,488	1

Table 2 Summary of Structure Path Coefficient Result 1

Variable	Coefficient between Variable	Path Coefficient	t_{cou}	Table		ϵ
				α=0,05	α=0,01	
P21	0,424	0424	5,087	1,645	2,33	0,872

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Based on the results of path analysis calculations in structure 1, path coefficient values are tained which indicate a causal relationship in the analyzed structural model as presented in the llowing figure:

Figure 4.5 Relationship of the Structure Path Diagram 1

. Structure Path Coefficient 2

Table 3 Summarry of Structure Path Coefficient Results 2

	Coefficient between variables	Path Coefficient	t_{cou}	t_{tab}	
				=0,05	=0,01
P_{31}	0,408	0,341	3,706	1,645	2,33
P_{32}	0,301	0,156	2,644	1.645	2. 33

The results of the calculation of structure 2 can be seen in the path diagram below:

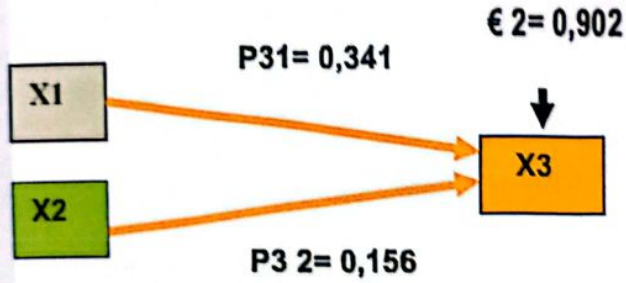

Figure 4.6 Relationship of Structure Path Diagram 2

3. Structure Path Coefficient 1,2 and 3

Table 4 Summary of Path Coefficient Calculating and Testing Results

Coefficient Track	t_{cou}	t_{tab}		Influence	
		α=0,05	α=0,01	Direct	Indirect
P_{21} 0,431	5,087**	1,64	2,33	0,2381	-
P_{31} 0,156	3,706**	1,64	2,33	0,1163	0,02698
P_{32} 0,166	2,644**	1,64	2,33	0,0243	-
P_{41} 0,427	4,85**	1,64	2,33	O,1822	0,03136
P_{42} 0,230	2,71**	1,64	2,33	0,0529	0,0169
P_{43} 0,244	2,90**	1,64	2,33	0,0595	-

Note: ** Path coefficient is very significant at α =0,01 dan α =0,05

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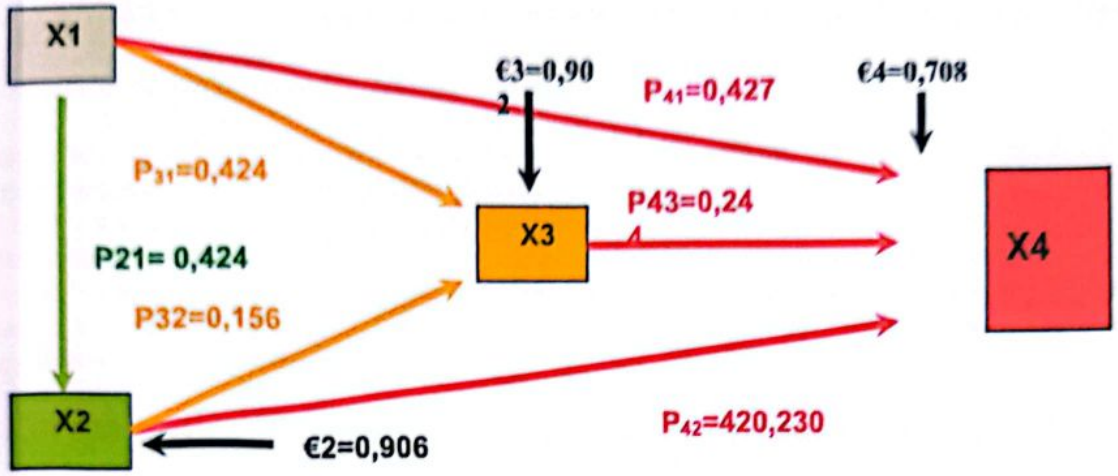
Based on the results of path analysis calculations on structures 1,2 and 3 obtained path coefficient values that show a causal relationship in the analyzed structure model as presented in the following figure:



DISCUSSION

1. The firt hypothesis: Family income has a direct effect on the parenting environment

The hypothesis being tested is Ho : $p_{21}=0$; H1 : $p_{21}>0$

Based on the results analysis of the family income path to the parenting environment, the direct path coefficient is $p_{21}= 0.488$ with $t_{cou}= 5.087$ with the value of $t_{0.05(118)} = 1.645$, it can be concluded that the path coefficient is significant, with this hypothesis being tested which states that there is a direct influence of family income on the parenting environment. To further improve the parenting environment, it can be done by increasing family income so that families can provide facilities and infrastructure to support parenting in terms of motor development.

