



INTERNATIONAL SEMINAR ON PUBLIC HEALTH AND EDUCATION

The 2nd International Seminar on Public Health and Education

PROCEEDINGS







Semarang, April 23, 2015

BOOK 2

Public Health Department in collaboration with Sport Education Department, Postgraduate Program, Semarang State University

Supported By:













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on Public Health and Education

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Postgraduate Program Semarang State University

THE SECOND INTERNATIONAL SEMINAR ON PUBLIC HEALTH AND EDUCATION 2015 (The 2nd ISPHE 2015) PROCEEDINGS

Postgraduate Program, Semarang State University

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PREFACE

Assalamu'alaikum warahmatullaahi wabarakaatuh,

Firstly, may we made our highest praise and thank to Allah The Almighty, for His bless so that we are able to continue a precious event; The Second International Seminar on Public Health and Education 2015 (The Second ISPHE 2015) in Semarang Indonesia, to share our knowledge and idea with so much warm and friendship from worldwide public health and education community.

The Second ISPHE 2015 is a continuation of The First ISPHE 2014 that had been held in Semarang, Indonesia on September 2, 2014. This second seminar is organized by Public Health Department in collaboration with Sport Education Department, Postgraduate Program, Semarang State University and supported by researcher team from Indonesia-Australia, Indonesian Health Education National Network (*Jejaring Nasional Pendidikan Kesehatan Indonesia* – JNPK), and Indonesian Public Health Association – Central Java (*Ikatan Ahli Kesehatan Masyarakat Indonesia Pengda Jawa Tengah* – IAKMI).

The Second ISPHE 2015 is aimed to gather all of experts, researchers, academicians, and practitioners in health education field in general as well as national and international level in one prestigious academic forum which to discuss the role of evidence based research in public health, health education, and health promotion decision making. This second seminar also proposed to contribute to the focus of health decision making; by considering the evidence based research, empirical data, and also local wisdom from each region, both national and regional levels as well as its relation to global health trends.

I would like to deliver our highest respect and appreciation to our honorable speakers, Prof. Donald, M.P.H, Ph.D. from Griffith University, Australia, Ross Sadler, B.Sc., Ph.D. from Griffith University, Australia, Min Jeung Park, Ners M.Sc., Ph.D. from University of Tokyo, Evaristo Soares from Department of Public Health Timor Leste, Ratha Phok from Institut de Technologie du Cambodge, Bashir Lakhal, M.Kes. from Department of Public Health, Lybia, and Dr. dr. Budi Laksono, M.HSc. from Health Department of Central Java, Indonesia. I really expect that this second seminar will be beneficial for all of us and to the development of the public health and education field.

Allow me to express my gratitude to all participants from Indonesia and other foreign countries who are enthusiastic in attending this seminar. I do hope that all participants will gain important values and collaborate it into our own fields and also able to make significant changes in the future. Besides, I also convey my appreciation to all organizing committee who have given their outstanding commitment for presenting this occasion.

Wassalamu'alaikum warahmatullaahi wabaraakatuh.

Sincerely yours,

Chairman of the Committee

Dr. dr. Oktia Woro Kasmini Handayani, M.Kes.

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WELCOME MESSAGE

Assalamu'alaikum warahmatullaahi wabarakaatuh,

Dear Conference Participant,

I extend my most sincere welcome to all participants of The Second International Seminar on Public Health and Education 2015, held in Semarang, Indonesia on April 23rd, 2015. Semarang State University is proud of being important part to develop public health, especially in public health education, through hosting this important event.

Semarang State University (Unnes) is one of the biggest state universities in Indonesia which was established in 1965. It is the first university that declared itself as the Conservation University in Indonesia. The idea of conservation has become its vision to be an international conservation university which is healthy, outstanding, and prosperous. Regarding the vision, Unnes determine to consistently uphold the idea of protection, preservation, utilization, and sustainable development of natural and cultural resources of Indonesia. Unnes also put conservation as a manifestation of the main duties of university, namely education, research, and community service.

In line with Unnes vision of healthy, this seminar is projected to be an international event in the field of public health education and aims to become a benchmark for decision-making in health, especially in promotion and prevention sector through evidence based research. The seminar theme, "The Role of Evidence Based Research in Public Health, Health Education, and Health Promotion Decision Making" will highlight different initiatives and projects that will help direct collective vision towards securing better health status to our nations. At this seminar, we will be able to consider application of public health research as a basic of making decision in public health area.

