

# Outdoor activities promoting mental and physical health and well-being in Sámi Early Childhood Education and Care institutions

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**Abstract:** This article explores the current situation of outdoor play for children in Sámi Early Childhood Education and Care institutions (ECECs) in Norway. The main objective is to discover how Sámi ECEC practices contribute to outdoor play and learning in early childhood education and community contexts by addressing the following research questions: How do Sámi ECEC staff emphasize outdoor activities and play in their daily practice, and how can these activities be regarded as a way of promoting mental and physical health and well-being? The sample comprises practitioners from seven Sámi ECEC institutions (ECECs) participating in focus-group and individual interviews. The main focus of the interviews was on Sámi ECECs as health-promoting arenas, and outdoor activities appeared to be important in this context. Stepwise-Deductive Induction was used as a qualitative research strategy in the analysis. The staff underline the importance of letting children attempt to be autonomous when it comes to physical and practical activities. They point to the importance of knowing the children and encouraging autonomous achievements. Traditionally, Sámi upbringing places emphasis on doing handicraft and daily work together with the children. The staff describe doing such daily outdoor activities as harvesting, handicraft, and food preparation together with the children as a way of maintaining Sámi culture. The main conclusion is that outdoor activities are important for promoting, experiencing, and contributing to Sámi pedagogy and children's well-being in the Sámi ECECs.

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## Introduction

This study explores how a sample of Sámi Early Childhood Education and Care institutions (ECECs) in Norway emphasize outdoor activities and play to promote mental and physical health and well-being. Our study, from seven South-, Lule- and North-Sámi ECECs in Norway, concentrates on children aged 4–6. Early childhood education and care refers to integrated services for children from 0–6 years of age. In Norway in 2022, ECECs were attended by 93.4 percent of children aged 1–5 years at some point before school start at the age of six (Statistics Norway, 2023). ECECs run by the public authorities constitute the most common institutional type of ECEC in Norway, but there are also quite a few private institutions. The local authorities in Norway are obliged to make ECEC places available to all children regardless of parental employment status. The local authorities can either provide the services themselves or may use private sector ECECs.

In recent years the number of Sámi ECECs has increased so that in 2019 there were 53 institutions that were either Sámi ECECs or had a special Sámi department (Storvik, 2021). The main aim of this article is to discuss how Sámi ECEC practices can contribute to outdoor play and learning in early childhood education and community contexts by addressing the following research question:

- How do Sámi ECEC staff emphasize outdoor activities and play in their daily practice, and how can these activities be regarded as a way of promoting mental and physical health and well-being?

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ECEC is an important aspect of children's early development and has been shown to have significant long-term effects on their health and well-being (e.g., outdoor play is favourably associated with preschool children's social skills, Hinkley et al., 2018, p.1).

### **Well-being; Definition, Research and Sámi context**

Well-being for children can be defined in a number of ways, and the definitions are slightly different than for adults. We use this definition:

Children's well-being is a dynamic state in a certain environment, which can be expressed by joy, and risk factors are kept to a minimum. This state of well-being is dynamic, because it is dependent on the fulfilment of the child's physical, social and emotional needs, which is influenced by protective and risk factors within the nature of the child and the different environments wherein the child participates (Van Trijp & Lekhal 2018, p. 45).

Outdoor activities and play with access to green space can be regarded as part of promoting mental and physical health and well-being (McCormick, 2017, p. 3). Being out in nature has been shown to have numerous physical health benefits, such as boosting the immune system, improving overall mental health, and reducing stress, anxiety, and depression (Jackson et al., 2021; McCormick, 2017; Piccininni et al., 2018, Sudimac et al., 2022, p. 4446). Outdoor play also promotes social and emotional development. Children learn to interact with others and manage their emotions in a natural setting (Bjørgen & Moe, 2021; Brussoni et al., 2015; Hinkley et al., 2018; McCormick, 2017). A systematic review concluded that even more benefits can be achieved by giving children access to nature, for example improved mental well-being, overall health and cognitive development, attention restoration, memory improvement, competence-raising, supportive social groups, self-discipline, less stress, improved behaviour, less symptoms of ADHD and higher standardized test scores (McCormick, 2017, p. 3).

A study by Sudimac et al. (2022, p. 4446) concluded that going for a one hour walk in nature could have salutogenic effects on stress-related brain regions, and could be a preventive measure against mental strain and potential disease. Sandseter et al. (2023) found that children's involvement in risky play matures their competence and helps them master more complex psychosocial settings. Risky play, often outside, increases the child's psychosocial competence here-and-now and in adulthood.

We will now very briefly position the Sámi upbringing practices compared to practices in other cultural contexts. Balto (2023, p. 117) interprets from her research review that the main essence of Sámi education is to raise children to be Sámi, to be good people, to act responsibly, to support good health, to see the consequences of one's actions, and to live in peace with other people, the environment, the local community, nature and all living things.

