

The Role of Physical Activity for Early Childhood

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Abstrak

In industrial revolution, social skills is an important thing that can sustain our life. Education is one of the ways that can take early as an investment in social skills in order to achieve cognitive and a better life in the future. Such social skills can be developed even enhanced through physical activity. But in developing countries one of them is Indonesia, shows data that physical activity is not an urgency in early childhood education. Parents or educators more focus on the children's cognitive abilities for formal school preparation. The study aims to describe the importance of physical activity in developing the social skills of young children. The study are used qualitative methods with a literary review technique. The results of this study found that physical activity is highly influential and is important in developing, as well as in improving children's social skills. Through physical activity, children become more able to explore a variety of things, actualize more broadly, express their emotions, and gain new knowledge through grit study. It can affect both cognitive ability and a child's life over a longer period of time in the future.

Keyword: Social Skills; Early Childhood Education; Physical Activity

Introduction

Early childhood is a period of rapid development for children. Children tend to develop more and want to explore their environment, and be active when they are at the age of 3-6 years. Therefore, parents, teachers, and everyone in the child's environment must facilitate the child's desire to be able to do physical activities freely. So that the active energy possessed by children can be channeled properly and does not make children behave negatively. Often, some schools schedule physical activity for children through physical education. Because some of them consider that physical activity in children can stimulate other aspects of development in children.

Education policy makers agree that the purpose of physical education is to stimulate and enhance children's behavioural development in daily life activities. Children learn through the interactions that occur between motor, cognitive, social and emotional. In fact, several countries and the World Health Organisation (WHO) have published guidelines on 24-hour physical activity movement for children aged 5 years that include specific recommendations on active and creative play (Tremblay et al., 2017; WHO, 2019; Cliff et al., 2017).

However, the reality is that most preschoolers are still not active enough, with only 11% meeting or exceeding the most recent international movement guidelines (Tapia-Serrano et al., 2022). For example, some schools in Riau province often only schedule children to do gymnastic activities one day a week without a clear and structured physical activity plan according to child's development. In addition, children are only directed to sit, fill out worksheets, or listen to the teacher speak. These problems are also corroborated by Putra et al. (2020) who mentioned that in the practice of physical education, early childhood faces various problems ranging from learning activities, facilities, social conditions and government policies that pay less attention to early

childhood physical education. Whereas in the school environment, Physical Education includes an organisational framework in which physical activity and sport are taught by a professional teacher within the scope and objectives of the curriculum (Johnson & Turner, 2016).

The National Standard for Physical Education states that the purpose of physical education is to develop physically literate individuals to stimulate and improve knowledge, skills, and confidence in performing physical activity over the life span (Mura et al., 2015). Haag (2011) also revealed that the development of sports science consists of seven sub-disciplines that can be a dimension of development in early childhood, which include sports medicine, sports biomechanics, sports psychology, sports sociology, sports pedagogy, sports history and sports philosophy. The seven sub-disciplines make sports science experts think about how to maintain and improve mental, cognitive and social emotional health through a method of physical activity. Because still the problem of physical activity in children is often not a special concern that is discussed and implemented by early childhood education actors including parents.

Physical activity can be broadly defined and includes a variety of different movements that can be done with others or oneself (Piggin, 2020). Furthermore, physical activity is very important for children because it can help improve physical condition, social skills, and self-esteem (Strauss et al., 2001). Improvements in children's concept of physical activity across multiple domains, having more positive feelings about appearance, strength, flexibility and cardiovascular fitness at the end of the 14-week programme (McNamee et al., 2017).

In addition, there are other studies that mention that physical activity is very important to maintain physical, and mental health and maintain the quality of life to stay healthy and fit. Lack of physical activity will increase the risk of obesity and also be a factor in reducing VO₂max (Çakir, 2019). The high prevalence of obesity in all age groups is a major public health problem. Recently, over the last 10 years, obesity in school children has increased by 30%, as much as 24.2% in children starting primary school (Board of School Aid and Scholarships of Chile & (JUNAEB), 2015). Alarmingly, recent worldwide data suggests that approximately 39 million children under the age of 5 years were classified as obese in 2020 and this number is expected to increase to 40 million by 2030 (WHO, 2021). Reinforced by obesity data in the United States from year to year for ages 2-19 years (Skinner et al., 2018). This is in line with previous literature studies. The initial study was conducted by conducting interviews and direct observations with teachers. From the results of interviews and observations conducted, it was revealed that the curriculum designed was more dominant towards the development of academic achievement (O'Neill & Kremer, 2016). The latest data from the Ministry of Education, more than 90% of primary school children have poor physical condition (Ministry of Education, 2014), while preschool children spend 60% of their time exercising with passive activities (Vásquez F, 2005).

This can certainly have an impact on the physical, and social development aspects of children. If the child is physically unhealthy and the child suffers from obesity, it will cause the child's self-confidence to decrease. Children will experience bullying by their peers and make children less confident and will then reduce children's social skills. If children's social skills decrease and become poor, it will have an impact on other children's abilities such as the development of children's academic achievement, intellectual and behavioural development, and children's adaptation at school (Wentzel et al., 2021; Hukkelberg et al., 2019; McIntyre et al., 2006).

