



Places, spaces and encounters with nature – socio-material discourses in Swedish preschools

Annika Manni, J. Annerbäck, H. Löfgren, F. Mårtensson & A. Fröberg

To cite this article: Annika Manni, J. Annerbäck, H. Löfgren, F. Mårtensson & A. Fröberg (2025) Places, spaces and encounters with nature – socio-material discourses in Swedish preschools, *International Journal of Early Years Education*, 33:3, 545-563, DOI: [10.1080/09669760.2024.2307361](https://doi.org/10.1080/09669760.2024.2307361)

To link to this article: <https://doi.org/10.1080/09669760.2024.2307361>



© 2024 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group



Published online: 30 Jan 2024.



Submit your article to this journal [↗](#)



Article views: 2158



View related articles [↗](#)



View Crossmark data [↗](#)



Citing articles: 5 View citing articles [↗](#)

Places, spaces and encounters with nature – socio-material discourses in Swedish preschools

Annika Manni ^a, J. Annerbäck^b, H. Löfgren^c, F. Mårtensson^d and A. Fröberg^e

^aDepartment of Applied Educational Sciences, Umeå University, Umeå, Sweden; ^bDepartment of Thematic Studies – Child studies, Linköping University, Linköping, Sweden; ^cDepartment of Thematic Studies (TEMA), Linköping University, Linköping, Sweden; ^dDepartment of People and Society, Swedish University of Agricultural Sciences (SLU), Alnarp, Sweden; ^eDepartment of Food and Nutrition, and Sport Science, University of Gothenburg, Gothenburg, Sweden

ABSTRACT

This article investigates views and discourses on outdoor play in preschool teachers' talks about their playgrounds and outdoor practices in Swedish preschools. Included were a strategic sample of teachers from newer, larger preschool facilities with more programmed outdoor space, and teachers from older, more traditional facilities containing more nature. Through interviews with 38 teachers at 21 preschools and a thematic analysis inspired by socio-material theory, we identified three main themes: *The meanings and limits of free outdoor play, the view on nature and children's encounters with nature, and dangers and risks in the playground*. Within these themes, we show how the teachers' views construct discourses related to the outdoor educational places and spaces that are available. Furthermore, changes in preschool curricula as well as in the playground material and design are active agents in constructing discourses on outdoor play, including risks and limitations, beyond teachers' own beliefs on children's needs.

ARTICLE HISTORY

Received 27 January 2023
Accepted 12 January 2024

KEYWORDS

Preschool teachers;
playgrounds; socio-material
discourses

Introduction

Nordic countries, such as Sweden, have a long tradition of catering to outdoor activities and encounters with nature for children (cf. Gericke, Manni, and Stagell 2020) and research into the issue indicates that outdoor play promotes children's well-being (Chawla 2015; Mygind et al. 2021). However, competition for land and a general densification of neighbourhoods have left schools, and preschools, with smaller playgrounds (SCB 2018) and new preschools are nowadays built on two floors with changes in the overall layout and design and fewer green areas available for outdoor play (Manni 2019; Mårtensson, Manni, and Fröberg forthcoming). As family structures and lifestyles also change, children spend much more of their time indoors and for many children, the

CONTACT Annika Manni  annika.manni@umu.se  Department of Applied Educational Sciences, Umeå University, SE-901 87 Umeå, Sweden

© 2024 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group
This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited. The terms on which this article has been published allow the posting of the Accepted Manuscript in a repository by the author(s) or with their consent.

preschool environment has become the most important arena for outdoor play, physical activity and opportunities for encounters with nature (Söderström et al. 2013).

However, there is an increased focus on teaching and learning than before in the Swedish preschool curriculum which has made preschool teachers shift their focus from caring and play to more planned and predefined activities (Löfgren 2016). In addition, interpretations of safety guidelines for playgrounds have further restricted the opportunities for local measures (Sandseter 2012). Agendas and trends in overall community planning and policymaking impact the kind of outdoor facilities and encounters with nature that are offered by preschools, as well as the ongoing discursive understanding and shaping of these social spaces (Lindgren 2020). From a critical educational perspective, policy changes like these might affect how teachers view their tasks as professionals in their preschool practice, as well as how they act. Playgrounds could, therefore, be seen as arenas in which discourses are shaped and negotiated by both present, i.e. teachers and children and absent actors, i.e. architects and policy-makers.

This article draws on interviews with preschool teachers and aims to explore how the current changes in Swedish preschools influence children's outdoor play regarding physical and social activities and encounters with nature in relation to the places provided in different kinds of preschools. We analyse teachers' views on children's outdoor activities at new and old preschools and how these views construct discourses of preschool educational spaces. The specific questions we seek to investigate are as follows:

- How do preschool teachers describe children's outdoor play in physical as well as social activities, and encounters with nature in old and new preschools?
- How do the teachers describe the opportunities and limitations of outdoor play?
- What kind of socio-material discourses can be found in teachers' descriptions of children's outdoor play?

Background

This research takes its departure from the field of early childhood education and care, ECEC but results are relevant also for planning, environmental psychology and outdoor/environmental education. We here contextualise the topic aiming for this large audience.

Swedish preschool facilities and outdoor activities

The history and development of Swedish preschools and their facilities have been well documented. In the early development of preschools during the mid-twentieth century, the form and content of many preschools were shaped by national investigations (SOU 1972:26; 1972:27). A statistical survey has documented a reduction in children's access to outdoor spaces (SCB 2018), and the focus regarding playgrounds is, therefore, set on issues regarding health and space requirements. National advice (Boverkett 2022) recommends all new schools and preschools plan for children to have access to outdoor facilities that are adequate for both play and education, immediately adjacent to the building. The advice further emphasises the importance of outdoor spaces for children's interaction with nature and a design that includes hilly terrain and green play areas.

Outdoor activities and play are integrated into Swedish preschool practice and daily routines (cf. Kane 2015), where self-regulated ‘free’ play, risky play and play-based learning, are also discussed and problematised intensely by scholars (cf. Hjelmér 2020; Pramling and Wallerstedt 2019). Regarding why, what and how outdoor play can contribute to children’s learning and meaning-making are also well documented internationally (cf. Broström and Frøkjær 2019; Knight 2009; Rickinsson et al. 2004). Outdoor play and learning have proved to be beneficial for increasing creativity, stimulating co-operation as well as concrete and holistic learning experiences (Ärlemalm et al. 2008; Chawla 2015; Quay and Seaman 2013). Swedish preschools have tended to view nature within three domains: as a classroom for learning, as a ‘home’ providing care and safety and as a fairyland – a place for fantasy and imaginary play (Änggård 2010), where children’s outdoor play, to some extent, are also found gendered even though nature in itself is not (Änggård 2011). Furthermore, memories of favourite places during childhood as recalled in adulthood often relate to places outdoors (Sandberg 2002).

