

What shapes the outdoor learning practices in Israeli kindergartens? ECE teachers' perceptions

Iris Levy ^{1*} , Sigal Tish ¹ , Pninat Tal ¹ , Clodie Tal ¹ , Michaela Kadury-Slezak ¹ , Sapir Faruchi ¹ 

¹Levinsky College of Education, Tel Aviv, ISRAEL

*Corresponding Author: irislevi96@gmail.com

Citation: Levy, I., Tish, S., Tal, P., Tal, P., Kadury-Slezak, M., & Faruchi, S. (2025). What shapes the outdoor learning practices in Israeli kindergartens? ECE teachers' perceptions. *Pedagogical Research*, 10(2), em0238. <https://doi.org/10.29333/pr/16056>

ARTICLE INFO

Received: 04 Mar. 2024

Accepted: 08 May 2024

ABSTRACT

The importance of outdoor learning to support children's learning and development has been recognized by research and policy. It carries the potential for social interactions, and authentic, informal, and playful learning. It fosters curiosity and creativity and develops the ability to deal with uncertain and risky situations. The Israeli Ministry of Education encourages a variety of outdoor learning activities, in and near the preschool yard. During the COVID-19 crisis, learning in outdoor spaces became even more important for children, staff, and parents. The aim of this research is to understand early childhood education teachers' perceptions of what shapes the outdoor practices in Israeli preschools. This study was based on a mixed-methods methodology, as it included qualitative (semi-structured interviews) and quantitative components (survey-questionnaire). Participants were 85 ECE teachers: 75 teachers participated in survey-questionnaire and 10 teachers participated in semi-structured interviews. The qualitative data analysis was performed using an inductive approach, which is based on an interpretive content analysis that is prevalent in the grounded theory paradigm. The results showed that most of the preschool teachers acknowledged the great importance of outdoor learning to a variety of learning areas. The teachers considered outdoor learning as providing a meaningfully "high contribution" to social-emotional and scientific learning, and for motor, cognitive and linguistic development. According to the teachers' perceptions, parents, preschool staff, the municipal authorities, and the Ministry of Education all serve as influential factors for outdoor learning. In addition, the findings revealed that the COVID-19 pandemic influenced the ways of working in outdoor spaces.

Keywords: ECE teachers', perceptions, outdoor learning, parents, staff

INTRODUCTION

Outdoor Learning

Learning outside the preschool classroom is learning that takes place in any location outside the preschool building: the yard, the preschools' surroundings, natural spaces both near and far, beaches, groves, streets, museums, and more. In all these environments, children gain direct and authentic experience with the elements of their environment, sense and examine them, and encounter and research processes and phenomena, where they take place (Orion, 2003, 2013; Tal, 2009). Numerous studies demonstrated the benefits of learning outside the preschool—meaningful learning, cognitive, psycho-motor, and emotional development of the children; outside learning also provides a benefit to the school, the community, and society. In recent years, there has been an increase in Nature Disorder Deficit, a phenomenon reflecting a lack of time in nature that stems from parents' worries, a lack of natural spaces, and the stimuli from technological means. This phenomenon impairs students' moods and grades can lead to obesity and alienation of the environment (Lavi Alon & Tal, 2021).

Outdoor learning affords children with new types of challenges. It bridges between theory and real life, invites numerous opportunities for social interactions, provides informal and playful learning that can be more appealing and enjoyable, encourages curiosity and creativity, develops the ability to cope with uncertainty, and cultivates a connection with the natural environment and the local community that surrounds the child (Levy, 2017; Shorgy, 2018). In addition, being out in nature can promote learning by improving children's attention by reducing stress levels, promoting self-regulation, interest, and enjoyment from learning. It seems that nature provides a more relaxed, quiet, and safe context for learning. It seems that nature provides a calm, quiet, and safe context for learning (Kuo et al., 2019). Activity in an open space provides new opportunities for children and their teachers to interact using dialogue with the external and internal boundaries (Frances, 2018), promotes children's motivation (Bell et al., 2009), and independence to learn and facilitates learning a variety of topics and supports learners' holistic development (Fiennes et al., 2015). Catucci and Ehrlin's (2018) research result can be used to reflect on the impact of shared habits in preschool

practices and thereby on the learning environment that children can have access to. It is important to note that children who are not exposed in their day-to-day lives to the living and natural world develop fear and suspicion of nature, and it is important that the young generation will learn to live with living creatures, protect them, and to portray responsibility and compassion towards them (Andres, 2018). Bjerklund and Amot (2023) have illustrated how Sámi (small area in Norway) ECEC staff emphasize outdoor activities and play in their daily practices. They discuss the benefits of outdoor activities for the mental and physical health of the children in ECECs in their study. Within this study, outdoor play also promotes social and emotional development. The children learn to interact with others and manage their emotions in a natural setting. 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. The main conclusion was that outdoor activities are important for promoting, children's well-being (Bjerklund & Amot, 2023).

One of the out-of-classroom spaces available to preschoolers is the preschool yard. The yard symbolizes the child's freedom of movement and independence in the planning and choice of actions. According to the Israeli Ministry of Education (2008), the preschool yard should be planned such that children can act and move freely and with great security. Similarly, since the yard is considered a learning space, it is important that its organization and design will match the curriculum, but at the same time, allow free activity. According to the Ministry of Education's (2008) guidelines, the preschool teacher should design an interesting and inviting yard that stimulates learning, raises curiosity and provides security. The preschool yard is perceived as inviting bi-directional flow between the inside and outside of the preschool, between the preschool and the community, between the preschool children and their families, and between the staff and the community (Andres, 2010). The natural spaces in the preschool yard can offer children multisensory experiences and day-to-day encounters with the living and growing world, which allow for a positive connection with the natural world. Similarly, the natural spaces address children's physical, emotional, cognitive, and spiritual aspects (Andres, 2015). Spector-Levy et al. (2013) claim that building natural gardens such as herb gardens, vegetable gardens, and flower gardens in the preschool yard encourage optimal climate education and provide multisensory experience. Similarly, during the building of the garden, and its maintenance, it is possible to foster social values relating to working the land, personal experience, and responsibility, and use of tracking and observational skills of the interactions and changes that take place in the garden throughout the year. In a study conducted by Bratitsis and Papachristou (2014), 12 children aged four-six were interviewed regarding their digital games or games in the preschool yard. Results revealed that most of the children clearly preferred to play outside over digital games.

Preschool Educators' & Parents' Perceptions of Outdoor Learning: Global Research

Parsons and Traunter (2020) explored the perceptions of parents and educational staff (preschool teachers and assistants) in Britain towards learning in open spaces. The study found that while parents and preschool teachers understood the advantages of learning in open spaces, they tended to avoid this kind of learning. Parents still believed that learning guided by the preschool teacher within the classroom was "true" learning, whereas they shied away from the dirt and the mud-stained knees that come with playing in the open space. The educational staff avoided the discomfort associated with the transitions between the preschool class and prolonged activity outside and back.

