The European Journal of Humanities and Social Sciences 2025, No 6
ISSN 2414-2344

PREMIER Publishing
ppublishing.org

DOI:10.29013/EJHSS-25-6-95-99

PHYSICAL-MOTOR ACTIVITY IN PRESCHOOL CHILDREN

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Cite: *Orges Licaj. (2025). Physical-Motor Activity in Preschool Children. European Journal of Humanities and Social Sciences 2025, No 6.* https://doi.org/10.29013/EJHSS-25-6-95-99

Abstract

Motor activity throughout early childhood is essential for personality development, making scientific research in this domain highly significant. Preschool motor instruction establishes the foundation for naturally occurring sports and pre-sports programs while also providing essential skills for personal development, significantly enhancing consistent learning in both pre-sports and academic settings. Methodology: Four bibliographic databases – PubMed, Web of Science, Google Scholar, ProQuest – were used as flexible sources for the literature review in order to gather the data for our investigation past 10 years and published in English. Key words are used; “motor skills”, “physical exercise’, “preschool children (age 3–6)”, “role of adaptation”. Results: A total of 64 references identified during the initial screening were evaluated through a systematic approach, including 16 articles from PubMed, 34 articles from Cross Ref, 9 articles from Google Scholar, and 5 books. After a comprehensive evaluation, 21 of these sources met the criteria to be considered reliable for the topic at hand. During several stages of development, physical education and sports profoundly affect the physical and mental development of children, defining it from time to time. Conclusion: Employing a comparable training methodology on an expanded scale (i.e., with programs in diverse locations and a greater number of youngsters) may optimize their motor skills. Training will facilitate the development of children’s motor skills, potentially resulting in the emergence of talents. Early talent identification is crucial to optimize the time available for the rapid development of fine and gross motor abilities. Children’s motor skills will surely develop throughout time, becoming more robust, coordinated, and agile.

Keywords: *motor skills, preschool children, role of adaptation, physical exercise*

Introduction

A child’s development is unique and should not be replicated or compared to another individual. Each child is unique in their development and progresses at different rates. Play is an enjoyable and engaging activity for children that affirms that play is their domain. Through play, children can learn to adapt to others and their environment, while simultaneously improving their motor, cognitive, and problem-solving skills (Tapia-Fuselier & Ray, 2019). Parents continue to prioritize their children’s academic performance in math and reading, believing

that these disciplines enhance their abilities (Mota et al., 2017). This belief stems from the misconception that video games are unproductive. Children benefit from purposeful, supervised play, including goal-oriented activities, with the optimal stage of life being the formative years and the present moment being critical to helping children improve their motor skills. Children's motor skills will decline if they engage exclusively in passive play, such as using touch-sensitive devices on their smartphones (Cristia & Seidl, 2015). Optimal development of motor skills is essential for daily functioning. Mixed play promotes the development of motor skills such as strength, endurance, agility, speed, balance, and coordination. D. Bergen (2009) argues that play requires enjoyment; therefore, activities that do not bring happiness cannot truly be classified as play. He argued that play is enjoyable and encourages creativity. Four areas of development – cognitive, physical, social, and communicative/linguistic – are associated with the definition of giftedness. Active engagement can improve cognitive function and problem-solving skills, while also extending attention spans. Goldstein (2012) states that engaging in two hours of intensive play each day helps alleviate hyperactivity and attention deficit disorders.

Motor skills of preschool-aged children refer to the neurological system's power to govern the execution of movement. Motor skills are classified into two categories: gross and fine. Physical examinations aim to evaluate preschoolers' (ages 4–6) gross and fine motor skills, facilitating the early detection of motor deficits in children (Bardid et al., 2016). Balance, object manipulation, and motor capabilities exemplify gross motor skills. Moreover, Rudd et al. (2015) assert that fundamental stability, object manipulation, or locomotor activities requiring a specific degree of basic motor skills are generally more effective methods for defining basic movement competencies. Preschool years are a crucial indicator of a child's future participation in several sports.

Kokštejn et al. (2017) assert that acquiring sufficient gross motor skills involves executing singular movements utilising large muscle groups, while acquiring fine motor skills necessitates performing movements that require coordination among various body parts, including hands, eyes, arms, and limbs. The coordination of hands and eyes, feet and hands, or hands and feet, together with finger movement, pertains to fine motor abilities (Carlson et al., 2013). Madrona (2014) asserts that the objective of motor development is to enable the body to achieve self-regulation, hence maximising its potential for activity.