Outdoor education is often a part of environmental education activities as the benefits of encounters with nature are associated with fostering environmental and sustainability values (cf. Chawla 2015; Gericke, Manni, and Stagell 2020; Giusti, Barthel, and Marcus 2014; Palmberg and Kuru 2000; Sandell and Öhman 2010). Outdoor environmental education is also common in Swedish preschools, particularly outside playgrounds (Ärlemalm-Hagsér 2013; Ärlemalm-Hagsér and Sundberg 2016). Furthermore, it is proven that emotional and relational encounters with nature are essential for promoting environmental ethical awareness, as well as sustainability learning and action (Häggström and Schmidt 2020; Manni, Ottander, and Sporre 2017).

In addition to the educational benefits of outdoor activities, spending time outdoors promotes physical activity and is favourably associated with multiple health parameters in preschool children, including motor and cognitive development, night sleep and overall well-being (Carson et al. 2017; Söderström et al. 2013; Veldman, Paw, and Altenburg 2021), with access to green spaces having a beneficial role for children’s socio-emotional development in particular (Mårtensson et al. 2009; Mygind et al. 2021; Tzoulas et al. 2007). Public health actors, therefore, recommend an overall increase in children’s opportunities to play outdoors (Gray et al. 2015; Tremblay et al. 2015). Overall, self-directed (free), active outdoor play is perceived as being essential for healthy child development and it is recommended that any exaggeration of the risks associated with outdoor stay is avoided (Tremblay et al. 2015).

Why do teachers organise outdoor activities?

Swedish early childhood education institutions have developed from being primarily care settings, to settings for teaching and learning (Lindgren and Söderlind 2019; Löfgren 2015; 2016) and relates to preschools being given their curriculum (National Agency of Education 2018). The curriculum also emphasises that young children should be given the opportunity to spend time in different natural environments and participate in physical activities.

When teachers talk about organising outdoor activities for children, they often recall a particular sense of freedom which they associate with their own childhood experiences of being outdoors (McClintic and Petty 2015), in particular, the sense of excitement associated with active risky play (Jerebine et al. 2022a). However, safety issues and rules tend to

impact the extent to which they follow their inner vision and ultimately organise outdoor activities; in other words, teachers emphasise the general benefits of outdoor learning, but convey little about what kind of knowledge guides them to concrete actions in practice (Erdem 2018; McClintic and Petty 2015).

A contemporary discourse on children's outdoor activities addresses the possible risks (and potentials) in children's active play outdoors, i.e. 'risky play' (Jerebine et al. 2022a). Scholars state the need for children to assess and manage new and possibly risky situations for them to develop their self-esteem and learn how to handle different situations (Sandseter 2009; 2012). Teachers and parents although fear children's safety in uncontrolled places, why potential risky play is limited (Jerebine et al. 2022b). The quality of the outdoor environment also severely constrains the educational practice, including when teachers emphasise the importance of risky play for children's development and independence (Little, Sandseter, and Wyver 2012).

Furthermore, and somewhat problematic, the arguments fearing risks contradict the 'competent child- discourse' (cf. Corsaro 2015) in early childhood education in which trust in the child's capabilities is at the forefront. According to Herrington, Brunelle and Brussoni (2017), the boundaries for children's play have been reduced compared to previous generations of children. Due to factors such as changed perceptions of risks, they further argue that the view of the child as resilient has been replaced by an image of the vulnerable child in need of protection. Furthermore, risky play is also found to be gender normative since there was a higher acceptance for boys than girls in 'rough-and-tumble play'. This acceptance did although not include war-like play, an activity that was always restricted (Storli and Sandseter 2015).

Teachers' professional knowledge is not stable but changing with contemporary discourses and is sometimes found to conflict with other professionals when fields of practice meet (Fenwick, Nerland, and Jensen 2012). The potential conflict between professionals could result in performative actions if one profession has a more powerful position. Different professions refer to different internal rationales and legal documents when enacting new policies and acting in what is regarded as a professional manner (Löfgren 2015). This study offers the opportunity for examining discourses, originating from different professions, in the design, planning and use of preschool outdoor facilities.

To summarise, the beliefs and actions of preschool teachers might be influenced by playground affordances, both positively and negatively (Goodling 2016), as well as by their own experiences of the outdoor environment (McClintic and Petty 2015) or by the performative implications of preschool practice (Löfgren 2015). Thus, how teachers express their views about outdoor activities in a changing preschool policy and practice will be further examined.

Theory and method

In this study on preschool playground encounters, we assume that physical places, material and social spaces intra-act and affect the nature of human activities (cf. Barad 2010; Dewey 1966; Fenwick, Edwards, and Sawchuk 2011). We have, therefore, found it valuable to understand and analyse our study of Swedish preschool teachers' views on playgrounds within a socio-material theoretical framework in relation to its similarities with Manassakis' (2020) study, which concludes that 'The effect of non-human

materials, and their interactions with humans, could exclude, regulate, limit and or invite children into the learning process' (20). Building on the comprehensive work by Tara Fenwick, we find that a socio-material perspective offers a holistic, relational and integrated understanding of actions and beliefs since 'Both material and social forces are mutually implicated in bringing forth everyday activities' (Fenwick et al. 2015, 123).

The concepts of place and space in a socio-material context

The concept of 'place' is used in this study as the physical and material aspects that are intertwined in the holistic processes of learning and meaning-making (Dewey 1966; Manni, Ottander, and Sporre 2017; Quay 2013). 'Space', on the other hand, is used in this study as the social aspects that form the rules and opportunities for action and agency in different physical places (cf. Ronnlund 2020). Place and space are thereby seen as two entangled concepts (cf. Barad 2010) that communicate the socio-material aspects of our study, which examines preschool teachers' understandings and approaches to children's outdoor activities (cf. Fägerstam 2012). A socio-material theory also suggests that materiality or physical places can exclude or invite social constructions and actions but also be analysed through its relations and intra-actions:

The focus is on the relations between things: how things influence and alter one another in ways that are continuously opening as well as foreclosing new possibilities. (Fenwick et al. 2015, 124)

Furthermore, in early childhood educational research, social constructions of the child, together with policy, are also shown to impact the educational practices and didactical approaches in preschools (cf. Löfgren 2017). This study is interested in both how physical outdoor places construct, and are constructed in, the educational settings of preschools, creating different discourses of social spaces. We will try to show how physical places interact and relate to the social-educational spaces that are created at preschools, i.e. how socio-material discourses are constructed at both more traditional types of preschool facilities and later developments at old and new preschools.

Qualitative interviews with preschool teachers

The participating preschools represent both old preschools often characterised by large playgrounds, more green areas and fewer children per unit, and new preschools often characterised by smaller playgrounds, fewer green areas and more children per unit. For this article, we analysed 21 interviews involving a total of 38 preschool teachers who described their experiences and views on preschool playgrounds and children's activities in them. The 21 preschools were located in a Swedish municipality and represent old preschools ($n = 10$) built from 1952 to 1989 (median: 1978) and new preschools ($n = 11$) built from 2013 to 2021 (median: 2018). The preschools are referred to in the analysis as O1–10 and N1–11.

The research project has been ethically approved (Dnr 2021-02403) and the data have been processed according to our data management plan regarding safety, confidentiality and access. All participating teachers received written and oral information and agreed to take part voluntarily.

