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Development

Active Outdoor Play

Valerie Carson, PhD, Madison Boyd, MSc

University of Alberta, Canada

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Introduction

Play is a fundamental part of childhood and is typically defined as a spontaneous, enjoyable, and self-directed activity with no external goal.[1] Active play is one main type of play.[1] Active play can occur indoors and outdoors but this section will focus on active outdoor play.

Subject

Definition: A scientific review on active play in early childhood identified common terms used in definitions of active play including, increased energy exerted, rough and tumble, gross motor movement, unstructured, freely chosen, and fun.[2] Furthermore, common examples of active play were also identified, including swinging, climbing, pulling, balancing, jumping, rolling, running, and skipping.[2] Based on this current research a working definition of active play was created: “A form of gross motor or total body movement in which young children exert energy in a freely chosen, fun, and unstructured manner.”[2] (pg. 164)

Settings: Active outdoor play in early childhood is typically supported by parents in the home (e.g., back-yard) and surrounding neighbourhood (e.g., park) settings.[3] However, since the number of children attending child care outside the home is increasing,[4] the importance of the child care setting for supporting outdoor play opportunities is increasingly being recognized.[5-7]

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Prevalence: Information on how much time young children currently spend in active outdoor play is limited to a small number of studies. For example, in a representative sample of Canadian children (3-4 years), parents reported an average of 1.6 (children cared for at home) to 2.1 (children cared for outside of home) hours of outdoor time per day.[8] Conversely, in relatively large samples of young children from Australia (2-5 years) and the United States (3 years), parents reported average outdoor play time as 3.1 hours a day and 2.6 (weekday) to 3.8 (weekend) hours a day, respectively.[9,10] Similarly, in a large sample of children followed from the age of 3 to 6 across five European countries (Germany, Spain, Italy, Poland, Belgium) average outdoor play across the 4 time-points was 2.4 (weekday) and 3.2 (weekend) hours a day, respectively.[11] Bigger day of the week differences were observed in a large representative sample of Swedish 4-year-olds, with parents reporting double the amount of daily outdoor play on weekend days (3 hours) compared to weekdays (1.5 hours).[12] Cultural differences have been noted in outdoor play.[13] For example, in a small sample, it was observed that outdoor time was significantly higher in a Swedish preschool setting compared to a United States preschool setting (211 versus 91 minutes per day).[14] Furthermore, in a large sample of 3-6 year olds from China, outdoor play was higher among male children and those living in urban versus rural areas.[15]

The COVID-19 pandemic also impacted young children's outdoor play. In a study of preschool children (3-4 years) from 14 countries, parents reported that their child's outdoor time during the height of COVID-19 pandemic restrictions (May-June 2020) was less than their outdoor time prior to March 2020.[16] In a sample of Canadian children (1-4 years at baseline) who were followed throughout the first two years of the COVID-19 pandemic, outdoor play significantly increased by 30 minutes in April and October of 2020, compared to the month before March 11, 2020. However, by April 2022, outdoor play had returned to pre-pandemic levels.[17] It is also important to note that this body of evidence regarding the prevalence of outdoor play likely overestimates active outdoor play because not all outdoor play is active.[18]

Problems

In some countries, there is evidence to suggest that children's outdoor play has been declining in recent decades.[19-22] This decline has been attributed to various cultural changes including the increase of perceived safety risks by parents,[23-27] the growing presence of sedentary screen time in children's lives,[23,26-28] and the hurried, overscheduled, and academically focused lifestyle.[24,25,29] Parental concerns around children's safety is thought to be one of the biggest barriers to active outdoor play.[28,30] For example, in a sample of over 400 Australian mothers with 3.5 year olds, 42%

perceived that it was not safe for children to play outdoors in their neighbourhood during the day.[31] Commonly perceived safety risks include stranger abduction, bullies/teenagers, child pedestrian collisions, and injuries.[26,30,32] Despite findings that the frequency and seriousness of these risks are quite low, parents are increasingly monitoring their children's play, enrolling children in more structured activities, and keeping children indoors.[25,26,30] Similar barriers have been reported by early childhood educators in the child care setting, including safety precautions, fear of injury,[33-35] and a focus on school readiness.[33] However, the level of perceived risk by parents and early child educators appears to vary from country to country.[32,36]

Research Context and Key Research Questions

The majority of research on active outdoor play in early childhood has been published in the last 10 to 15 years.[2] Existing evidence is primarily observational using cross-sectional designs, and therefore of lower quality.[2] Consequently, there are a number of research questions to be answered in this area. Three key research questions that are gaining increasing attention include: 1) What are the unique benefits of active outdoor play? 2) What is the role of the child care setting in promoting active outdoor play? 3) How do we accurately measure active outdoor play?