Methodology

In order to answer the research questions, this literature evaluation was carried out using the recommendations for meta-analyses. Since the data used in this study came from earlier research that had received ethics board approval, ethics board approval was not required. The study data were handled using Microsoft Excel 2019.

Study sources and inclusion criteria:

Four bibliographic databases – PubMed, Web of Science, Google Scholar, ProQuest – were used as flexible sources for the literature review in order to gather the data for our investigation past 10 years and published in English. Key words are used; "*motor skills", "physical exercise', "preschool children (age 3–6)", "role of adaptation"*. Following the selection of scientific publications, we determined the most important details, such as methodology, tests, and key findings.

Studies were chosen for full text examination following preliminary evaluations of abstracts and different complete articles. The list was cleared of studies that did not meet the inclusion requirements. The complete article was reviewed to confirm eligibility if the title and abstract screening did not yield enough information.

Results

A total of 64 references identified during the initial screening were evaluated through a systematic approach, including 16 articles from PubMed, 34 articles from Cross Ref, 9 articles from Google Scholar, and 5 books. After a comprehensive evaluation, 21 of these sources met the criteria to be considered reliable for the topic at hand. During several stages of development, physical education and sports profoundly affect the physical and mental development of children, defining it from time to time.

Motor skills is the component where the scientific community has recognized the critical significance of motor development for the enhancement of many competencies, including cognitive and social abilities, particularly in children aged one year (Cools et al., 2009), leading to a systematic evaluation of motor skills.

The game is classified into one of three categories: constructive, role-playing, or sensorimotor. Sensorimotor play, the most fundamental form of play, is characterized by repetitive muscular motions that enhance balance, strength, speed, and agility (Spanaki et al. 2014).

Discussion

Motor skills are essential for a child's development of fundamental abilities, as they enable exploration of the environment through movement, association of items with their functions, and adaptation to ever-changing situations (Chien & Bond, 2006). Tsimaras et al. (2011) argued that fine motor activities and the utilization of instructional aides are essential elements of early childhood education. Longitudinal studies indicate that participation in physical activity and the enhancement of motor skills significantly influence health and developmental advantages (Clark et al., 2020). Consequently, preschool children are at a critical juncture for physical, cognitive, and social development (Hermann et al., 2021). Robinson et al. (2012) assert that an exceptional and innovative methodology is essential for instructing children in motor skills and encouraging physical activity. Ages of 3 to 5 years, is regarded as a crucial phase for the development of fundamental movement abilities, presumably through the attainment of sufficient levels of physical exercise (Donnelly, 2003).

Research indicates that the majority of preschool children fail to attain enough levels of physical exercise (Hinkley et al., 2012), which adversely impacts motor abilities at primary school age (Barnett et al., 2016; Bryant et al., 2014; Le Gear et al., 2012). For children residing in low-income neighbourhoods, girls, those without siblings at home, and individuals affected by the relative age effect, as these factors seem to impact children's physical activity and motor skills.

Gross motor skills pertain to large muscle groups and postural movements involving the full body or substantial sections thereof. Included are specific competencies:

- Movement skills: these involve utilizing bodily motion to traverse from one spatial position to another while coordinating the complete body. Movement-related skills encompass sprinting, galloping, jumping, sliding, and similar activities.
- Balance: this refers to the ability to maintain one's posture or stance under control while executing a specific task or activity. Two forms of balance exist: dynamic balance, which is the ability to maintain a position while moving, such as walking. It is achieved when the body sustains its balance throughout movement. The ability to sustain posture during stationary activities, such as sitting or standing, is termed static balance.

Balancing on a single leg is a common assessment for this type of equilibrium. Competencies pertaining to object management: activities centred on the manipulation of things. It encompasses any manual lab or activities that utilize hands, feet, or other implements to manipulate objects (e.g., throwing, catching, striking, etc.).

The development of children's motor skills is essential, as they constitute the foundation of everyday activities. Goal-orientated play activities are enjoyable for children as they encourage repetitive engagement with the same activity. Engaging in active play offers a multitude of advantages. The child's enhanced motor skills will result from increased muscle action and stimulation. Engaging in goal-orientated, dynamic games or swimming significantly promotes motor skill development in young children.

Conclusion

Employing a comparable training methodology on an expanded scale (i.e., with programs in diverse locations and a greater number of youngsters) may optimize their motor skills. Training will facilitate the development of children's motor skills, potentially resulting in the emergence of talents. Early talent identification is crucial to optimize the time

available for the rapid development of fine and gross motor abilities. Children's motor skills will surely develop throughout time, becoming more robust, coordinated, and agile.

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submitted 30.10.2025;
accepted for publication 14.11.2025;
published 29.12.2025

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