2. Second hypothesis: Family income has a direct effect on nutritional status

Hypothesis is : Ho : $p_{31} = 0$; H1 : $p_{31} >0$

Based on the results of the path analysis of the parenting environment on nutritional status, the direct path coefficient is $p_{32} = 1.156$ with $t_{cou} = 2,644$ with t value $_{0.05(117)} = 1.645$, it can be concluded that the path coefficient is significant, with this hypothesis being tested which states that there is a direct influence of the parenting environment on nutritional status. To further improve nutritional status, it can be done by providing training on the parenting environment, especially the consumption of food needed by toddlers.

3. Third hypothesis: Parenting environment has a direct effect on nutritional status.

Hypothesis tested Ho : $p_{32} = 0$; H1 : $p_{32} >0$

Based on the results of the path analysis of the parenting environment on nutritional status, the direct path coefficient is $p_{32}= 1.156$ with $t_{cou} = 2,644$ with t value $_{0.05(117)} = 1.645$, it can be concluded that the path coefficient is significant, with this hypothesis being tested which states that there is a direct influence of the parenting environment on nutritional status. To further improve nutritional status, it can

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be done by providing training on the parenting environment, especially the consumption of food needed by toddlers

4. The fouth hypothesis: Family income has a direct effect psychomotor development

The hypothesis being tested is Ho : $p_{41} = 0$; H1 : $p_{41} > 0$

Based on the results of the path analysis of the family income path that has a direct effect on psychomotor development, the direct path coefficient is $p_{41} = 0.427$ with $t_{cou} = 4.85$ with t value $t_{0.05(116)} = 1.645$, it can be concluded that the path coefficient is significant, with this hypothesis being tested which states that there is a direct influence of family income on psychomotor development is accepted. To further improve psychomotor development, it is done by increasing family income, by increasing family income, so that it is sufficient to provide the facilities and infrastructure needed for the psychomotor development of toddlers

5. Parenting environment has a direct effect on psychomotor development

Hypothesis : Ho : $p_{42} = 0$; H1 : $p_4 > 0$

Based on the results of the analysis of the influential family income effect directly on psychomotor development obtained direct path coefficient of $p_{42} = 0.230$ with $t_{cou} = 2.71$ with a value of $t_{0.05(116)} = 1.645$, it can be concluded that the path coefficient is significant, with this hypothesis being tested which states that there is a direct influence of the nurturing environment on psychomotor development, it is accepted. To further improve psychomotor development, it can be done by providing training for families about a good parenting environment and in accordance with the developmental needs of toddlers.

6. Nutritional status has a direct effect on psychomotor development

The hypothesis being tested is Ho ; $p_{43} = 0$;H1 : $p_{43} > 0$

Based on the results of the path analysis is the family income has direct effect on the level of psychomotor development, the direct path coefficient is $p_{43} = 0.244$ with $t_{cou} = 2.90$ with a value of $t_{0.05(116)} = 1.645$, it can be concluded that the path coefficient is significant, with this hypothesis being tested which states that there is a direct influence of nutritional status on psychomotor development, it is accepted. To further improve psychomotor development, it can be done by paying attention to the nutritional status of toddlers. After the results of the analysis and statistical testing of the proposed hypotheses, the recapitulation of the results of testing each hypothesis can be seen in the table below

Table 5 Recapitulation of Hypothesis Testing Results

No	Hypothesis	Statistic Test	Ho's Decision	Conclusion
1	Family income take direct effect to nurturing environment	Ho : $p_{21}=0$ H1 : $p_{21}\neq 0$	Rejected	Have direct influence
2	Family income take direct effect to nutritional status	Ho : $p_{31}=0$ H1 : $p_{31}\neq 0$	Rejected	Have direct influence
3	Nurturing environment take direct effect to Nutritional Status	Ho : $p_{32}=0$ H1 : $p_{32}\neq 0$	Rejected	Have direct influence
4	Family income take direct effect to psychomotor development	Ho : $p_{41}=0$ H1 : $p_{41}\neq 0$	Rejected	Have direct influence

