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An Initial Study on the Development of Gross Motor Primary School Pupils

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ABSTRACT

This paper is a concept paper on the review to be carried out on the development of gross motor primary school pupils. The proposed study will be performed on primary school pupils in the district. The research will involve two (n = 2) schools, one school in the category of urban and rural areas is another category that covers a total of one hundred (n = 100) male students. The expectation of this study will produce a result that showed that there was gross motor development impact during physical education activities. Study gross motor development of primary school pupils carried out in two phases as phase I and phase II. Phase I was to identify primary school pupils aged nine years who suffer from delays in gross motor development of locomotors and manipulative skills. A total of 60 students involved in the study of the district. The instrument used in this study was the test Gross Motor Development Test / GMD-2 (Ulrich, 2000) which was adopted at the international level. Phase II study also examines the impact of small game for elementary school pupils who are experiencing delays in gross motor development. This research is a quasi experimental pre and post control group design. A total of 30 pupils aged nine years selected as study subjects. Students are divided into two groups. A total of 15 students participated in the intervention program small games in the treatment group and 15 students in the control group following the usual physical education program. Expected results showed that there are significant differences on the development of gross motor pupils between the treatment group and the control group. The results are expected to show the performance of the treatment group were given a gross motor development interventions small games better than the control group which followed the regular physical education classes.

INTRODUCTION

Physical Education is through gaming activities to meet the needs of small children instinctively, self-satisfaction, growth and efficiency of their gross motor. Gross motor development is very important in basic movements to allow children to engage in physical activity and learning with confidence. This study focuses on gross motor developmental aspects. Gross motor development is the movement that involves large muscle groups of the body such as arms, legs and treatment involves walking, running and hitting (McKenzie, Alcaraz, and Sallis, 1998). Gross motor development of a child beginning school depends on the development of the brain, the body's balance, coordination, strength and flexibility.

Gross motor development can be understood as treatments related to the nervous system, the point when the nervous system and muscle function after induced. Gross motor development may also be defined as a control on behavior that requires a lot of muscle to enable children to respond to its environment and is lifelong.

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According Bruininks (1978) and William (1983), gross motor skills are the ability to use the major muscles and joints in performing a variety of stunts acting basis.

Gross motor is also related with physical fitness. Fitness is defined as the condition that allows an individual to lead a perfect life and to deliver his tasks efficiently, and in turn produces useful contributions and services. Fitness consists of five components, which are physical, emotional, spiritual, intellectual, and social fitness. All the five components of fitness need to be adjusted and balanced in order for an individual to get on with his daily life. According to Kassim & Mokhtar (2016), physical fitness is a component that constitutes total fitness that is constantly being used in acting or in any order form of action.

Skills are defined as movements involving the muscles of the body such as the biceps and hamstrings. Fine motor skills are also involving the movement of muscles such as muscle lubrical smaller muscles (finger). Kassim, M. & Isa, M.I (2015), noted that the athletes are engaged in a process of learning, which involves important aspects interpersonal and intrapersonal skills. This is supported by Kassim, M & Berahim, M.(2015), a conducive learning environment is also important, as well as giving them a reward if they achieve excellence. According Arasoo (1989), there are two major factors that control motor skills attitudes or environmental and genetic factors, including central nervous system development and neurotically function. This shows that motor skills are developing in children is dependent on many different factors and influencing each other.

Literature Review:

The development of motor skills is determined by the influence of the environment and ecological system support, and genetics of the breed itself, maturation and biological entity (Gabbard, 2004). Then it will form individuals vary in shape and style but have skills in the same movement. The growth rate of the motor is affected by several factors, reciprocal interaction between parent and child, encouragement and experience barriers and limited environmental conditions. Each of these factors can raise and lower the motor development of children depends on the quantity and quality of each factor and also the child's acceptance of the suit.

Development can also be deemed to be a relationship between changes towards a certain direction and can be expected and change over the time. The field of change in terms of human movement control capabilities and the development of gross motor movements that occur throughout life. The term refers to the development of gross motor physical development or growth abilities of children with limbs and their physical skills. Physical exercise involving large muscle groups with dynamic movement for 20 minutes or more, three or more times a week can improve your physical fitness and motor skills of an individual (Wilmore, 1982; Rowland, 1985; Fox *et al*, 1975, Vacaro & Mahon , 1987; Pollock & Blair, 1981).

The study also showed that the frequency of training will increase muscle endurance, muscle strength and suppleness of body composition (atomic *et al*, 1978, ACSM, 1998; Poabo & Karman, 1981). American College Of Sports Medicine (ACSM, 1998) suggest that physical activity at least 30 minutes three times a week is essential to improve motor skills and fitness of the individual. Involvement in low physical activity causes related to cardiovascular disease and may lead to health problems such as obesity, diabetes and other diseases and contribute to the low gross motor development. Kassim (2012) stated that the important of coaches and teachers requiring knowledge in the coaching process are important to build up the quality of fitness level using the norms of physical fitness.