The Sámi culture and way of life are linked to a "presence in nature and traditional use of natural resources". One study showed that Sámi young people had a close relationship with nature and the value of using nature had been passed on from their parents. This was important for the well-being of Sámi people of all ages (Hansen & Skaar, 2021). According to Balto (2023, p. 129), the Sámi have an eco-philosophical worldview: Humans are seen as dependent on nature and all living things. This worldview is present in fairy tales, stories, proverbs, research, joike (traditional song), art, and poetry. Gratani (et al. 2016) found that Indigenous people's values are often built on five principles: (1) connection between past and present, (2) traditions that give them respect for nature, (3) connection to nature, (4) an understanding that health and well-being are based on their environment, and (5) knowledge of how the environment supplies food. In line with this, Ness and Munkejord (2021) concluded that Sámi informants connected well-being to: a) connection to nature; b) connection to reindeer; and c) connection to family. At the same time they also point out that research on the well-being of Sámi people should always consider the individual's life story and what constitutes well-being for them personally (Ness & Munkejord, 2021, p. 1).

These positive effects of activity and play outdoors might be particularly important for Sámi children as part of an Indigenous population that more often than the majority population in Norway experiences additional stressors and mental health problems related to discrimination and marginalization (Eriksen et al. 2018; Hansen & Skaar, 2021). Quantitative research on Indigenous children's mental health

internationally has largely focused on negative outcomes:

Indigenous children living in high income countries share many of the same risk and protective factors associated with mental health. The evidence linking children's familial environment, psychological traits, substance use and experiences of discrimination with mental health outcomes highlights key targets for more concerted efforts to develop initiatives to improve the mental health of Indigenous children (Young et al., 2017, p. 1).

According to a study by Laiti et al. (2022, p. 794), Sámi culture is founded on such traditional values as "respect for nature, and the activities constructed based on these values are implemented in Sámi early childhood education". Nature is "considered to provide the framework for a good life". Laiti et al. (2022) also found that ECEC educators acted as agents for imparting Sámi culture by teaching children "to adopt the values, the world view, and practices of the Sámi culture". ECEC staff "modified their activities according to Sámi culture and were flexible in their use of space and time in a way that allowed them to teach nature-related knowledge and respect it in a culturally sustainable way. Sustainable education influences individuals' learning, awakening, behavior, and choices."

Pedagogical research into Norwegian majority contexts, on the other hand, has mainly concentrated on what happens within the school and ECECs as institutions, and has been less concerned with contextual conditions (Birkeland, 2009).

### **The Sámi ECEC**

Norway is founded on territory belonging to Norwegians and the Sámi. The Sámi people are a minority population and an Indigenous group traditionally living in the Arctic (Norway, Finland, Sweden) and Russia. Sámi culture and language are in a vulnerable position, and ECECs are of value as they can contribute to the preservation and strengthening of Sámi culture (Laiti et al., 2022, p. 783). That children in the Norwegian part of Sápmi (Norway, Sweden, Finland and Russia) have the right to attend ECECs with Sámi language is the result of long processes, changes in the law, and human rights regulations. ECECs for Indigenous people are relatively unique globally. In Norway, Sweden and Finland, the Indigenous status of the Sámi is protected in the constitution, but the Sámi have different rights and formal status in each of the countries (Nutti, 2023). In this article we will only describe the Norwegian tradition and policy for Sámi ECECs.

The current understanding of Sámi ECECs in the Norwegian context is that Norway is committed through national law and such international declarations as ILO-169 and the UN Declaration on the Rights of Indigenous Peoples (UNDRIP) to give Indigenous people like the Sámi recognition of and education adapted to their culture (Olsen & Andreassen, 2017, p. 257). Sámi culture and rights are more visible in the 2017 Framework Plan for Kindergarten in Norway (Ministry of Education and Research [MoER], 2017) than in the older framework plans. The Norwegian state today has a policy that acknowledges the Sámi culture, perspectives, and history more than has been the case historically (Olsen & Andreassen, 2017). Even so, according to the National Audit Office "Riksrevisjonen" (2019), the lack of Sámi teachers and teaching materials is a persistent problem in Sámi education on all levels, from ECECs to the universities. It is difficult to recruit ECEC teachers who have competence in Sámi language and culture. Moreover, there are too few teachers who can provide language teaching in the Lule-Sámi and South-Sámi languages (Angell et al., 2022). This means that cultural knowledge on Sámi culture and relationship to outdoor life might vary from one Sámi ECEC to the next in Norway.

