

Analysis of Gross Motor Development in Children Aged 5-6 Years With the Methods DDST for Student in Kindergarten in Semarang

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Abstract— One of the golden ages of early childhood at the age of 0-6 years. The age of the child is on the best physical and brain development. Children have been able to perform moves such as walking, running, jump, and other that are classified in a rough motor is a movement that uses big muscles. So, in order to identify to development of children aged 5-6 years or a children who sit in kindergarten class B, it is necessary to be a screening method for development problems and comparing children with the method of DDST. Denver Development Screening Test (DDST) is a method of monitoring the development of children aged 0-6 years. An overall assessment of the development of all children aged 5-6 years in Kindergarten B in table b shows some children with normal results are 220 children (80,7%), suspect there are around 50 children or (19,3%). This shows that overall children aged 5-6 year have good development. But this does not make parents allow current developments but as parents continue to pay attention to the development of their children and diligently monitor their development.

Keywords— *DDST Test, Gross Motor Skill, Children Aged 5-6 Years*

I. INTRODUCTION

Motor learning is series of training or experience associations that can change motion, for example, infants aged 3 months given “bedong” or the term Indonesian is a baby wrapped in cloth, especially newborn babies intended to help babies feel comfortable and can sleep peacefully, this will inhibit his motor development [1]. In early childhood the physical skills needed are activities that can be learned, specially trained in models and methods that are use d in the early development period, this is because early childhood is

known as a critical period of development and for basic motions skills so the importance of children’s motor development used in activities related to environment and surrounding people both physical, social and language. In early childhood every individual experiences a process of growth and development that is very rapid this is applied in daily activities, such as moving activities by running in the yard and how to line up in a room.

This is clarified in a study at [2] children who engage in physical activity can determine self-confidence positive responses and facilitate activities that affect their health. This means that children who do physical activity will have a positive impact on psychology and health in their lives. In early childhood 0-6 years is a very valuable age range compared to the next age because the development of intelligence grows very extraordinary, at this time experts call it the golden age or “Golden Age”

This Golden Age only comes once and cannot be repeated. This is said to be a very important for children who are 3 years old because children at this age already have movement skills. By recognizing the things above, then we as parents or teachers will know the abilities, needs and experiences of motion learning, which relate to the age of the child so that children’s motor development is more optimal and get the appropriate motion experience

In 1967 a screening test for cognitive problems and behavior in preschool children, by Dr. Frankenburg and J B Doods K, named Denver Development materials or knows as “Denver Scale” made at the university of Colorado Medical Center, in Denver Colorado. Its development was perfected

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into Denver II or DDST II [3] in the use of this screening parents will increase their awareness to find out the development of children that can be identified early in life. This is confirmed by several studies conducted in Brazil by identifying the neuropsychomotor development of children born prematurely [4] the second by using the Denver II screening can be carried out analysis of listening, language, motoric and social skill in preschool children. In Addition in DDST II can know physical development especially in preschool children who have problems with being overweight and anemia. Based on the results of the above research, especially at an early age, it can be concluded that the environment will affect the development of children both motoric, linguistic and social personal and it would be a good for the environment to make children's activities move freely in unlimited ways but still safe.

From the results of a literature review conducted by the author by looking at journals, the results of the study look at the fact that the monitoring of child development has not been carried out especially in the kindergarten of Gunungpati sub-district. Method with the game learning models, so that research that aims to find out and analyze the development of gross motoric skills is rarely considered based on background and review of literature above, how important this research is conducted which focuses specifically on gross motor development in children aged 5-6 years using the Denver development screening test (DDST) screening method especially for B kindergarten students 5-6 years in gunungpati sub-districts, Semarang city. With screening is expected to be able to identify delays in child development and must be handled as early as possible.

II. MATERIALS AND METHODS

The type of research used is quantitative research using a descriptive approach. In this study, the type of research that provides an overview or description of a situation as clearly as possible without any treatment of the object under study. The location of this research in Gunungpati district, Semarang City. Where this location is the highlands. The western Gunungpati region with an altitude of 259.00 Mdpl and the eastern region of Gunungpati with an altitude of 348.00 Mdpl. The sampling method used is purposive sampling is a technique that takes characteristics or samples whose characteristics are known in advance based on the characteristics or nature of the population. The sample criteria in this study were 5-6 years old who were registered at TK-B in Gunungpati sub-district which was in accordance with the research objectives. Research Instruments, The purpose of the DDST test is used as a method for identifying children who need further evaluation regarding their development. In Denver II consist of 125 items above tasks. Progress according to the age of the child from ages 0-6 years. In this study only taken in the gross motor sector namely sitting, walking and doing general movements of the large muscle. While the gross motor test of children aged of 5-6 years there is a movement that is done is, 1) Stand up one foot

The following are the results of analysis of the DDST II Motor Sector Test Rough children aged 5-6 years from 9 TK in Gunungpati District, Semarang City:

for 4 seconds, 2) Stand up one foot for 5 seconds, 3) Walk with heels to toes as far as 4 steps, 4) Stand up one foot for 6 seconds. To score each item with conditions, as follows:

TABLE I. DESCRIPTION OF SCORES ON TEST ITEMS

No	Description	Information	Value
1.	L	Pass	2
2.	G	Failed	1
3.	M	Reject	0

For the assessment of the whole test the results of the interpretation are categorized into 3, namely, "Normal", "Suspect", and "Cannot be tested". The following is an explanation of the three categories, as follows, 1) Normal : Given if there is no "Late" score and given a score of 2, 2) Suspect : Given if there is a failure (G) not by rejection (M), this occurs because of momentary factors, such as fear, pain or fatigue, 3) Cannot be tested : Given an Interpretation "Cannot Be Tested" if caused by rejection (M) not failure (G). If these results are obtained, then repeat in the next 1-2 weeks.

