

## How an early learning and child care program embraced outdoor play: A case study

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**Abstract:** Research indicates outdoor play influences children's physical, cognitive and social-emotional well-being, but there are barriers to implementation in early learning settings. This study explores an early learning and child care (ELCC) program achieving success with outdoor play to identify strategies that may help overcome barriers and support outdoor play in similar contexts. Focus groups and interviews were conducted with ELCC program Early Childhood Educators (ECEs) and facilitators, school teachers and principal, and government staff. Data also included relevant documentation and photographs of the outdoor play spaces. Thematic analysis of all data was completed, resulting in a description of the ELCC program's outdoor play space and practices and factors that may be influencing these identified practices. Six themes or influencing factors were identified: 1) outdoor play, including loose parts and risky play, is valued; 2) outdoor play is promoted and engaged in by others; 3) space and resources are available; 4) communication and engagement happens; 5) leaders are integral; and 6) partnerships and collaboration are essential. Using Bronfenbrenner's ecological systems model, this research identifies outdoor play implementation strategies that may provide guidance to ELCC stakeholders such as ECEs and policymakers. To overcome outdoor play challenges, considerations should be made to purposefully target and engage multiple subsystems and stakeholders as described in this study for greatest impact.

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### Introduction

Early childhood (birth to eight years old) represents a highly sensitive time in human development as children's early experiences and opportunities are critical determinants of their future health, behaviour, and learning (Irwin et al., 2007; McCain et al., 2011). The importance of play for optimizing child development is well established (Ginsburg, 2007), with play being recognized by the United Nations High Commission for Human Rights as a right of every child (International Play Association, 2012). Play has been shown to positively influence children's physical, cognitive, and social-emotional development (Ginsburg, 2007; Parrott & Cohen, 2020; Pellegrini & Smith, 1998). Although both indoor and outdoor environments provide valuable play experiences, the outdoor environment is associated with unique play opportunities and benefits (Gray et al., 2015; Kemple et al., 2016; Tremblay et al., 2015). In 2015, a Position Statement on Active Outdoor Play was published (Tremblay et al., 2015), recommending that children's opportunities for self-directed play outdoors, with its risks, be prioritized in all settings – at home, at school, in child care, in the community and in nature. Although outdoor play with its risks is recognized as beneficial, and even crucial, for children's optimal development, there continues to be challenges with ensuring that children have these opportunities in the spaces and places where they spend their early years, such as early learning and child care (ELCC) programs. A substantial amount of research has been done to understand the various perceptions and barriers of outdoor play (Jayasuriya et al., 2016; MacQuarrie et al., 2022; Spencer et al., 2019, 2021). The purpose of this study was to offer a new focus on identifying the factors

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that contribute to success by exploring the implementation of outdoor play in an ELCC program that has managed to move beyond the commonly reported challenges.

## Literature Review

Much of the benefits of outdoor play can be attributed to the greater opportunities for risky and loose parts play afforded by the natural environment (Sandseter, 2007; Stephenson, 2003). Risky play is commonly defined as “a form of play that is thrilling and exciting, which involves uncertainty, unpredictability and varying degrees of risk-taking” (Lee et al., 2022) and comprises eight categories (playing at great heights, at great speed, with dangerous tools, near dangerous elements (water, fire), rough and tumble play, independent exploration, with impact, and vicarious play) (Sandseter & Kleppe, 2019). Encountering risks gives children the opportunity to assess situations and problem-solve (risk management), and to fail and try again, which helps to develop resilience (Farmer et al., 2017; Roojien & Newstead, 2016; Sandseter & Sando, 2016); through risky play, children also become more self-confident (Brussoni et al., 2012, 2015; Spencer et al., 2021). Risky play is also associated with increased physical activity (Sando et al., 2021) and is, therefore, a catalyst for the multitude of known benefits of physical activity including enhanced fine and gross motor skills (Fjørtoft, 2001; Johnson et al., 2005), executive functioning (Becker et al., 2014; Scudder et al., 2016), sleep quality (Taylor & Kuo, 2011), cardiovascular endurance and obesity prevention (Johnson et al., 2005).