The Norwegian Framework Plan for Kindergartens (Ministry of Education and Research 2018, p. 24-25) lays down that the Sámi ECECs shall:

promote the children's Sámi language skills, strengthen their Sámi identity and promote Sámi values, culture and traditions. [...] Sámi kindergartens shall help preserve and develop Sámi cultural heritage and promote modern-day Sámi language, culture, ways of life and values. Kindergartens shall enable the children to discover the diversity of their own culture and those of others and to develop respect for and solidarity with the diversity that exists in Sámi culture. Sámi kindergartens shall adopt traditional learning and working methods on the children's terms and in a present-day perspective. Kindergartens shall allow the children to actively participate in traditional activities in which staff offer guidance and thus help the children become independent. Kindergartens shall build on a Sámi understanding of nature to help ensure that the children can live in harmony with nature, make use of and reap the

land and develop respect for natural phenomena. Sámi history and cultural expressions such as duodji, joik and storytelling shall form part of the kindergarten content, adapted to reflect the children's age and stage of development.

The ECEC curriculum, practice, and discipline need to be both critically analysed and contextualized if they are to contribute to challenging colonial practices and the history of the Norwegianization of the Sámi people (eg. Gandolfi & Rushton, 2023).

### **Theoretical Framework**

This article takes a socio-cultural perspective on children's development of psychosocial skills through outdoor activities and play in ECEC. Learning is perceived as "making experiences in environments where physical and intellectual tools are made available in a way that is appropriate for the individual, and where they are used as part of concrete activities". In this way, the child experiences things that open for the acquisition of conceptual systems and skills (SäljØ, 2017, p. 246, our translation).

An ecocultural perspective also focuses on cultural continuity as essentially constructed from the activities undertaken by the adults with the children and the routines the adults introduce in the operational environment (Laiti & Määttä, 2022, p. 64). The content and form of daily routines depends on the early childhood educators' interpretations of what they regard as culturally appropriate and meaningful aims and goals. The adults who work with the children define how and why their daily routines are the way they are, but they might base the implementation of early childhood education on different values (Laiti & Määttä, 2022).

We also base our discussion on Antonovsky's theoretical concept of salutogenesis. According to this concept, health and well-being are achieved, for example, through SOC (Sense of Coherence) (Lindström & Eriksson, 2015, p. 30). SOC is "a global orientation that expresses the extent to which one has a pervasive, enduring though dynamic feeling of confidence that (a) the stimuli deriving from one's internal and external environments in the course of living are structured, predictable and explicable; (b) the resources are available to one to meet the demands posed by these stimuli; and (c) these demands are challenges, worthy of investment and engagement" (Antonovsky, 1987). The salutogenesis concept seeks to explain why some people manage their life well and cope despite risk, and why some develop in a healthy way rather than developing an illness (Antonovsky, 2012, p. 27). SOC makes life comprehensible, manageable, and meaningful. It requires meaningful activities, existential reflection, contact with inner feelings, and social relationships (Lindström & Eriksson, 2015, p. 30). A salutogenic approach focuses on resources, conditions, and factors that promote well-being (Lindström & Eriksson, 2015, pp. 18–23). A key factor in promoting Sámi children's life-coping skills is that the ECECs include Sámi culture in a way so the children experience a connection between the institution's pedagogy and upbringing in the home (Bjerklund & Åmot, 2020). To accomplish this, ECEC needs to have a critical and reflective attitude towards creating such a connection. We also argue that ECEC is responsible for creating environments that strengthen the life-coping skills of Sámi children – it is not the individual child's responsibility.

### **Method**

Our overall epistemological position uses a hermeneutic approach. We conducted a qualitative study to explore the participants' experience of Sámi ECEC as a health-promoting arena. A key theme introduced by the informants in the interviews was the significant role of outdoor activities. This led us to the focus of this article.

The sample comprises practitioners from Sámi ECECs participating in the project Sámi ECECs as a health-promoting arena. We contacted Sámi ECECs in the 18 municipalities that received support from the Sámi Parliament in Norway to establish Sámi ECEC. We received a positive response from eight, but due to circumstances related to the COVID-19 pandemic, the number was reduced to seven. We included South-, Lule- and North-Sámi ECECs in different regions in Norway. The sample includes Sámi communities in regions in Norway from the northernmost parts of Norway, to central Norway, and to southern Norway. We had 16 informants, three of whom were men. All the ECECs had Sámi-speaking staff; some had learned Sámi as adults, and not all had a Sámi background. In all the institutions we

interviewed ECEC teachers and also some assistants. All directors who agreed to let ECEC staff participate in our sample received an invitation letter from us, approved by the local authority. The letter was distributed to the staff by the directors. The ECEC personnel were anonymous to the researchers until they had consented to participate. Our selection includes both Sámi and Norwegian ECEC staff. It is common in Sámi ECECs in Norway that it is not possible to employ exclusively Sámi and Sámi-speaking staff because there are too few trained Sámi ECEC teachers and it is difficult to recruit teachers who have competence in Sámi language and culture (Angell et al., 2022; Riksrevisjonen, 2019). The sample in our study thus reflects the common situation for staff in Sámi ECECs. In all the ECECs, however, we have interviewed mostly Sámi staff.