On the other hand, motor-based fitness refers to the muscle potential and the ability of an individual to carry out physical activity in terms of balance, agility, speed, power, reaction time and coordination. In addition, physical training is defined as training required to prepare players' respiratory, energy, and muscular systems physiologically from aerobic, anaerobic, and strength perspectives (Kassim,M & Ali, N.C.R, 2015). This is supported by Kassim, M; Azmir, H & Mokhtar, S.R (2014), fitness is defined as the condition that allows an individual to lead a perfect life and to deliver his tasks efficiently, and in turn produces useful contributions and services. fitness consists of five components, which are physical, emotional, spiritual, intellectual, and social fitnessConsequently, according to Kassim, M; Ahmad, S.K.S & Muda, B.B (2016) cardiovascular endurance is a most important component in the human physiology.

Every human being must have changed through the process of growth and development. All development is in accordance with natural rules, processes and behavior characteristics universal. Developments are resulting from the action of interdependence between physical development and learning (De Witt, Lessing, & Lenayi, 2008). Achievement of gross motor development describe the process through which the children in the development of specific skills at certain ages.

Gabbard (2004) states that the study of action and perception is based on the general hypothesis that coordination and motor control comes from constant interaction and meetings between the nervous system and vision, limbs and other body parts. This explains the close relationship between the members of the body which is driven by the nervous system that carry sensory information and communicate information. The motors are controlled by nerves will control the movement of muscles to produce the desired movement.

Ulrich test, (2000) was used to assess children's psychomotor domain after the intervention program was implemented. And small game such as 'jump and step on the balloon' can develop locomotors skills such as

jumping on one leg and balance or the game 'Golden Ball' which involves four skills as well as the skills of throwing, hitting, catching and running. For children play is the most preferred. Through small game, children learn various things informally. Roskos and christie, (2007) found a small game psychomotor and cognitive development can be established.

Ulrich has also developed GMD-2 in the year 2000. GMD-2 is widely used to assess the development of gross motor skills of children aged between three to ten years (Cools *et al*., 2008; Wiart & Darrah, 2001). This tool provides an explanation by reference, and reference norms-criteria (Gabbard, 2008), and can be used to identify children who are missing or problematic in the development of gross motor skills (74 Cools *et al*., 2008). This tool can also be used by occupational therapists, Physiotherapy and Physical Education teachers (Ulrich, 2000).

Definition Ulrich (1985, 2000), gross motor skills are categorized into locomotors skills and manipulative skills. Locomotors skills are involving movement from one place to another (Haywood and Getchell, 2005). Non-locomotors skills involving stability skills, they are also considered as basic motor skills. Manipulative skills involve some skill that requires players to apply a force on the object (Haywood and Getchell, 2005). By definition Ulrich (2000) manipulative skills are hitting, bouncing, catching, kicking, throwing and rolling balls. Locomotors skills also involve the skills of running, gallop, and jump on one leg, elastic, jump and run legs side.

According Valentini & Rudisill (2004), the effectiveness of a test made more depending on experience and maturity among teachers. He has conducted studies of the effectiveness of training programs among children pj and teachers' pj in determining gross motor development test scores. The study found there is a strong foundation if given the right training, can contribute to assess the development of gross motor skills of children in PJ disabled children and normal children.

The developments of gross motor skills are fundamental to the achievement of more complex movement skills such as specific movements in sports activities (Goodway & Branta, 2003). The study on which they run directly show that the level of gross motor development and physical effectiveness of intervention programs have a positive correlation.

Research Objective:

Determine the level of gross motor development among boys ages nine years.

Dismantling whether other factors such as socioeconomic status and body mass index have an impact on the development of gross motor boys ages nine years.

To analyze the difference between the gross motor development stage treatments group with a control group for pre-test scores among boys aged nine years.

To compare the difference between the different levels of gross motor development between the treatment groups with a control group for the post-test scores among boys aged nine years.

Research Questions:

What is the level of gross motor development among boys ages nine years?

How far the other factors have an impact on gross motor development study groups?

Is there any difference between the gross motor development stage treatments groups with a control group for pre-test scores among boys aged 9 years?

How and how the further of different between the gross motor development stage treatments groups with a control group for the post-test scores among boys aged 9 years?

Statement of Problem:

Gross motor development is important in the early stages of schooling because it is the foundation before children are able to master complex skills (Gabbard, 2004; Haywood and Getchell, 2009; Payne & Isaac, 2002; Seefeldt, 1980). The problem is how does the level of gross motor development of children aged 7, 8 and 9 years old. Is the level of gross motor development of the child in accordance with age and in line with the mastery skills.