Loose parts are a recognized facilitator of risky play (Flannigan & Dietze, 2017; Spencer et al., 2019, 2021), and there is growing research on the benefits of loose parts play to children’s physical, cognitive and socio-emotional development (Branje et al., 2022; Gibson et al., 2017; Spencer et al., 2019). The term “loose parts”, developed by Nicholson (1971), is used to describe non-fixed materials (natural or manufactured, such as sticks or rope) that can be manipulated, transformed, and created through child-led play. More recently, a scoping review of terms related to play, learning and teaching outdoors (Lee et al., 2022), updated this definition, noting that loose parts are, “natural or manufactured materials with no specific set of directions that can be used alone or combined with other materials, moved, carried, combined, redesigned, lined up, and taken apart and put back together in multiple ways and used for play” (Lee et al., 2022, p. 12). Loose parts and the fluctuating outdoor environment create affordances for children, the possibilities that an environmental feature or object provides to an individual (Gibson, 1977; Sando & Sandseter, 2020). Research by Flannigan and Dietze (2017) notes that loose parts can offer children a variety of opportunities for play, social interaction, language, and risk-taking, and inclusivity of gender and age. Play with loose parts enables opportunities for problem-solving, cultivating independence and confidence, and building relationships and leadership (Bundy et al., 2009; Farmer et al., 2017; Spencer et al., 2019). Loose parts also offer opportunities for movement and therefore increased levels of physical activity (Branje et al., 2022; Gibson et al., 2017; Spencer et al., 2019). Some of these benefits of risky and loose parts play, including increased physical activity, resilience and confidence, contribute to children’s physical literacy, a term used to describe an individual’s confidence, motivation, competence and individual value in pursuing physical skills and activities (Edwards et al., 2017). In addition to the benefits highlighted from risky and loose parts play, playing outdoors in green space has been shown to reduce stress and improve attention (McCormick, 2017; Taylor & Kuo, 2011; Wells, 2000).

Despite these benefits, there is evidence that children’s engagement in outdoor play has decreased in recent years. A Canadian non-profit organization, ParticipACTION, has been releasing yearly Report Cards synthesizing evidence from multiple sources to determine how well Canadian children are achieving healthy, active lifestyles. The ParticipACTION Report Card (2020) indicated that Canadian five- to six-year-old children are spending an average of between 1.8 hours (when cared for at home) to 2.1 hours (when cared for in a non-school, childcare setting) per day outdoors, prompting a recommendation for promoting and supporting more outdoor play opportunities. Not enough time outdoors is a concern being raised beyond Canada. The majority of mothers from one study in the United States shared the feeling that their children were spending less time playing outside than children from even a few years earlier, and that they recalled engaging in more outdoor play as a child than their children do (Clements, 2004). In a nationally

representative survey conducted in the United States, just half of the sample of preschool children were reported to have at least one outdoor play opportunity per day (Tandon et al., 2012). And in Australian childcare settings, children aged one- to five-years-old have been found to spend as much as 80% of their time sedentary (Ellis et al., 2016). The barriers to outdoor play in ELCC settings are complex (Sandseter et al., 2020) and require a comprehensive theoretical approach, such as a socio-ecological model, to better understand the factors impacting outdoor play and how they interact (MacQuarrie et al., 2022).

Barriers of outdoor play in ELCC settings can be explored using Bronfenbrenner's (1994) ecological systems model, which includes five subsystems (microsystem, mesosystem, exosystem, macrosystem, chronosystem) that are interrelated and interact to influence, in this case, children's outdoor play behavior (MacQuarrie et al., 2022). Positive parental attitudes and support for outdoor play have been identified as correlates for outdoor play (Lee et al., 2021). Although research indicates parents and ECEs (*microsystem*) generally value and understand the benefits of outdoor play (MacQuarrie et al., 2022; McFarland & Laird, 2018; Spencer et al., 2019, 2021), these positive attitudes can be hindered by a variety of culturally-fluctuating factors including school readiness pressures (Kane, 2016; Lin & Yawkey, 2013; O'Gorman & Ailwood, 2012), perceptions of risky play (Spencer et al., 2019, 2021), and safety concerns (e.g., environmental hazards, potential for injury) (Lee et al., 2021; MacQuarrie et al., 2022; Spencer et al., 2019, 2021). These safety concerns are heightened when there is little communication between ECEs and parents around risky play and outdoor play practices (*mesosystem*) (Sandseter et al., 2017; Spencer et al., 2021). Policies and regulations also influence outdoor play (*exosystem*), such as when an ELCC program is located in a school setting and the rest of the school follows a different curriculum or structure, thereby presenting possible tension. Other barriers to outdoor play at the exosystem level are environmental factors, such as lack of play space, and urban/suburban (rather than rural) environments (Lee et al., 2021; MacQuarrie et al., 2022; Sandseter et al., 2020), and concerns around the durability, quantities, and storage of loose parts (Spencer et al., 2019). At the macrosystem and chronosystem levels, ECEs may feel the need to prevent even minor injuries to children at all costs ('surplus safety framework', Spencer et al., 2019, 2021; Wyver et al., 2010) due to perceptions around regulations and administrative reporting of injuries (Spencer et al., 2021) and a perceived rise in litigious culture (Little et al., 2012; Sandseter et al., 2020; Sandseter & Sando, 2016). The cold season and weather conditions have also been shown to reduce time spent outdoors (Lee et al., 2021; MacQuarrie et al., 2022; Sandseter et al., 2020).