The interviews with teachers took place at each preschool. Upon arrival, the teachers spent considerable time showing the researchers around the preschool and the playground. Before our visits, the teachers had made three-day observations at their preschools on children's outdoor activities. They made their annotations on a map of the outdoor area. The interviews had an open character and where we asked the teachers to tell us about their experiences and observations in relation to the focus areas of the study. All interviews were audio-recorded and transcribed verbatim.

In the first stage of analysis, the transcriptions were organised using thematic analysis in relation to the three focus areas of the study: physical activities, relational encounters/social activities and encounters with nature (Braun and Clarke 2006). The first stage of the analysis highlighted the features that were most as well as least frequently described during the interviews (Braun and Clarke 2019). Following on from this approach, we started to work with the data closer to the interview accounts. This involved identifying and describing the data on a semantic level, i.e. how the participants explicitly described their views and experiences (cf. Braun and Clarke 2006). In the third stage of the analysis, we used theory and previous research findings on preschool playgrounds to deepen the analysis. This process was interpretative and focused on both the assumptions and meanings that underpinned the semantic meanings (Braun and Clarke 2006). The analytical process generated three main themes comprising different discourses that cut across the data, which are exemplified in the results through extracts from the interviews.

Results

Overall, the descriptions by the teachers were positive in the sense that they expressed their appreciation for and appeared to value the outdoors as a place for various activities for preschool children. Three main themes of various understandings were identified in the analysis: *The meanings and limits of free outdoor play, the view on nature and children's encounters with nature and the dangers and risks in the playground*. Within these themes, we show how the teachers' views construct discourses related to the outdoor educational places and spaces that are available.

The meanings and limits of free outdoor play

Providing high-intensity outdoor activities

The teachers described the children's bodily movements in the playground, such as walking, running, dancing, sliding and/or rolling and also how the children moved around on their own in the environment, or with the support of a teacher holding hands or in the company of other children. A variety of physical activities were mentioned such as ball games, skating, sledding, cycling, as well as activity on the swings and slides. Climbing and balancing were also mentioned, both at locations intended for climbing, such as marked trees or climbing frames, as well as other places such as fences and sandpits. In total, a variety of physical outdoor activities were described although many teachers, especially teachers at new preschools, stated that they missed the opportunity for the children to climb. Furthermore, there was a strong perception among all teachers at both old and new preschools that the children needed high-intensity movements. For example, two teachers stated the following:

Because they find other things to play with outdoors than indoors, and also because they can move around more, be more physical active. That kind of space do not exist indoors and the children need to get rid of some of their energy. In order to keep it calm indoors, we have rules that restrict running, jumping around and such things. (O1)

It easily gets intense, like they chase each other and wrestle. I mean, it gets.. or ..I think that [...] it might be that they show that they need to run. (N8)

Apart from the teachers' views and experiences of the main purpose of the playground, i.e. to 'run and release energy' (O4), the examples also highlight that playgrounds are perceived as providing more freedom for high-intensity physical activities, compared to indoor spaces often associated with restricted bodily movement and calmer activities (cf. Maynard, Waters and Clement 2013). One interviewee described how some children took a nap after lunch and other children participated in what is called the 'the quiet moment', all indoors. Thus, it is not only the physical limitations of a place that seem to affect the differences between the outside and inside but also aspects such as routines and ideas about what children need at different times of the day, such as peace, quiet and rest after lunch. Place is here associated with space since ideas about when and where different activities should take place affect the extent to which children engage in indoor and outdoor activities, how long they spend indoors and outdoors during the day and what they are encouraged, or even allowed, to do in different places (cf. Fenwick et al. 2015).

Supporting children's autonomy

Many teachers also refer to children's free play, which is considered to be an important and valuable part of outdoor activities (cf. McClintic and Petty 2015). The teachers talked about social activities in 'unedited places' (cf. Hammarsten 2021) such as bushes, rocks, hills, fences or outdoor storage rooms where the children wanted to be at peace, talk about secrets, engage in role-playing, negotiate rules for play or/and observe other children playing. One teacher at an old preschool also talked about encouraging the children, especially the older children, to take command of their activities and to use the playground independently:

No, but what I think is so nice with these children is that they have always been so independent, I mean you let them out and then they find things to play with on their own. Either they walk right away to the sandpit, or to the storage and get some favorite toys. (O1)

Independence is viewed as a strength since the children manage to engage in activities on their own. Another teacher, at a new preschool, touched upon the same topic when talking about the children's use of the playground during the day:

[...] the kids moved around across the playground and started playing [...] it looked wonderful, like this morning, when we were outside,

I was standing on the lawn here and suddenly 15 children were running around ... (N11)

While this account indicates how independence seems to be an appreciated part of the children's outdoor activities, it also discerns an emotional view of 'it looked wonderful' of childhood and free play. This includes an image of a happy child, playing outside with their friends while moving around freely in the playground (cf. Bennet 2010). The teachers' accounts about independence and free play are consistent with what the preschool

is commissioned to stimulate (Lpfö18), and the current Swedish societal view of children as independent and competent actors in their own right (cf. James and Prout 2015).

However, our data show how both views of an autonomous or a vulnerable child (Herrington, Brunelle, and Brusonni 2017) coexist since the playground, as a place in which children's activities take place, is constituted through entangled social and material processes that strengthen or limit the autonomy of children (cf. Fenwick et al. 2015). The latter especially applies to newer preschools, as will be shown below.

Fostering desirable play

The children's activities are related not only to the playground design, lack of materials and everyday routines but also to the teachers' views on play, the type of play that is encouraged and desirable or not. According to many teachers, children's play varies little over time as particular children tend to have their favourite games and areas in the playground. Many times, the teachers appear to support the children's initial preferences and choices so that they participate in the same activities over and over again. However, some teachers emphasise the importance of variety in children's outdoor activities and may intervene to get the children to do something different and to promote 'curiosity, creativity and a will to play and learn' (Lpfö 18).

Even though the teachers intervene to challenge the children to participate in different kinds of play and movement (see, for example, O3), interventions mainly happen when the children's play is undesirable; when children are playing by themselves when they are using material or equipment the 'wrong way' or are playing war or zombies (Jerebine et al. 2022a; Storli and Sandseter 2015). One of the teachers at an old preschool talked about children's play during the interview and said that

Yes, it is a lot of playing, the *Summer-shadow* (a popular character in a TV-show) and ... yes a lot of role-playing. It is either playing the summer-shadow or playing family. Some role-plays you try to stop; like war-like games from YouTube, then you try to change their play to something else to stop them using the sticks as swords and guns and so on. (O9)

Apart from showing how playing war is not allowed, the example also shows how undesirable play is regulated by the teacher. The teacher mentions using a strategy of distraction, to lead the children into other more desirable activities. The teacher further emphasises the origin of the undesirable activity as being outside the preschool by indicating how the children learned to play war at home through YouTube. Another teacher, from a new preschool, said that

The children use hockey sticks and pretend to shoot with things they are not allowed to use [...] you have to remind them quite often on how to use the tools, like hockey sticks, because it tends easily to be such kind of play you do not want, especially when you have a group of children with lots of energy. (N8)

This teacher describes another strategy of regulating undesirable activities in the playground which, in turn, is linked to children using equipment intended for something else, such as shooting with a bandy stick. Rather than just ending play or removing the equipment, this teacher describes how she reminded the children about what the material was originally intended for, and therefore what it was *not* intended for. This subjugation of things, such as bandy sticks, by teachers, limits both the qualities of the items

themselves and the actions of the children since certain kinds of use and play are forbidden (cf. Fenwick 2015). A majority of the undesirable activities in our study involved the older boys at preschool, or typically boy-like activities, in comparison to girls or younger children, similar to results by Storli and Sandseter (2015).

