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**MIROSŁAW BABIARZ**

# Physical and Musical Activity of Preschool Children and Its Benefits for Their Development

ORCID: 0000-0003-2229-767X, dr hab., prof. Jan Kochanowski University in Kielce, Faculty of Pedagogy and Psychology, Institute of Pedagogy, Department of Early Childhood Education and Child Development Support, Poland; email: mbabiarz@ujk.edu.pl

**Abstract**

Physical and musical activities are key determinants supporting the holistic development of preschool-aged children. Regular physical activity promotes balanced somatic, intellectual, emotional, and social growth, positively influencing the functioning of the nervous, circulatory, respiratory, and immune systems. Movement-based play and exercises enhance coordination, perseverance, independence, self-efficacy, and social integration. Musical activity – including singing, dancing, and rhythmic play – supports emotional, social, and cognitive development by improving memory, attention, auditory perception, and motor skills. The integration of movement and music in musical–movement activities intensifies cognitive processes, fosters imagination and creativity, and prepares children for school learning. Both forms of activity also perform preventive and therapeutic functions, promoting mental and physical health and shaping pro-social and pro-health attitudes.

**Keywords:** physical activity, musical activity, child development, preschool age, dance, musical–movement activities, coordination, emotions, cognitive development, preschool education

## Introduction

Contemporary preschool education places strong emphasis on the comprehensive development of the child, encompassing physical, emotional, social, and cognitive domains. Among the most significant factors supporting this development are physical and musical activities, which naturally form part of a preschool child's everyday life. Both movement and music serve as fundamental means of self-expression, while simultaneously stimulating somatic, intellectual, and emotional growth.

Physical activity contributes to the proper functioning of the body by strengthening the muscular, skeletal, and circulatory systems, and by shaping both physical and mental resilience. Participation in movement-based play fosters social development through cooperation, adherence to rules, and the formation of positive self-esteem. Musical activity, which includes singing, dancing, and playing instruments, plays an equally important educational and therapeutic role. It stimulates cognitive processes, develops memory, attention, imagination, and linguistic abilities, and supports the acquisition of social competence.

The integration of movement and music in musical–movement activities enables the child to develop physically and mentally in a harmonious way, while cultivating emotional sensitivity and creativity. This article aims to highlight the importance of these two forms of activity in the context of preschool development and to identify the developmental benefits that arise from their implementation in early childhood education.

**Subject of research**

Physical activity has a significant and multidirectional impact on human health and quality of life. Primarily, it prevents postural defects in children, supports maintaining an appropriate body weight, aids in the reduction of adipose tissue in cases of overweight, and protects the body from numerous civilization-related diseases. Regular physical activity performed outdoors further strengthens immunity, promotes hardening of the body, and supports adaptive processes.

Motor activity contributes to reducing psychological tension and stress, improves emotional well-being, and in childhood serves as a kind of "energy reservoir" that the body draws from in later stages of development. It supports the proper functioning of internal organs and the circulatory, respiratory, nervous, and musculoskeletal systems. Furthermore, it shapes character, enhances psychological resilience, and strengthens the child's emotional competence (Maszorek-Szymala, 2010).

Regarding the aforementioned systems, movement increases joint mobility, flexibility, and elasticity of joint capsules and ligaments, promotes bone mineralization, strengthens tendons, and enhances lung vital capacity. Physical activity is also an essential factor supporting children's preparation for learning to read and write, as it improves visuomotor coordination and manual dexterity (Leżańska, Płóciennik, 2021).

Lack of physical activity leads to numerous negative health consequences, including reduced immunity, pulmonary efficiency, and overall adaptive capacity, as well as increased susceptibility to somatic diseases. Sleep disorders, digestive problems, and weakened cardiovascular function may also occur. Physical activity underpins proper cognitive development, enables school readiness, and facilitates adaptation to the educational environment.

During movement games and exercises, children integrate with peers, and by observing their capabilities, they form realistic self-assessment, influencing personality development. As physical fitness improves, the child gains confidence in their abilities, becomes more independent and self-reliant, and experiences joy, satisfaction, and a sense of accomplishment. Physical activity increases self--confidence, reduces fear and emotional tension, and also serves a preventive function by protecting against obesity and other chronic diseases (Maszorek--Szymala, 2010).

Alongside a balanced diet, physical activity is a fundamental component of obesity therapy, as it increases energy expenditure. The type and intensity of exercises should be adjusted to the individual capabilities and fitness levels of the child (Kubica, 2008).

Motor activity influences the development of:

– Somatic system – stimulates muscle development, ensures proper body mass gains, and guarantees harmonious physical growth;
– Intellectual system – enables problem-solving and supports understanding of phenomena and environmental elements;
– Psychological system – teaches experiencing success and failure, coping with stress and fatigue, and regulating emotions;
– Social system – fosters interpersonal relationships, adherence to rules, self-control, and respect for others (Trzcionka-Wieczorek, 2019).

Motor fitness also significantly affects the development of mathematical skills, as these develop during spatial activity. Preschool children with higher motor fitness "probably have greater abilities to process more complex concepts, including letters and numbers" (Witkowska, Gut, 2018, p. 141).

Movement games enhance the child's overall psychophysical fitness, with key benefits including:

– fulfilling the natural need for movement and creating a joyful atmosphere;
– strengthening immunity and physical efficiency;
– developing courage, independence, and creativity;
– fostering confidence in one's abilities and stimulating imagination;
– teaching cooperation and adherence to social norms;
– improving spatial orientation, direction and distance assessment;
– developing observation skills, logical and strategic thinking (Wlaźnik, 1996).