Bronfenbrenner's ecological systems model has previously been used in early childhood research, including seeking to understand the perceptions and barriers (as utilized above) of outdoor play and physical activity (Graham et al., 2022; MacQuarrie et al., 2022; Martinez-Andrés et al., 2020). Given the perceptions and barriers of outdoor play have been well documented already, this study instead seeks to use Bronfenbrenner's ecological systems model to purposefully explore facilitators of positive outdoor play practices and experiences. Notwithstanding the reports of decreased time outdoors and the barriers, there are ELCC settings where outdoor play continues to be an integral part of daily programming and includes opportunities for risky and loose parts play. The following case study will explore the implementation of outdoor play in an ELCC program achieving such success. The objectives of this research are to explore what outdoor play practices are being implemented at the ELCC program and determine what factors enabled the identified outdoor play practices to occur at the ELCC program. Using Bronfenbrenner's ecological systems model, key factors to overcoming barriers and supporting outdoor play in ELCC programs and similar contexts will be identified across subsystems, offering possible areas of focus and action for both ECEs and policymakers.

## Method

### Research Design

This research study followed a qualitative, exploratory, embedded, single-case study design (Yin, 2018) to acquire an in-depth understanding of outdoor play in one ELCC program. This research design reflects an interpretive research paradigm, believing there to be multiple realities and focusing on uncovering participants' perspectives (Wahyuni, 2012).

## **Research Sample**

Following research ethics board approval from Mount Saint Vincent University (#2018-076), one ELCC program in Nova Scotia, Canada was chosen using a purposive sampling method. To uncover how barriers to outdoor play can be overcome, the ELCC program was selected on the basis of their successful implementation of outdoor play according to Nova Scotia's Early Learning Curriculum Framework (Province of Nova Scotia, 2018) following recommendations from Government of Nova Scotia staff and other relevant professionals. Prior to data collection, consent was obtained from the school in which the ELCC program was situated and the relevant regional school authorities.

## **Data Collection Tools**

Following a case study approach (Yin, 2018), a variety of methods were used to collect data between December 2018 and February 2019 including 30- to 60-minute focus groups and interviews, photographs, and documentation. The focus groups and interviews were conducted using semi-structured guides that included questions focused on the participants' values and perceptions of outdoor play and the ELCC program's outdoor play practices.

## **Case Site and Participants**

The ELCC program selected was based in an elementary school serving approximately 150 students from Pre-primary to Grade Six (ages approximately 4-11 years) in a small, rural community in Nova Scotia. Nova Scotia is located in south-eastern Canada, experiencing a range of cold and hot temperatures and precipitation (snow, rain) across seasons. This ELCC program operates from September to June, experiencing temperatures typically ranging between -15 to 5 degrees Celsius in the winter months (mid-December to mid-March) and 0 to 20 degrees Celsius in the Fall and Spring months (mid-September to mid-December; mid-March to mid-June) (Tourism Nova Scotia, 2021). The ELCC program included two ECEs and 19 children between 4 to 5 years of age.

Through focus groups and interviews, photographs, and relevant documents, information was provided about the outdoor play practices engaged in by the ELCC program and the factors that could have contributed to the ability to engage in the identified practices. The first focus group was with the two ELCC program Early Childhood Educators (ECEs). During the focus group, the ECEs used documentation, such as learning stories, to support the discussion around the ELCC program's outdoor play spaces and practices. Scans of these documents were later emailed to the lead researcher to be included in analysis. Immediately following the focus group, both ECEs provided a tour of the designated outdoor play spaces (even those used occasionally). Photographs were taken by the lead researcher (without children visible).

The second focus group was with two elementary school teachers. A total of six interviews were completed, with two ELCC program facilitators, one school principal, and three government staff. Similar to the ECEs, these other participants were also asked to share any relevant documents that may speak to the outdoor play practices and spaces at this ELCC program, such as links to external outdoor play resources used by the school.

Throughout the results, participants are referred to by participant type (ELCC, school, government) to preserve their anonymity. See Table 1 for a description of the participant types.