Furthermore, while all preschool teachers in the study seemed to value and encourage free play outdoors, our data show that the teachers had particular ideas about the playground, which largely seemed to decide the type of play that could take place in specific areas. For example, many teachers described how preschool playgrounds are becoming more structured through ‘activity stations’, implying that the toys should stay in this particular area. Similarly, bicycles could often only be used within restricted areas and at certain times. When asked whether they – the teachers and children – take out toys during the day, one teacher at a new preschool replied:

No, but we have a box that we take out sometimes, in the box we have sand buckets and spades, tractors and dinosaurs. And then we try to make them keep those things in the sandpit. (N10)

While the previous examples with sticks and bandy sticks show how the qualities of a material can be limited by the way it is allowed to be used, this example shows that there are more rules in place since a certain material, like the toy dinosaurs, may only be used in a certain area, a particular box or the sandpit, for example. These kinds of rules tend to be more common in new preschools in our study with a large number of children using the same playground. Furthermore, children’s activities often relate to a certain area that is more or less predetermined for the kind of activity that is taking place there. For example, a play-house is a coffee shop/restaurant or a family home, baking or cooking with sand in the sandbox, or going on vacation on the bus in the playground. In comparison to previous research (cf. Mårtensson 2004), not many cross-cutting activities were mentioned such as the dinosaurs buying ice cream in the playhouse.

Our analysis of the data indicates how teachers, material, environments as well as educational discourses intra-act in children’s outdoor play. All of these aspects, together with the sizes of groups of children sharing the same playground areas seem to have an effect on the activities going on in the playground. Hence, networks of both human and non-human relations regulate activity and how active play is performed in the playgrounds (cf. Fenwick et al. 2015).

Views on nature and children’s encounters with nature

The understanding and emphasis on various benefits of children’s encounters with nature have been shown in previous research studies (Änggård 2010; Årlemalm-Hagsér 2013; Chawla 2015). However, this is not to be the case in this study. Instead, most of the answers on encounters with nature related to certain questions that were asked during the interviews, not in spontaneous descriptions. This indicates that this aspect of children’s outdoor play is not a main discourse or educational goal but is rather absent in teachers’ views on playground activities.

An instrumental value of nature

In many ways, the outdoor activities described by the teachers reflect a so-called instrumental approach to nature, i.e. using it for human needs, rather than a sustainable and

relational approach to encounters with nature (Ärlemalm-Hagsér 2013; Hägglund and Samuelsson 2009; Häggström and Schmidt 2020). This means that nature is not attributed an intrinsic value, i.e. valued in itself, but is rather a tool for achieving other pedagogical goals and values such as stimulating creativity. For example, one teacher at a new preschool said 'So, like yesterday I picked leaves for them [the children] to work with' (N1). In a similar manner, talking about some outdoor projects at the preschool, another teacher said that

Yes, but sometimes we bring ... yeah like last time then we had a task for them, to be nature scouts and look for different colors. We work with different themes, so the children are to look for colors in nature and then we gather it and other material in our studio. Then we let the children do artwork and ... Yes, we create things. (O10)

In other words, nature in preschool playgrounds is not seen as having an intrinsic value from a sustainable, relational perspective to give children a sense of nature and its importance for all life on earth (cf. Ärlemalm-Hagsér 2013). Rather, many teachers' views are related to the instrumental values of nature, cultivating for different reasons, picking things from nature for crafts and so on. Furthermore, related to this are the other discourses on risk as teachers worried about the children hurting themselves with sticks or damaging plants as they are expensive to replace (not important for the environment).

An absence of relational encounters with nature

Building a relationship with nature, such as learning and caring about plants and animals, during childhood has proved vital from an environmental and sustainability perspective (Chawla and Cushing 2007; Giusti, Barthel, and Marcus 2014). This was described the least by the teachers, compared to other outdoor activities and encounters. Overall, the results indicate an absence of, or a reduction in, green nature-like areas in the playgrounds, especially at newer preschools (cf. Authors, forthcoming). Encounters with nature, therefore, vary, and the ways green areas at the playgrounds are used in practice by different teachers. According to the teachers in this study, confirming the traditions of preschools in the Nordic countries (cf. Lysklett and Berger 2017), outdoor activities also take place in other environments, such as forests, to stimulate a relationship between the children and nature to a varying degree. Many teachers described the difficulty of going on excursions due to a lack of resources, for example, staff absence due to illness and/or lack of transport facilities, these obstacles particularly are applied to the youngest children, limiting their opportunities to engage in encounters with nature (Manni 2022).

Overall, fewer green areas in playgrounds, educational discourses, difficulties in going on excursions, as well as restrictions on engaging with plants limit preschool children's opportunities for relational encounters with nature, particularly at new preschools.

Limits and risks of outdoor play

This theme describes accounts of the dangers, risks and limitations when children play outdoors, and is also seen in the previous themes. Some risks concern children that they might get hurt when playing outdoors, but other risks concern the outdoor material that plants or materials might get damaged by the children.

Playground limitations in supporting outdoor play

Teachers' views on children's outdoor activities show, both explicitly and implicitly, various limiting aspects related to the autonomy and free play of children. For example, most teachers pointed to the lack of equipment in the playgrounds, such as actual climbing opportunities for the children. Many teachers stated that the children attempted to climb in places that were not suitable for climbing, resulting in restrictions regarding where the children could climb. Also, many new preschools did not have the same access to equipment and materials that could potentially promote a variation in physical activity, particularly bicycles and more unprogrammed spaces as natural land with a wild character and any substantial amounts of trees, bushes and hilly terrain. There were also rules for the use of equipment and materials in both new and older preschools. For example, some preschools have introduced fixed times during the day when bicycles may be used in dedicated areas. Such rules were more frequent at new or large preschools with many children as an explanation to avoid accidents. In this sense, things, bodies and settings are entangled and regulate the activities in the playground as some actions are permitted and others are not prevented (cf. Fenwick 2015).

Another example that cut across the data is how the design of playgrounds at new preschools in combination with larger groups of children sharing the same areas tends to exclude some children, especially younger children since, according to some teachers, they need to be protected from the older children, as well as from their playground activities (see N5). The youngest children are also limited by their physical ability to move around on their own, which is why they tend to engage in activities closer to the buildings. One of the teachers at a new preschool said that

The children [the younger ones] are dropped off there by their guardians. So naturally they just stay there. (N11)

The youngest children are dropped off in the mornings by their guardians in certain areas of the playground, for example, sandpits, where they also seem to remain. These areas are often close to the preschool buildings with fewer stimulating environments and materials such as surfaces of asphalt, have less vegetation and fewer play equipment adapted to them.