McFarland and Laird (2018) examined the perceptions of 121 parents and 26 teachers who taught in rural and urban environments regarding challenging activity outside of the preschool. The parents and teachers belonged to four educational frameworks (two in Australia and two in the USA). The children in the preschools ranged from a few months old to six-years-old. The study found that repertoire of challenging activities offered by parents and teachers in three dimensions:

- (1) movement activities that support gross motor movement,
- (2) activities exploring the immediate environment, and
- (3) activities that have an aspect of developing children's ability to evaluate risks in their immediate environment. It was further found that teachers supported challenging activities in open spaces, even for children younger than three-years-old, and all the teachers demonstrated a deep understanding regarding the contribution of outdoor activities to children.

In a similar study conducted in Estonia regarding preschool teachers' perceptions of learning in the yard, it was found that the teachers did not work with the children in the yard for the most part, even though they considered learning in the yard as important (Tuuling et al., 2018). All the parents in the study valued the importance of out-of-classroom activities for children's development. A clear finding in the study related to parents' concerns from the risks involved with activities outside of the preschool. Of children whose parents did not encourage them in these kinds of activities, some took part without permission and took the risks without adults' guidance. From these findings, it seems that parents set boundaries on children's challenging activities in open spaces. In terms of the risks involved, two approaches can be taken: One, forbidding involvement in these kinds of activities, and two, permitting challenging activity accompanied by mediation, which teaches the children to evaluate the risks in the environment without avoiding these important activities.

In a study conducted in France in terms of teachers' perceptions of their role in the school yard, Delalande (2010) found that teachers who taught in both rural and urban areas saw the nurturing and supervision of the students as the main role in the preschool yard. At the same time, differences were found between teachers in rural versus urban environments, with those in rural areas claiming that they spend more time involved in children's play and guiding it, while those in the urban schools noted that they spend less time involved in children's play in order to allow the children to develop autonomy and social skills.

Dietze and Kashin (2019), who led a professional development relating to learning in outdoor spaces, found minimal training for preschool and schoolteachers about learning in outdoor spaces. Of the preschool teachers, 72% reported that they had limited theoretical and practical knowledge regarding learning in open spaces. Only 11% of them participated in professional

development on the topic, and 89% reported that the professional development was the first time they were exposed to this topic. The results of this study highlight the little knowledge that preschool teachers have regarding learning in open spaces.

Bartnæs and Myrstad (2022), found in their study that enabling children to learn *in* and *with* their environments requires an acknowledgement that knowledge is not the exclusive domain of humanity, but can also be acquired in the correspondence between different elements of our surroundings, by means of large or small physical or sensuous encounters. According to their results for educators, this can entail a shift in attention from the child as an individual towards what occurs in the relationship between the child and their environments. This is a dance of life, which over a period can provide a deeper understanding of how individuals and their environments are entangled in a common world.

Card and Burke (2021) case study provides evidence of the power of nature as a teacher in children's inspired nature inquiries. They invite educators and policy advisors to take notice of the possibilities of land-based learning and show how emergent land-based learning may promote strong sense of self, place and community. According to the researchers, a land-based approach and nature immersion would meet both cultural and curricular outcomes.

Outdoor Learning in Israeli Context

The early childhood education system in Israel includes preschools that are free and compulsory according to the compulsory education law (1949) and accommodate three-to five-year-old children. Preschools in Israel are very populated and include 30-35 children with one trained teacher and one teacher assistant. Professional training of kindergarten teachers is carried out at teachers' colleges as a four-year track granting a B.Ed. The fourth year serves as an internship. In general, every preschool in Israel includes two main activity spaces: indoor and outdoor. As the climate is generally comfortable in Israel, as part of their daily schedule, children play in the yard between one-two hours. According to the policy of the Israeli Ministry of Education (2008) the preschool yard is considered a learning space and must provide opportunities for children's experimentation, exploration and discovery and should be designed to match the children's age, cognitive, social and emotional development. Furthermore, the Ministry of Education (2008) indicates that teachers should allow and encourage independent and secure activities outdoors.

In the last years the early childhood education system in Israel has been undergoing numerous changes. During these years a new curriculum titled "The Future Kindergarten" (Ministry of Education, 2021) was developed, aiming to foster innovative pedagogies to promote 21st century skills and abilities. The curriculum is based on four main pedagogical principles: self-expression; innovation, productivity and technology; togetherness (developing strong connection to the community); and learning environments. That is, learning should take place in a variety of educational environments including the preschool yard, the nearby forest etc., all of which serve as places, where children learn and develop. The new curriculum highlights 'agency' as a main ability that should be fostered in preschools. Agency is explained as the ability to act independently, to set goals and fulfill them for the purpose of improving one's quality of life and society as a whole. According to the Ministry of Education's (2008) guidelines, the preschool curriculum aims to foster cognitive, language and literacy, motor, emotional and social development and encourages a variety of outdoor learning activities, in and near the kindergarten yard..

The COVID-19 pandemic has brought about massive disruptive changes to children around the world and to multiple sectors that are essential to children's optimal development (United Nations International Children's Emergency Fund [UNICEF], 2021). Research found a decrease in the levels of children's physical activity, temporal lack of accessibility to places of leisure, and lack of peer support (Ostermeier et al., 2022). During the COVID-19 crisis, learning in outdoor spaces became even more important, as it allowed for a safer space, where the level of infection between children, staff, and parents decreased (Bray et al., 2021). Yet, researchers from Europe and North America found that children's outdoor play was reduced during the pandemic while there was an increase in indoor play. In addition, there was decline in time spent by children in outdoor and indoor physical activity (Kourti et al., 2021).

Most governments played catch-up to the exponential spread of COVID-19, and institutions had very little time to prepare for a remote-teaching regime (Daniel, 2020). The Israeli Ministry of Education closed all schools on 13 March 2020. Two days later, the Ministry shut down all preschools, daycare centers, and special education facilities. The entire Israeli education system moved to digital platforms, and distance learning took place for about one month with no orderly guidance from the Ministry of Education—each school developed its own curriculum (Dahan et al., 2020). A month or so after the schools had shut down, the Ministry of Education published an outline for distance teaching that resembled the normal daily schedule of preschools and schools (Dahan et al., 2020). Although teachers made use of this and began to prepare weekly curricula for children in the preschools and schools, the outline provoked considerable criticism among parents and teachers, who argued that it did not take into consideration the differences of age or socioeconomic situation of the children in the school system. The Israel Psychological Association (2020) published a position paper stating that the program did not accommodate the emotional and cognitive abilities of preschool children (Dahan et al., 2020). In the wake of this protest, the Education Ministry issued an advisory whose framework was not mandatory, but rather a tool to help teachers organize distance teaching (Dahan et al., 2020).

During 2020 and 2021, the Israeli education system changed the ways of working in the preschools based on the number of infected in the different cities. There were periods when they divided the children into two groups in the preschool, with each group attending for half of the week on site and the other half of the week remotely from home. The preschool staff was instructed to have individual meetings with the children to listen to their needs and provide a personal response to each child. Later on, the Corona Cabinet encouraged learning in small groups in the preschool yard and other open spaces (Vining, 2020).

METHODOLOGY

This article is part of a larger research conducted by the research in which the perceptions of Israeli parents and ECE teachers regarding outdoor learning were examined. Part of the research, which relates to parents' perception was recently published (Kadury-Slezak et al., 2023). This article focuses on the Israeli ECE teachers' perceptions regarding outdoor learning.

