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FATHER PARTICIPATION AND ITS EFFECT ON MOTOR DEVELOPMENT OF 4 YEARS-OLD CHILDREN IN KINDERGARTEN

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ABSTRACT

Background: From 2-5 years old is called the preschool years, one of child development in this main area is sensory and motor development. Father's figure has become an important resource for children under 5 year developing self regulation skills.

Aims: This study aims to know father participation of motor development for children under 5 year.

Method: This is a research survey using cross sectional analysis (range spearman) with 77 respondent taken from total sampling technique. Data collection was done in one month (April-May, 2013) using questionnaires and DDST (Denver Development Screening Test).

Result: The research indicates that 82% children have normal motor development with father who participates in caring process., whilst 50% children without father participation have an incomplete motor development. There are positive correlation between father participation and motor development for children under 5 years

Conclusion: Fathers participation is necessary for development of child's motor..

Keywords: Father participation, caring process, motoric development

INTRODUCTION

Several formats of parenting interventions have been reported that vary according to two dimensions. They vary firstly according to the number of parenting variables which are manipulated within the program, ranging from a large number to only one, and secondly according to the nature of these parenting variables, which can be either cognitive or behavioral. Manipulation of parenting cognitions refers to changes in beliefs and thoughts such as causal attributions, cognitive distortions, parental perceptions of their children[1], self-efficacy or emotional states related to parenting such as stress[2]. Manipulation of parenting behavior refers to operant learning theory, in which parents learn how to reinforce children's positive behavior (i.e. by praising) and how to ignore or introduce limit-setting (i.e. time-out) to children's negative behavior[3, 4]. Parents are therefore helped to model more effective behavior in their child[5].

In Indonesia, the majority of its citizens still think that the development of children is mainly influenced by the mother's care, not the father because of the perception that the father's main role is to earn a living hence lower intensity of meeting. But according to existing theories, the behavioral characteristics of parenting and maternal parenting show different types of interactions since the child's early life. In infancy, father interacts in giving physical stimulation and playful interaction, while the mother is more of a public game and is primarily responsible for caring. Fathers' participation in parenting consistently takes on an action-oriented role, while mothers are more likely to provide emotional support and cultivate children's curiosity [6].

Health monitoring in children under five and pre-school children is done through early detection of growth and development at least twice per year by health personnel. Detection of growth motoric development for children in East Java in 2012 has been done on 2,321,542 children under five and preschool or 63.48% from 3,657,353 children under five. Coverage is decreased compared to the year 2011 where 24.503.322 64.03% has been done. Both are still below the target of 80%, hence there is an immediate need of innovation to increase coverage if there is a problem or delay in growth of children under five.

Development of motor abilities is defined as one of the main goals of Physical Education (PE), defined in the national curriculum for nine-years compulsory education in the Republic of Macedonia [7]. From the aspect of PE teaching process, development of motor abilities is defined as one of the concrete goals in the segment named “movement” [8]. The curriculum can be applied in Indonesia and should be included in the national curriculum for nine-year of compulsory education. In Indonesia, motor ability is also strongly associated with various skills and habits of motor behavior. Therefore, the change of motor ability in children is one of the criteria to know the result of PE, the criteria for monitoring and evaluating individual development and improvement of each child, as well as ways determining the efficiency of the applied PE curriculum. The aims and tasks suggested in PE curriculum are according to the main educational goal: holistic and harmonious children development, according to their individual abilities and development characteristics [9].

Executive function (EF) is a group of cognitive processes that include the higher-level skills of working memory, inhibiting undesired behaviors, and mental flexibility [10]. This construct encompasses earlier ideas about self-regulation, such as delay of gratification, impulsively, and ego control a psychoanalytic idea reflecting the degree to which a person exercises control over their desires and wishes. EF skills provide the basis for regulating one’s own behavior to make progress toward a goal. EF shows rapid development in the preschool years and continues maturing through adolescence [11-14]. It is closely related to the development of children, especially motor development.

