

Benefits of Outdoor Activities for Kindergarten Children

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Abstract:- Children who attend kindergarten are in the golden age for child development. During this period, children undergo significant advancements in various domains, such as physical, mental, and social development. Thus, outdoor activities are a crucial means to support development in these areas. The present literature review will examine the advantages of engaging children in outdoor activities during their kindergarten years. Our objective is to clarify the various benefits of outdoor activities for kindergarten children, including physical, cognitive, social, mental health, and sensory processing advantages.

Keywords:- *Outdoor Activities, Children in Kindergarten.*

I. INTRODUCTION

The importance of play in kindergarten is a vital element of childhood, functioning as a main modality for acquiring knowledge and developing. Play-based activities in the kindergarten classroom are essential for promoting children's development in a variety of areas [1]. Children exercise crucial executive processes by engaging in self-directed, imaginative interactions, including problem-solving, decision-making, and adaptable thinking [2]. It is this kind of divergent thinking that establishes the foundation for academic achievement and the development of essential 21st-century abilities. The escalating academic expectations placed on kindergarten classrooms have resulted in a worrisome pattern of decreased playtime and an increased focus on direct instruction, despite the well-recognized importance of play in early childhood [1]. This transition can have negative consequences for children's global development, as they may have difficulties participating in the self-directed, exploratory learning that is essential during this critical period. Extensive research has demonstrated that learning through play can result in substantial enhancements in children's cognitive capacities, such as improved memory, attention, and language proficiency [3]. Clements (2004) conducted an investigation that showed children who regularly engaged in outdoor play exhibited higher levels of self-esteem, social competence, and emotional control compared to their less active peers [4]. In the kindergarten years, these social-emotional advantages are especially crucial as children negotiate the intricacies of peer interactions and cultivate the self-regulation abilities essential for achieving success. Indoor play cannot completely replicate the distinct benefits that the outdoor environment offers to

children in kindergarten, aged 4-6 years old, in terms of physical development, cognitive abilities, social-emotional well-being, mental health, and sensory processing.

II. THE BENEFIT OF OUTDOOR PLAY FOR KINDERGARTEN CHILDREN

➤ *The Physical Benefits of Outdoor Play for Kindergarten Children*

Kindergarten is a critical period in a child's development, marking the transition from the more unstructured early childhood years to the more academically focused elementary school environment. During this pivotal time, children undergo significant physical, cognitive, social, and emotional growth, laying the foundation for their future health and well-being. Outdoor play is at the heart of this transformative stage, providing a wealth of physical benefits that support the holistic development of the kindergarten child. Physical activity is critical for children's healthy development in kindergarten, particularly during the kindergarten years. Studies have demonstrated that a child's physical, cognitive, and social-emotional well-being significantly benefits from regular engagement in active play and exercise [5]. From a physical standpoint, outdoor play and exploration support the development of fundamental movement skills, such as running, jumping, climbing, and balancing. These basic motor skills serve as the building blocks for more complex physical activities, enabling children to participate in a wide range of sports and recreational pursuits throughout their lives. Additionally, the physical demands of outdoor play contribute to improved cardiovascular fitness, muscular strength, and overall health, setting the stage for lifelong healthy habits.

The physical benefits of outdoor activity and exploration offer a wealth of benefits for kindergarten children, supporting the development of fundamental movement skills, cardiovascular fitness, and overall health and well-being. Fundamental movement skills: One of the primary physical benefits of outdoor play is the development of fundamental movement skills, which serve as the foundation for more complex physical activities [6]. These basic skills, such as running, jumping, climbing, and balancing, are essential for a child's ability to engage in a wide range of sports and recreational pursuits throughout their lives. Through the varied and dynamic nature of outdoor play, children have the opportunity to practice and refine these fundamental

movement skills in a natural, engaging environment. For example, climbing on playground equipment or navigating uneven terrain can help children develop balance and coordination while running and chasing games can improve their speed and agility [6]. Research has shown that children who engage in regular outdoor play demonstrate significantly better motor fitness, balance, and coordination compared to their more sedentary peers [6]. This physical proficiency not only supports their current participation in active play but also lays the groundwork for future success in sports and other physical activities.