The aim of the study was to understand the perceptions of Israeli preschool teachers in relation to out-of-classroom learning in the preschool. This is in order to explore their perceptions of the factors that foster or impede learning in the preschool yard and in the immediate environment during routine days and during the routine of the COVID-19 crisis.

The primary research questions were: What are preschool teachers' perceptions of the contribution of out-of-classroom activities to children's development? How do they view outdoor activities within the preschool complex and which activities does that outdoor serve during routine days and during the COVID-19 crisis?

Secondary research questions were:

1. What are preschool teachers' perceptions regarding open spaces that are available to children during the preschool day and in the afternoon, during routine and COVID-19 days?
2. How do preschool teachers perceive the contribution and role of the parents in preschool children's outdoor activities in the preschool yard and its surroundings?
3. How do preschool teachers perceive the contribution and role of the educational staff in preschool children's activities in the outdoor area of the preschool and its surroundings?
4. What are preschool teachers' perceptions regarding children's going out to the open spaces in the preschool and its surroundings?
5. What are preschool teachers' perceptions regarding risks involved in the activities in the open space in the preschool and its surroundings?

This study was based on a mixed methods design (Creswell, 2014) as it included qualitative (semi-structured interviews) and quantitative components (survey-questionnaire). Survey-questionnaire was constructed by the research team based on the analysis of pre-interviews conducted with preschool teachers and was inspired by Landy's (2018) survey.

Research Sample Group

Participants were 85 preschool teachers: 75 teachers participated in survey-questionnaire and 10 teachers participated in semi-structured interviews. All the participants work in state preschools (children aged three-six). The quantitative data were collected in May 2022 and the interviews were conducted in May 2021 (this was after the lockdowns imposed during the pandemic but while there were still waves of infections). Most of survey-questionnaire participants were teachers who work in urban preschools (80%) and the others work in rural preschools (20%). In terms of seniority: 13% of the participants have up to five years' experience; 20% of the participants have 6-10 years of experience; 31% of the participants have 11-20 years of experience; 36% of the teachers' participants have more than 21 years of experience. Most of the kindergarten teachers define themselves as female. 97% of the kindergartens are secular and 3% of the kindergartens are religious.

In qualitative part, participants were teachers who work in urban preschools (80%) and the others work in rural preschools (20%). In terms of seniority: 50% of the participants have 11-20 years' experience and 50% have 20 and above years of experience.

Data Collecting

10 semi-structured interviews were conducted with preschool teachers. The interviews included different types of pre-determined questions that solicited the teachers' perspectives on a variety of issues. The questions focused on the contribution, risks, and role of the preschool teachers in encouraging children's activity in outdoor spaces (preschool yard and the environment near the preschool).

The questionnaire was constructed based on the interviews with the preschool teachers. It included 83 questions of various types (open and closed) that examined the preschool teachers' perceptions of the items. In the current study, only 15 closed items from this questionnaire were analyzed, which related to the teachers' perceptions of the contribution of the outdoor yard to children's learning, sources of support for learning, and the impact of COVID-19 on learning in and out of the preschool yard.

The qualitative data analysis was performed using an inductive approach, which is based on an interpretive content analysis that is prevalent in the grounded theory paradigm (Charmaz, 2012). It facilitated the identification of the main themes obtained from survey-questionnaire. The quantitative data analysis was performed by a descriptive statistical analysis that was based on distribution of frequencies and mean values of answers to the closed-ended and open-ended items of this questionnaire. A process of triangulation was performed so that the teachers' answers to the closed-ended items were accounted for by the yielded main themes. Interviewees gave their consent to participate in the study. Questionnaires were anonymous and the identity of respondents was unknown to the researchers. The study was approved by the Ethical Committee of Levinsky-Wingate Academic College.

Limitations

The study has relatively small sample of participants, which may limit the representativeness of the findings. In addition, it is based on data collected only in Israel and cannot be generalized to other countries.

Table 1. Contribution of children's participation in outdoor activities to dimensions of development

Item	CVM (%)	M	SD
Understanding phenomena & processes in nature	85.3	5.00	1.58
Social-emotional development	86.7	5.05	1.46
Cognitive development	84.0	4.89	1.54
Physical development	86.7	4.96	1.57
Language development	84.0	4.72	1.53

Note. CVM: Contributes very much (ranking four-six); M: Mean; & SD: Standard deviation

RESULTS

The current study examined the preschool teachers' perceptions regarding learning in the preschool years and open spaced during routine days and the COVID-19 pandemic. The Ministry of Education (2021) encourages various out-of-preschool activities, such as in the adjoining yard, open spaces, neighborhood streets, within and outside the town. The study's results reveal the preschool teachers' perceptions and their expression in pedagogical activities in the preschool yard and in the design of the educational environment, as well as the variety of factors in the ecological systems that influence its design (Bronfenbrenner, 1986; Bronfenbrenner & Morris, 2006). Following are the study's findings regarding the preschool teachers' perceptions in terms of learning in the preschool yard and open spaces.

Theme 1: Activity in Preschool Yard Enables Development & Balance of Various Dimensions of Development

In response to the questionnaire, 88% of the preschool teachers responded that they perceive the preschool yard as a safe space for learning, and 84% responded that they were familiar with the publications of the Director General of the Ministry of Education, where the rules and procedures for a safe and secure preschool yard are detailed. These findings indicate the importance that the preschool teachers attribute to activities in the preschool yard as a safe place that promotes learning.

In the questionnaire, the teachers were asked to assess the contribution (1-low contribution, 6-high contribution) of children's participation in activities in the preschool yard and open spaces outside the preschool's boundaries to five dimensions of development: understanding phenomena and processes in nature; social-emotional development; cognitive development; physical development; language development.

From **Table 1**, it is apparent that more than 84% of preschool teachers perceived that children's participation in outdoor activities contributes "very much" to all the included dimensions of development. To examine the perception of the contribution to the different developmental areas, repeated measures ANOVAs were conducted, which revealed significant differences ($p < .050$). The contribution to language development was significantly lower than the contribution to social-emotional development. The averages in **Table 1** reveal that the preschool teachers expressed the perception that out-of-classroom activities greatly enable development in a variety of childhood dimensions, and in particular, allow children to develop and learn.

An analysis of the interviews revealed the preschool teachers' perceptions of the contribution of our-of-classroom activity to children's developmental dimensions. For example, Dikla emphasized the importance of movement and setting physical challenges for children in the preschool yard:

We do not have climbing walls, so I tell them that they can climb on the fence but only to a certain height. Since they see that I trust them, they do not climb a centimeter beyond what I've shown them. You know, they leave with a feeling of 'wow I'm able to do something that no one would believe, and even I did not believe I would do.'

Many of the preschool teachers related to outdoor learning as an activity that helps the children's emotion regulation and supports aggression reduction. For example, Dalit said:

I take children who need to release aggression to the yard. We have fun, play sports, climb, and then go back into the preschool, in order to relax.

Lena also talked about the yard as a place for children's physical and active movement:

There are a lot of restrictions in the preschool building. In contrast, in the yard, if you do not find yourself you can run, go in circles, and no one will stop you. The teachers also feel much more comfortable when they do not constantly have to stop and suggest something.