Motor skills are important across development. Once a child enters school, a major developmental task is to apply their EF skills successfully in the school context (e.g., sitting still, following directions, staying focused on one’s own work). Such skills have been identified as key components of school readiness. Teachers have identified EF skills as even more important than basic academic knowledge for children entering kindergarten [15]. Low EF is associated with decreased classroom adjustment and ability to learn in elementary grades [16]. Furthermore, EF continues to be associated with outcomes across the lifespan, such as educational attainment, social skills, mental health, physical health, personal finances, and criminal. [17]

Preciseness is one of the abilities that define human motor space. It is related to successful realization on many movement tasks especially those related to ball games. Based on the research that has been made by Mitevski Orce, 2015 in his journal entitled *Manifestation, Assessment and Development of Preciseness at 7 Years Old Children* is to determine the manifestation and assessment of preciseness at 7-years old children and possibilities for its development applying PE contents. Preciseness was analyzed using six motor tests, applied on a sample of 123 seven years old male examiners. Using adequate statistics methods, the following tests characteristics are determined: discriminativity, reliability, validity and representativity. Obtained results suggest on good validity and poor reliability of applying tests. Three of the tests are recommended for future use for estimation of preciseness.

Research conducted by Meuwissen and Carlson, 2015 found that father’s autonomy support or control was concurrently related to EF skills for preschool children. Most of this work have been done with middle to high income samples. Father-figures in the home environment is an important resource for children’s self -regulation skills development, and this may be especially important for at-risk families. There is evidence that father-child interactions provide children enriching experiences that are unique from mother-child interactions, and that the high-energy, unpredictable play facilitated by father figures

may be an important context for practicing self-regulation skills. [18]. The PE curriculum proposed include activities that are suitable for development of preciseness in children[19].

Children's early experience with caregivers is proposed to be an important force in shaping brain development[20, 21]. The National Institute of Child Health and Human Development [NICHD] Early Child Care Research Network stated that various aspects of parenting is known to be important precursors to later cognitive development. Research is emerging on aspects of mother-child interactions that support EF development, but little is known about the role of father-child interactions. This study examined the relation between father autonomy support and control on developing pre-schoolers. One cognitive outcome that is being studied extensively is executive function (EF). EF refers to higher level thinking skills, such as inhibition, working memory, and mental flexibility, which allow for goal-directed behaviors [21].

From the preliminary study in PGRI (*Persatuan Guru Republik Indonesia*, Teachers' Association of the Republic of Indonesia) 02 Ngaglik Batu school on March 19, 2013, ten fathers were asked to answer four questions related to the motoric development sector in children found that six (60%) have good interaction between father and son while four (40%) stated that there is not enough interaction due to occupation. Information obtained from interviews with teachers who taught daily in kindergarten level-A is that out of ten children aged four years in kindergarten, six children (60%) were able to perform all instruction in class and four children (40%) have difficulties to carry out some instructions well. This data complemented the results of father interviews. Based on the background mentioned above, the researcher wants to examine whether there is an influence of father's parenting relationship with the development of motoric skill in children aged 4 years.

METHODS

This study used survey research type with Cross sectional approach with total sampling technique. The sample of this study were 77 fathers of four years old children in kindergarten PGRI 02. Data were collected by using questionnaires in order to know the father's participation in parenting and DDST (Denver Development Screening Test) checklist by the motoric test. DDST is one of the screening methods for child development disorders. This test is not a diagnostic test or an IQ test, and is used to assess personal, social, motoric, linguistic and motor development in children aged one month to six years. DDST test has a normal category because they are able to do all the six test developments that includes standing on one foot for six seconds, walking heels to toes, standing on one foot for five seconds, standing on one foot for four seconds, standing on one foot for three seconds, and jump with one foot, which is in DDST sheet according to their age (4th years old).

Primary data used in this study were obtained from interviews accompanied by questionnaires, by way of one-by-one parent visit of the students. The first step was to ask for consent. If the father agrees, we gave instructions on how to fill out the questionnaire. For data development of the children, the DDST were given directly to the respondents in kindergarten PGRI 02. Secondary data used in this research were obtained from the archive of kindergarten PGRI 02 Ngaglik Batu. The data included a list of names of students along with the results of growth and data of parents of all students.