Cardiovascular fitness: Besides fostering the development of fundamental movement skills, outdoor play significantly enhances cardiovascular fitness in kindergarten children. The physical demands of activities such as running, jumping, and climbing require the body to work harder, leading to increased heart rate and respiratory effort [5]. Over time, this sustained physical exertion can result in enhanced cardiovascular endurance, reduced risk of obesity, and improved overall health. A study by Burdette and Whitaker (2005) found that children who engaged in regular outdoor play exhibited higher levels of physical fitness, as measured by cardiovascular endurance, muscular strength, and flexibility [5]. These physical benefits can have a positive impact on a child's energy levels, sleep quality, and overall well-being, setting the stage for a lifetime of healthy habits. Moreover, the cardiovascular benefits of outdoor play can also contribute to improved cognitive functioning. Research has shown that physical activity can enhance brain development, improve memory and attention, and support the acquisition of academic skills [4]. By engaging in regular outdoor play, kindergarten children can reap the physical rewards while also bolstering their cognitive abilities, which are essential for success in the classroom and beyond.

Overall health and well-being: In addition to developing fundamental movement skills and cardiovascular fitness, outdoor play also supports kindergarten children's overall health and well-being. The natural environment provides a wealth of sensory stimulation, physical challenges, and opportunities for exploration, all of which contribute to a child's holistic development [6]. For example, exposure to natural elements, such as sunlight, fresh air, and varied terrain, can have a positive impact on a child's physical and mental health. Sunlight exposure, in particular, is essential for the production of vitamin D, which plays a crucial role in bone health, immune function, and mood regulation [5]. Additionally, the physical demands of outdoor play can support the development of strong muscles, bones, and joints, reducing the risk of injury and promoting overall physical well-being. Furthermore, the sense of freedom and autonomy inherent in outdoor play can have a profound impact on a child's social-emotional development. Giving children the chance to explore, experiment, and participate in self-directed activities fosters the development of their independence, confidence, and resilience. These social-emotional skills are essential for navigating the complexities of the kindergarten classroom and beyond, contributing to a child's overall well-being and success.

➤ *The Cognitive Benefits of Outdoor Play for Kindergarten Children*

There are numerous benefits for kindergarten children's cognitive function. Engaging in physical activity in natural environments has well-documented cognitive advantages, ranging from enhanced executive function skills to improved academic performance. They are well documented. Executive function skills One of the primary cognitive benefits of outdoor play is the development of executive function skills, which are essential for success in the classroom and beyond. Executive function refers to a set of higher-order cognitive processes, including working memory, inhibitory control, and cognitive flexibility, that enable children to plan, focus, and regulate their behavior [4]. Research has shown that children who engage in regular outdoor play exhibit enhanced executive function skills compared to their more sedentary peers. A study by Burdette and Whitaker (2005) found that kindergarten students who spent more time in unstructured outdoor play demonstrated better memory, attention, and problem-solving abilities [5]. These cognitive gains can have a direct impact on a child's academic performance, as they are better equipped to focus, retain information, and apply critical thinking skills in the classroom.

The natural environment of outdoor play provides a wealth of sensory stimulation and physical challenges that contribute to the development of executive function skills. For example, navigating uneven terrain, climbing on playground equipment, and engaging in imaginative, self-directed play require children to constantly adapt their behavior, remember instructions, and inhibit impulsive responses [6]. These cognitive demands, in turn, strengthen the neural pathways associated with executive function, laying the groundwork for future academic success. Outdoor play not only fosters the development of executive function skills but also enhances academic achievement in kindergarten children. The cognitive benefits of physical activity in natural environments can have a direct impact on a child's performance in core subject areas, such as reading, mathematics, and science. A study by Clements (2004) found that kindergarten students who engaged in regular outdoor play demonstrated higher scores on standardized tests in reading and mathematics compared to their more sedentary peers [4]. The researchers attributed these academic gains to enhanced cognitive abilities, including improved memory, attention, and problem-solving skills, fostered by outdoor play. Furthermore, the hands-on, experiential nature of outdoor learning can also contribute to a child's academic success. Giving children the chance to explore, experiment, and participate in self-directed activities in the natural world fosters a deeper understanding of scientific concepts, mathematical principles, and language skills [1]. This holistic, multisensory approach to learning can help kindergarten students make meaningful connections between academic content and their lived experiences, leading to improved comprehension and retention of information.