Talia related to the yard as a place, where children successfully regulate their behavior and find their strengths, and not just a place for active movement:

I had the biggest child, a child named Danny. If I had a regular preschool, he could have been the child who 'explodes the preschool'. He had a disability, he was always frustrated, but outside he was creative, and all the children were around him.

In this example, Talia describes how Danny successfully managed to express himself in the yard in a personal and social way. As she said, "he was creative and all the children were around him," in contrast to Talia's and Lena's perspective of the yard as a place needed for children to "release aggression" and facilitating active movement.

Table 2. Preschool teachers' perceptions of outdoor learning

Item	CVM (%)	M	SD
Young children should be allowed to experiment with materials that can make them dirty (mud, finger paints, etc.).	100	5.79	0.52
Outdoor learning engages all the senses.	100	5.69	0.71
Outdoor learning contributes to social integration.	98.7	5.44	0.88
Outdoor learning is possible for all ages.	96.0	5.35	0.97
Outdoor learning is essential for children's physical health.	96.0	5.35	0.85
Outdoor learning is enriching, adding interest and complementing the curriculum inside the preschool.	93.3	5.51	1.03
Outdoor learning is an integral part of my annual curriculum.	81.3	4.95	1.39
Special knowledge is needed to develop the ability to teach children in an open space.	56.0	3.61	1.68
There are areas of interest that are not appropriate for outdoor learning.	53.3	3.41	1.68
To implement outdoor learning there is a need for guidance and accompaniment by experts in the field.	53.3	3.44	1.49
Outdoor learning is less important than learning to identify letters and math exercises.	25.3	2.21	1.55

Note. CVM: Contributes very much (ranking four-six); M: Mean; & SD: Standard deviation

Table 3. Preschool teachers' perceptions of factors influencing management of activity in preschool yard

Item	CVM (%)	M	SD
Fear of damage to health (stings, falls, & other injuries)	100	5.79	0.52
An extended stay in the open space deviates from the core and annual curriculum	100	5.69	0.71
Dirt and messiness are associated with outdoor activities	98.7	5.44	0.88
Resistance from the preschool teacher assistants	96.0	5.35	0.97
Resistance from the parents	96.0	5.35	0.85

Note. CVM: Contributes very much (ranking four-six); M: Mean; & SD: Standard deviation

Miri highlighted the preschool yard as a space that enables spontaneous social connections, and that sheds light on social difficulties that may not be as clear within the closed preschool building:

Children who have social difficulties, it is expressed more in the yard compared to within the preschool, because within the preschool they go to activities, where they occupy themselves, like coloring or playing a game, so it's less apparent. There are a lot of children in one space. In a more condensed space, where they are closer to one another, it's less apparent ... it's very obvious, it puts a spotlight on the children with social difficulties.

According to Miri, the children within the preschool are occupied with more structured activities compared to outside, where the activities are freer and initiated more by the children. Outside, there is a larger space that reveals their coping abilities. It may also be that inside the preschool, the teacher is busy managing the various activities, whereas outside, she lets the children select the activity and as such, "manages" them less.

Dikla noted the contribution of activities in the yard to children's sensorimotor development:

I believe that meaningful learning can happen anywhere, but the learning is very meaningful in terms of strengths that activate all the children's senses ... outside, they really experience learning.

The preschool teachers were asked about their perceptions of outdoor learning. These results are presented in **Table 2**.

The results from the questionnaire revealed that the preschool teachers ranked the importance of children being able to experiment with dirtying substances and learning that involves all the senses at the highest level. They emphasized the strong contribution of outdoor learning to social integration, physical health, and noted that outdoor learning is appropriate for all ages.

An interesting finding that emerged related to the preschool teachers' training to the principles of learning in outdoor spaces. The teachers ranked a low level of importance to the need for special knowledge to manage activities in an open space, and that there is no need for guidance for these activities.

In terms of the type of learning in open spaces, it seems that few preschool teachers think that outdoor learning is less important than learning letters or math, or that there are certain areas of interest that are not appropriate for learning in the preschool years.

Theme 2: Various Factors Influencing Outdoor Learning

The preschool teachers were asked about factors that influence their management of outdoor learning in their preschool. These results are presented in **Table 3**.

It can be seen in **Table 3** that the participants perceived the various challenges as not contributing very much to their management of outdoor activities in the preschool yard or in outdoor spaces beyond the preschool boundaries. Of the teachers, 41% ranked the concern for harming health at the highest level (four-six) and between 21%-25% ranked the rest of the challenges as contributing to a high degree.

To examine if significant differences exist in the teachers' perceptions of the various challenges, repeated measures ANOVAs were conducted. Results revealed statistically significant differences ($p < .001$), with worry about harming health (stings, falls, other injuries) perceived as higher than the other challenges.

Teachers' worries over a negative reaction from parents regarding dirt & messiness associated with activity in open spaces

From an analysis of the quantitative data, 14% of the preschool teachers noted that the dirt and messiness associated with activities in open spaces are a factor that contributes greatly to impeding learning in outdoor spaces. In contrast, 58% of the teachers noted that this item does not contribute to impeding the activity. The qualitative data revealed examples of the impact of parents' reactions towards managing outdoor activities that lead to dirtiness, as Dorit remarked:

Today I saw one of the mothers shaking the sand from her daughter's shoes. The parents very much influence on the selection of our yard. I'll tell you about things that I used to do in the past like water fountains, various containers, blowing up balloons with all kinds of hoops, sticks, straws, things we used to do years ago. Today I would not dare. I think about what the parents will say. Other than the sandbox, I do not have any sand in the yard.

Another teacher noted parents' sensitivity to the cleanliness of the expensive clothing as a factor that prevents sensory activities in the yard. According to her, this is a cultural issue:

In the Arab sector, they are more careful about dress, needing to take care of yourself, but in the Jewish sector, no ... it's unfortunate, it's the development of children at this age and there are parents who do not allow it. During parent-teacher conferences ... we talk about how important it is and I ask them to bring a change of clothes in the bag and ask them not to send the children with expensive brands and clothing, that they can get dirty without being afraid.

Varied perceptions regarding relations between learning in outdoor spaces & core & annual curriculum

The quantitative results showed that 10% of the preschool teachers marked that extended time in the open space detracts from the Ministry of Education's core and annual curriculum to a great degree, compared to 60% who felt it did not. We found echoes of this in the qualitative results as well. For example, Orit, a preschool teacher (who works regularly twice a week in the preschool), in a rural area described the preschool yard in negative terms such as "neglected," "sand everywhere not only in the sandbox", and "scraps spread everywhere and not a scrap yard." The use of these kinds of words revealed Orit's attitude towards learning in the preschool yard. During the interview, Orit noted that, The regular teacher tries to teach the children in groups and not waste time in the yard... This seems to indicate that for Orit, learning in the yard is considered a "waste of time," and she does not see a connection to the core or yearly curriculum. Moreover, Orit claimed that the preschool manager has an excellent knowledge of nature but believes in the importance of preparing children for first grade and does not allow the children to go out to the yard too much, because then she will not manage to prepare them for first grade.