This study aims to measure the level on how related the fathers' participation can affect the gross motor development of children aged 4 years. The independent variables were ordinal data scale and the dependent variables were ordinal scale. The statistical method used is Spearman Rank test. If $Z_{\text{arithmetic}} > Z_{\text{table}}$ then H_0 is rejected means significant. If $Z_{\text{arithmetic}} < Z_{\text{table}}$ then H_0 is accepted means not significant. Significance level = 5% price $Z_{\text{table}} = 1.96$

Based on previous research, the objective of that study was to examine the psychometric properties of the Spanish version of the Denver Developmental Screening Test II in a population of Spanish children. Two hundred children ranging from nine months to six years old were grouped into two samples (healthy or with psychomotor delay) and screened in order to check whether they suffered from



psychomotor delay. Children from three Early Intervention Centres and three schools participated in this study. Criterion validity was calculated by the method of extreme groups, comparing healthy children to those with development delay[22].

RESULTS

As shown in Table 1, all children with fathers who participated in the development of developmental outcomes are normal. The results showed that 77 or 100% of the respondents in the Ngaglik kindergarten found it appropriate that the father participated in parenting. As for some respondents who did not participate in the care of their toddlers, there are ten respondents with the results of the development of doubtful and abnormal children with 50% each. According to the percentage obtained, there is a balance in the results of its development between the father who participated and did not participate. For parents in Ngaglik kindergarten who have not yet applied parenting participation, means that they are not entirely prioritizing the development process of their toddlers.

Table 1. Frequency distribution of respondents from the level of interaction frequency to child development outcomes

Table with 7 columns: Interaction Frequency, Normal, %, Dubious, %, Abnormal, %. Rows include < 5 hours, 6-10 hours, 16-24 hours, and Total.

It can be seen that most of the respondents (father) have more frequent interaction time of 16-24 hours found the development of normal toddlers (84.13%), while five respondents who have the least interaction time of less than five hours obtained reported abnormal toddler development (100%). The results proves that fathers' interaction frequency with children is very important and influential on the process of child development especially in growth motor development. The higher the intensity of parenting, the daily stimulation will produce a better development.

Table 2. The cross-frequency distribution between the participation of father's on the growth motoric development of children aged 4 years

Table with 6 columns: No., Motoric growth, Father Participation (Yes/No), P value, Rho Spearman. Rows include Normal, Dubious, Abnormal, and Total.

The table presents fathers 'participation in parenting to the development of children aged 4 years. The result shows all children with fathers who participated in the normal developmental test. From the result, we noted that the influence of Father's participation in caring for growth motoric development in children aged 4 years was significant (p value < 0.001).

DISCUSION

The results of this study proved how important the role of a father is in the growth and development of children. It is shown that 63 out of 77 children development is good or appropriate with their ages. In this case, we cannot underestimate the important role of a father on their children.

Motor abilities are the essence of human motor space. Their development is based on human native characteristics and is the result of development and training[23]. Different levels of development of motor abilities suggest the different levels of motor efficiency are related to the development of human individual [12]. Children's motor abilities are manifested and developed differently, compared to the adults'. Therefore, issues related to development, follow-up and assessment at pre-school and early school period of children's motor abilities are one of the most important research issues in kinesiology [24-26].

Motor skilfulness is the ability to produce steady state coordinated. Given the current state of the field regarding parenting and the development of EF in children, the purpose of the present study is to firstly examine whether the support that at-risk children receive from fatherly figures has an effect on the development of children's EF over and above mother parenting. Secondly, the study considers the role of attachment status as a moderator of the relation between parenting and children's EF development. [9].

CONCLUSION

The results of statistical tests show a relationship between the participation of the father in the care of children under four years of age. Fathers who participated in the parenting process were most likely to develop normal and age-appropriate development. This study conducted a direct assessment of father support/control as a predictor of child development. This study also tested the relationship between fathers' support and controlled parenting of preschool children, and it is found that father parenting was related to the combination factors of child motoric growth. The cultural ideal of fathers being "helpers" to mothers in parenting has given way to the ideal of co-parenting, and this trend should be embraced in parenting research [11]. High-quality father parenting may be an important resource for putting children on a pathway to successful cognitive, socio-emotional development and motor development in accordance with his age.

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