Data collection Technique, In steps as for collecting data in this study are as follow : 1) Managing the permit letter addressed to the UPTD of the ministry of education that houses Kindergarten or RA (Raudhatul Athfal) level to find out the number of TK in Gunungpati district, 2) after knowing the number of kindergarten in the sub-districts of Gunungpati, then subsequently ask permission for data collection in research purpose, especially for DDST Test, 3) Provide permission letters to the intended kindergarten that is the subject of research, 4) Find a team to retrieve data, 5) Data collection through direct testing of research subjects using DDST II instruments in kindergarten in Gunungpati sub-district, 6) Data analysis, 7) Research results.

III. RESULTS AND DISCUSSION

Next is kindergarten in Gunungpati sub-district, Semarang City which is the subject of research:

TABLE II. THE SCHOOL IS SUBJECT OF RESEARCH

No	Name of kindergarten	Total	Number of Students Entering
1.	Kindergarten Qurrotul Aini	14	10
2.	Kindergarten Pertiwi 45	42	37
3.	Kindergarten Al-Jannah	45	41
4.	Kindergarten Pertiwi 44	35	29
5.	Kindergarten Pertiwi 49	21	14
6.	Kindergarten Sekar Mekar	25	18
7.	Kindergarten ABA 52	42	31
8.	Kindergarten ABA 38	63	56
9.	Kindergarten IT Sekar Gading	32	3
	Total	313	236

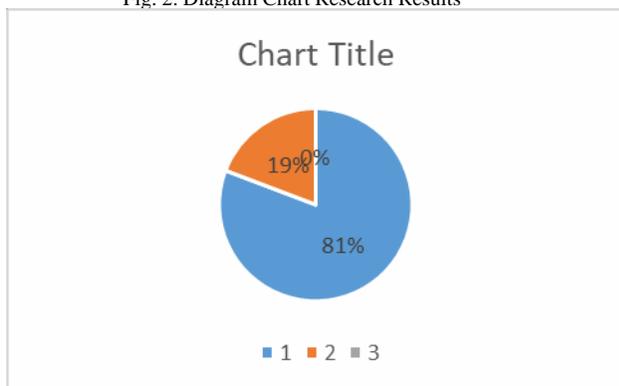
TABLE III. THE SCHOOL IS SUBJECT OF RESEARCH

Results of Analysis of DDST II Tests Rugged Motorized Sector Children aged 5-6 years				
Test type	Interpretation Results	Frequency	Percentage	Cumulative Percentage
Don't go to school		4	28,6	28,6
	Normal	10	71,4	100,0
Stand up 1 foot 4 second	Suspect	-	-	-
	Untestable	-	-	-
	Total	10	71,4	100,0
Stand up one foot for 5 second	Normal	10	71,4	100,0
	Suspect	-	-	-
	Untestable	-	-	-
	Total	10	71,4	100,0
Walk with heels to toes as far as 4 steps	Normal	10	71,4	100,0
	Suspect	-	-	-
	Untestable	-	-	-
	Total	10	71,4	100,0
Stand up one foot for 6 second	Normal	10	71,4	100,0
	Suspect	-	-	-
	Untestable	-	-	-
	Total	14	71,4	100,0

Kindergarten Qurrotul Aini was not found suspect and untestable, so the child was declared within normal limits and did not experience delays in gross motor development.

The results of early detection of gross motor development in Kindergarten B students aged 5-6 years in Gunungpati district, Semarang City :

Fig. 2. Diagram Chart Research Results



Based on the data from the table above, it shows that student development measured using DDST-II on gross motoric aspects, conclusion were obtained for the overall development of all children aged 5-6 years in Kindergarten B which showed some children with normal results as many as 220 children (80,7%) suspect there were 50 children (19,3%). This shows that overall children aged 5-6 years have good development, but this does not make parent allow the current development of but as a parents must continue to

pay attention to the development of their children and diligently monitor their development at the health center or hospital a kind of institution provided by the government for child development is caused by stimulation carried out by parents of children according to Soetjningsih and Ranuh (2013), children who get directed and regular stimulation will develop faster than children who don't know or lack. Support the mental and social development of children which includes the intelligence of independence of children's creativity.

In this study there were also found 2 toddlers who experienced abnormal development on child experiences delay in gross motor development for its cause when the teachers data collection on the students had told them that there was 1 child with "ABK" and researches didn't dig deeper children who experiences development (Suspect) caused by a child failing to do a test or repeating this because the child lacks concentration or most parents are less organized in providing stimulation.

IV. CONCLUSION

The results of study specifically on the gross motor aspects of 210 children (80,7%) and its development in the gross motor aspects of most children was normal, while 50 children (19,2%) experienced "suspects". The results of the conclusions off all aspects of development in children using DDST II method obtained child development that children at the age of 5-6 years still need guidance in growth and development should parents, can pay attention to the development of their children by stimulating the 4 aspects of development. Namely personal social, adaptive-motoric, language, and gross motor skills so that the development of toddlers can achieve optimal.

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