Miri, who also described enriching research projects in the yard, noted that, "in the yard, learning is primarily active and independent ... less cognitive, more social-emotional." That is, while outdoor learning is perceived as important, Miri considers it as contributing less to cognitive learning and more to the children's social-emotional learning.

It may be that some of the preschool teachers relate in a differential manner to the children's profile, and not as a holistic, integrative set of skills that support each other for the child's development. In this context, they perceive science as a discipline that primarily promotes cognitive aspects and less as something that develops all children's skills (social, emotional, motor, language, cultural). Orly presented an approach that sees an equal contribution of the internal and external preschool space to children's development:

I achieve my goal here and there. If I want to encourage reading books, I have a library in the preschool, so there is a library outside the preschool, and I encourage it both inside and outside. Overall, it's open air. This is inside the preschool and that's outside the preschool, but I achieve the same goals. So I feel that they complement each other. I do not know how to explain it but it's kind of a continuous connection.

It should be noted that many of the preschool teachers who were interviewed in the current study related primarily to the meaningful contribution of learning outdoors to the science discipline, and provided varied examples of children's learning in the preschool yard:

"We lifted our heads up and saw storks, something we had never seen before above the preschool. Inside the preschool I had no opportunity to talk about storks" (Dorit).

"The children go to the viewpoint freely, that's what we call it, and then they can research and observe the birds, they can look at the fruit trees, check the weather and mark it on the meteorology station/ It's not really defined, the children go out and look for what interests them" (Miri).

"There's a garden, once a week we check what grew" (Nigella).

Presence, perceptions, & management of assistant teachers impacts nature of learning in outdoor spaces

According to the quantitative results, 11% of the preschool teachers agreed that resistance by the assistant teachers is perceived as a factor that greatly influences activities in the preschool yard and its surroundings. In contrast, 50% of the teachers reported that the assistant teachers' perceptions and management does not serve as a deterrent for outdoor activities. Dikla described the negative influence of the assistant teacher's resistance to outdoor learning:

“I can say that when I can, the yard was completely sand. Outside the sandbox, everything was sand. It made the assistant teacher angry that she always had to sweep. I really loved it.”

From what Dikla said it is clear that the yard required the assistant to work a lot, aside from the work within the building. Miri related to the perception of the job of the assistant teacher in the yard. According to her, some assistants feel that when the children are in the yard, it is their own relaxation time, but to her the assistant plays an important role in the yard:

I think the staff has to know that the yard is not their free time. In the yard, the teacher and the staff have to work. 100% if the teacher and staff are involved with the children, if they are there, going from corner to corner, play with the children, the activities go up quite a few levels. Without a doubt it is also more varied, and the play is deeper, and there are also no discipline problems. The minute that the staff sits around and take on the role of supervisor, there are many more discipline problems, more cases of ‘putting out fires’, they happen more in the yard than in the preschool classroom.

Miri emphasized the job of the assistant as a mediator who is involved, and as a person who serves as a model for the children, not just someone who supervises and “puts out fires”. Miri continued to expand regarding the emotional role of the preschool teacher and assistants, which is expressed especially in outdoor playtimes during the COVID-19 pandemic:

This year, because of the situation, we reduced the number of groups, and freed up time to stay, to stay in the place, where the children play, in order to hear, to be involved, to provide the emotional support, because we decided that this year it is more important than doing more learning groups or another creative group. Really, we are there, and we really feel that the children need it, and sometimes, even a hug like when you’re sitting on the chair and someone comes and cuddles next to you, this year [corona] they need it more than ever.

It is apparent that Miri perceived the time in the yard as a place that provided her and the assistants the opportunity to form an emotional connection with the children, a connection that the children needed more during the COVID-19 pandemic, which was challenging.

The quantitative results demonstrated that some of the preschool teachers guide and recruit the assistants towards optimal work in the preschool yard. For example, Dikla described how she trains and encourages the assistants to work according to her educational approach:

My assistant this year is new, she’s just learning principals of outdoor learning, so I am teaching her through movement. For example, the outdoor carpentry, she has no idea about this, so at the moment I’m teaching her. To me it’s very important to guide and motivate her for outdoor learning, staff work is tougher. There’s no mine, or yours, there are no areas, where you’re weak or I’m weak, it’s joint interactions.

In other words, the assistant teachers do not receive organized training from the municipality, and their professional training rests on the preschool teachers’ shoulders, which at times, has to withstand the assistant’s opposition to work outside the preschool building.

Perceptions of parents as a factor that influences nature of learning in preschool yard & outdoor spaces

According to the quantitative results, 11% of the preschool teachers noted that opposition from the parents is perceived as a factor that greatly influences activities in the yard and outdoor spaces, similar to the opposition of the assistant teachers. In contrast, 48% of the teachers reported that parents’ opposition does not greatly influence their management of outdoor activities.

The qualitative results revealed how the preschool teachers interpret the parents’ influence on their management of outdoor learning. For example, Orly related to the parents’ worry and concern for their children, explaining:

“Parents worry that something will happen to their children outside, they wrap them in bubble wrap.”

Talia also mentioned parents’ over-protectiveness:

“Parents have a tendency to overly protect the children, in the preschool as well, like not letting them use scissors or to fear that the children go outside when it’s raining.”

Dorit described parents’ concern for their children as a factor that deters meaningful and appropriate learning for young children in the school yard:

The parents are afraid that something will happen to their children, so from the start I do not let the children do things that are risky. There is avoidance. Parents’ reactions impact the type of school yard, the types of activities in the yard. Even at the level that slides are lower than they once were. There’s fear of lawsuits and relating to ‘what will parents say.’ Parents influence the choice in our school yard. Today I do not dare, I think about what parents will say. Other than the sandbox, there is no sand in the yard.

Additionally, when the preschool teachers were asked what factors encourage them to include out-of-classroom activities, 56% responded that when they receive encouragement from parents they succeed in holding these activities more successfully. As it emerged from the qualitative data, according to Nigela, parents do not always understand the potential in outdoor learning,

Table 4. Sources of support for outdoor learning in preschool yard & beyond

Source of support	Percentage who responded yes to activity in preschool yard	Percentage who responded yes to activity beyond preschool yard
Supervision/supervisor	81.3	60.0
Local authority	62.2	53.3
Parents	74.3	62.6
Children	97.3	78.6
Assistant or substitute teacher	81.9	50.6

and therefore they express negative attitudes towards the children being outdoors. Nonetheless, according to her, when she explains the importance of outdoor play to parents, they accept it.

From my previous experience, from what I would hear from parents, but this was early on in my path, many parents would perceive the yard like they go to a park and sit, and the children play, so they think about it like that. So they're kind of like, 'Until when are they outside, why are they outside so much,' and these kinds of things. I would hear this and as a teacher, would start these kinds of statements ... But the minute that I come and explain it, and say what's behind it, and the possibility of choice and the desire of each child, and what each child connects to, and it's not that the child goes out to the yard with play with nothing. The yard is divided into areas and there are always activities that are learning experiences outside, and the minute I explain what my 'I believe' is to the parents, they start to believe in my way. I do not hear anyone who complains that the children are outside too much.