Our study, from seven South-, Lule- and North-Sámi ECECs, concentrates on children aged 4–6. The study was undertaken during and right after the coronavirus pandemic/lockdown had put restrictions on the operation of ECECs in Norway. We conducted four focus-group and three individual interviews with staff working in seven Sámi ECECs. Due to the pandemic, some of the interviews were conducted online and we were not able to visit all ECECs to undertake observations.

The ECECs, spread around different regions in Norway, offered varying research contexts. Some were in local Sámi communities in the north, and some were ECECs in more populated areas; three were urban (> 20 000 inhabitants) and three rural (< 5000 inhabitants). The study proposal was approved by the Norwegian Centre for Research Data (NSD) and the project complied with the ethical guidelines established by the National Committee for Research Ethics in the Social Sciences and the Humanities (NESH) (2018). Participation in the study was voluntary. A reference group of Sami representatives contributed to our project during the entire period. Through websites and articles in popular magazines the findings have been published for both the Norwegian and Sami populations. We have published in Norwegian, English, North Sami and South Sami to make our findings transparent for the Sami community.

The focus of the interviews was on Sámi ECECs as health-promoting arenas and our informants appeared to find outdoor activities to be an important arena for promoting well-being among the children. The interviews lasted between 60–90 minutes, and the number of participants varied from three to six in the three focus-group interviews. Due to the pandemic situation, the four remaining interviews were conducted online, three individual interviews and one focus-group interview. The participants have been given fictitious names in the article.

Stepwise-Deductive Induction (SDI) was used as a qualitative research strategy in the analysis. The aim of SDI qualitative research is to develop “concepts, models, or theories on the basis of a paradigm that gradually reduces complexity” (Tjora, 2018). The SDI is a schematic model for qualitative research. The basic principle is an inductive development from empirical evidence to concepts or theories, with deductive step-by-step feedback. This method enables the development of concepts inductively while at the same time quality assuring them (stepwise deductive) (Tjora, 2021, p. 296). Based on research on Sámi culture that finds the outdoors to be an important cultural contributor to well-being, health, and inclusion (Balto, 2023, Ness & Munkejord, 2021), we asked our participants how the ECECs’ physical environment contributed to this. We used an interview guide where, for example, we asked the informants to: “Describe elements in Sámi culture that strengthen children’s mental and physical health. In what way do you introduce these elements in the work in your ECEC?” The participants choose then to describe the use of the outdoors in Sámi ECEC as important for psychosocial and physical health. Based on the empirical evidence, we used concepts and theories to analyse how these activities could be regarded as part of promoting mental and physical health and well-being.

The material has been analysed in stages from raw data to concepts, both upward and inductively from data to theory, and through downward feedback where the theoretical concept is checked against the empirical data (deductive) (Tjora, 2018, p. 18). Thus our analysis started from raw data that we used to move towards concepts and theories in incremental deductive feedback loops. From this we developed two categories that contextualized how ECEC staff use outdoor activities and play in their daily practice,

and how these activities can be regarded as part of fostering positive psychosocial development and healthy behaviour: 1) Outdoor activities that promote mental and physical health and well-being; 2) Outdoor activities and play that promote Sami culture and belonging.

### Findings

The staff in the Sámi ECECs emphasize two main subjects when it comes to outdoor activities:

1. *Outdoor activities that promote mental and physical health and well-being* (for example hiking to a nearby area where they can make a bonfire).
2. *Outdoor activities and play that promote Sami culture and belonging* (for example strengthening the children's autonomy in outdoor activities and letting them engage in work activities that can lead to play).

We will present those two categories before discussing the overall theme in more detail.

### Outdoor Activities and Play that Promote Mental and Physical Health and Well-Being

The Sámi ECEC staff in our study find many benefits from being outdoors in nature that are good for children's physical, mental, and emotional health:

We took a lot of walks. And there was a forest that we went to regularly. We would take out knives and start whittling there. The children can be inspired by many other things too, for them the natural thing to play when on walks is to play lighting a bonfire in the lavvo [Sámi tent], they don't do this alone of course, for real, but they probably have another way of playing, I think (Lásse).

"Bonfire", mentioned 37 times by our participants, was then quite a common topic.