I am convinced that the seminar will produce valuable result for improving public health education through different presentations and discussion by our distinguished speakers and participants. I hope you find the seminar sessions and program material in framing the direction of your work. I am confident that the efforts made by all organizing committee will make it a definite success and a valuable experience for participants.

Finally, I sincerely look forward to your participation and contribution to this event.

Wassalamu'alaikum warahmatullaahi wabaraakatuh.

Sincerely yours, Rector of Semarang State University **Prof. Dr. Fathur Rokhman, M.Hum.**

WELCOME MESSAGE

Assalamu'alaikum warahmatullaahi wabarakaatuh,

Dear Conference Participant,

On behalf of Postgraduate Program Semarang State University, we are pleased and honored to welcome you to The Second International Seminar on Public Health and Education 2015. It is a great privilege for us to be in Semarang, Indonesia on April 23rd, 2015. Postgraduate Program is proud to be working jointly with researcher team from Indonesia-Australia, Indonesian Health Education National Network (*Jejaring Nasional Pendidikan Kesehatan Indonesia* – JNPK), and Indonesian Public Health Association – Central Java (*Ikatan Ahli Kesehatan Masyarakat Indonesia Pengda Jawa Tengah* – IAKMI) at this important event.

Today is a time for change and we hope that the seminar will help us in confronting this change by bringing new opportunities for advancing public health education, nationally and globally. We are expecting the seminar to offer us with new material for improving our way of thinking and operation in confronting many public health problems. This seminar proposed to contribute to the focus of health decision making; by considering the evidence based research, empirical data, and also local wisdom from each region, both national and regional levels as well as its relation to global health trends.

Let's take advantage of this excellent opportunity and work together in strengthening our regional and national network and in sharing our interests and experience, particularly in public health education field. We are confident that the seminar will help us in building our network connections and in strengthening relationship.

We would like to thank each of you for participating in The 2nd ISPHE 2015 and bringing your knowledge and skills to this event. We expect you to be engaged in the sessions and to be proactive and inquisitive. Hopefully, all of you would enjoy your stay in Semarang, Indonesia. Finally, we would like to say thanks to all the organizing committee, who made this event possible be held.

Wassalamu'alaikum warahmatullaahi wabaraakatuh.

Sincerely yours,
Director of Postgraduate Program, Semarang State University
Prof. Dr. H. Achmad Slamet, M.Si.

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PLAYING AS A MEANS TO DEVELOP MOVEMENT SKILLS AND PHYSICAL FITNESS OF PRESCHOOL CHILDREN

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Abstract

Playing is an integral part of life and tends to be a basic requirement for pre-schooler children. Playing provides many benefits for preschool children who do it. The benefits gained through playing in preschool children include developing motor skills and physical fitness of preschool children. The planning of playing program to develop the motor skills of preschool children should contain basic elements of movement and basic movement. Basic elements of movement is associated with locomotor skills, non-locomotor and manipulative. Meanwhile, the basic movement must be associated with perceptual motor. Programming playing to develop physical fitness must consider the principles of FITT (Frequency, Intensity, Time, and Type)

Keywords: Playing, movement skills, physical fitness, preschool children.

Introduction

Playing is a fun activity for everyone. For children, especially preschoolers, playing is an appropriate means to optimize the growth and development. It is because playing becomes the world of preschoolers. Playing gives some effects for the children as it will help developing the existing all aspects. The benefits gained in playing activities will broadly develop the physical, cognitive, psychomotor and affective aspects.

The development of motor skills and physical fitness in pre-school children, is an important part that can be developed through the medium of playing activities. Development of motor skills can be gained through play, including locomotor movement skills, non-locomotor and manipulative. Meanwhile, in the aspect of physical fitness for pre-school children, it becomes a person's ability to perform all daily duties without experiencing significant fatigue and still have the energy remains to enjoy their leisure time as well as for unexpected needs. Physical fitness components are divided into two groups, called physical fitness components related to health, which includes cardiorespiratory endurance, muscle strength and endurance, flexibility, and body composition. The other components of physical fitness are associated with coordination skills including speed, power, agility, and a feeling of motion. In this paper, it will be described on the development of motor skills and physical fitness in pre-school children through playing.