Therefore, it is felt that the role of physical activity in children has urgency and a sustainable domino effect. This article will discuss and analyse using the literature review technique by collecting some relevant literature that can be used as a basis for developing physical activity for children and how the important role of physical activity for early childhood.

The role of physical activity for early childhood includes several things, including cognitive, communication, social, and motor skills. Several relevant studies that have been conducted previously suggest that physical activity has a very important role. Mavilidi, Okely, Chandler, and Paas (2006) in their research suggested that the use of physical activity in the classroom can help improve understanding of geography concepts in preschool children. Lorente (2017) conducted research showing that the implementation of the SPARK physical activity curriculum in California's Central Valley had a positive impact on children's participation in physical activities and the development of their motor skills. Complementing what Mevilidi et al (2006) and Lorente (2017) stated, Alba et al (2023) also suggested that physical activity has an important role. Through the application of mathematics learning in the classroom using integrated active learning through games can improve children's self-concept, self-esteem, and social skills. This is evidenced by the increase in improvisation experienced by the experimental class against the control class after and before being given active learning integrated with fun. Introducing playful learning in mathematics is recommended to support the improvement of children's self-concept, self-esteem and social skills. This is the opposite of research conducted by Carson, Lee, Hesketh (2019) which suggests that screen viewing in children can damage children's social skills because it minimises physical activity in children. Therefore, it is important for parents to invite children to do physical activities outside to be able to foster good social skills in children. Physical activity according to Ramón et al (2023) can also affect children's ability to create or more simply physical activity can affect children's creativity.

Of all the aspects that can be influenced by physical activity, social skills are the most dominant aspect that can be influenced by physical activity. Crewdson (2023) suggested in his research that cooperative activity games dominate children's social skills in giving praise. This proves that cooperative game activities in children can improve children's social skills. Supporting this research in the previous year, Meryl (2021) conducted a study which obtained the results that Game-based learning through the interactive Zoom application can significantly affect children's social skills and emotional skills.

Not only interactive digital games, games in an environment that involves a lot of physical activity can also improve social skills in children. In Indonesia, the use of traditional games Nyumpur Sarong and Ngakuk Wai, which are implemented for 2 weeks with a frequency of 3 times a week with a duration of 2 hours, can improve children's social skills. This is evident from the statistical data which shows that the number of children with low social skills has decreased from 60 children to 25 children, children with moderate social skills increased from 15 children to 25, and the number of children who have high social skills has increased from 0 children to 5 children (Maharani et al., 2021). Meanwhile, in Thailand, learning with the topic of Thai Dessert showed an increase in children's social skills with the following results There was a change in the child's assessment pretest score from 83.43% to 98.47% after the action of making Thai Dessert. While the assessment from teachers and parents on children's social skills has increased from 74.28% before the implementation of the action to 94.85% after the implementation of the action (Pongsupa, 2018).

Physical activity in children that is carried out with sufficient time both in the home and school environment can also improve communication skills, cooperation, persistence, responsibility, empathy, child involvement, child self-control (Joca, 2012; Undy, Anita C; Naughton, Geraldine; Tranter, Paul; et al., 2011). To support physical activity, parents, teachers, and other parties need to invite children to do physical activities outside the home or in a greener environment so that it can have a positive impact on children in the form of children's positive attitudes towards the environment becoming more developed, and children's relationships with their environment become better (Wanlu, Liu, Jin, Chen., 2021).

Method

This research is a qualitative research with a literature review study. In a conceptual review, researchers aim to provide an overview of the literature in a particular field, including main ideas, models and debates (Popay et al., 2006). Such a review will be made easier if key theories applicable to the topic of interest are identified (Galvan & Galvan, 2017). This research aims to conduct a literature review that examines educator professional development related studies in terms of trends, research and practice. Literature was selected from online sources including books and journal articles. Research articles were determined by searching Scopus, DOAJ, and ERIC (Educational Resources Information Centre) databases. The studies eligible for the review process were examined in detail and summarised in the specified categories. Findings included sections referring to the categories. Sources were evaluated for eligibility and relevance based on predefined categories such as professional development, educators, early childhood education, trends, research and practice. Related references in the sources checked were also analysed and relevant ones were included in the collection. Some studies were selected for the review process and summarised by category. More details about this manuscript will be described in the findings.

Results and Discussion

The results of the analysis of relevant sources derived from previous articles or research consisting of 4 articles that discuss the urgency of physical activity in early childhood, and 13 articles that discuss the impact or role of physical activity for early childhood. The first 4 articles found that there are several things that become the urgency of physical activity in early childhood including:

1. In the digital era, the proliferation of social media and digital games that make children rarely do physical activity. Children tend to do monotonous activities in front of the screen. This causes children's creativity to decrease, and causes children's cognitive and motoric abilities to also decrease.
2. Parents as the party that interacts more often with children need to be made aware of the important role of physical activity in children. Because they tend to let them play with gadgets too often.
3. The lack of physical activity carried out by children also causes children's physical health to decline. Many of the early childhood are obese due to the lack of physical activity. This can certainly affect children's cognitive, motoric, and social abilities.