Creativity and imagination Outdoor play not only supports the development of executive function skills and academic achievement but also fosters creativity and

imagination in kindergarten children. The natural environment provides a wealth of sensory stimulation, physical challenges, and opportunities for open-ended exploration, all of which contribute to the cultivation of a child's creativity and imagination during outdoor play, children often encounter a variety of natural materials like sticks, leaves, and rocks, which they can utilize in inventive and unrestricted ways. This freedom to experiment, manipulate, and transform their surroundings encourages children to think divergently, generate novel ideas, and engage in creative problem-solving [2]. Furthermore, the social interactions and collaborative nature of outdoor play can also stimulate a child's creativity and imagination. When children work together to build forts, create imaginary scenarios, or solve problems, they are required to communicate, negotiate, and coordinate their ideas, leading to the development of innovative solutions and the expansion of their creative capacities [2]. Research has shown that children who engage in regular outdoor play demonstrate higher levels of creativity, as measured by their ability to generate unique ideas, think flexibly, and engage in imaginative play [6].

In short, outdoor play and physical activity are essential for the cognitive development of kindergarten children, supporting the acquisition of executive function skills, academic achievement, and creativity. By integrating these activities into the curriculum, educators can create dynamic, engaging learning environments that foster a love of learning, enhance academic performance, and support the holistic development of each child.

➤ *The Social Benefits of Outdoor Play for Kindergarten Children*

Outdoor play has social benefits. Numerous studies have demonstrated the profound impact of outdoor play on the social development of kindergarten children. Engaging in physical activity in natural environments has well-documented social advantages, ranging from enhanced social skills and peer interactions to improved emotional regulation and self-awareness. Research has shown that kindergarten students who regularly participate in outdoor play exhibit stronger social skills, such as communication, cooperation, and conflict resolution, compared to their more sedentary peers [5]. The dynamic, unstructured nature of outdoor play encourages children to navigate social situations, negotiate roles and rules, and engage in problem-solving, all of which contribute to the development of these essential social abilities. Moreover, the social interactions that occur during outdoor play can have a direct impact on a child's peer relationships and overall social well-being. When children engage in cooperative, imaginative play in the natural environment, they are required to share resources, take turns, and consider the perspectives of others [6]. These experiences not only foster the development of social skills but also promote the formation of positive, supportive peer relationships, which are crucial for a child's social and emotional development. A study by Clements (2004) found that kindergarten students who spent more time in outdoor play demonstrated higher levels of social competence, as measured by their ability to initiate and maintain positive

interactions with their peers. Strong peer relationships and social skills, when linked to improved academic performance, emotional regulation, and overall life satisfaction, can directly impact a child's overall well-being [66].

Children often navigate their emotional responses, such as frustration, excitement, or disappointment, when engaging in outdoor play. The ability to recognize, regulate, and appropriately express these emotions is a crucial component of social-emotional development, as it enables children to form and maintain positive relationships with their peers [6]. Research has shown that kindergarten students who regularly participate in outdoor play demonstrate higher levels of emotional regulation, as evidenced by their ability to manage their impulses, cope with stress, and respond to social cues in a constructive manner [5]. These emotional skills not only support positive peer interactions but also contribute to a child's overall well-being, as they are better equipped to navigate the social and academic demands of the kindergarten classroom. Furthermore, the self-directed nature of outdoor play can also foster a child's self-awareness, or their ability to understand their own thoughts, feelings, and behaviors. Giving children the freedom to explore, experiment, and engage in imaginative play in the natural environment encourages them to reflect on their own experiences, preferences, and capabilities [1]. This heightened self-awareness can, in turn, support the development of emotional regulation, making children more attuned to their internal states and better equipped to manage their responses accordingly. A study by Fjørtoft (2001) found that kindergarten students who engaged in regular outdoor play demonstrated higher levels of self-awareness, as measured by their ability to recognize and articulate their own emotions, strengths, and limitations [6]. These social-emotional advancements can significantly influence a child's overall well-being, as self-awareness plays a crucial role in emotional intelligence and is an essential skill for successfully navigating the social environment of the kindergarten classroom and beyond. kindergarten classroom and beyond.