The examples collectively show how things, both material and non-material, such as routines and pedagogical ideas, alter each other in ways that reveal the opportunities for the youngest children in the playgrounds (cf. Fenwick 2015). At newer preschools, in particular, the needs of younger children seem to be both neglected and excluded through such socio-material processes.

Dangers and risks in the playgrounds

The teachers' descriptions of playground activities are further characterised by a risk discourse (cf. Jerebine et al. 2022b). However, when talking about the potential risks in the playgrounds, the teachers in this study mention the safety of the children and the playground itself needs protection. This mainly concerns new preschools and is linked to the fact that green areas in these playgrounds are not yet fully grown. Describing how the children liked to balance on the bricks next to the bushes by the school building, a teacher working at a new preschool said that

Well, we have told them not to be there, but it is ... well no, but the children have played and damaged quite a lot of plants. And, well ... in the beginning there were small fences to protect the plants and bushes from the children. (N3)

Experiences of damaged plants have resulted in new rules and the children are now being told that they cannot enter certain areas. The bushes have also been provided with protection to further prevent children from entering those areas. This is one of many examples from new modern preschools in which children are prohibited from exploring plants and where areas and materials are protected in different ways through rules (cf. Fenwick 2015).

Other examples from both new and old preschools show regulations aiming at protecting children and avoid accidents from happening. Notions of what could potentially occur, have led to a number of restrictions being introduced in the playgrounds as a teacher from a new preschool said:

No really, it has not been that many accidents at all. Those children that can manage to climb, they climb. But it is to *prevent* that something like that could happen why the branches have been cut off. I mean, then the children cannot climb that high up in the trees. (N5)

Despite not having many accidents in the playground, they have implemented preventive measures, for example, cutting branches, to avoid presumptive accidents. Similar yet different perspectives have also been raised in other interviews as well. For example, another teacher from a new preschool mentioned having to restrict the children's movement in the playground to be able to keep an overview of their activities when there were fewer teachers present (N11). Playground interventions, especially those interventions described by N5, are introduced to protect children from harm and danger. The question is what effects the will to protect children can have in the long run, according to the benefits of risky play (Sandseter 2009; 2012)? Ideas about the potential dangers and risks have effects, excluding and regulating the material and children's activities in the playgrounds (cf. Fenwick 2015).

Furthermore, regulations are not introduced solely to protect children from accidents that they cause themselves. Due to the number of children who share the same playground, children also need protection from each other. This principle especially applies to large preschools and younger children. For example, a teacher at a new large preschool mentioned that to prevent accidents and protect children, the teachers 'had to manage things in such a way that the children could only cycle in one direction' (N3). At the preschool, clear rules have been introduced for how and when children can ride bikes. The same teacher also said that

We needed to regulate the number of children using the swing, we made signs that clearly showed that a maximum of four children could be in the swing at a time. We also had to post one teacher there to keep the rules and safeguard that the younger ones do not sneak in and get the swing in the head or get hurt. We, the teachers, have also discussed this matter quite a lot. (N3)

Apart from showing how the swings need to be monitored by a teacher and that a maximum number of children are allowed to stay there to reduce the risk of

younger children being injured, the example also shows how the material conditions of a defined area become an important factor for the teachers' perception of safety. While it is unclear exactly why restrictions around the swings needed to be implemented, it is clear that they are the result of discussions between the teachers, objects (the swings) and children's bodies and actions, i.e. a socio-material process (cf. Fenwick, Nerland, and Jensen 2012).

Summing up

Many of the discourses that were revealed in preschool teachers' views on outdoor activities are cross-cutting the areas of physical activities, social activities and relational encounters with nature. For example, the risky play discourse not only involves physical activities but also limitations that affect relational play and elements from nature are considered risky and not essential for children's relational encounters. The analysis also shows how some discourses are more dominant in either new or old preschools, for example, views on risks and restrictions are more dominant at new preschools than old. The opposite is seen in the discourse on the autonomous child, as old preschool practices tend to trust the children's own capacity more than the new. Descriptions of, and discourses relating to, relational encounters with nature are least frequently seen in both old and new preschools, accompanied by quite a common (but somewhat un-reflected) discourse of nature given an instrumental and anthropocentric value.

Concluding discussion

According to teacher's descriptions, the opportunities for preschool children's free and varied outdoor play are more limited at new, and larger preschools than at old ones. New preschools have more programmed space in their design and smaller areas of trees, bushes and hilly terrain, resulting in difficulties managing the large number of children in the playgrounds, resulting in more regulations regarding active and free play. We find the results to be alarming in several ways. Because green areas and loose materials are generally essential factors in facilitating children's negotiations and making a place inclusive for children of different levels of competence, age and gender, the use of such factors should be considered in the playground designs. Another aspect concerns the lack of 'wild and rough' terrain that could provide opportunities for risky play, which is regarded as being important for developing physical self-esteem and increased activity (cf. Jerebine et al. 2022a). Furthermore, this type of nature stimulates creativity, fantasy and emotional attachment to a place, all of which are key aspects of sustainable learning and meaning-making (cf. Giusti, Barthel, and Marcus 2014). Based on studies of children's perspectives on newly planted grounds, it should be acknowledged that fencing off plants might disconnect children from their playground in ways that could last long after the fences have been removed. Based on such findings, an attempt should be made to use fewer restrictive obstacles that do not prevent the children from visiting a particular location, but rather slow the pace and save green areas to the extent that they

survive (Jansson et al. 2014), as well as for the future planning of preschools to keep the original forest and other eco-systems to get robust land from the start.

Adding to the physical changes regarding green areas, the results showing an instrumental view of nature make us conclude that the changes in preschool playgrounds affect the understanding of nature also having intrinsic values. This, we argue, needs a re-thinking in relation to contributing to social and ecological sustainability in preschools.

Looking beyond the explicit views of the teachers, it is clear that visible and invisible professional actors compete in different ways when negotiating the social space of playgrounds. The matter of how the places (playgrounds) are used appears to be a matter of negotiations between professional groups and their different agendas. The teachers and children become visible actors that negotiate boundaries of what constitutes acceptable activities on the one hand (such as high-intensity activities like running, training for autonomy, and using toys in certain areas), and unacceptable activities (such as risky play and war games), on the other. This is not new or surprising. The negotiations about space and place between the teachers/children and the invisible actors, such as architects, community planners, as well as local and national policymakers, however, are remarkably evident in the results. It is clear that when new playgrounds are designed, they follow rationales and presumptions about how children's play should be enacted in certain and safe ways (cf. Barad 2010). The playgrounds are made safe, elements of nature are disciplined and groomed and the things that appear in the playgrounds all have their purpose and place. It is also clear that the policymakers who decide the location and size of the buildings and playgrounds follow other rationales relating to, for example, learning (national curricula) and funding (local considerations). In this multifaced field of different agendas, rationales and discourses, it is hard for teachers to give voice to their professional rationales, considering, for example, valuable encounters between themselves and the children (Löfgren and Manni 2020; Manni and Löfgren 2022), free or risky play (Jerebine et al. 2022b). Furthermore, as the very few references to nature and encounters with nature illustrate, none of the professional actors (whether visible or not) fight for the children's right to play in ways that involve nature in other ways than the purely instrumental ones. A conclusion is that the newer the preschool, the less likely it is that the children can develop their relationship with nature since there are so many actors that have used their professional skills to orchestrate children's play based on different agendas.