**Table 1.** Description of participant types

Participant Type	Included Participants	Description
ELCC participants	Two ELCC program ECEs and two ELCC program facilitators	<p>Participants who are employed by the Nova Scotia Department of Education and Early Childhood Development and work directly in/with the ELCC program on a regular basis.</p> <p>ELCC program ECEs: Responsible for children's daily programming and care in the program.</p> <p>ELCC program facilitators: Support ECEs within the region with ELCC programming.</p>
School participants	One school principal and two elementary school teachers.	<p>Participants who work on-site for the school, but not for the ELCC program specifically.</p> <p>One teacher teaches Grade One. One teacher teaches Grade Two.</p>
Government participants	One development specialist, one regional manager, and one physical activity consultant	<p>Participants who are employed by different Government of Nova Scotia departments and do not work directly with the ELCC program on a regular basis.</p> <p>Development specialist: Employed by the Nova Scotia Department of Education and Early Childhood Development. Primarily responsible for ordering and delivering ELCC program equipment and materials, and supporting inclusion.</p> <p>Physical activity consultant and regional manager: Employed by the Department of Communities, Culture, Tourism and Heritage. Focused on supporting sport and recreation within their region, often through collaborating with community organizations and programs.</p>

## Analysis of Data

Focus group and interview audio-recordings were transcribed verbatim using Express Scribe Transcription NCH Software. Transcripts were de-identified to remove any identifying information. All transcripts, photographs, documents, and field notes were managed and analysed with assistance from the NVivo software program. Thematic analysis followed the six steps outlined by Braun and Clarke (2006) and followed an inductive analytic strategy by working with the data 'from the ground up' (Yin, 2018, p. 169). The six steps included: 1) Reviewing and becoming familiar with the data; 2) generating an initial set of codes to begin meaningfully grouping the data; 3) exploring relationships between initial codes to identify which ones may combine to form broader themes; 4) reviewing and refining the themes; 5) defining and naming the themes (Braun & Clarke, 2006). A separate researcher supported the lead researcher by reviewing and discussing initial codes, patterns and relationships between codes, and the eventual defining of themes. This process did not always remain linear, with the lead researcher at times going back and forth between steps.

## Findings

### Outdoor Play Practices

A general map of the ELCC program and school's property and outdoor play spaces can be seen in Figure 1. The children and ECEs use all the on-site outdoor play spaces with the exception of the manufactured equipment zones. The most actively used outdoor play space for both the ELCC program children and the school students is the wooded area.



**Figure 1.** Map of ELCC program and school's property.

Throughout the wooded area is a gravel trail (see Figure 2), a slackline, tree logs of varying lengths, tires, tree stumps, and old Christmas trees donated by members of the community. The brook and bridge along the property line are considered off-limits to the children. See Figures 3 and 4 for a photograph showing some of these items.



**Figure 2.** Beginning of the gravel trail in the wooded area. December 13, 2018.



**Figure 3.** Tires, logs, stumps and sticks in the wooded area. December 13, 2018.





Figure 4. Brook and bridge along the property line of the wooded area. December 13, 2018.

The ECEs and children typically spend about an hour outdoors morning and afternoon unless the weather conditions are particularly cold and/or wet. During Nova Scotia's warmer months (approximately April through October), the ECEs and children will spend the majority of their day outdoors. The children and ECEs engage in weather-related activities including sledding, playing in the puddles, and looking for worms and salamanders. For the most part, the children are in the woods exploring and playing with loose parts. The children also engage in risky play including tree climbing, freely exploring the wooded area, hiding among shrubs, and building with real tools (e.g., saws, hammers). The ECEs lead some organized activities, including guided walks and examining natural elements (e.g., bark, fungi). Many of the activities either bring elements of the outdoors indoors (e.g., collecting natural loose parts for art projects) or bring typically indoor activities outdoors (e.g., making salt dough to use as faces on trees).

### Factors Influencing Outdoor Play

The collected data from participants, photographs and documents also provided implicit referencing to identify factors that would have influenced the identified activities: (1) outdoor play, including loose parts and risky play, is valued; (2) outdoor play is promoted and engaged in by others; (3) space and resources are available; (4) communication happens; (5) leaders are integral; and (6) partnerships and collaboration are essential.

#### *Outdoor Play, Including Loose Parts and Risky Play, is Valued*

**Outdoor play.** Participants described the outdoors as being 'a second classroom' with outdoor play being the opportunity for children to engage in internally motivated activities and explore in, or near, nature with exposure to fresh air and access to space to move.

Participants explained that outdoor play affords learning opportunities and benefits to children's overall development, including increased physical activity and opportunities for gross motor skill and physical literacy development. Many participants shared their own positive experiences growing up playing outdoors and indicated their on-going desire to provide similar experiences to today's children.

I think of how I played like I literally got up every day and went to my friends' we knocked on the door... we went in the woods we built tree forts we cut up worms we dug in the dirt we ran we rode our bikes... I think we have to just go back to the basics and teach children how to enjoy the environment around them. (ELCC participant)

When asked more specifically, participants responded that loose parts and risky play are components of outdoor play that offer unique benefits for children.

**Loose parts.** Participants described loose parts as manufactured or natural manipulable objects that offer multiple functions, with examples including tires, sticks, rocks, and drainage pipes. Participants added that loose parts are 'tools for learning' that provide endless opportunities for children to use their creativity and imagination, more so than typical manufactured playground structures. Participants explained that, through loose parts play, children interact with their peers more, practicing and improving their language and social skills (e.g., sharing, negotiating).