The Nature of Playing

Playing is an activity that everyone can do, from children to adults, not to mention the disabled. In childhood, playing an integral part of life and tend to the basic needs are essential. In fact, education experts say that children identical to play, because almost all of his life cannot be separated from the play. According to Novan Ardy Wiyani and Barnawi (2014: 93), the term of playing is defined as an activity that is done by using tools or without using tools and it generates understanding, provides information, gives some pleasure, and it can develop a child's imagination. Playing activities can be used to explore the children's world, developing the competence in copying the world and developing their creativity. Furthermore, according to Novan Ardy Wiyani and Barnawi (2014: 93), there are five sense of play, which is described as follows: 1) something that is fun and has intrinsic value in children, 2) no purpose extrinsic, intrinsic motivation is more, 3) spontaneous and voluntary, there is no element of compulsion and freely chosen by the child, 4) involves the active participation of children's participation, and 5) has a special relationship with the systematic things, such as creativity, problem solving, learning, social development, etc.

According to the Ministry of Education (2008: 34-35), playing is defined as an activity that makes the feeling of a child to be happy, comfortable, and excited. In short, playing is doing something for fun. Furthermore Dworetzky cited by Moeslichatoen (1999: 31-32) describes the five (5) criteria in play, such as: 1) intrinsic motivation. Playing is motivated from within the child, because it is done for the sake of the activity itself and not because of the demands of society or body functions, 2) positive influence. Playing is fun or exciting to do, (3) not be done casually. The action is not done while ago, because it does not follow the exact pattern or sequence, but rather is pretended, (4) method/destination. The way in playing is emphasized overthe precedence. Children are more interested in the behavior itself rather than the output produced. According to Huizinga cited by Agus Mahendra (2005: 3) playing is an activity that is done freely and voluntarily, their activities are limited by time and place, using the rules of free and non-binding, it has its own purpose and it contains elements of suspense, excitement and awareness. It is totally different from ordinary life. According to H. E. Mulyasa (2012: 168), playing is not working and not a productive activitydone in earnest. Even, work can be interpreted as playing while playing can sometimes be recognized as work. Similarly, children who are playing, they can shape their world as it is considered merely real, earnest, and productive asit resembles the real life.

In playing, it needs a medium called the game. Santrock cited by M. Fadlillah (2014: 26) explains that the game is a fun activity that is done for the sake of the activity itself. The game allows children to release excessive physical energy and liberating the feeling inside. Furthermore, Paul Henry Mussen quoted by M. Fadlillah (2014: 26) says there are several criteria about the game, namely: 1) the game is something that is exciting and fun, 2) the game does not have a purpose, extrinsic motivation subjective children and have no practical purpose, 3) the game is spontaneous and voluntary, freely chosen by the player, and 4) the game include the active involvement of the player. Based on some of the above opinion about the play can be concluded



that the play is an activity that is done voluntarily, without coercion that are based on intrinsic motivation to gain a sense of pleasure.

Physical and Motor Growth of The Preschoolers

By the time a child reaches the age of 2-6 years old in preschool stage there are characteristics that are clearly distinguish between the infants and the preschoolers. The difference is in appearance, body proportions, weight, body length and skills they possess. For example, the preschoolers have some muscles of the body that develop really well and it lets them showing a variety of skills. With the increasing age, the comparison between the parts of the body will change. When the children are experiencing the increasing age, the balance is under the lower limbs. Furthermore, according to Charles B. Corbin (1980: 14) a child after the first year until the first four or five years, enter the period of the most rapid growth for both physical traits and mental.

