

Proceeding of The 1st International Conference on Integrated-Holistic Early Childhood Education (ICIHECE)

Islamic Early Childhood Program, Faculty of Tarbiya and Teacher Training
Universitas Islam Negeri Prof. K.H. Saifuddin Zuhri Purwokerto
e-ISSN: XXXX-XXXX, p-ISSN: XXXX, DOI: 10.24090/icihece

Optimization of Gross Motor Skills Development in Early Childhood by Conducting Physical Training Activities

Dyah Arfanny Muslim^{1✉}, Ika Febrian Kristiana¹

¹ *Fakultas Psikologi, Universitas Diponegoro, Indonesia*

✉ email: dyaharfanny@students.undip.ac.id

Abstract: Increasing children's motor skills will improve children's cognitive, social-emotional, and physiological abilities, so that later children will grow into smart, independent, and healthy individuals. Related to early childhood physical motor, the target that must be achieved by children is to apply as best as possible basic movement abilities and skills. The basic movements mastered by children must be correct in accordance with their body functions and in accordance with children's daily activities. The purpose of this study was to determine the experience of teachers in optimizing the development of gross motor skills in early childhood by conducting physical training activities at PAUD Permata Diponegoro University. This research method uses qualitative methods with phenomenological approach studies. The participants in this study amounted to three participants who were teachers at PAUD Permata Diponegoro University. The results showed that doing physical training activities can optimize the development of gross motor skills in early childhood. Physical training activities in this study were carried out with a game-based warming-up model in the form of rhythmic gymnastics, traffic light games, active road creations and ball knee shoulder head games.

Keywords: early childhood; physical exercise; gross motor; qualitative research.

A. Introduction

Physical education in children at the kindergarten level is the beginning of efforts to direct, nurture and develop children's physical potential and character systematically and regularly in an effort to realize the ideals of building a healthy and strong human being as a whole. The development and development of physical potential and character carried out from an early age will provide a strong foundation for efforts to build a complete and quality human being. Physical education's touch on kindergarteners is often overlooked, so we often miss out on utilizing, educating and developing them. Providing a foundation of children's physical potential and character from an early age is the basis for the subsequent development of their physical and psychological abilities. Child movement provided through physical education is the basis of knowledge and experience for children aged five or six years to enter school (Iain Adams and Rahantoknam, 1988). The opportunity to obtain formal physical education for children is a future opportunity to achieve success according to their respective potentials. Formal physical education should start from the lowest level of education, namely kindergarten. Physical education in kindergarten should be handled by professional teachers and have adequate knowledge and skills so that in providing guidance and developing the physical potential of kindergarten children can be maximally in accordance with their characteristics. As is well known to date, physical education in kindergarten is handled by

kindergarten teachers, not by Physical Education teachers specifically. So that being a kindergarten teacher must be given enough provisions to teach physical education in kindergarten. Basically, the concept of physical education is an important part of the educational process, meaning that physical education is not just decorations or complementary ornaments attached to school programs as a tool to add activities to students. Moreover, physical education is an important part of education itself and should be carried out with clear references and standards so that it can spur skills in students as well as other learning materials in the curriculum at school. Physical activity refers to any muscle movement that requires considerable energy expenditure and has various sub categories for example, recreational activities or sports. Related to early childhood physical motor, the target that must be achieved by children is to apply as best as possible basic movement abilities and skills. The basic movements mastered by children must be correct in accordance with their body functions and in accordance with children's daily life activities. Increasing children's motor skills will improve children's cognitive, social-emotional, and physiological abilities, so that later children will grow into smart, independent, and healthy individuals. Physical activity not only affects the level of health but also on the cognitive, emotional, and social abilities of children based on various studies. Pagani & Messier (2012) said that although in general children's motor skills are often ignored in the concept of school readiness because schools are generally only focused on children's cognitive and emotional abilities, but based on the results of their research it was found that motor skills (both gross motor and fine motor) are related to other abilities that are requirements for school readiness such as verbal skills, social, early math skills, and behavioral skills.