Inclusion and membership not only enhance the development of social skills and emotional regulation but also cultivate a sense of inclusion and belonging among kindergarten children. The natural environment provides a neutral, welcoming space where children of diverse backgrounds and abilities can come together to engage in shared experiences and form meaningful outdoor play. It often presents children with opportunities to collaborate, communicate, and solve problems with their peers, irrespective of their individual differences [2]. This collaborative, inclusive approach to learning and play can help break down social barriers, promote understanding and acceptance, and cultivate a sense of community within the kindergarten classroom. Furthermore, the physical and sensory nature of outdoor play can also support the inclusion of children with diverse needs, such as those with physical, cognitive, or developmental disabilities. The natural environment often provides a more accessible, adaptable space where children can engage in activities that cater to

their unique strengths and challenges, fostering a sense of belonging and participation [4]. A study by Hirsh-Pasek et al. (2009) found that kindergarten students who regularly participated in outdoor play demonstrated higher levels of social inclusion and a stronger sense of belonging within their peer group. These social-emotional gains can have a profound impact on a child's overall well-being, as a sense of belonging and acceptance is a fundamental human need that supports healthy social-emotional development and academic success [1]. In a kindergarten setting, kindergarten teachers have the ability to create outdoor activities that not only foster social-emotional growth but also effectively integrate academic content in engaging and meaningful ways. For example, a lesson on community helpers could involve children engaging in imaginative role-play in an outdoor setting, where they collaborate to build a pretend fire station or hospital, practice communication, and problem-solving skills, and explore the roles and responsibilities of various community members [7]. By fostering this blend of play and learning, educators can cultivate a love of learning, enhance social-emotional skills, and support the holistic development of each child.

In addition to incorporating outdoor play into the daily curriculum, kindergarten educators can also explore opportunities for extended outdoor learning experiences, such as field trips to local parks, nature preserves, or other natural environments. These immersive experiences not only provide children with the social benefits of outdoor exploration but also expose them to a wealth of sensory stimulation, scientific phenomena, and opportunities for cross-curricular learning [6]. Physical activity is essential for the social development of kindergarten children, as it supports the acquisition of social skills, emotional regulation, and a sense of inclusion and belonging. By integrating these activities into the curriculum, educators can create dynamic, engaging learning environments that foster positive peer interactions, enhance social-emotional well-being, and support the holistic development of each child.

➤ *The Mental Health Benefits of Outdoor Activities for Kindergarten Children*

The research literature thoroughly documents the mental health benefits of outdoor activities for kindergarten children. Several studies have found that engaging in outdoor play and physical activity can have a positive impact on the mental health and well-being of young children. One systematic review examined the mental, physical, and social health benefits of immersive nature experiences for children and adolescents [8]. The researchers found that interacting with nature, such as through outdoor play and exploration, was associated with improved mood, reduced stress and anxiety, and enhanced social skills development. Researchers observed these benefits across a range of age groups, including young children in the kindergarten years. Similarly, a meta-analysis by Lubans et al. (2016) looked at the role of physical activity and sedentary behavior in the mental health of preschoolers, children, and adolescents. Increased participation in physical activity, including outdoor play, was associated with lower rates of mental health problems and

improved overall psychological well-being in these age groups, according to the findings. The authors noted that providing opportunities for young children to be physically active outdoors should be a priority for promoting mental health [9]. Other systematic reviews have further supported the positive impacts of natural contact on children's mental health. Tillmann et al. (2018) synthesized the evidence on the mental health benefits of interactions with nature in children and teenagers. Their analysis revealed that exposure to natural environments was associated with reduced symptoms of mental health disorders such as depression and anxiety, as well as enhanced psychological well-being [10]. Another study documented by Mygind et al. (2021) examined the effects of nature-based activities and experiences on the well-being of children and young people. The researchers found that engaging with nature, whether through outdoor play, environmental education, or other immersive experiences, had a range of mental health benefits, including improved mood, reduced stress, and enhanced social and cognitive development [8].

The COVID-19 pandemic has also highlighted the mental health benefits of outdoor activities. A study by Marques et al. (2021) investigated the impact of outdoor activity participation on the mental health and well-being of adolescents during this challenging period. The findings indicated that increased engagement in outdoor physical activities helped to mitigate the negative psychological effects of the pandemic, leading to improved mood, reduced anxiety, and better overall well-being [11]. The early childhood education literature has also highlighted the benefits of nature-based learning and play. A study by Dankiw et al. (2020) examined the physical health outcomes of nature-based early childhood education programs, which often involve increased time spent outdoors. The researchers found that these programs were associated with higher levels of physical activity, reduced sedentary behavior, and improved motor competence in young children. While the primary focus of this study was on physical health, the authors noted that the mental health benefits of nature-based education for preschoolers and kindergarteners are also well-documented [12]. Researchers have linked outdoor play and exploration to the development of critical social skills in young children. A cross-sectional study by Hinkley et al. (2018) found that increased screen time and decreased outdoor play were associated with poorer social skills in preschool-aged children. These social-emotional competencies acquired through outdoor play can have long-term implications for children's mental health and well-being as they progress through school and into adolescence [13].