Movement of the preschoolers are more controllable and organized in patterns, such as the enforcing body in a standing position and they can pose in a relaxed hand, and they are able to set foot by moving the legs and feet. In observation of physical development, the growth of preschool children is cephalo-chaudal (ranging from the head to the back bone) and proximo-distal (starting from the center towards the edge of the body). Coarse motion is first developed before smooth muscle movement. Control of head and arm muscles is first developed than leg muscle control. Large muscles in preschool children is growing out of control towards the fingers. Children are first able to control the muscles of the arms, after which the hand muscles used for writing and cutting or cutting something. Physical development of preschool children in height and weight is next. Children grow an average height of 2 inches and gain weight between 5-7 pounds per year At the age of 5 years old, reaching the size of the adult brain. Some of them increase in size due to the number and size of the nerves, something myelinated. Average fewer girls are only smaller and lighter than boys at the age of 2-6 years old. During the preschool years, both boys and girls are more slender while the torso is longer, (John W. Santrock, 2002: 224). Furthermore, in terms of physiological development, in preschool children is characterized by a change in quantitative, qualitative, and functional work of biological systems, such as muscle contraction, blood circulation and breathing, neurotic system, production of digestive gland. In preschool children, muscles have a function as a motor controller (Soegeng Santoso et al, 2002: 10).

For preschool children, naturally they have such motor development. Motor development explained by Elizabeth B. Hurlock, (1997: 150) is the developmental control of bodily movement through the nerve center, nerve, and muscle coordination. According to Soegeng Santoso (2002: 11) preschool children have a gross and fine motor skills. Child's gross motor skills is the ability to move by using the large muscles, while fine motor skills is the ability to move by using the smooth muscles (small), for example: writing, squeezing, drawing, and so on. Children's ability to perform activities using major muscle is included into basic motor skills. This capability is useful to improve the quality of life. Basic motion is the basis of all sorts of skills that are very needed for guidance,

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training, and development so that the child can carry out swiftly and smoothly. For most normal children the skills and maturity is always associated with the basic motion. According to Yudha M. Saputra (2001: 14) children at age of 2-7 years old are included in the period of development for basic motion. In the development phase of the basic motion for children aged 2-7 years old, children begin to learn to walk at the time they are about two years and other forms of locomotor movement. Children aged 2-7 years old are basically going through a period of growth, experiencing many things, they rely on instructions and imitating others. They become more skilled in mastering basic movement skills. In this phase the child is ready to receive information from the teacher. Teachers are able to provide perceptual motor skills, basic movement skills, multilateral and integrated skills.

At age of three years old, children in general can walk a straight line and in general they have been able in running backwards, walking on tiptoe and run, and be able to throw the ball and catch the ball with both hands straightened forward. In over four years to run following the shape of a circle line. Child after the age of five is able to run strong toned with style as adults and can jump to maintain her balance generally very active preschooler. They already have a mastery or control over her body and really liked the activities undertaken alone. Tad bigger, while girls are more skilled in particular in fine motor skills.

Development of Movement Skills and Physical Fitness on The Preschoolers

Playing is a joyous activity and always liked by children. Playing is done well organized to encourage the growth and development of children. According to Yudha M. Saputra (2001: 7-9), the benefits of playing are: (1) for physical development. Children who have the opportunity to conduct playing, involve a lot of movement of the body, then the body of the child will be healthy and fit. Muscles of the body will be strong. Children can express the excessive energy through playing activities, (2) for the development of skills. Mastery of movement skills can be developed through playing activities. It can be observed in daily activities, for example, when children playing romp with his friend. At first the children are not skilled to run, to play romp, then the child will be more interested to do so, so that the child will be skilled in running, (3) for the intellectual development. Through physical activity and play, children are faced with a problem and the ability to make a decision quickly and accurately. Physical activity and a balanced playing will trigger the child's intelligence, (4) for social development. Children usually invite peers in playing activities. Children will learn a variety of property, using a toy in turn, carry out activities together, maintaining a relationship that has been built up, looking for a way of solving the problems as they face it with their friend, (5) for the development of emotion. Playing is a daily necessity for children. None of the children who do not like to play. Through playing, children can express their feelings and desires. Children are trained to control themselves. Playing activities are done with a group of friends, then each child will have an assessment of himself, about the capabilities and advantages. Assessment here is important for the formation of the concept of positive personality, (6) for the



development of sports skills. Children who are skilled, walking, running, jumping, and throwing will be better to pursue a particular sport. Children will be more skilled at performing these activities and will be more confident and feel capable of doing a more difficult movement.