The fact that children between the ages of three and six were allowed to use knives and matches during outdoor activities appeared repeatedly in our material. The children were supervised by the adults, but they were definitely allowed to try the tools under guidance. Walking up and down steep slopes outdoors that the children *almost* did not manage to navigate was also perceived as positive for their development and well-being:

I'm thinking about this feeling of mastering, particularly when it comes to the youngest ones. For them mastering something can be to get up from the ground without falling over, and [getting] down the hill without falling over. And we have quite bumpy terrain here. And we have a small tree up the hill a ways, and it's in the woods. So there's also mastering when they practice walking up there. It's walking uphill all the way; there's no road. For a one-year-old, getting there without falling over more than ten times can be a sense of mastering (Sára).

Walks usually lead to a familiar place that serves as a base for the group's activities, and lighting a bonfire there represents an important cultural signal of settlement and gathering.

The staff underline the importance of letting children attempt to be autonomous when it comes to physical and practical activities. They point out the importance of knowing the children and encouraging their autonomous achievements and participation:

While we have made plans for the week and the month, we have also made sure that they are not so densely packed. There must be room for the children to contribute ideas. What they actually would like to do. And the spontaneous ideas that may come up. There must be room to make changes. And to follow the children's ideas. So today we up and went to the football field because that's what they wanted to do there and then, when we were going on a walk. We make sure that everything isn't set in stone. In this way we make sure that we can do what the children really want to do (Maija).

This is a way of underlining the importance of children's participation and autonomy. At the same time, the staff said that outdoor activities and play improved their well-being:

After the corona lockdown we had almost ten weeks of kindergarten outdoors. We did not physically go inside the kindergarten building at all. [...] Then we had a lavvo, a lean-to, and a cabin available. If you think about enjoyment and the psychosocial aspect, then I think it was fantastic to see how the children changed by being outdoors so much. And that gave us very strong motivation to be much more outdoors now (Maija).

The informants found that the outdoor activities helped the children to form relations and

friendships in other ways. The period when they had to adapt to Covid restrictions made it clear that more outdoor activities made children more independent and offered new possibilities than earlier:

It wasn't so important; you're not sitting waiting for your friend. They had a totally different way of playing. Like they were playing outside their usual routines. It was good to see. They were in fact making friendships with more children than they were accustomed to. Normally everyone plays together across normal lines in the course of the day, but it was in a different way when they were outside, they found joy in tiny insects or one thing or another (Maija).

Spending so much time outdoors made these children more aware of nature and the wonders of life. It seems as if the outdoor activities offer other possibilities for interaction with children and nature than the standard time schedule the children were used to.

### **Outdoor Activities and Play that Promote Sami Culture and Belonging**

In some ways outdoor activities and play were linked to promoting Sami culture and belonging. In our material we see that such cultural activities as fishing and berry picking were used to help children develop understanding of Sami culture and a sense of belonging to their community:

Then we have these fixed activities that are typical for us, such as cutting sedge grass, and being outdoors and picking berries. And stacking firewood, our children do that a lot, and we often light bonfires on our hikes. And there has been a lot of focus on skiing, which is not a typical Sámi thing to do, but we do ski a lot (Lásse).

Maija and Biret in other ECECs also talked about sedge grass, and the seasons for picking it.

The above interview extract describes what is special about Sámi cultural activities and is also an example of how the ECEC institution adopts the Nordic cross-country skiing tradition during the winter. For the ECEC institution close to the sea, one of the staff explained:

We spent a lot of time on the sea. We were outdoors a lot and did many cultural things (Inga).

In Lule-Sámi culture the sea is an important cultural marker, but it was complicated to play out this aspect of the culture:

We spend a lot of time along the shore and in the skerries. And when we're there, we light a bonfire, look for crabs and all sorts of small creatures. We have also fished. We have fishing rods and life jackets. We were offered a toy boat for our outdoor area. We chose the one that looked most like a fishing boat. We have placed it so that the children see the sea when they are playing in it. So they can play that they're out at sea. Sadly, we don't have our own fishing boat, but we have been considering this. There are so awfully many [safety] requirements [from the authorities] when it comes to taking children out on the sea (Inga).

One challenge for a Sámi ECEC assistant was that the ECEC lacked Sámi staff, and this assistant felt it was difficult being the only one promoting Sámi culture in the outdoor activities:

We would like to be more out on the sea and to take more trips. I could have brought some Norwegian-speaking staff, but it wouldn't be quite the same dynamics then. It just wouldn't be quite the same (Inga).

In this extract the assistant underlines the importance of being a team that knows the cultural codes and the language within the codes. The staff also tried to adapt the ECEC institution's own outdoor area to be more in compliance with Sámi culture, in cooperation with parents:

We try to improve our outdoor area, and to add more Sámi elements so we can use more of the outdoor environment for something like a fairy-tale forest. When you enter a Sámi kindergarten you should be able to see that it is a Sámi kindergarten. So we have established a group of parents and staff to do some planning. We intend to improve our outdoor area using parents and staff, and work (volunteer-work) in the evenings together. I really feel that we have good collaboration with the parents. For example, we ask them to put up the lavvo and help us with things like that (Lásse).