Overall, the research evidence strongly suggests that engaging in outdoor activities, such as physical play, exploration of nature, and participation in nature-based education, can have significant mental health benefits for kindergarten-aged children. These benefits include improved mood, reduced stress and anxiety, enhanced social skills development, and better overall psychological well-being. Providing young children with ample opportunities to play and learn in natural environments should be a priority for

promoting their mental health and supporting their healthy development.

➤ *The Sensory Processing Benefits of Outdoor Activities for Kindergarten Children*

Research has demonstrated that engaging in outdoor activities and play significantly enhances the sensory processing development of young children, particularly those in the kindergarten age group. One systematic review by Dankiw et al. (2020) examined the physical health and developmental outcomes of nature-based early childhood education programs, which often involve increased time spent outdoors. The researchers found that these programs were associated with improved motor competence and sensory processing skills in young children. The authors noted that the sensory-rich experiences provided by outdoor play and exploration contribute to the enhancement of children's sensory integration abilities [12]. Similarly, a study by Fjørtoft (2001) investigated the influence of natural play environments on the motor fitness and motor development of 5-7-year-old children. The findings indicated that children who played in natural landscapes, such as forests and meadows, demonstrated better sensory-motor coordination, balance, and agility compared to those who played in more traditional, manufactured playgrounds. The diverse sensory stimuli present in natural settings appeared to foster improved sensory processing and integration in the young participants. Children with developmental disabilities or sensory processing disorders have also highlighted the benefits of outdoor play for sensory processing disorders. A study by Yuill et al. (2007) examined the effects of an outdoor adventure program on the sensory processing abilities of children with autism spectrum disorder. The results showed that engagement in outdoor activities led to significant improvements in sensory integration, as well as enhanced social skills and overall well-being [14].

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The early childhood education literature has further explored the sensory-rich nature of outdoor environments. A review by Kuo et al. (2019) synthesized the evidence on the cognitive, social, and emotional benefits of nature-based learning for young children. The researchers found that the multisensory experiences provided by outdoor play and exploration, such as exposure to diverse textures, sounds, and visual stimuli, contributed to the development of children's sensory processing and integration abilities. Besides the direct benefits on sensory processing, studies have linked outdoor activities to the development of other crucial skills in young children [15]. A study by Hinkley et al. (2018) found that increased screen time and decreased outdoor play were associated with poorer social skills and motor competence in preschool-aged children. Outdoor play enhances these foundational skills, which can have long-term implications for children's sensory processing and overall development as they progress through school and into adolescence [13]. The COVID-19 pandemic has also highlighted the positive impacts of nature-based experiences on sensory processing. A study by Marques et al. (2021) investigated the role of outdoor activity participation in supporting the well-being of adolescents during this challenging period. The findings indicated that increased engagement in outdoor physical activities helped to mitigate the negative effects of the pandemic on various aspects of health and development, including sensory processing and integration [16].

Overall, the research evidence strongly suggests that engaging in outdoor activities, such as physical play, exploration of natural environments, and participation in nature-based education, can have significant benefits for the sensory processing development of kindergarten-aged children. These benefits include improved sensory-motor coordination, enhanced sensory integration abilities, and the development of foundational skills that support overall sensory processing. Providing young children with ample opportunities to play and learn in natural settings should be a priority for supporting their sensory development and overall well-being.

III. CONCLUSION

Outdoor activities are crucial for kindergarten children, as they undergo significant advancements in physical, mental, and social development, as well as in sensory processing. These activities promote children's cognitive abilities, such as improved memory, attention, and language proficiency, which are essential for academic achievement and the development of 21st-century abilities. However, the escalating academic expectations in kindergarten classrooms have led to decreased playtime and an increased focus on direct instruction, negatively impacting children's global development. In short,

to facilitate optimal child development, it is crucial to carefully design early development education.

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