Marsh, Gerber, & Peterson (in Pagani and Messier, 2012) stated that children's motor abilities in the clinical field are associated with cognitive abilities and the general sensory system and cortisol structure in the brain. Grismer (in Pagani & Messier, 2012) explains that gross motor skills, fine motor skills, and perceptual visual skills are significant factors associated with math and reading achievement. Cvejic, Pejovic & Ostojic (2013) suggest that the components of physical fitness include cardiorespiratory components, which are components that describe the total capacity of the cardiovascular and respiratory systems to supply oxygen during prolonged physical activity. The musculoskeletal component includes a healthy balance of functions of the muscular and skeletal systems consisting of strength, muscular endurance, muscle exclusivity, and flexibility. Furthermore, Du Toit, et al (2011) stated that Body Mass Index (BMI) is a component of health-related physical fitness that has been shown to have a significant negative correlation with academic achievement in children in several large-scale studies involving children of different ages. Warming up or what we call warm-up is a stage of activities carried out by children in a sports lesson. Warming up plays a very important role for children, before entering into the core activities when participating in learning. According to Luxbacher (2004) states that heating is useful for warming muscle temperature, improving blood flow circulation and increasing oxygen flow into the body, improving muscle contraction and reflex movement speed, and also to prevent muscle spasms. In addition, heating will also make organ systems such as the lungs and heart can work and be trained properly. According to Lutan (2000) the purpose of warming up is to prepare students to immediately prepare themselves with teaching assignments, stimulate the function of body organs to be ready to do heavier physical work, stretch muscles and joint cords so that the

danger of muscle or joint injuries can be avoided. Meanwhile, according to Mulyaningsih, et al. (2009) explained that the purpose of heating is to increase body temperature, fulfill the desire to move children, who previously sat for hours in school, bring / prepare optimal body heat for children, to receive the next exercise, bring the child's soul and taste to a physical education lesson. According to Suherman & Mahendra (2001) that when children warm up interestingly, it can be expected that physically and mentally children will be ready to follow learning. Their readiness is marked by their increased morale due to warm-up activities. Therefore, it is important to warm up before learning takes place. In order to make children more enthusiastic and interested in warm-up, it is necessary to have creative and interesting strategies such as small games but do not forget the usefulness of it. Play can develop other abilities possessed by children. One of them is that children can show their movement skills during the game, so that it can be known that the child is talented in sports activities. The function of play activities in children is mastery play, in accordance with the opinion of Mayke (2001), namely most play activities in children are referred to as mastery play or play to master certain skills, because these activities can be exercises for children to master skills that are new to them through repetitions carried out by children. The application of rhythmic gymnastics in children begins with a demonstration by the facilitator. After the initial demonstration, music is played and rhythmic gymnastics with the child begins. The warm-up stage consists of nine movements, the core stage consists of six movements, and the cool-down exercise consists of seven movements. Each move consists of 2 x 8 and 1 x 8 counts. The duration of rhythmic gymnastics in this program is 12 minutes. The following is an explanation of the movements in this rhythmic gymnastics program: Before gymnastics, children raise both hands and pray first; The second movement, legs left and right, arms stretched; Third movement, one foot forward, body bent, clapping; The fourth movement, legs move in place, hands at waist, while nodding the head; The fifth movement, hands remain waisted, feet walk in place, head looking right then left; The sixth movement, hands remain waisted, legs walk in place, and head broken left and right; The seventh movement, feet stay in place, hands directed upwards while counting 1-8; The eighth movement, the legs are directed back alternately, then the hands are waved right and left; The ninth movement, feet in place, hands pointed up, while shouting "Great boy, smart boy, hurray!"; The tenth movement, the body is still, the child holds the head, shoulders, then bends down holding the knees and legs. After that, the child wiggles his hips left and right and jumps; The eleventh movement, the child steps left and right and hands are waved according to the direction of the steps; Twelfth movement, the child runs on the spot with his hands clenched; The thirteenth movement, the child imitates ducks and chickens with legs moving back and forth; The fourteenth movement, the child dances jaipong and the legs are moved alternately forward; The fifteenth movement, the child jumps left and right, the dexterous hand follows; The sixteenth movement, the feet move in place, the hands are moved forward and chest, then jump up and shout "Yes!"; The seventeenth movement, cooling by stretching the legs, then the body bending while taking a breath and exhaling; The eighteenth movement, legs are spread out, then the hands are moved up, down and forward; The nineteenth movement, legs pressed together and hands on chest.