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5	Nurturing environment take direct effect to psychomot development	Ho : $p_{42}=0$ H1 : $p_{42}\neq 0$	Rejected	Have direct influence
6	Nutritional Status take direct effect to psychomotor development	Ho : $p_{43}=0$ H1 : $p_{43}\neq 0$	Rejected	Have direct influence

Direct and Indirect Effects Between Variables

Direct and indirect effects of exogenous variables on endogenous on structure 1

Table 6 Direct Effect of Family Income and Parenting

Variable	Influence		
	Direct	Indirect	Total
Family Income (X_1)	0,238	-	0,238

Path coefficient $p_{21} = r_{12}= 0,424$ means that the direct influence of family income on the parenting environment is 0,238 or 23,8 %.

The direct and indirect effects of exogenous variables on endogenous variables on Structure 2

Table 7 Direct and Indirect Efects trough Family Income and Parenting Environment on Nutritional Status

Variable	Influence		Total
	Direct	Indirect	
Family Income (X_1)	0,11628	0,02698	0,1433
Parenting Environment (X_2)	0,0 2434	-	0,02434

Table 7 shows that family income directly affects nutritional status is 0.11628 (11.628%) while indirectly through the care environment is 0.02698 (2.698%) so that the total amount is 0.1433 (14.33%). While the parenting environment affects nutritional status only directly or indirectly from the variables of family income and the parenting environment on nutritional status is as much as 0.02434 (2.434%)

The direct and indirect effects of exogenous variables on endogenous variables on structure 3

Table 8 Direct and Indirect Effects trought Family Income, Parenting Environment and Nutritional Status on Psychomotor Development

Variable	Influence			Total	ϵ
	Direct	Indirect trought			
		X2	X3		
Family Income (X_1)	0,182	0,0164	0,0314	0,2298	0,872
Parenting Environment (X_2)	O,0529	-	0,0169	0,0698	0,902
Nutritional Status (X_3)	0,0595	-	-	0,0595	0,708

ϵ = unanalyzed effect

Income has a direct effect on psychomotor development by 0.1823 (18.23%) and indirectly through the nurturing environment by 0.0164 (1.64%) and through nutritional status by 0.0314 (3.14%) so that the effect of overall from direct or indirect family income through the nurturing environment and nutritional status to psychomotor development of 0.2298 and other influences outside the exogenous variable in structure 1 of 0.872. The nurturing environment directly affects psychomotor development by 0.0529(5.29%) and indirectly the nurturing environment through nutritional status by

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0.0169(1.69%). So that the overall effect of the nurturing environment through nutritional status on psychomotor development is 0.02698 (2.698%), and other influences outside of exogenous variables in structure 2 are 0.902. Furthermore, nutritional status only has a direct effect on psychomotor development by 0.0595, (5.95%) and other influences outside of exogenous variables in structure 3 are 0.708 so that the overall effect of family income, parenting environment, and nutritional status, on development psychomotor is 0.3591 (35.91%).

CONCLUSION

Based on the results of research that focuses on the influence of the parenting environment, nutritional status and family income on the level of psychomotor development, it can be concluded as follows:

1. There is a direct influence between family income (X_1) to the toddler parenting environment (X_2).
2. There is a direct effect between family income (X_1) to toddler nutritional status (X_3).
3. There is a direct effect between parenting environment (X_2) to toddler nutritional status (X_3).
4. There is a direct effect between family income (X_1) to the level of toddler psychomotor development (X_4).
5. There is a direct effect between parenting environment (X_2) to the level of toddler psychomotor development (X_4).
6. There is a direct effect between nutritional status (X_3) to the level of toddler psychomotor development (X_4).

The efforts to increase family income, nurturing environment and nutritional status in increasing the level of psychomotor development can be done by providing training to families and communities about a good parenting environment for children which includes food care and parenting to train psychomotor development.

SUGGESTIONS

Remind that the nurturing environment and nutritional status have a positive effect on children's psychomotor development, it is appropriate for families with toddlers to pay special attention to children so that the quality of children seen from their child's psychomotor development can develop optimally.

Society as a place of interaction between families is expected to care on the issue of the quality of human resources by participating in helping disadvantaged families in providing a conducive environment and high concern. The government as a policy maker plays an important role in improving the quality of human resources. It is hoped that the policies taken, can solve problems that exist in the family and in society in general.

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