Then after finding the urgency, the researchers analysed the findings in 13 articles. From 13 articles, researchers found several important roles of physical activity in early childhood. The role of physical activity in early childhood according to the 13 articles can be categorised into several aspects as follows:

1. Physical activity can affect cognitive abilities in children by increasing children's understanding of the material taught by the teacher through physical activity.

2. Physical activity can improve the development of children's motor skills.
3. Physical activity can improve children's emotional abilities and skills by the way children can regulate their emotions with peers or with their environment.
4. Physical activity can improve children's social skills in the aspects of: communication, cooperation, persistence, responsibility, empathy, child involvement, child self-control.
5. Physical activity in children can train children to interact with people around them and with their environment.

Of the six roles of physical activity in children listed in 13 relevant research articles. After the researchers analysed, each of these roles has its own dominance. Physical activity in children that affects cognitive abilities in children was found in one study, physical activity that can improve motor development in children was found in one research article, physical activity that can improve children's emotional abilities was found in one research article, physical activity that can affect self-concept in children was found in one research article, physical activity that can train children's interactions with their environment was found in one research article, while the largest number was children's physical activity that affects children's social skills found in eight research articles.

It is concluded that physical activity in early childhood tends to influence and play an important role in the development of social skills in children with aspects: communication, cooperation, persistence, responsibility, empathy, child involvement, child self-control which indirectly without us realising it is a skill needed in the digital era or in the industrial revolution 4.0 era.

In the analysis and discussion, it will be discussed one by one about the findings according to previous research with existing theories. The first finding shows that physical activity in children can affect cognitive development in children (Mavilidi, 2006). When analysed, these findings are in accordance with the theory of physical activity proposed by Bandura (1971) which states that effective learning is not just from learning by experience or feeling, but learning by seeing, and observing the activities of others. When analysed according to this theory, when a child does physical activity as part of a lesson, for example learning geography or getting to know the environment contained in the lesson plan prepared by the teacher. Then the child can directly see the real form of the learning material presented. This will facilitate children's cognitive stimuli to understand the concept of material because early childhood learns things from concrete to abstract not from abstract to concrete. In addition, the concept of learning that takes place by observation (vicarious learning) is a way of how an individual learns by observing others rather than by reinforcement. When an individual can learn through observation, they can automatically focus attention, construct images, remember, analyse and make decisions that affect learning outcomes. Thus individuals can think about the consequences of what they imitate from others so that it can affect cognitive output.

Furthermore, findings show that physical activity can improve children's motor skills or development (Lorente, 2017). Alluding to the previous theory, a child learns through a process from specialised or concrete to abstract. We can take an example in learning, often loaded how to make a cake or how to make a drink (Pongsupa, 2018). A child cannot simply imagine how to make a cake, what the ingredients are, and what kind of tools are needed. Children need hands-on practice making cakes or drinks so that physical activities outside of formal learning can support these activities to occur. Through these physical activities, children's creativity and motor skills will be stimulated. How children cut, hold a spoon, then arrange plates and so on will more directly train children's motoric so that it can improve their development and motor skills.

Physical activity can also affect children's emotional development and how children interact with their environment and peers (Wanlu, Liu, Jin, Chen., 2021; Alba, 2023). When analysed using Bandura's (1971) social cognitive theory, these findings are appropriate, because Bandura mentions in the Reciprocal Determinism theory that there are three important components in learning, namely behaviour, personality, and environment. The essence of each interconnected component in this concept is that humans process the information they get from modelling, then develop it into a series of adapted behaviours. From these theories and findings, it can be analysed that the more often a child does physical activity outdoors with other people, it will hone his emotional abilities and his interactions with other people and with the environment.

The last discussion is a discussion of the role of physical activity that is most commonly found in articles or previous research, namely physical activity is very influential on children's social abilities with specific aspects, namely: communication, cooperation, persistence, responsibility, empathy, child involvement, child self-control. If we relate it back to Bandura's theory (1971), these findings are still relevant and appropriate. That children's learning is more effective when done through observation activities which in this study is interpreted as physical activity then from physical activity will affect social skills in children which is the development of Reciprocal Determinism theory which states that social skills will affect the ability of self-efficacy. The more often children do physical activities both at home and at school, the more often children will find problems, group with others, solve problems, and interact with others. So that it will improve social skills in children.

Conclusion

From the findings and analyses conducted in this literature research, it was found that physical activity plays an important role in the development of cognitive, motoric, self-concept, children's relationship with the environment, especially the more dominant is physical activity significantly affects the development of children's social skills. This becomes a reference and input for parents, teachers, and other parties who actively interact with children to be able to provide more time and space for children both at school and at home to freely allow children to do supervised physical activities safely

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