The invisible actors in terms of planners, architects and policy-makers become present through different things and materials that limit the children's own choice of outdoor activities (to a high extent in new settings and a lower extent in older settings). Thus, different professional agendas seem to form social spaces through the things they put in the places (cf. Fenwick et al. 2015).

The societal changes that frame the prerequisites for preschool practice are therefore significant. Viewing it from a distance, it could be said that we are facing a shift from the Swedish preschools we used to know with sufficient space and place for children's free play and outdoor nature encounters, to a new kind of modern preschool with other frameworks, prerequisites and educational discourses.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

The study is part of a research project funded by FORMAS (a Swedish government research council for sustainable development) with aims to contribute to sustainable transformations in society. It is a co-operative project with one municipality in Sweden contributing to the development of preschool playgrounds and increased collaboration between research and practice.

ORCID

Annika Manni  <http://orcid.org/0000-0002-4388-7970>

References

- Änggård, E. 2010. "Making Use of 'Nature' in an Outdoor Preschool: Classroom, Home and Fairyland." *Children, Youth and Environments* 20 (1): 4–25. <https://doi.org/10.1353/cye.2010.0032>.
- Änggård, E. 2011. "Children's Gendered and Non-Gendered Play in Natural Spaces." *Children, Youth and Environments* 21 (2): 5–33. <https://doi.org/10.7721/chilyoutenvi.21.2.0005>.
- Ärlemalm-Hagsér, E. 2013. "Respect for Nature – a Prescription for Developing Environmental Awareness in Preschool." *Center for Educational Policy Studies Journal* 3 (1): 25–44. <https://doi.org/10.26529/cepsj.249>.
- Ärlemalm-Hagsér, E., and B. Sundberg. 2016. "Naturmöten och källsortering-En kvantitativ studie om lärande för hållbar utveckling i förskolan." *Nordic Studies in Science Education* 12 (2): 140–156. <https://doi.org/10.5617/nordina.1107>.
- Ärlemalm, H., A. Sandberg, J. Brodin, B. Davidsson, P. Lindstrand, T. Vuorinen, and R. Karlsson. 2008. *Miljöer för lek, lärande och samspel*. 1. uppl. ed. Lund: Studentlitteratur.
- Barad, K. 2010. "Quantum Entanglements and Hauntological Relations of Inheritance: Dis/ Continuities, Spacetime Enfoldings, and Justice-to-Come." *Derrida Today* 3 (2): 240–268. <https://doi.org/10.3366/drt.2010.0206>.
- Bennet, J. 2010. "Pedagogy in Early Childhood Services with Special Reference to Nordic Approaches." *Psychological Science and Education* 3:16–21.
- Boverket. 2022. *Utveckla förskolors och skolors fysiska miljö för att lyfta hela samhället*. Accessed November 10, 2023. <https://www.boverket.se/sv/samhallsplanering/arkitektur-och-gestaltad-livsmiljo/arbetsatt/skolors-miljo/>.
- Braun, V., and V. Clarke. 2006. "Using Thematic Analysis in Psychology." *Qualitative Research in Psychology* 3 (2): 77–101. <https://doi.org/10.1191/1478088706qp0630a>.
- Braun, V., and V. Clarke. 2019. "Reflecting on Reflexive Thematic Analysis." *Qualitative Research in Sport, Exercise and Health* 11 (4): 589–597. <https://doi.org/10.1080/2159676X.2019.1628806>.
- Broström, S., and T. Frøkjær. 2019. "Developing a Pedagogy of Education for Sustainable Futures: Experiences and Observations from Danish Preschools." *ECNU Review of Education* 2 (4): 475–496. <https://doi.org/10.1177/2096531119893306>.
- Carson, V., E. Y. Lee, L. Hewitt, C. Jennings, S. Hunter, N. Kuzik, Jodie A. Stearns, et al. 2017. "Systematic Review of the Relationships Between Physical Activity and Health Indicators in the Early Years (0–4 Years)." *BMC Public Health* 17 (Suppl. 5): 854. <https://doi.org/10.1186/s12889-017-4860-0>.
- Chawla, L. 2015. "Benefits of Nature Contact for Children." *Journal of Planning Literature* 30 (4): 433–452. <https://doi.org/10.1177/0885412215595441>.
- Chawla, L., and D. F. Cushing. 2007. "Education for Strategic Environmental Behavior." *Environmental Education Research* 13 (4): 437–452. <https://doi.org/10.1080/13504620701581539>.
- Corsaro, W. A. 2015. *The Sociology of Childhood*. 4th ed. Los Angeles, CA: SAGE.