Gross motor development problems students are:

Generation of children of this age prefer to explore and interact with the internet. They are more excited and engrossed for hours using video games and Internet applications. In fact, some parents prefer their children to stay in the house instead of playing on the field or playgrounds. These things will somehow slow down and disrupt the process of development of children's motor skills. Due to inactivity, not fond of sports and recreational activities will result in children of this age are more prone to obesity.

The Physical Education teachers are more focused on how to measure the performance of children in terms of physical fitness levels but ignore the measurement of gross motor skills. This happens because physical education is not providing the tools and how to measure this aspect as gross motor development tests Ulrich containing components of gross motor skills test which must be mastered early childhood schooling.

Until now, no one battery of fitness tests in Malaysia, which measures motor fitness of children aged 7 to 9 years. So indirectly this kid is not clear whether they are really able to master gross motor skills ranked by chronological age. There is no single standard instrument to be adopted by the Physical Education teacher to assess gross motor development of children ages 7, 8 and 9 years old. This situation contributes to the level of gross motor development lower among children in that age.

Lack of effective teaching and learning in school physical education because teachers are not skilled and competent teaching physical education, large class size and the lack of places and sports equipment also affect gross motor development of children.

Research Impact:

The research could help create a new syllabus for assessing pupils aged seven to nine years. This study is able to detect and provide information on the level of gross motor development of children before and after the program starts. Curriculum Development Centre (CDC) can make a reassessment of the physical education curriculum in evaluating and modifying where necessary.

The data obtained in this study can serve as a useful indicator for teachers of Physical Education, Physical Education department heads, school administrators and coaches' sports (grass).

The result of the information obtained, the relevant authorities can provide new models and tests of early detection of children at the national level. Models of small game can be introduced in the curriculum of teacher training institutes in order to would-be teachers the option of Physical Education and Sports Science can practice it in school when they start teaching duties due. They can be trained on how to use the instrument for assessing gross motor development or Test of Gross Motor Development Second Edition (GMD-2) to see how the ways of assessing children's early schooling. The use of this test is expected to contribute knowledge in their evaluation of gross motor skills of children.

The study can also provide feedback to parents on the development of gross motor skills of their children. The school can give grades or stars to students who achieve high gross motor skills. Indirectly, this awareness will change the perception of parents towards the subject of physical education as a subject that is geared toward a healthy lifestyle such as exercise, play and sport and to improve gross motor development of children to the maximum level.

Based on information and data obtained, students can make an assessment of gross motor development of their own and know what needs to be done to improve it. They can choose to get involved with sports as appropriate to the level of their abilities. Indirectly, this could motivate them to always maintain the level of gross motor development from pre-school to secondary school.

Expectations Findings:

The expected result is likely to show the game for 10 weeks suggests an improvement in gross motor development of children. Test results are expected to master the efficiency of the treatment group gross motor skills compared to the control group. This is because the control motor skills can be achieved with a perfect through training and skills tests undertaken either formal or informal. This has been demonstrated in a study conducted by Timothy Andrew Paul Dunham and Dunham (1988). Their study involved a total of 51 subjects were grade 1 in Kino Primary School, Papua New Guinea. The results obtained from this study showed that structured training and specific tests that can shape the development of motor skills in children.

In assessing gross motor development, process and product elements are the two main things that need to be seen by researchers. Because gross motor development is a process, then factors such as flexibility, balance and muscle strength actually have an effect on gross motor performance (Raudsepp & Pall, 2006). From the product, the gross motor development of children occurs normative, involving phases, time-consuming and can have significant effects on the developmental aspects of childhood and adolescence (Piek, Dawson, Smith, and Gasson, 2008).

Based on view of rough eyes, the children can move with ease. In a short time a child can do all kinds of movement. Virtually every type of movement through a complex process and involves various body systems. All of these systems combine to form motor control. The information sensed by the receptor organs saved while before adjusting it with new data. The activities carried out in small games can look gross motor ability of children to act on a stimulus.

Conclusion:

Based on the facts that have been discussed with above indicate where reserves of this study need to be forwarded towards the further increase in the mastery of gross motor skills among primary school pupils who are considered important because they are rated tubers. Thus there is a must to get support from the top management of the Ministry of Education Malaysia especially Curriculum Development Centre to look at this matter seriously. This study is expected to be passed in order to generate a steady syllabus related to the process of development and gross motor proficiency exam.

Conclusion of the results acquired intervention program that will run for 10 weeks that is, three times a week showed better progress significantly in gross motor development by age for the collection of treatment versus the control set. The outcome has also expected to show a positive impression intervention program 'educational game' towards the children at risk in gross motor skills.

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