In another urban ECEC the staff had to create a lavvo (Sámi tent) and other effects in the outdoor area that were not present in the surrounding environment to give children outdoor experiences they considered to be particularly Sámi. One of the rural ECECs also wanted to get a boat to go out on the sea, but due to regulations this was hard to arrange. Such factors limited the outdoors activities and encouraged the staff to make creative moves.

Risky play was commonly allowed in the Sámi ECECs in our sample:

**Weike:** There have been hikes where we have had to get children down from high up in trees [laughs].

**Ingvild (researcher):** Because this happens?

**Weike:** It has happened.

**Ingvild:** How do you solve this?

**Weike:** Well, you know, we simply have to climb up and guide them down.

**Ingvild:** Okay. And nobody has fallen down?

**Weike:** No. [...] Well, but rather than standing there and either yelling at them or climbing up and bringing them down, I will usually climb up and tell them like put your foot here, and perhaps put it on a branch right below there, and then they manage to get down. And then they have learnt that perhaps they shouldn't climb so high, or they have learnt to climb down.

This is a way of exploring the environment, testing limits, and letting the children test their own capabilities. To do this, it is necessary to act in cooperation with the parents:

The first thing I tell the parents at the meeting we have with them in the autumn is that "You must expect that your child will hurt themselves. We'll call you". We have them playing with some risk, doing this and that. [...] But we have less injuries here than any other kindergarten, because we [...] know the children, we know that this child aged two can climb in that tree, while that child aged four can't climb that tree in the same way. We are so close to them in our relationship that it is our way of doing risk assessment, that we are close to them, really know them. I find that this is very typical in Sámi educational thinking, that you allow the children to try things for themselves, and of course there mustn't be a worse injury than for example that they fall down and get a bump or bruise or get a scratch, to put it that way. That's okay. The children will cope with that. Perhaps a slightly different mentality [...] than packing the children in bubble wrap (Lásse).

The main conclusion is that outdoor activities are important for promoting, experiencing, and contributing to Sámi pedagogy. Outdoor activities and play promote mental and physical health and well-being, as well as an understanding of Sami culture and belonging.

### Discussion and Conclusion

We have illustrated above how Sámi ECEC staff emphasize outdoor activities and play in their daily practices. Thus, the first part of our research question has been answered by the informants, as it is an empirically-driven subject in our research. Below we will discuss the benefits of outdoor activities for the mental and physical health of the children in the ECECs in this study, supported by our theoretical framework. How can these activities be regarded as part of promoting mental and physical health and well-being?

Our informants point out that spending time in nature can help Sámi children to connect with their cultural heritage and traditions. They make many pedagogical moves to help the children experience the outdoors in a way that at the same time promotes Sámi culture.

The participants in our study give Sámi children the possibility to have experiences in environments where physical and intellectual tools, like an outdoor area including elements of the Sámi culture, participating in cutting sedge grass, and picking berries, are made available to them. In this way, the children can learn conceptual systems and skills from Sámi culture, what Säljøl (2017, p. 246) defines as a socio-cultural approach. Participating in socio-cultural society is a form of inclusion that supports well-being. From an ecocultural perspective, in the Sámi ECECs in our sample, the children are participating in adult outdoor activities that introduce them to their environment (Laiti & Määttä 2022, p. 64) and culture. This aligns with Balto (2023), and what she states are the core values in Sámi upbringing.

Sámi people have a deep connection to their environment and traditional ways of life (Laiti et al. 2022, p. 794), which is reflected in their approach to early childhood education and care. The Sámi ECEC staff in our sample often emphasize outdoor activities and play as part of their daily practice.

This is done in a way that is somewhat different than in the Norwegian culture, as more room is given for children's participation, impulsive activities, myths and narration from olden times, Sámi cultural guidance on how to use (and not misuse) nature, and so on (Åmot & Bjerklund, 2023). Sámi ECECs also seem to be more open to risky play in nature (in our material climbing in trees, using knives and matches, cutting grass, walking on slippery ground) than mainstream Norwegian ECECs traditionally are, even though more recently risky play has also been given more positive attention in Norwegian ECEC pedagogy

(Sandseter et al., 2023). Our informants talked positively about risky play and informed the parents that it was something they encouraged. They made sure the children did not hurt themselves seriously but were not afraid of them getting bumps and bruises. This type of play and outdoor activity may help children to develop a sense of mastery and develop motor skills than if risky play was avoided to some extent, according to Brussonii et al. (2015). In this way Sámi ECECs have a unique approach that emphasizes outdoor activity and play as psychosocial support for children's well-being. But Sámi ECECs are also part of the same tradition as other ECECs in Norway in some ways. The special aspect of the Sámi ECECs in our sample is the focus on the deep connection to the environment and the traditional ways of Indigenous life, which is reflected in their approach to ECEC pedagogical practices.