- Dewey, J. 1966. *Democracy and Education, An Introduction to the Philosophy of Education*. 1966th ed. New York: The Free Press.
- Erdem, D. 2018. "Kindergarten Teachers' Views about Outdoor Activities." *Journal of Education and Learning* 7 (3): 203. <https://doi.org/10.5539/jel.v7n3p203>.
- Fägerstam, E. 2012. "Space and Place-Perspectives on Outdoor Teaching and Learning." Doctoral thesis, Linköping University, Linköping.
- Fenwick, T., S. Doyle, M. K. Michael, and J. Scoles. 2015. "Matters of Learning and Education: Sociomaterial Approaches in Ethnographic Research." In *MultiPluriTrans in Educational Ethnography: Approaching the Multimodality, Plurality and Translocality of Educational Realities*, edited by S. Bollig, M. Honig, S. Neumann, and C. Seele, 141–162. Bielefeld, Germany: Transcript Verlag/Columbia University Press. <https://cup.columbia.edu/book/multipluritrans-in-educational-ethnography/9783837627725>.
- Fenwick, T. J., R. Edwards, and P. Sawchuk. 2011. *Emerging Approaches to Educational Research: Tracing the Sociomaterial*. Milton Park: Routledge.
- Fenwick, T., M. Nerland, and K. Jensen. 2012. "Sociomaterial Approaches to Conceptualising Professional Learning and Practice." *Journal of Education and Work* 25 (1): 1–13. <https://doi.org/10.1080/13639080.2012.644901>.
- Gericke, N., A. Manni, and U. Stagell. 2020. "The Green School Movement in Sweden—Past, Present and Future." In *Green Schools Globally. International Explorations in Outdoor and Environmental Education*, edited by A. Gough, J. C. K. Lee, E. P. K. Tsang, 309–332. Cham: Springer. https://doi.org/10.1007/978-3-030-46820-0_17.
- Giusti, M., S. Barthel, and L. Marcus. 2014. "Nature Routines and Affinity with the Biosphere: A Case Study of Preschool Children in Stockholm." *Children, Youth and Environments* 24 (3): 16–42. <https://doi.org/10.1353/cye.2014.0019>.
- Goodling, B. H. 2016. *Exploring the Outdoors: A Multiple Case Study Examining Teacher Beliefs and Practices in Preschool Outdoor Play*. ProQuest Dissertations Publishing. <http://proxy.ub.umu.se/login?url=https://www.proquest.com/dissertations-theses/exploring-outdoors-multiple-case-study-examining/docview/1857949435/se-2>.
- Gray, C., R. Gibbons, R. Larouche, E. B. Sandseter, A. Bienenstock, M. Brussoni, Guylaine Chabot, et al. 2015. "What is the Relationship Between Outdoor Time and Physical Activity, Sedentary Behaviour, and Physical Fitness in Children? A Systematic Review." *International Journal of Environmental Research and Public Health* 12 (6): 6455–6474. <https://doi.org/10.3390/ijerph120606455>.
- Hägglund, S., and I. P. Samuelsson. 2009. "Early Childhood Education and Learning for Sustainable Development and Citizenship." *International Journal of Early Childhood* 41 (2): 49–63. <https://doi.org/10.1007/BF03168878>.
- Häggström, M., and C. Schmidt. 2020. "Enhancing Children's Literacy and Ecological Literacy Through Critical Place-Based Pedagogy." *Environmental Education Research* 26 (12): 1729–1745. <https://doi.org/10.1080/13504622.2020.1812537>.
- Hammarsten, M. 2021. "What are Schoolchildren doing Out There? Children's Perspectives on Affordances in Unedited Places." *Built Environment* 47 (2): 186–205. <http://dx.doi.org/10.2148/benv.47.2.186>.
- Herrington, S., S. Brunelle, M. Brussoni, et al. 2017. "Outdoor Playspaces in Canada: As If Children Mattered." In *The SAGE Handbook of Outdoor Play and Learning*, edited by T. Waller, E. Arlemalm-Hagser, and E. B. H. Sandseter, 143–165. London: Sage.
- Hjelmér, C. 2020. "Free Play, Free Choices? – Influence and Construction of Gender in Preschools in Different Local Contexts." *Education Inquiry* 11 (2): 144–158. <https://doi.org/10.1080/20004508.2020.1724585>.
- James, A., and A. Prout. 2015. *Constructing and Reconstructing Childhood: Contemporary Issues in the Sociological Study of Childhood*. 3 Uppl. London: Routledge.
- Jansson, M., A. Gunnarsson, F. Mårtensson, and S. Andersson. 2014. "Children's Perspectives on Vegetation Establishment: Implications for School Ground Greening." *Urban Forestry & Urban Greening* 13 (1): 166–174. <https://doi.org/10.1016/j.ufug.2013.09.003>.

- Jerebine, A., K. Fitton-Davies, N. Lander, E. L. J. Eyre, M. J. Duncan, and L. M. Barnett. 2022a. "All the Fun Stuff, the Teachers Say, 'That's Dangerous!' Hearing from Children on Safety and Risk in Active Play in Schools: A Systematic Review." *The International Journal of Behavioral Nutrition and Physical Activity* 19 (1): 72–72. <https://doi.org/10.1186/s12966-022-01305-0>.
- Jerebine, A., K. Fitton-Davies, N. Lander, E. L. J. Eyre, M. J. Duncan, and L. M. Barnett. 2022b. "Children are Precious Cargo; We Don't Let Them Take any Risks!': Hearing from Adults on Safety and Risk in Children's Active Play in Schools: A Systematic Review." *The International Journal of Behavioral Nutrition and Physical Activity* 19 (1): 1–111. <https://doi.org/10.1186/s12966-022-01344-7>.
- Kane, E. 2015. "Playing Practices in School-Age Childcare: An Action Research Project in Sweden and England." Doctoral thesis, Stockholm University, Stockholm.
- Knight, S. 2009. *Forest Schools and Outdoor Learning in the Early Years*. London: SAGE.
- Lindgren, N. 2020. Managing free space in preschool developments Commonalities and divergences in perspectives regarding quality in preschool outdoor environments, Independent project in Landscape architecture, SLU, Alnarp.
- Lindgren, A.-L., and I. Söderlind. 2019. *Förskolans historia: Förskolopolitik, barn och barndom*. Malmö: Glerup Utbildning AB.
- Little, H., E. B. H. Sandseter, and S. Wyver. 2012. "Early Childhood Teachers' Beliefs About Children's Risky Play in Australia and Norway." *Contemporary Issues in Early Childhood* 13 (4): 300–316. <https://doi.org/10.2304/ciec.2012.13.4.300>.
- Löfgren, H. 2015. "Teachers' Work with Documentation in Preschool: Shaping a Profession in the Performing of Professional Identities." *Scandinavian Journal of Educational Research* 59 (6): 638–655. <https://doi.org/10.1080/00313831.2014.965791>.
- Löfgren, H. 2016. "A Noisy Silence About Care: Swedish Preschool Teachers' Talk About Documentation." *Early Years* 36 (1): 4–16. <https://doi.org/10.1080/09575146.2015.1062744>.
- Löfgren, H. 2017. "Learning in Preschool: Teachers' Talk about their Work with Documentation in Swedish Preschools." *Journal of Early Childhood Research* 15 (2): 130–143. <http://dx.doi.org/10.1177/1476718X15579745>.
- Löfgren, H., and A. Manni. 2020. "Valuable Everyday Encounters in Early Childhood Education: Narratives from Professionals." *Early Years* 42 (4-5): 434–449.
- Lysklett, O. B., and H. W. Berger. 2017. "What are the Characteristics of Nature Preschools in Norway, and How do they Organize their Daily Activities?" *Journal of Adventure Education and Outdoor Learning* 17 (2): 95–107. <https://doi.org/10.1080/14729679.2016.1218782>.
- Manassakis, E. S. 2020. "Children's Participation in the Organisation of a Kindergarten Classroom." *Journal of Early Childhood Research* 18 (1): 18–28. <http://dx.doi.org/10.1177/1476718X19882714>.
- Manni, A. 2019. "Förskolébarns lek, lärande och hälsa i nya förskolors utemiljöer- aspekter av förändrade förutsättningar för uteverksamhet i förskolan." Paper presented at the Ute är inne -Forskningssymposium Jönköping University.
- Manni, L. 2022. *Förskolébarns möjligheter till naturmöten: Förskolors tillgänglighet till naturpräglade grönområden utanför förskolan som en förutsättning för att erbjuda barn naturmöten* (Dissertation). Retrieved from <https://urn.kb.se/resolve?urn=urn:nbn:se:uu:diva-466856>Other Info
- Manni, A., and H. Löfgren. 2022. "Methodological Development Through Critical Reflections on a Study Focusing on Daily Valuable Encounters in Early Childhood Settings." *Contemporary Issues in Early Childhood*: 146394912211291. <http://dx.doi.org/10.1177/14639491221129192>.
- Manni, A., C. Ottander, and K. Sporre. 2017. "Young Students' Aesthetic Experiences and Meaning-Making Processes in an Outdoor Environmental School Practice." *Journal of Adventure Education and Outdoor Learning* 17 (2): 108–121. <https://doi.org/10.1080/14729679.2016.1219872>.
- Mårtensson, F. 2004. "Landskapet i leken: en studie av utomhuslek på förskolegården." Alnarp, Dept. of Landscape planning, Swedish Univ. of Agricultural Sciences.