We often think of having single-focused or minimal-focused materials outside such as large climbers... but what the research will actually support is that having more open-ended materials that they can interact with as they see

appropriate is more—is better for them developmentally and allows them greater opportunities to develop all their skills in all areas of development. (Government participant)

**Risky play.** Participants described risky play as engaging in activities that may cause children feelings of fear but provide them with challenges to test their personal boundaries, physically and/or emotionally (e.g., climbing trees, playing with real tools). Participants indicated that risky play helps children to learn how to move their bodies, make decisions, problem-solve, self-regulate, develop confidence, and take risks safely. A few participants pointed out that what is risky for one child may not be for another.

...for one child risky play could be climbing up on a stump that they've never climbed up on before and then jumping down because to them there's some risk involved it's something that they've never done they're learning new skills...but for another child it could be climbing to the second branch of a tree. (Government participant)

...there's so much to learn outside! You know? Like climbing a tree isn't just climbing a tree it's 'where do I put my foot? Am I touching in three places at all times? ... 'Are my friends being respectful of the space around me?'... 'Do I need help? If I can't do it myself do I get to do it?'... So it's not just that physical experience but it's all those other pieces that come with it that you don't get inside. (ELCC participant)

Participants compared the concepts of 'risk' and 'hazard' by explaining that hazards are dangerous and need to be avoided/removed from the play environment. This differs from opportunities or challenges offered through risky play. For this reason, some ELCC and government participants noted they prefer to call risky play 'adventurous play' to avoid the stigma of negative or harmful outcomes.

... risk is the butterflies in your belly that little bit of excitement that little bit of fear, but you still conquer it, and hazard is like actual dangerous things around right? Broken glass, concrete chunks... (ELCC participant)

**Children appear to value outdoor play.** Participants offered insight on their perspective of how the children and their guardians feel about the ongoing outdoor play practices at the program. Some of the ELCC and school participants noted that the children do not complain about being bored and rather appear to be enjoying the available loose parts and variety of play opportunities, even children who were initially less comfortable with playing outside.

...they were ecstatic to be in this big puddle and it was just fun to watch them you know it was only about four—four or five inches deep but, you'd think they were up to their necks in water and just playing and splashing. (School participant)

I think our kids thrive and there are kids that—that weren't comfortable with it probably at the beginning of the year and they were getting more comfortable with it because it's not often that we're inside. (ELCC participant)

**Guardians appear to value outdoor play.** According to ELCC and school participants, the children's guardians similarly appear to be enjoying the presented outdoor play opportunities, including the loose parts and risky play, despite occasional accidents (i.e., scrapes, bruises) or children's clothes becoming dirty from play. ELCC participants have even heard some guardians considering integrating loose parts into their own backyards.

### *Outdoor Play is Promoted and Engaged in by Others*

Participants indicated that different aspects of the ELCC program's outdoor play practices are being practiced and promoted by the rest of the school as well as off-site in the community itself. One ELCC participant suggested that the outdoor play practices have overall been accepted and easy to engage in because of how similar they are to the rest of the school and what the school had already been implementing before the introduction of the ELCC program. ELCC and school participants explained that the entire school tries to go outside in a variety of weather conditions, spends the majority of their time in the wooded area using loose parts when outdoors, and tries to bring academic and physical education activities outdoors when possible.

Beyond the school and ELCC program, other organizations in the community are also working to promote, sustain and/or engage in similar outdoor play practices. Government participants shared how part of their role has been to support a community organization dedicated to encouraging children's physical activity and outdoor play through initiatives such as after-school programs and community and



professional learning opportunities. According to these participants, municipalities from all over this region have introduced more natural play spaces in their communities that include more loose parts and less manufactured playground structures.

Many of the municipal units in the [region name] are developing natural play spaces and parks and green spaces and playgrounds which often have—or more so these days have loose parts incorporated, taking advantage of the natural play space and less building of structures, or purchasing plastic kind of structures. So we see that happening in communities all around the region. (Government participant)

A few participants suggested that the rural aspect of the community has also set the children up for outdoor play success in that they are more likely to have been provided opportunities to engage in risky play and/or have parents who grew up playing outdoors.

These are rural kids too, their parents I think probably grew up in—playing in the woods and stuff so it's not so far removed whereas maybe in an inner-city or a town school it may be a bit different but the kids that I've seen the outdoor play be really successful are rural—are smaller rural schools that allow the kids—I don't know maybe to take more risks within a more regulated area. (School participant)

### *Space and Resources are Available*

Both ELCC and school participants commented on how fortunate this ELCC program is in terms of the outdoor spaces they have access to, especially the wooded area which simultaneously provides space, risky play opportunities and natural loose parts. Some participants noted that this amount and type of natural outdoor space is not a feature for all ELCC programs, which they indicated would be challenging for outdoor play implementation.

