Outdoor play and why it's important

ECE resources

Outdoor play can occur in various contexts, including developed or maintained spaces such as landscaped parks and playgrounds, as well as relatively natural wild spaces such as fields and bush. Forest School is a form of outdoor play provision, influenced by practices in Scandinavia, that involves regular outdoor learning sessions in an area of bush. School and early childhood setting playgrounds form other contexts for outdoor play, and may constitute open spaces of both grass and tarmac, manufactured and/or built equipment, and, increasingly, natural elements, habitats or gardens. Outdoor environments might hold affordances for:

- constructive play such as building shelters, dens and other constructions with loose parts
- symbolic or dramatic play including playing house or pirates
- locomotive play involving gross motor activities and skills, such as running, hide and seek, and chase games which tend to take place where there are large open spaces

Children are spending less time playing outdoors, and particularly in natural environments, than in previous generations, despite the fact that outdoor play has a range of developmental benefits beyond physical and social development and the evidence base exploring the benefits of outdoor play is extensive. Many findings are quite robust, holding consistent across age groups, school types and research methodologies, although there are some issues with a lack of description of methodological processes and the ways in which children engage with the environment. There are some inconsistencies in definitions of 'nature' and 'natural environments' and their analysis, making it difficult to compare and transfer findings. There are also difficulties in researching unquantifiable measures related to the emotional and sensory aspects of being in nature, for example, or attributes such as resilience. Bias is rarely acknowledged, despite researchers tending to be advocates of pedagogies related to outdoor and nature play.

Research suggests that outdoor play:

- **correlates with higher physical activity levels,** which are associated with numerous health benefits including physical fitness, metabolic function and bone health, while children's lack of access to outdoor play is thought to be a contributing factor to health issues such as increased levels of depression and obesity.
- **encourages healthy behaviour habits** with robust evidence associating physical and mental health benefits with outdoor play. Research also demonstrates that activity habits formed during childhood tend to continue into adulthood.
- **supports children's learning,** as research shows that children have better opportunities to play without distractions or interruptions outdoors and that there is increased opportunity for making choices and constructing play activities and spaces, leading to more complex play. Children find learning outdoors more motivating, enjoyable and memorable. Exercise improves children's executive functions, such as the ability to inhibit impulses and the ability to hold information in working memory, and physical activity has been shown to be linked to academic success,

particularly in reading and maths, as well as IQ more generally, although research findings in this area are a little inconsistent.

- **builds children's independence and self-esteem,** as outdoor spaces encourage autonomy, especially when teachers trust children to explore independently. Children can come to perceive wild outdoor spaces, in particular, as their own domain and develop feelings of competence and self-efficacy.

Why are natural outdoor spaces important?

Outdoor play in natural environments (environments not developed and maintained by humans) is shown to have a greater impact on children's learning and development than outdoor play in designed or manufactured outdoor spaces. Natural environments are thought to offer a number of benefits for children's learning and development.

Research finds that natural environments offer **greater affordances or challenges and loose parts,** especially where natural spaces have a diversity of landscape elements, vegetation and topography (gradients and textures). This leads to greater inventiveness and creativity, extended engagement and exploration, more diverse, complex and cognitively demanding play activities, more complex movement, risk-taking, problem-solving, and social competencies. Manufactured equipment and fixed structures, on the other hand, support physical development but are rarely associated with complex dramatic play scenarios or cognitively demanding play.

Play in natural environments also **supports children's attention skills and cognitive resources.** Research finds that children who spend time in natural settings demonstrate superior cognitive performance and effectiveness in terms of attention skills, working memory, self-regulation and self-discipline. Concentration and attention require mental effort, and the more effortless form of attention associated with natural environments offers respite from, and restores, focused attention. Time spent outdoors in natural settings is associated with lower hyperactivity and inattention symptoms, while limiting children's time in outdoor spaces is linked to attention difficulties. Cognitive ability is also found to be improved by reduced stress levels and noise.