Dikla talked about parents' negative perceptions regarding activities in the preschool yard and outdoor spaces, which stem from their fear of the dangers in the yard. Similarly, she described how she resolved the issue with the parents:

I'm not afraid that the child will be injured, I'm not afraid that they will touch things. I always tell the parents in the beginning—'Here, I do not wrap the children in plastic wrap, here, the more that children may have black and blue marks, know that they'll have better experiences in life.' It's not that we go to extremes, and I do not tell them to kill themselves, or that we do things that put them in unusual danger, but I do allow. I do like to let them experiment.

Sources of support for outdoor learning in preschool yard & beyond

In the questionnaires, the preschool teachers were asked about sources of support that positively influence their management of outdoor learning.

Table 4 reveals that 97% of the respondents said that they receive support for conducting activities in the schoolyard from the children themselves; 81% responded that they receive support from the supervision; 82% that they receive support from the assistant teachers. Further, 74% of the preschool teachers noted that they receive support from the parents of the preschool children, and 62% receive support from the local authority. Alongside this, are the findings from the qualitative data. Talia detailed the communication methods and how she recruited parents to outdoor learning and emphasized its importance and uniqueness along with its challenges:

With parents, there was a lot of work with parents. They helped, understood the potential. I sent them pictures of what the children are doing, they're barefoot, in the water, playing—they understood the importance. I had a negotiation with them about the conditions, where they'll allow the children to be outdoors, even on rainy days. We agreed on terms for the children, like changing clothing after the rain.

Talia noted the parents' support when going to an activity in the area near the preschool. She described this support, particularly in arranging formal processes with the municipality:

In the new preschool that I started to manage during the pandemic (2020-21), the parents helped me put in some changes in the yard when there was no response from the education department in the municipality ... I got support from the parents for trips in the area around the preschool. The parents accompanied me on these trips.

In contrast to the factors that encourage activities in the preschool yard (**Table 3**), it seems that the preschool teachers receive less support for activities in the broader outdoor space beyond the preschool from all the factors (children, parents, supervisor, etc.). From these findings it seems that children, parents, and the supervisor are perceived by the preschool teachers as factors that encourage them and support them in activities in and beyond the school yard. However, the teachers perceive the assistant teachers and the local authorities as less encouraging of activities outside the preschool.

Local authority as a factor that influences outdoor learning in preschool—Security, safety, & procedures

Analysis of the questionnaires revealed that most of the preschool teachers received support from the local authority (see **Table 3**).

At the same time, in some of the interviews, the complexity and awkwardness of working with the local authority emerged. Many teachers related to the local authorities' sweeping decisions as arbitrary decisions made without consulting them. Similarly, they discussed the safety and security procedures that impacted their ability to implement outdoor learning in the preschool yard and beyond.

1. Local authority makes decisions relating to design of preschool yard

Preschool teachers in a central Israeli city were critical and against the sweeping decision of the local authority to cover the preschool yard ground with various artificial covers, from their desire to maintain the yard's cleanliness and address parents' requests. The teachers expressed the desire to remove the play equipment [e.g., climbing, slides, etc.] that the municipality put in and the artificial coverings and explained themselves. For example, Miri claimed:

"Recently ... they covered the yard with sidewalks and carpets. If I did not have a part of the garden that's nature, the yard would be completely plastic, paved. And there are preschools like this, not just one or two."

Dikla added:

"If I could change it, I would take out all the metal equipment of the municipality. I cannot stand seeing it."

2. Enforcement of security & safety procedures by authority as a factor influencing management of outdoor learning in yard

In the interviews, the teachers were asked about the children going out to areas outside of the preschool. Dorit expanded upon the change and the local authority's hardening of their positions for safety reasons:

Even the smallest exit needs a security permit. I could go to the synagogue on the next street, and despite its proximity, I needed a permit. 10 years ago we went out without saying anything, or being afraid of anyone, and today even the smallest exit needs a permit from the supervisor and the security division of the authority, which clips the wings even more, and this is something else that changed over the years.

The security situation in Israel, especially in mixed cities, but not only, prevents many preschool teachers from going out to the surrounding city because of the many necessary security permits. Sometimes, for safety reasons, the local authority objects to the application of educational approaches, such as the scrap yard. Orly related how she dealt with this:

Because of all the fights about the yard, and the various plastic equipment and objects, we have fights with the "evil dwarf" from the municipality. They wanted to take the scraps. I called the police and the children started to cry and he took it. Since then I'm at the municipality all the time with the deputy mayor and the person who's responsible for early childhood...I told him, "take the slides and seesaws, the equipment," so he told me to submit to the call for proposals for the initiative for the future preschool. I submitted to the Ministry of Education a proposal for a yard that has equipment from wood, waterfalls and bridges, a dream yard. I was successful and now they're putting it in wooden equipment, something that's challenging, things that are appropriate for the age, hills, and a vegetable garden, a rabbit corner, and muddy sand that will be neat.

From this situation it can be seen that Orly describes her battle as a preschool teacher against the local authority with the aim of managing the teaching-learning procedures in the preschool yard according to her educational principles and beliefs. It may be that not all preschool teachers are successful in their battles with the local authorities and their preschool yards are not designed according to their educational beliefs and this may impact how they work in the yard. Moreover, it seems that there is dissonance between the various voices that reach the Ministry of Education from the local authorities. While the Ministry of Education encourages preschool teachers to engage in learning from nature in the preschool yard, and they include the preschool yard as part of the "future preschool," where there is a constant dialogue between the children, the educational staff and the spaces of the kindergarten and yard (Sela & Regev, 2008; Turjeman, 2019), at times the local authorities place safety and security at the expense of learning. That is, it can be said that regarding the design of the preschool yard, there are power struggles between the various stakeholders in the education system: preschool teachers, parents, local authorities, and the Ministry of Education. For example, Dorit noted that because of the pressure and fear of parents' reactions, the local authority does not allow an education environment and challenging equipment:

"I feel this change, and the municipality's and education system's fear of the parents' reactions. They want to cover their rears, are afraid that something will happen, so they prevent it from the start."

Theme 3: COVID-19 Pandemic Had a Decisive Impact on Time Spent & Ways of Working in Preschool Yard & Outdoor Spaces Compared to Pre-COVID-19 Times

In the questionnaire, the preschool teachers were asked about activities in the yard during the COVID-19 pandemic and the period prior to the pandemic. In terms of the impact of the pandemic on children's time spent in the yard, the results showed that all the preschool teachers noted that the pandemic caused them to spend less time in the yard with the children compared to prior to the pandemic, except for those teachers who normally were with the children for three hours during routine days (see [Table 5](#)).

The qualitative results provided an explanation for the changes in outdoor learning during the COVID-19 pandemic. For example, one of the preschool teachers discussed that the daily schedule was identical to routine days except it took place in the yard as opposed to inside the preschool building:

"During COVID-19, the schedule remained the same."

Table 5. Amount of time children spend in preschool yard during routine & pandemic days

Time in preschool yard	Routine days	During COVID-19 pandemic
Up to one hour	0.12	0.50
Up to two hours	0.70	0.49
Up to three hours	0.10	0.14
Throughout day	0.16	0.21
Not at all	0.02	0.00

In contrast, another preschool teacher reported that they spent less time in the yard due to the pandemic:

“It’s the opposite, we were inside the preschool more, I emphasized the organization, the times. We went back to what it was in the beginning, I felt that was what they needed.”