In addition to the wooded area's natural loose parts, ELCC and school participants indicated manufactured and natural loose parts continue to be collected, including community-donated old Christmas trees and tires. There is even a shed to store some of their smaller loose parts (e.g., pots, pans). Beyond space and loose parts, ELCC and school participants identified other resources they have had access to such as rain suits that prevent children's clothes from becoming dirty in wet weather.

...so the children all have access to—to something that protects their clothing when they're outside because that's a huge factor especially in our rural community. I'm sure it would be urban as well honestly but, you know trying to mitigate how much wet and dirt is going home because that's not the parents' job if we put them through that play it's our job to make sure that they're not going home and—and adding too much to the plate of—of the family. (ELCC participant)

### *Communication Happens*

The ELCC participants indicated they believe their outdoor play practices have been well-received by guardians because of the ECEs' communication with guardians about expectations for outdoor play at the program. They indicated that the ECEs share outdoor play knowledge and learning stories, photographs and experiences of the children engaging in outdoor play with guardians, typically during pick-up. Because pick-up occurs outdoors, guardians are also able to see for themselves the outdoor play practices in action.

We've set ourselves up for success though, cause in all of our communication in the beginning one of the things that we said was 'we—we encourage outdoor messy play. Your child is going to get dirty. Their clothes are going to get dirty'. (ELCC participant)

The ECEs' communication also extends to other ECEs. One of the ECEs explained that allowing children to engage in loose parts and risky play initially required a 'mental shift' for them. They indicated having the other ECE's knowledge and experience in outdoor play and their mentorship helped them to overcome this challenge over three to four months.

So she's taught me a lot about basically how—really, how—how the program is. Cause it is very new this program. So I feel, coming into the program had it not been for someone with some experience would have way more challenges. I just feel that I just think, you know, you need somewhat of a guidance. (ELCC participant)

The ECEs also communicate about outdoor play with the children, detailing outdoor play expectations and guidelines (e.g., off-limit areas for play) and guiding the children through learning new

skills (e.g., tree climbing, using real tools). Participants indicated this communication with the children is key to allowing the children to engage in risky play while still promoting safety.

If you want to climb on that pile of wood look at it. Are they all rickety and mis-matched is it gonna move a bunch when you step on it? Is it wet? Is it slippery?... but it's talking them through because they have to learn to make those decisions. (ELCC participant)

### *Leaders are Integral*

Within this ELCC program, school, and surrounding community exists various leaders that have contributed to enabling the identified outdoor play practices to occur. ELCC and school participants indicated there were key school staff who opened the wooded area to outdoor play and shared guidelines with school staff and students around increasingly independent outdoor play practices built around more natural elements. These participants indicated that school staff continue to take initiative in collecting outdoor play materials and demonstrating overall support for the ELCC program.

Leadership is additionally provided by the participants who work with the ELCC program from an off-site position. The ELCC participants indicated that the ELCC program facilitator provides them with guidance around outdoor play and checks in with the ECEs to provide support and ensure they have the tools they need to continue playing outdoors. It was also indicated that the facilitator helps to educate others in the community about outdoor play practices.

### *Partnerships and Collaboration are Essential*

Participants indicated that a government-supported community organization had a positive impact on outdoor play in the community, particularly through the development of outdoor play-focused professional development (PD) training modules. Government participants discussed these modules and provided some description of what they involved.

...we developed five modules that were designed to help Early Childhood Educators integrate outdoor play within their practice so moving what they're doing inside the classroom outside the classroom, as well as going over the benefits so how — facilitating a conversation with them to draw out the benefits that the kids are getting and then we move into sort of the adult role and how they can interact in the outdoor environment with the children that they're working with as well as developing an outdoor play philosophy... (Government participant)

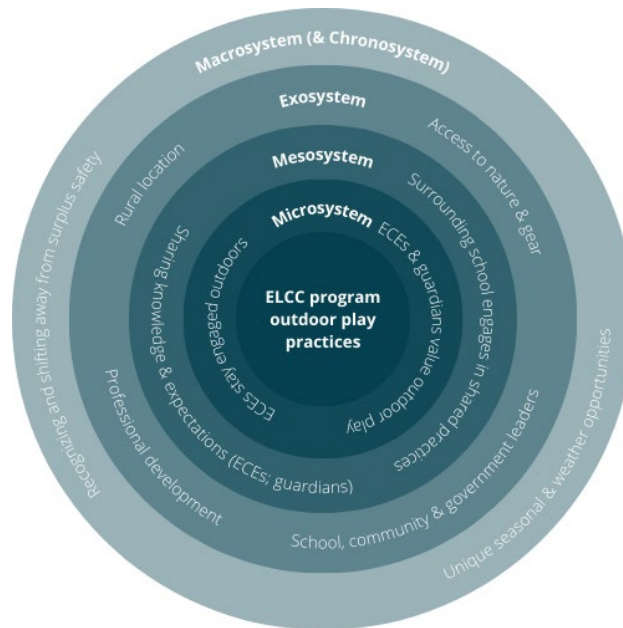
A couple of the ELCC participants attended the testing trial of these modules, and one of these participants indicated they believe it was this training that enhanced their skills to educate and communicate with others about outdoor play.