Traffic light games. This game is done by responding to the signals conveyed by the teacher to make movements such as traffic signs, namely red to stop, green running, and several other signals. Equipment; Cone 8 pieces for a barrier with a minimum field size of 10 by 10

meters. The number of Players is 5-10 people and can be more. Implementation of the Game: Each student will have to manage their distance; If the teacher shouts "red", then later all students will have to run and should not move a single one; If the teacher shouts "green", then later all students must run and stop until there is a whistle; If the teacher shouts by saying, "traffic is jammed," then later the student should crawl as slow as possible and run as fast as possible until a whistle is heard; If there are students who are wrong in doing the movement, they will get a punishment in the form of squat jump 5 times.

Head, shoulders, knees, balls. This game aims to train one's concentration and reaction. The way this game is 2 players face each other with between the two players who have placed the ball in the middle. The teacher/instructor mentions the word head, shoulders, knees randomly and at the same time the player must hold the body part mentioned by the teacher. If suddenly the teacher says the word ball, then the two players race to take the ball between the players. Equipment; 1 ball every 2 players. Minimum number of Players 2 – multiples of 2. Game Execution: Each player stands facing each other; The ball is placed between the two players; The teacher/instructor says the word head, shoulders, knees randomly and repeatedly, and the player holds each part of the body as spoken by the teacher; When the teacher says the words of the ball, the two players compete to take the ball between the two players; The winner is the player who manages to get the ball.

Physical education programs in early childhood with a game-based sports warming up model aim to increase the desire to move owned by children, who previously sat for hours in school and bring children's soul and taste to physical education lessons. While the early childhood physical education program with rhythmic gymnastics aims to develop physical components, build body strength, train motor skills, coordination and balance. By doing rhythmic gymnastics regularly will make health and physical development in early childhood to be better. For physical and character development to build a quality generation, the author conducts one type of training, namely the game-based sports warming up model. The warming up of game-based sports is applied so that children can develop their physical, cognitive, social, and emotional potential. Therefore, this study aims to determine the experience of teachers in optimizing the development of gross motor skills in early childhood by conducting physical training activities at PAUD Permata Diponegoro University.

B. Methods

The research method used in this study is a qualitative method with a phenomenological study approach. The participants in this study were three people who were teachers at PAUD Permata Diponegoro University. The data collection technique used in this study is an in-depth interview, with semi-structured questions that can be asked openly to get complete and in-depth information (Bungin, 2012). The data analysis process uses the Interpretative Phenomenological Analysis (IPA) data analysis procedure proposed by Kahija (2017), where the procedure consists of several steps, namely (1) researchers read the transcript many times where the transcript is the experience of participants in written form, (2) make initial notes about the purpose of the transcript that has been made which aims to find out which parts of the transcript are important to highlight First, (3) formulate themes that arise, namely themes that arise from the exploration of individual experience, this can be words or phrases, and (4)

researchers make the formulation of superordinate themes, which accommodate several themes that have similarities or similarities.

C. Results and Discussion

Based on the description of the themes that have been found in the three participants, researchers integrate in the form of a pattern or general description. The results of the study obtained, in general, the three participants applied the same thing in terms of optimizing the development of gross motor skills in early childhood by conducting physical training activities at PAUD Permata Diponegoro University. The importance of applying several ways to optimize the development of gross motor skills because it will get many benefits in these activities. As explained in Rozalena & Kristiawan's research (2017), early childhood learning activities are in the form of learning while dancing or moving, drawing/coloring while learning, and memorizing words while clapping. Optimization of gross motor ability development is explained in three themes obtained during the study. The theme is teacher experience in improving the optimization of gross motor skills development, teacher and student relationships, and game-based warming-up models. The following themes are described in table 1.

Table 1. Theme Analysis

Participants	Discussion	Third Theme of Participants
Subject 1 (FS)	FS has been working in ECCE for three years. FS has not experienced any difficulties that are difficult to overcome. So far FS finds it easier for children to be told and understood.	1. Related Experiences: The three teachers have the same experience in optimizing student development because they are in accordance with their SOPs. 2. Teacher and student relationship: a. Good communication b. The attachment of the sense of security provided by the teacher 3. Game-based warming-up model: a. Rhythmic gymnastics b. Traffic light games c. The path of active creation d. Head Shoulder knee ball
Subject 2 (FN)	FN often provides input to school principals in providing new innovations in improving the optimization of student development. Compared to FS, FN already works. FN already implemented a game-based warming-up model, and it proved effective.	
Subject 3 (MR)	During work, according to MR, children in PAUD permata are easier to control than in PAUD where he previously worked. It is proven that when applying the game-based warming-up model, all students follow instructions well and in an orderly manner. According to MF, these activities are very beneficial in optimally improving gross motor development in students.	