Recent Research Results

Benefits: Studies have found that when children play outdoors, they are more physically active then when they play indoors,[25,26] likely due to less space and equipment restrictions.[37] Therefore, active outdoor play is associated with healthy physical, social, emotional, and cognitive development due to the increased engagement in physical activity.[38] However, the benefits of active outdoor play extend beyond the well-known health benefits of physical activity. For instance, research has found that active outdoor play and access to green space is associated with higher vitamin D levels,[39] improved mental wellbeing,40 better attention behaviours,[41-43] better self-regulation,[44] and improved spatial working memory.[45]

Child care setting: Child care represents an important setting for a large proportion of children to engage in active outdoor play during the day time.[46,47] Policies at the national, state/provincial, local or centre level may be one potential strategy to ensure young children have adequate active outdoor play opportunities when cared for outside of the home.[48,49] Recent research has examined provincial/state policy.[50-52] For example, in Canada, all provincial regulatory bodies mandate daily

outdoor play if weather conditions are appropriate but only three provinces specify the frequency or time for outdoor play.[50,53] Similarly in the United States, most States (86%) recommend daily outdoor time[51] but few (n=9) provide minimum lengths.[52] Several studies have also examined outdoor play policies at the child care centre level.[54-58] Overall, these studies have highlighted the importance of policies being translated into practice,[54] for example, through resources and training for early childhood educators,58 and ensuring the content of policies are not restrictive to outdoor active play (e.g., weather-related policies).[55]

Research Gaps

Given the infancy of research on active outdoor play in early childhood a number of research gaps exist. One key gap involves the current measurement of active outdoor play.[2,59,60] Questionnaires administered to parents or educators, are prone to measurement error, and activity monitors typically lack the contextual information needed to identify active outdoor play. However, an accurate measure of active outdoor play that combines activity monitors, global positioning systems (GPS), and log books has been introduced in older children.[61,62] Future research should determine if a similar technique is feasible to use in early childhood, and whether it can improve our understanding of active outdoor play. It is also unclear how much active outdoor play is needed daily for optimal growth and development.8 Therefore, future research should examine different amounts of active outdoor play with a variety of health indicators in early childhood to inform an evidence-based benchmark that can be promoted.

Conclusions

According to the United Nations High Commission for Human Rights, play is a fundamental right for every child.[63] Several organizations worldwide have endorsed the importance of active outdoor play and have encouraged future research in this area.[26,64,65] However, parents from around the world have reported that children today play outside less compared to previous generations,[19,22,23,66] largely due to cultural changes around parenting and technology.[23,25-27] This decline is a major concern as active outdoor play is strongly related to physical activity in children,25 an important behaviour in healthy growth and development.[38] Furthermore, active outdoor play is associated with unique health benefits above and beyond those of physical activity.[39-45] Efforts to reverse the trend of declining active outdoor play in early childhood should consider home, neighbourhood, and child care settings. There are several relevant partners across these settings that can play an important role in increasing active outdoor play in early

childhood.[26]

Implications for Parents, Services and Policy

Despite the research gaps in active outdoor play, recommendations for relevant audiences can still be made based on current evidence. Young children have limited autonomy from adults. Therefore, parents, early childhood educators, and other caregivers are the gatekeepers for outdoor active play opportunities in early childhood. To encourage healthy growth and development, these individuals should aim to strike a balance with scheduled activities, screen time, and free time so children have ample opportunities to engage in active outdoor play.[67] Health care professionals and policymakers also play key roles in supporting outdoor active play in early childhood. Where policy does not already exist, regulatory bodies should add policy in child care settings around minimum frequency and duration of daily outdoor time, and policy should be updated as evidence evolves. Additionally, health care professionals should promote active outdoor play to families across settings and weather conditions as an important component of healthy growth and development.[29] Emphasis should be placed on the feasibility of facilitating outdoor active play opportunities for children, given specific programming or equipment is not required.[2] Though research is needed to continue to advance knowledge in this area, these collective efforts are a starting point to ensure all children regularly experience the joy of playing in the great outdoors.

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