It is evident that the teachers were aware and loyal to their perceptions despite the pandemic and decided how they would spend time in the yard or in the preschool based on their perceptions of the children’s needs, despite the Ministry of Education’s and Ministry of Health’s recommendations to spend more time in outdoor spaces. The results indicated that the Ministry of Education’s “capsule” policy (March, April 2021) also influenced the duration spent and the ways of working in the preschool yard. For example, Hila reported:

The capsules forced us [to go out more to the yard] ... I think that we took advantage of the capsule period very well. Every day the activities in the yard were improved because we could not be inside the preschool at all.

The use of the word “forced” showed that going out to the yard served as a challenge for the teacher; despite this, her perception was that the work outside was “improved” and developed. Miri also reported about her work with the children in capsules and related that following this policy, small groups were created that were outside, and according to her, this influenced the relations between the children and the nature of the activity:

“Primarily, it organized the issue of which groups went out. We had to work according to capsules, so each time a smaller group of children was outside and there were different connections, and it was possible to investigate the phenomena occurred in the yard”.

In other words, the organized policy of the Ministry of Education and its clarity with the parents and media brought about a change in the work of the preschool teachers. The change in perceptions and ways of working was associated with complexity that initially served as a challenge, although later on it created opportunities for change. It can be seen that even within the constraints and challenges of the period, the kindergarten teachers showed flexibility, initiative, and creativity and made substantial changes in their ways of working.

Regarding the training of the educational staff to work in the preschool yard, Dikla related that during the COVID-19 pandemic, she had to reduce the training in favor of addressing the children’s needs:

But right now, you know, in the periods of time that we were with the children, we were not there for almost six months at all, so I did not bother with it [training of the educational staff]. All the work, for example, of the concrete, of the carpentry, I was involved, and I told her come and watch and that’s it.

The study should include discussion on any potential biases or limitations in perceptions of teachers on outdoor learning.

DISCUSSION

The aim of this research was to understand early childhood education teachers’ perceptions of what shapes the outdoor practices in Israeli preschools. Results showed that most of the preschool teachers acknowledged the great importance of outdoor learning to a variety of learning areas. The teachers considered outdoor learning as a ‘big or meaningfully high contribution’ to social-emotional learning, scientific learning, along with children’s motor, cognitive, and linguistic development. In addition, analysis of the quantitative and the qualitative data revealed that according to the teachers’ perceptions, outdoor learning contributes to children’s holistic development and enables place-based, contextual, ecological learning and learning “from life itself”. According to the teachers’ perceptions, parents, preschool staff, the municipal authorities, and the Ministry of Education are all influential factors for outdoor learning. Further, the findings revealed that the COVID-19 pandemic had an effect on the time spent and the ways of working in the outdoor spaces. The results indicate that the preschool teachers express the new spirit of the Ministry of Education regarding the concept of “the future preschool”. That is, an approach, where children develop the ability to navigate a world that is uncertain, volatile, complex, and rapidly changing. As such, children need to be armed with the knowledge, skills, and values that will enable them to manage in this kind of world (Ministry of Education, 2021).

We found that the preschool teachers perceive outdoor activities as those that greatly allow the development in a variety of dimensions of childhood, and primarily, enable the child to succeed. Support for this is found in the rich literature. Thus, for example, Ulset et al. (2017) examined the relations between the time that preschool children played in nature and their cognitive and behavioral development (attention, hyperactivity, short-term memory, temperament), and found that children who spent more time outside demonstrated less hyperactivity and lack of attention compared to children who spent less time outside. Our

findings are in line with similar studies, such as a study that examined the relations between learning outdoors and identity formation and environmental management. It was found that children who learned outdoors become more attentive and involved, less stressed, and better regulated (Kue et al., 2019). These research findings emphasize the importance that Israeli preschool teachers place on outdoor learning. Other studies also found that outdoor learning increases children's ability to develop friendships and enables them to cooperate and improve their social relations, improves their skills at working in groups, connections between peers, and ability to understand personal responsibility and respect for others and their work (Siskind et al., 2022). This is in line with Israeli preschool teachers' perception of the importance of social-emotional learning in outdoor spaces.

Learning outdoors helps children develop a feeling of responsibility for the environment, and practice more ecological behaviors. These experiences in learning in the preschool yard and outdoor spaces helps children develop in all areas and promotes their acquisition of skills, attitudes, and behaviors that are important in life, beyond preschool and school, such as perseverance, resilience, leadership, health, communication, and behavior in the environment (Siskind et al., 2022).

The study's findings reveal that parents have a great ability to influence activities and ways of working in the preschool yard, due to a fear of dirtiness, which can be an implication of working outdoors, or concern for children's safety. This finding is in line with other studies that found that parents can restrict or disrupt activities outside the preschool (Maynard, 2007) because of various reasons such as the weather or fear that children will get injured in the yard (Cevher-Kalburan, 2014). In Mart's (2021) study, it was found that parents overwhelmingly preferred activities inside the preschool than outside. We found that on the one hand, parents serve as an anchor, support and help to the teachers' implementation of their educational visions, but on the other hand, parents may be a limiting factor.

We also found that the preschool staff plays a critical role in supporting or opposing the work in the preschool yard and beyond it. These findings indicate that recruiting and training the preschool staff can contribute to the inclusion of outdoor learning. These findings are in line with the analysis of the quantitative questionnaire, as some of the kindergarten teachers claim that the parents' opposition prevents them from conducting regular activities in the kindergarten yard and outside the kindergarten yard.

An interesting finding related to the low ranking by the preschool teachers to the issue of their training with regard to their management of outdoor learning. They reported that there is no need for specialized training. This finding shows that the idea of expertise of outdoor learning is still not in the teachers' awareness, and they should be trained and given additional tools to establish meaningful outdoor learning. These findings are similar to Dietze and Kashin (2019) results.

From the current study's findings, it emerged that at times there are discrepancies between the teachers' perceptions of outdoor learning, the Ministry of Education policies and decisions of the local authorities. The latter prevent the teachers' ability to best implement their educational approach.

We found that the preschool teachers who spent many hours outside in the period prior to the COVID-19 pandemic, also spent more time outside during the pandemic itself. This contrasts with other teachers who spent less time outdoors prior to the pandemic and reduced their time outdoors during the pandemic. It seems that the pandemic reinforced the routine in both cases and led to either a reduction or expansion of time in the preschool yard. That is, the teachers' perceptions in both groups became more extreme during the pandemic. Similarly, the findings show that learning during the pandemic as complex, which in the beginning served as a challenge, but later provided opportunity for change. Even within the constraints and the challenges of the pandemic period, the preschool teachers demonstrated flexibility, initiative, and creativity, which led to meaningful change in how they work from the need to cope with the challenges placed before them by the pandemic.