- Mårtensson, F., C. Boldemann, M. Söderström, M. Blennow, J.-E. Englund, and P. Grahn. 2009. "Outdoor Environmental Assessment of Attention Promoting Settings for Preschool Children." *Health & Place* 15 (4): 1149–1157. <https://doi.org/10.1016/j.healthplace.2009.07.002>.
- Mårtensson, F., A. Manni, and A. Fröberg. *forthcoming*. "Do the New, Large Preschools Change the Game for Outdoor Stay? – A Comparative Study of Preschool Design in a Swedish Municipality."
- Maynard, T., J. Waters, and J. Clement. 2013. "Child-Initiated Learning, the Outdoor Environment and the 'underachieving' Child." *Early Years* 33 (3): 212–225. <http://dx.doi.org/10.1080/09575146.2013.771152>.
- McClintic, S., and K. Petty. 2015. "Exploring Early Childhood Teachers' Beliefs and Practices about Preschool Outdoor Play: A Qualitative Study." *Journal of Early Childhood Teacher Education* 36 (1): 24–43. <https://doi.org/10.1080/10901027.2014.997844>.
- Mygind, L., M. Kurtzhals, C. Nowell, P. S. Melby, M. P. Stevenson, M. Nieuwenhuijsen, Jarrad A. G. Lum, Trine Flensburg-Madsen, Peter Bentsen, and Peter G. Enticott. 2021. "Landscapes of Becoming Social: A Systematic Review of Evidence for Associations and Pathways Between Interactions with Nature and Socioemotional Development in Children." *Environment International* 146:106238. <https://doi.org/10.1016/j.envint.2020.106238>.
- National Agency of Education. 2018. *Curriculum for the Preschool*. Lpfö18. Stockholm: Skolverket.
- Palmberg, I. E., and J. Kuru. 2000. "Outdoor Activities as a Basis for Environmental Responsibility." *The Journal of Environmental Education* 31 (4): 32–36. <https://doi.org/10.1080/00958960009598649>.
- Pramling, N., and C. Wallerstedt. 2019. "Lekresponsiv undervisning – ett undervisningsbegrepp och en didaktik för förskolan." *Forskning om undervisning och lärande* 7 (1): 7.
- Quay, J. 2013. "More Than Relations Between Self, Others and Nature: Outdoor Education and Aesthetic Experience." *Journal of Adventure Education & Outdoor Learning* 13 (2): 142–157. <https://doi.org/10.1080/14729679.2012.746846>.
- Quay, J., and J. Seaman. 2013. *John Dewey and Education Outdoors – Making Sense of the 'Educational Situation' Through More Than a Century of Progressive Reforms*. Rotterdam, The Netherlands: Sense Publishers.
- Rickinson, M., J. Dillon, K. Teamey, M. Morris, M. Y. Choi, D. Sanders, and P. Benefield. 2004. *A Review of Research on Outdoor Learning*. National Foundation for Educational Research and King's College London. <https://www.informalscience.org/sites/default/files/Review%20of%20research%20on%20outdoor%20learning.pdf>.
- Ronnlund, M. 2020. "'I Love This Place, but I Won't Stay': Identification with Place and Imagined Spatial Futures Among Youth Living in Rural Areas in Sweden." *Young* 28 (2): 123–137. <https://doi.org/10.1177/1103308818823818>.
- Sandberg, A. 2002. *Vuxnas lekvärld: en studie om vuxnas erfarenheter av lek*. Acta Universitatis Gothoburgensis, Göteborg.
- Sandell, K., and J. Öhman. 2010. "Educational Potentials of Encounters with Nature: Reflections from a Swedish Outdoor Perspective." *Environmental Education Research* 16 (1): 113–132. <https://doi.org/10.1080/13504620903504065>.
- Sandseter, E. B. H. 2009. "Characteristics of Risky Play." *Journal of Adventure Education & Outdoor Learning* 9 (1): 3–21. <https://doi.org/10.1080/14729670802702762>.
- Sandseter, E. B. H. 2012. "Restrictive Safety or Unsafe Freedom? Norwegian ECEC Practitioners' Perceptions and Practices Concerning Children's Risky Play." *Child Care in Practice* 18 (1): 83–101. <https://doi.org/10.1080/13575279.2011.621889>.
- SCB. 2018. *Grundskolor och friytor. Nationell kartläggning och uppföljning av grundskoleelevers tillgång till friytor 2014–2017*. <https://www.boverket.se/contentassets/7f6b1586a5504fca11ea370f73b2b05/rapport-grundskolor-och-friytor.pdf>.
- Söderström, M., C. Boldemann, U. Sahlin, F. Mårtensson, A. Raustorp, and M. Blennow. 2013. "The Quality of the Outdoor Environment Influences Children's Health – a Cross-Sectional Study of Preschools." *Acta Paediatrica* 102 (1): 83–91. <https://doi.org/10.1111/apa.12047>.
- SOU. 1972:26. *Förskolan del 1. Betänkande avgivet av 1968 års barnstugeutredning*. https://weburn.kb.se/metadata/562/SOU_260562.htm.

- SOU. 1972:27. *Förskolan del 2. Betänkande avgivet av 1968 års barnstugeutredning*. https://weburn.kb.se/metadata/565/SOU_260565.htm.
- Storli, R., and E. B. H. Sandseter. 2015. "Preschool Teachers' Perceptions of Children's Rough-and-Tumble Play (RandT) in Indoor and Outdoor Environments." *Early Child Development and Care* 185 (11–12): 1995–2009. <https://doi.org/10.1080/03004430.2015.1028394>.
- Tremblay, M. S., C. Gray, S. Babcock, J. Barnes, C. C. Bradstreet, D. Carr, Guylaine Chabot, et al. 2015. "Position Statement on Active Outdoor Play." *International Journal of Environmental Research and Public Health* 12 (6): 6475–6505. <https://doi.org/10.3390/ijerph120606475>.
- Tzoulas, K., Kalevi Korpela, Stephen Venn, Vesa Yli-Pelkonen, Aleksandra Kaźmierczak, Jari Niemela, and Philip James. 2007. "Promoting Ecosystem and Human Health in Urban Areas Using Green Infrastructure: A Literature Review." *Landscape and Urban Planning* 81 (3): 167–178. <https://doi.org/10.1016/j.landurbplan.2007.02.001>.
- Veldman, S. L. C., Chin A. Paw, and T. M. Altenburg. 2021. "Physical Activity and Prospective Associations with Indicators of Health and Development in Children Aged<5 Years: A Systematic Review." *International Journal of Behavioral Nutrition and Physical Activity* 18 (1): 6. <https://doi.org/10.1186/s12966-020-01072-w>.