The development of motor skills through playing activities led to the development of basic motor skills. Basic motor skills in preschool children were divided into three aspects called locomotor, non-locomotor, and manipulative. Locomotor skills are used to move the body from one place to another or to lift the body up. Example: walking, running, jumping tiptoe, jumping, galloping, creeping, and climbing. Non-locomotor skills performed in place, without adequate space. Example: bending, stretching, twisting, swinging, hinge, pull and push. The manipulative skills are developed when children are mastering various objects. More manipulative skills involving limbs and toes, but other body parts are also used. Object manipulation is far superior in foot-eye coordination and hand eye coordination. Coordination is important enough to process in space and motion. Example: throwing, catching, kicking, herding, kicking, hitting, and reflect. While forming of play, it is also expected to contain the basic elements of motion. The basis of this motion is the foundation for moving perceptual motor. According to Sugiyanto, (2007: 85) perceptual motor skills are the ability to interpret the stimulus received by the sensitive organs. Perceptual ability is useful to understand everything that is around, so that one is able to do or perform certain actions in accordance with the situation at hand. For example, when someone is playing the ball, he can see the ball and understand the situation of the ball, so he can play the ball according to the situation. According to Rudolph Laban cited by Hari Amirullah Rachman (2004: 33) the ability of a person's perceptual motor is formed by: 1) an understanding of the body (body awareness), 2) understanding of space (spatial awareness), 3) the quality of motion (qualities of movement), 4) connecting with objects outside the body (relationships). Understanding how the body deals with body exercise, understanding related to the space where the body is exercising, the quality of motion related to how the body exercising, while the relationship with objects outside the body relate to who or what is driven by the body.

The term is defined just like a physical fitness or physical fitness as a whole person's ability to perform daily duties without experiencing significant fatigue and still have energy remains to enjoy their leisure time as well as for unexpected needs. Physical fitness is an ability that emphasizes on physiological functions, called the ability of the heart, blood vessels, lungs and muscles to function at optimum efficiency. Physical fitness consists of various components. Physical fitness components are divided into two groups, namely physical fitness components related to health, which includes endurance, heart lung, muscle strength and endurance, flexibility, and body composition. The other components of physical fitness is associated with coordination skills include speed, power, agility, and a feeling of motion.

Physical fitness is very important for children and also affects the motor skills. Therefore, increasing the duty of child physical fitness physical education teacher, because one of the objectives of physical education is to improve the physical fitness of students. For preschool

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children, improving physical fitness can be done through the activity in the form of playing. It is very convenient, because the world of the child is playing. In providing activities for children, they should pay attention to the principles of exercise to improve physical fitness. According to Djoko Pekik Irianto (2005: 16) FITT concept should be considered in giving a good activity in the form of play in preschool children. FITT concept are: Frequency (F), play should be done regularly at least 3 times per week at intervals or intervals sufficient. Intensity (I) given game should consider the quality of excitatory, it means game should be able to make the heart beat faster than the resting heart rate, for example, in a state of rest heart rate of 70 beats per minute kid, so when children play heart rate to 100 beats per minutes, would be better if the increase in heart rate of 60 heart rate achieve maximal or higher. Time (T), it took quite a play, try the game can be more than 15 minutes, if only for a moment have not been able to play cause adaptation to quality of organs. Type (T), to be able to improve fitness, the kind of game should be adjusted to the basic characteristics of play, including the move, such as walking, running, jumping, crawling. Lift like to encourage friends, carrying friends, interesting. Stretch for example: mutual interest, contorted body. In implementing these programs, also have to consider the pleasure and safety.

Playing contains elements of physical activity, associated with an increase in the quality of children's physical, then in preparing the game needs to consider the principles that exist. As with physical fitness training, the principles that need to be considered is overload, specifity, and riversible, (Djoko Pekik Irianto, 2005: 12). Overload means, a game which is given to the child should be able to provide the physical burden on the child. Specifity means, kids games are selected according to the fitness components that will be upgraded. For example: to improve the flexibility of joints, then the shape of the selected game contains motion stretch or stalling. Riversible, means that the game needs to be designed and carried out continuously over time, if the child stops playing in a certain time, then it also stops the impact of increased physical quality.

Conclusion

Preschool period is a time of growth and development as well as the golden age period (golden age) in which children begin to receive the sensitive things or get some development efforts. Children in preschool period have a huge potential to optimize all aspects of development, including the development of motor skills and physical fitness.

Efforts that should be made to develop motor skills and physical fitness for preschoolers, is by playing activities. In realizing these efforts, it must be tailored to the stage of growth and development of children, so that the results to be achieved in accordance with the desired expectations.

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