Natural environments offer **greater safety** by providing children opportunities for diverse forms of free play. This can reduce social hierarchies related to physical competence that occur when physical activity is the only activity catered for, and increase civil and cooperative behaviours and decrease confrontation and frustration. Naturalised playgrounds also offer softer play surfaces and calmer flows of movement. They also offer greater **space** for free movement, noisier, messier or more boisterous play, larger scale constructions, and role plays, as well as direct and **sensory-rich experience** of natural phenomena, weather, seasons and shadows. The vegetation and soft surfaces of natural spaces dampen noise, and enable children to learn in more kinaesthetic ways and through hands-on involvement.

This means that outdoor play in nature is found to enhance:

- **cognitive development** through unique opportunities for problem-solving, discovery, creativity, decision-making, mastery and control, and risk-taking. Some research suggests students in school have higher achievement when they have access to natural outdoor areas, although data is inconsistent, and there is quite robust evidence that gardening projects lead to modest gains in science learning. Adults are found to engage with and support children's play more in natural spaces, which is likely to enhance cognitive development.
- **positive learning dispositions** as well as motivation, involvement and endurance. The ability to take risks and successfully overcome challenges develops confidence, self-esteem, and self-efficacy or feelings of mastery, which are in turn linked to enhanced resilience.

- **emotional wellbeing** by restoring positive emotions, particularly for children with behavioural difficulties, and increasing positive feelings such as playfulness and a sense of freedom. Play in nature-based settings is found to lead to children being happier, having better emotional adjustment, regulation and mental health, and experiencing reduced stress, anxiety, depression, anger and aggression. It is important to note, however, that some children may find outdoor experiences frightening or unpleasant because of fear of hazards or the handling of natural materials.
- **health** due to increased physical activity, the restorative effects of being in nature, and the reduction of negative feelings such as anger. Built play equipment is associated with more vigorous activity but more children are likely to engage in at least moderate exercise and diverse gross-motor activities upon playgrounds with natural elements, as these offer better conditions for children of all abilities. High quality outdoor environments that include trees, shrubs and hills, for example, are associated with improved cardiorespiratory and musculoskeletal fitness, lower blood pressure, leaner bodies, longer sleep at night, greater diversity of skin bacteria and fewer allergies, increased Vitamin D levels, and better overall wellbeing.
- **physical skills and development,** particularly balance and co-ordination, as well as fitness. Forest School is linked to improved stamina as well. Engagement with a diversity of equipment and materials positively impacts on motor skill development, and demanding movement tasks such as those associated with more rugged, uneven and complex landscapes foster physical learning more than stereotypic movements.
- **linguistic development, language and communication skills** including descriptive language use, listening skills, sophisticated conversations and metacommunication or communication about language. This is thought to be due to the lack of background noise and other constraints upon communication of indoor settings, as well as the extended vocabulary accompanying the use of unfamiliar loose parts and diverse play experiences.
- **personal and social skills,** such as self-knowledge, learning to take risks and overcome uncertainty and fear, as well as friendships and social bonds. Children who have access to nature demonstrate greater prosocial, civil and courteous behaviours and increased social play with children of different sexes, ages and other variables, as a result of natural play spaces being minimally structured to afford co-operative and complex play and a choice of activities and roles. The use of loose parts is found to increase negotiation amongst children alongside other positive social behaviours such as teamwork, turn taking, leadership, the inclusion of others, and dealing with peer conflicts.
- **creativity and imagination** due to the changeable environment and flexible materials. Children are found to engage in a greater number of fantasy roles rather than domestic roles in natural environments, and use higher numbers of imaginative object substitutions and transformations.
- **sensory integration processes**, in which the senses are activated in combination, integrating, for example, the visual, vestibular (balance) and proprioceptive (sensors of muscles, tendons and joints) systems. Children who have limited outdoor play opportunities are found to have limited sensory perception.
- **connection with nature** and a sense of relationship and relatedness to the natural world, which are important for helping children develop respect and care for the environment. Positive experiences of nature in early childhood are reliably associated with an increase in environmental behaviours that continue into adulthood, such as environmental stewardship. Children who have experience of natural settings also have greater environmental knowledge.

Further Reading

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