Collaboration was also brought up by participants, specifically between the ELCC program and the rest of the school. ELCC and school participants indicated the ECEs and children are encouraged to use available school resources and attend school activities. ELCC participants indicated the ECEs even arrange opportunities for the children and other school students to play outdoors together.

## **Conclusion and Discussion**

The purpose of this research study was to explore the implementation of outdoor play in an ELCC program that has successfully supported and implemented outdoor play, in the hopes of offering potential strategies for other ELCC programs and similar contexts that may be facing some of the commonly cited barriers to outdoor play implementation. To achieve this purpose, this study focused on the objectives of exploring what outdoor play practices are implemented by the ECEs and children and what factors enabled the identified outdoor play practices to occur.

Outdoor play implementation at this ELCC program involves the use of many outdoor play spaces in a variety of weather conditions, but mostly a wooded area that involves natural loose parts play, risk-taking opportunities, and some ECE-led group activities. Participants also implicitly referred to factors that would have influenced these outdoor play practices. An adapted visual of Bronfenbrenner's ecological systems model (see Figure 5) considers where these influencing factors fit within the five subsystems and how they interact to influence the children's outdoor play behaviours.



**Figure 5.** Adapted visual of Bronfenbrenner's ecological systems model with factors that support outdoor play implementation based on the findings of this study.

Research indicates that engaging multiple systems and stakeholders results in more effective implementation of change for both school and ELCC settings (Messing et al., 2019). The findings of this study further supports that notion and provides a descriptive case study of how this ELCC program overcame barriers to outdoor play through involvement of various subsystems and stakeholders (e.g., parents, ECES, school staff, community organizations, government).

At the microsystem level, this research identified that both the children's guardians and ECES appear to value outdoor play. Although there is evidence that guardians and ECES typically value outdoor play (MacQuarrie et al., 2022; McFarland & Laird, 2018; Spencer et al., 2019, 2021), research shows that guardians may still be hesitant due to perceived school readiness pressures (Kane, 2016; Lin & Yawkey, 2013; O'Gorman & Ailwood, 2012) and safety concerns (Lee et al., 2021; MacQuarrie et al., 2022; Spencer et al., 2019, 2021). These pressures and concerns may be reduced at this site due to ECES' communication with guardians (mesosystem).

The results further demonstrate that the ECES engage with the children outdoors, rather than resort to a supervisory-role due to safety concerns (Bundy et al., 2009; McClintic & Petty, 2015; Spencer et al., 2019, 2021). The ECES' ability to remain engaged and promote risky play may be attributed to prioritizing communication with the children (e.g., outdoor play expectations, guidelines), ECES' communication with guardians (mesosystem), leadership (exosystem) and the professional development (PD) opportunity (exosystem).

Mesosystem influencing factors brought up by participants included communication and the integration of the ELCC program with the rest of the school. ELCC participants indicated communication between the ECES and guardians about outdoor play has maintained guardians' support and comfort with their outdoor play practices, confirming previous research that shows ECE-guardian communication improves guardians' support for outdoor play (Jayasuriya et al., 2016), risky play (Spencer et al., 2021) and play-based learning as a whole (Breathnach et al., 2016). Additionally, ECES sharing their outdoor play knowledge and experience with each other was integral to a smooth transition to outdoor play. This is aligned with how ECES in Spencer et al.'s (2021) study shared that communication around risky play expectations and comfort levels was required whenever there were staff changes. Finally, participants indicated the ELCC program's outdoor play is supported by the school staff. This may have allowed the ECES to feel at ease to implement their desired outdoor play practices.

This research shows there are policies, regulations, external supports and environmental factors

(exosystem) influencing the children's outdoor play. This ELCC program is situated within a school and near community organizations that are both promoting and engaging in similar outdoor play practices. The school's principal and physical education teacher also served as leaders by increasing access to outdoor play space and resources. This is notable as outdoor play culture as demonstrated at this ELCC program does ultimately influence outdoor play progress (Lawson Foundation, 2019) and school-level leadership tends to have a large influence on school improvement efforts (Gurr & Drysdale, 2018). These ECEs also had access to outdoor play PD, which had a positive influence on the ECEs' knowledge, value, and implementation of outdoor play (microsystem) as well as their ability to communicate about outdoor play with others (mesosystem). The importance of PD to support communication around outdoor play and risky play with others is consistent with previous literature (Spencer et al., 2021).