Sudimac et al. (2022, p. 4446) concluded that walking in nature could have "salutogenic effects on stress-related brain regions, and prevent mental strain and potential disease. In our sample the Sámi ECECs let children walk in nature, and also to be challenged by hills and slippery surfaces. Even though this is hard for young children, it can make them more psychologically robust.

The current understanding of Sámi ECECs in a Norwegian context is that children have the right to find their own cultural heritage reflected in the educational section, and to find support for this in ECEC (Olsen & Andreassen 2017; The Norwegian Framework Plan for Kindergartens 2018, p. 24-15). This is something we find the ECECs in our sample strive to accomplish through their use of the outdoors in a traditional Sámi way. By creating a sense of coherence from the children's heritage and culture and from relating the ECECs' pedagogy to the outdoors, their psychosocial health will be supported, according to Antonovsky (2012, p. 27) and Bjerklund & Åmot (2020).

The Sámi people traditionally have a history of living off the land, and taking part in activities connected to this is an important part of their cultural heritage. By engaging in these activities, children can learn about their cultural heritage and develop a sense of understanding of their past and present. When the children stacked firewood, they participated in daily tasks that were part of the adult tasks in the ECEC. In this way the ECEC teachers act as agents for the Sámi culture by teaching the children worldviews, values, and activities from Sámi culture (Laiti et al. 2014). The informants portrayed this as one of the values in Sámi culture, where children are allowed to participate almost "on the same line" with the adults in the ECEC on tasks that also have to be done at home on a daily basis. Sometimes this also included parents' reindeer husbandry (for the few families in our material that had this occupation). This might also be seen as health promoting as it creates a sense of coherence in the children's lives in accordance with the traditional family life and cultural heritage (Antonovsky, 2012, p. 27; Bjerklund & Åmot 2020)

Traditionally, according to our informants, Sámi upbringing places emphasis on doing handicrafts and daily work together with the children (Åmot & Bjerklund, accepted for publication). The staff in our present study describe such daily outdoor activities as harvesting, handicrafts, and food preparation together with the children as a way of maintaining Sámi culture. They have a focus on how the activities with the staff can lead to children's own play and creativity. This is in line with how Laiti et al. (2022, p. 794) point out that Sámi culture is founded on such traditional values as respect for nature, and that the activities constructed according to these values are implemented in Sámi early childhood education. Additionally, cultural activities like the ones our informants used in ECEC institutions, such as fishing and berry picking, may help children to develop a sense of belonging to their Sámi community – and hence a sense of coherence. The ECEC educators act as agents promoting the Sámi culture by teaching the children to adopt the values, the worldview, and practices of the Sámi culture in daily outdoor activities.

Within this, outdoor play also promotes social and emotional development. The children learn to interact with others and manage their emotions in a natural setting (Bjørger & Moe, 2021; Brussoni et al., 2015; Hinkley et al., 2018; Jackson et al., 2021; McCormick, 2017; Piccininni et al., 2018).

To promote outdoor activities and play, the Sámi ECEC staff in our study planned such activities as fishing, going on nature walks, berry picking, and looking for crabs and all sorts of small creatures. These activities not only provide opportunities for physical exercise and to get fresh air, they also allow the children to connect with the natural world and learn about their environment. According to Sudimac et al.

(2022, p. 446), there are “causal effects of acute exposure to a natural vs. urban environment on stress-related brain regions, disentangling positive effects of nature from negative effects of the city”. This then indicates that the practices our informants undertake in their ECEC institutions are beneficial for children’s stress levels.

The Sámi ECEC staff in our study also used outdoor play to teach children traditional skills, such as how to start a fire, how to row a boat and fish, how to play safely on the local beach on the water’s edge, and how to use a knife safely in nature. These activities are both important cultural practices that promote Sami culture and more common activities in both the Norwegian and Sami context. This means that sometimes it is impossible to separate majority practices on how to act outdoors from Indigenous practices, and some practices might be more local than Sámi. But there might also be small differences that are only visible to the trained Sámi eye and not to members of the majority population. One informant said she could not take Norwegian staff with her out on a boat because it was just not the same when it came to passing on Sámi culture. Her thinking here might be based on virtually invisible differences that only a Sámi can detect.