Walks and excursions as forms of physical activity combine learning and play, satisfying children's cognitive needs, allowing observation and experience, and enriching emotional experiences. They also foster cooperation, empathy, respect for nature, and independent thinking (Karbowniczek, Kwaśniewska, Surma, 2011).

Research published in 2006 in the *Journals of Gerontology Series A: Biological and Medical Sciences* demonstrated that physical activity stimulates neurons, leading to denser neural networks, which is crucial for cognitive development. Learning and memory processes are more efficient with a greater variety of physical activities (Koprowiak, 2020).

Dance, which can be classified as both a physical and musical activity, has particularly beneficial effects on the psychophysical development of children. It enhances overall motor fitness, strengthens muscles, develops the nervous system, and improves motor coordination. Dancing also increases endorphin levels, enhancing mood, reducing emotional tension, and generating feelings of joy.

Children who dance, clap, stomp, or sing consolidate kinesthetic-motor patterns, supporting motor memory development and sensory integration. Dance shapes character traits such as patience, perseverance, resistance to fatigue, and enhances memory, imagination, attention, and perceptiveness (Górniok-Naglik, 2000).

Music-movement activities serve two main functions: musical education and general development. They foster a sense of rhythm and musicality while stimulating cognitive processes, promoting abstract thinking, attention, and language competence (Ławrowska, 2003).

Music is a crucial factor supporting child development–it enhances concentration, memory, problem-solving, and teaches emotional regulation. Since rhythms in music correspond to life rhythms (e.g., day-night cycles, seasonal changes, daily rituals), musical and rhythmic play positively affects children's mental and physical health.

Music allows emotional expression, reduces tension, and strengthens positive emotional experiences (Podolska, 2008). This is especially evident during dance, playing instruments, or singing, which combine movement, expression, and play.

Musical activity develops visuomotor and auditory-motor coordination, preparing the child for reading and writing. Depending on the type of music, it may have a stimulating or relaxing effect – calm music promotes focus and relaxation, while rhythmic and dynamic music activates the nervous system and cognitive processes.

During dance and singing, the child's nervous system and muscles are strengthened, and breathing efficiency improves (Leżańska, Płóciennik, 2021). Singing activities support memory and rhythm development, whereas movement to music enhances imagination, coordination, and motor memory (Gandziel, 2015).

Broadly understood, musical activity promotes holistic child development. Singing improves respiratory and vocal apparatus functioning, while various musical activities enhance motor fitness.

Rhythmic and dance activities using large muscle groups develop coordination, movement fluidity, and motor planning abilities. Activities involving

clapping, snapping fingers, or playing simple instruments develop fine motor skills, while rhythmic-motor exercises enhance strength, endurance, and flexibility (Ławrowska, 2003).

Music strongly affects the child's emotional sphere. Early contact with music may create a lifelong need for engagement with music.

Musical activity supports the development of social and moral attitudes, teaches cooperation, empathy, and respect for others, and fosters responsibility for shared group achievements (Wojtanowska-Janusz, 2014). Music develops listening skills, cultural and social understanding, and verbal expression (Górniok-Naglik, 2000).

Music activities support group integration, allow emotional release, and are particularly valuable for shy or withdrawn children, facilitating social interaction, and for hyperactive children, helping them calm and relax (Sienkiewicz-Wilowska, 2012).

During collective musical activities, children learn to understand others' emotions, recognize diversity in experiences and perspectives, and engage in creative musical improvisation using props like ribbons or scarves (Woźniczka, 2010).

Musical activity requires differentiating sounds, enhancing auditory perception while also improving physical fitness, as music-based activities demand responses to tempo, rhythm, and dynamics.

Playing instruments reduces motor clumsiness, and singing or playing wind instruments strengthens the respiratory system and improves speech organs. Dance develops the body, increases flexibility, speed, strength, and endurance.

Music stimulates imagination, enriches the child's inner life, and refines perceptual abilities. Consequently, memory, attention, and concentration improve. Music education affects all developmental areas and serves a preventive function, reducing risks of social competence deficits (Wojtanowska-Janusz, 2014).

Learning songs expands vocabulary, develops phonological awareness, teaches rhythmization, and proper articulation, supporting reading and writing skills. Moreover, musical activity strengthens mathematical competencies by developing understanding of rhythm, time, sequence, order, and classification of objects (Majzner, 2015).

**Conclusion**

Physical and musical activities are integral to the holistic development of preschool children. Their role extends beyond recreation – they perform educational, preventive, and therapeutic functions that contribute to the child's overall well-being. Regular physical activity promotes proper somatic development, enhances body efficiency and coordination, and helps establish health-promoting habits. Musical activity, in turn, enriches auditory perception, stimulates cognitive

processes, and nurtures emotional and aesthetic sensitivity. Combining movement and music in daily preschool practice generates numerous benefits in emotional, social, and intellectual domains. Through such activities, children learn cooperation, self-control, empathy, and creative expression, which are essential for their balanced growth. Both forms of activity thus serve as powerful tools for supporting the child's holistic development and preparing them for further education and social life.

In conclusion, physical and musical activities should be considered indispensable components of preschool curricula, as they not only enhance motor skills and cognitive abilities but also foster pro-health, social, and emotional attitudes essential for lifelong development.

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