Considering environmental factors to this ELCC program's success with outdoor play, a few participants referenced the rural aspect of this community as a benefit. These participants described that living in a rural community meant the children had more opportunities for risky play outdoors, which is supported by current literature (Lee et al., 2021; MacQuarrie et al., 2022). Participants' perceptions included that being in a rural community also meant the children's parents would likely have grown up playing outdoors and would therefore have more positive attitudes and support for outdoor play. Another benefit of being in a rural location was the ELCC program's access to plenty of natural outdoor play space. Both ELCC and school participants recognized that this type of outdoor play space is not available at all ELCC programs, and that outdoor play would be challenging without it (Lee et al., 2021; Sandseter et al., 2020).

At the macrosystem (and chronosystem) level, participants discussed changing societal beliefs/ideologies and approaches to the different seasons and weather that have been influencing children's outdoor play. Participants shared their personal perceptions that children are not provided the freedom to experience the same play opportunities they themselves had experienced growing up (Little, 2015; Spencer et al., 2021) for reasons such as adults' increasing pre-occupation with injury-prevention and the assumption that risky play ultimately leads to injury. These comments by participants support the surplus safety framework (Bundy et al., 2009; Little et al., 2012; Sandseter & Sando, 2016) and the perceived litigious culture in Canada (Brussoni et al., 2015). ELCC participants also indicated that some of the children began the program lacking basic play skills and being hesitant about the outdoors, which they attributed to less time outdoors and playing with other children at home due to increased technology use. Current literature would support this concern (ParticipACTION, 2020; Slutsky & DeShetler, 2017), but also offer that this reported hesitancy outdoors could instead or also be due to children requiring time to adjust to loose parts (Spencer et al., 2019). Finally, cold seasons and weather conditions are also commonly cited barriers for outdoor play (Lee et al., 2021; MacQuarrie et al., 2022; Sandseter et al., 2020). Although ELCC participants did note they spend more time outdoors during warmer seasons, they still overcame much of this barrier through their value of engaging in the unique play opportunities that come with changing seasons and weather (e.g., finding salamanders, puddle jumping) and having the right gear (e.g., rain suits).

### **Strengths and Limitations**

Although much research already exists on barriers to outdoor play, this study addresses a gap in research by identifying what factors may be critical in overcoming such barriers. By exploring these factors using Bronfenbrenner's ecological systems model, this study supports and promotes the importance of a multi-component approach to overcoming barriers to outdoor play implementation in an ELCC context. This research provides perspective to multiple realities relevant to this ELCC program through a range of data collection. The interaction between participants in the focus groups led to unique and valuable data, which could have been further increased with a larger number of recruited participants per focus group. Future research should also include input from the children and their guardians, as well as teachers from other grades who may hold a different perspective on outdoor play. Additionally, a multi-case research design could allow for an exploration of how outdoor play is being implemented at various ELCC programs across Nova Scotia, providing robust cross-case information (Yin, 2018).

### **Conclusion**

This research provides an understanding of what outdoor play implementation looks like at one ELCC program in Nova Scotia, and the factors that have influenced current outdoor play practices. The children are provided outdoor play opportunities that enhance their overall development through experiences that encourage them to take risks and be creative, educate them about the natural world and foster the development of new skills. Participants identified several factors that translate to actionable items for both ECEs and policymakers that contribute to the delivery of successful outdoor play, and using Bronfenbrenner's ecological systems model, this research provides insight as to how these factors interact across subsystems. For example, an actionable item for ECEs would be to focus on sharing outdoor play knowledge and expectations with each other, guardians and children. However, this is more likely to be possible and have a positive impact if the ECEs have the support of the surrounding school. Policymakers must ensure outdoor play policies, leadership and professional development extend to the surrounding school and broader community, not just the ELCC program, in order for ECEs to have the appropriate climate and opportunity to share their outdoor play knowledge and expectations. As such, supporting outdoor play in ELCC settings should not be narrowly targeted. Although perhaps a common strategy when trying to support outdoor play, focusing solely on the ELCC environment (e.g., equipment, outdoor space) and/or ECE practices (e.g., sharing outdoor play knowledge and expectations) involves only one to two subsystems and one stakeholder group. Future efforts should ideally extend to also include the broader community, addressing multiple subsystems and stakeholders that influence ELCC programs for more effective impact. Considering the influence of the surrounding school and community on this ELCC program's outdoor play practices, policymakers supporting ELCC programs should consider exploring ECE, school and interdepartmental collaboration when addressing outdoor play challenges.

## Declarations

### *Authors' Declarations*

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