Theme First, related to experience in improving gross motor development in early childhood, it was found that all three teachers had the same experience in optimizing student development. Because when teachers want to provide input and new innovations, it is important for them to first discuss to determine whether the method will work effectively and well or vice versa can work badly. Therefore, when they have determined what method is best for students, the three participants must also implement the new method or innovation properly and seriously.

Theme secondly related to the relationship between teachers and students and the attachment of the sense of security given by teachers to students, the three participants of FS, FN and MR have good communication with early childhood (students). This is evident when they observe and interview, they say that children are easy to tell and understand. According

to MR, in his interview, children in PAUD permata are easier to control than in PAUD where he previously worked. So it can be concluded that teachers and students have good communication and provide a sense of security that the teacher provides can be accepted by early childhood students well.

While in the third theme related to the game-based warming-up model according to the three participants FS, FN and MR the method was proven to be affective in improving gross motor development in early childhood. The game-based warming-up model has several activities in it, namely rhythmic gymnastics, traffic light games, active road creations and ball knee shoulders head. The four activities each have benefits. The first activity is rhythmic gymnastics which is useful for developing physical components, building body strength, training motor skills, coordination and balance. By doing rhythmic gymnastics regularly will make health and physical development in early childhood to be better. The second activity is a traffic light game that is useful for training children's cognitive and discipline related to traffic sign rules and commands given by the teacher. The third activity, the path of active creation, provides benefits for physical development and fitness in children. Finally, head, shoulder, knee, ball game activities that are useful for training children's concentration and reactions to things and commands. The implementation of each game is different.

D. Conclusion

Based on the results and discussions that have been described, it can be concluded that carrying out physical training activities can optimize the development of gross motor skills in early childhood. Physical training activities in this study were carried out with a game-based warming-up model in the form of rhythmic gymnastics, traffic light games, active road creations and ball knee shoulder head games.

References

- Bungin, B. (2012). *Penelitian kualitatif*. Kencana Prenada Media Group
- Cvejic, Pejovic & Ostojic.2013. Assessment of physical fitness in children and adolescents. *Physical Education and Sport*.Vol.11, No.2.
- DuToit, D., Anita E. P., & Leani, T. (2011). Relationship between physical fitness and academic performance in south african children. *South African Journal for Research in Sport, Physical Education and Recreation*, 33(3), ISBN: 0379-9069.
- Iain Adams dan Rahantoknam. (1988). *Pendidikan Jasmani dengan Pendekatan Pemahaman*. Depdikbud Ditjen Dikdasmen.
- Kahija, Y. F. L. (2017). *Penelitian fenomenologis: Jalan memahami pengalaman hidup*. Kanisius.
- Lutan, R. (2000). *Asas-asas Pendidikan Jasmani Pendekatan Pendidikan Gerak di Sekolah Dasar*. Direktorat Jenderal Olahraga, Depdiknas.
- Luxbacher, J. (2004). *Sepakbola: Taktik dan Teknik Bermain*. Raja Grafindo Persada.
- Mayke S. T. (2001). *Bermain, mainan dan permainan untuk Pendidikan anak usia dini*. Grasindo.
- Mulyaningsih, F. dkk. (2009). *Senam Irama*. Yogyakarta.

- Pagani, L. S., & Messier, S. (2012). Links between Motor Skills and Indicators of School Readiness at Kindergarten Entry in Urban Disadvantaged Children. *Journal of Educational and Developmental Psychology*, 2(1).
- Rozalena & Krsitiawan, M. (2017). Pengelolaan pembelajaran PAUD dalam mengembangkan potensi anak usia dini. *Jurnal Manajemen, Kepemimpinan dan Supervisi Pendidikan*. 2(1), 76-86.
- Suherman, A & Mahendra, A. (2001). *Menuju perkembangan menyeluruh menyiasati kurikulum Pendidikan jasmani di sekolah menengah umum*. Direktorat Jendral Olahraga.