Spending time outdoors can help children to develop a sense of environmental awareness and responsibility, such as sustainable fishing practices, knowledge and use of plants, and traditional ecological knowledge. This can foster a sense of connection to and responsibility for the land and natural resources. This is important to Sámi culture and livelihoods (Gratani et al., 2016; Hansen & Skaar, 2021). In our material the ECEC staff tried to talk to the children about environmental awareness in several ways. Moreover, outdoor activities and play are a part of promoting mental and physical health and well-being in a holistic way. Being in nature has been shown to have numerous physical health benefits, such as reducing stress, anxiety, and depression, improving sleep, boosting the immune system, and improving overall mental health (Jackson et al., 2021; McCormick, 2017; Piccininni et al. 2018).

All in all, the emphasis on outdoor activity and play in the Sámi ECEC institutions in our sample promotes a holistic approach to health and well-being that incorporates physical, mental, emotional, and cultural aspects. The children are not only engaging in outdoor activities, they are also learning about Sámi culture. By engaging in these activities the children can develop important life skills, foster a connection to nature, and learn about their Sámi cultural heritage, all while promoting their overall health and well-being. This was done differently in urban and rural settings and in different parts of Norway because Sámi traditions vary and it is not possible to have the same outdoor activities in an urban city in central or southern Norway as in the northern parts of the country. In some parts of Norway, the staff, in collaboration with the parents, had to create a Sámi outdoor space themselves because the ECEC was located in an urban context that lacked natural access to open spaces, the sea, and mountains in the immediate vicinity. They created an outdoor area that they experienced as more Sámi than the traditional outdoor areas in the Norwegian majority population’s ECEC institutions. This points out the different types of access to nature in a Norwegian context, even though Norway is a land with large and expansive nature areas.

The Sámi ECEC institutions in our study emphasize outdoor activities and play in their daily practice in a holistic way. This can promote health and well-being for children by providing opportunities for participating in cultural practices, getting physical exercise, forming relationships with peers, and connecting to nature. The ECECs also promote social and emotional development and understanding of Sami culture by using the outdoors in a culturally adopted manner, as this is a way of creating a sense of coherence from the children’s culture to ECEC pedagogy (e.g. Antonovsky, 2012). By emphasizing outdoor activity and play in a culturally adapted and contextualized way (as in the Lule-Sámi context and when creating a Sámi environment outside where it is not present, or when using the nature present in the ECEC institutions’ surrounding areas to perform traditional Sámi activities), the Sámi ECEC institutions appear to promote a psychosocial and cultural approach to health prevention.

Spending time in nature in the way the ECEC institutions in our sample are doing can promote physical health through such activities as hiking, fishing, and skiing. These activities can help children to

develop coordination, strength, and a healthy life. Moreover, the informants in our study teach children cultural practices outdoors. Hence our informants stimulate the children physically, cognitively, socially, and emotionally – but also culturally – through their pedagogy. In sum, the informants use nature and the outdoors in a way that can nurture the well-being of Sámi children by providing opportunities for cultural connection, and can promote physical and mental health, environmental awareness, and cultural knowledge. It is therefore important to ensure that Sámi children have access to culturally appropriate outdoor spaces and activities regardless of where in Norway the ECEC institution is situated, and that children are supported in developing a culturally-based connection to the natural environment.

ECEC must always consider the children's life story and what constitutes well-being for them personally (Ness & Munkejord, 2021, p. 1).

One shortcoming of our study is that children and parents are not included. Another is that we had to hold back information on each participant in the study because the Sami society and population is so small. We were therefore unable to specify what characterizes our informants, what Sami language they speak, and which town their ECEC institution is situated in. This means that in order to avoid indirect identification of our participants, less information was provided about the informants than in other studies with larger populations.

The implications of our findings are that Sámi ECECs need outdoor areas that are adapted to Sámi culture if they are to fulfill the framework plan's requirements for Sámi ECEC pedagogy. Further research on how Sami ECECs' outdoor areas can align with Sami culture and pedagogical thinking would be fruitful. It would also be interesting to study Norwegian and Sami outdoor pedagogy in a comparative perspective. Another possible implication of the UN sustainability goals is that the majority of ECECs can also benefit from focusing more on outdoor activities in their pedagogy, and from having a more holistic view of these activities. An innovative research project where Sami and non-Sami ECECs share their pedagogical knowledge on the use of outdoor areas and develop it together in line with the sustainability goals can be a useful approach. Outdoor activities can promote health, strengthen learning, improve mental health, and increase awareness of a sustainable lifestyle. Here, Indigenous pedagogy can be a useful addition to the field.

## Declarations

### *Authors' Declarations*

**Authors' contributions:** First author Monica Bjerklund and second author Ingvild Åmot have both contributed to the data collection and analysis of the material. The first author has made a slightly higher contribution to the writing of the article and to the discussion.

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**Ethics approval and consent to participate:** The study proposal was approved by the Norwegian Centre for Research Data (NSD) and the project complied with the ethical guidelines established by the National Committee for Research Ethics in the Social Sciences and the Humanities (NESH) (2018).

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