In sum, what shapes the complex practices of outdoor learning are the perceptions of the teachers, children, parents, staff, local authorities, and the policy of the Ministry of Education. We recommend emphasizing to all these stakeholders the importance of work in outdoor spaces to children's development, guiding preschool staff in developing teaching methods and learning in the preschool yard, and supporting their ability to cope with difficulties and opposition. It is important to recruit all the different participants who impact the design of the preschool yard and the activities in the outdoor spaces outside the preschool and provide them with the ability to express their skills and perceptions, and together to cooperate and influence the learning outside the preschool, strengthen the connection with the environment outside the preschool, and broaden children's knowledge beyond the local context. The preschool teacher's role is to collect, integrate, and incorporate the various factors, lead them and create a dialogue between them that highlights the strengths of each factor and their role (the parent, supervisor, local authority, each have a particular role and they all contribute to meaningful learning adapted to the unique needs of each preschool).

The findings of this study reveal that outdoor learning at preschool is critical to the development of children. In this context, it is important to conduct reflective discourse with ECE students, preschool teachers and staff about the possibility that they have early biases against outdoor learning (whether it is conscious or unconscious). We will emphasize that these biases have an impact on the quality and frequency of outdoor learning. This study reveals the different factors that impact the outdoor learning in Israeli preschools. It also highlights the need to emphasize to all stakeholders the importance of outdoor learning for the children's development and to provide guidance as well as support in dealing with objections and difficulties. These findings also emphasize the preschool teachers' role in a constantly changing world; she must demonstrate flexibility, express her unique voice, and adapt her ways of working based on the dialogues with the physical and professional environment in which she works. With all this, like the new concept presented by the Ministry of Education in the document of "Pathways to the Future Kindergarten" (Ministry of Education, 2021), there is a need to enable the preschool teacher to move from the standard pedagogical methods in the yard to a unique pedagogical methods in the yard, that reflect the uniqueness of children's perspectives and needs, their families and communities. Parents, preschool teachers, educators, and local authorities need to view the preschool as an entire space, with an optimal relationship between the outside and the inside, between the border of the preschool and the community in which it operates. This relationship enables the children, families, and education staff to operate according to the changing reality, between the various partners in place-based, planned, and available learning.

Author contributions: All authors have sufficiently contributed to the study and agreed with the results and conclusions.

Funding: This study was supported by the Research Authority of Levinsky Wingate Academic College & College Presidential Foundation.

Ethical statement: The authors stated that the study was approved by the institutional ethics committee of The Academic College Levinsky-Wingate on 9 September 2020 (Approval code: 2020090901). All participants agreed to participate in this study. Written informed consents were obtained from the participants. Participant identities are kept anonymous.

Declaration of interest: No conflict of interest is declared by authors.

Data sharing statement: Data supporting the findings and conclusions are available upon request from the corresponding author.

REFERENCES

- Andres, B. (2010). Cultivating the connection to the natural world and the environment in early childhood. *Da-Gan*, 3, 14-21.
- Andres, B. (2015). Nature in the preschool, the preschool in nature. *Da-Gan*, 8, 56-63.
- Andres, B. (2018). Education and living creatures. *Da-Gan*, 11, 33-43.
- Banks, J. A. (2013). The construction and historical development of multicultural education, 1962-2012. *Theory Into Practice*, 52(1), 78-82. <https://doi.org/10.1080/00405841.2013.795444>
- Bartnæs, P., & Myrstad, A. (2022). Knowing-with-snow in an outdoor Kindergarten. *Journal for Research in Arts and Sports Education*, 6(1), 76-91. <https://doi.org/10.23865/jased.v6.3012>
- Bell, P., Lewenstein, B., Shouse, A. W., & Feder, M. A. (2009). *Learning science in informal environments: People, places and pursuits*. National Academies Press.
- Bilton, H. (2010). *Outdoor learning in the early years: Management and innovation*. Routledge. <https://doi.org/10.4324/9780203860137>
- Bjerklund, M., & Amot, I. (2023). Outdoor activities promoting mental and physical health and well-being in Sámi early childhood education and care institutions. *Journal of Childhood, Education & Society*, 4(3), 261-273. <https://doi.org/10.37291/2717638X.202343287>
- Bratitsis, T., & Papachristou, I. (2014). Children's perceptions of real and technology assisted sport games (exergames): A case study in greek kindergarten. In *Proceedings of the 8th European Conference on Games Based Learning* (pp. 34-40).
- Bray, I., Reece, R., Sinnett, D., Martin, F., & Howard, R. (2021). Exploring the role of exposure to green space in preventing anxiety and depression among young people aged 14-24 living in urban settings: A systematic review. *Research Square*. <https://doi.org/10.21203/rs.3.rs-255123/v1>
- Bronfenbrenner, U. (1986). Ecology of the family as a context for human development: Research perspectives. *Developmental Psychology*, 22(6), 723-742. <https://doi.org/10.1037/0012-1649.22.6.723>
- Bronfenbrenner, U., & Morris, P. (2006). The bioecological model of human development. In R. M. Lerner, & W. Damon (Eds.), *Handbook of child psychology: Theoretical models of human development* (pp. 793-828). John Wiley & Sons. <https://doi.org/10.1002/9780470147658.chpsy0114>
- Card, B., & Burke, A. (2021). Outdoor kindergarten: Achieving outcomes with a place-based & land-based approach to emergent curriculum. *The Morning Watch: Educational and Social Analysis*, 47(1), 122-138.
- Catucci, E., & Ehrlin, A. (2018). A case study on the impact of preschool teachers "habits on children's opportunities for outdoor learning. *International Journal of Learning, Teaching and Educational Research*, 17(3), 65-81. <https://doi.org/10.26803/ijlter.17.3.6>
- Cevher-Kalburan, N. (2014). Early childhood pre-service teachers' concerns and solutions to overcome them (the case of Pamukkale University). *South African Journal of Education*, 34(1), 1-18. <https://doi.org/10.15700/201412120923>
- Charmaz, K. (2012). The power and potential of grounded theory. *Medical Sociology Online*, 6(3), 2-15.
- Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches*. SAGE.
- Dahan, Y., Abu Raviye Kawider, S., Yona, Y., Biton, A., San, S., Levy, G., Masalaha, M., Yaakov Safari, L., & Pines, H. (2020). *The corona crisis and its impact on the Israeli education system*. <https://www.crisis-experts.org.il/experts/education>
- Daniel, S. J. (2020). Education and the COVID-19 pandemic. *Prospects*, 49, 91-96. <https://doi.org/10.1007/s11125-020-09464-3>
- Delalande, J. (2010). La socialization des enfants dans la cour d'école: Une conquête consentie? [The socialization of children in the schoolyard: An accepted conquest]. In I. Danic, O. David, & S. Depeau (Eds.), *Enfants et jeunes dans les espaces du quotidien [Children and young people in everyday spaces]* (pp. 35-47). Rennes University Press. <https://doi.org/10.4000/books.pur.27153>
- Dietze, B., & Kashin, D. (2019). Perceptions that early learning teachers have about outdoor play and nature. *LEARNING Landscapes*, 12(1), 91-105. <https://doi.org/10.36510/learnland.v12i1.981>
- Elliott, H. (2015). Forest school in an inner city? Making the impossible possible. *Education*, 43(6), 722-730. <https://doi.org/10.1080/03004279.2013.872159>
- Fiennes, C., Oliver, E., Dickson, K., Escobar, D., Romans, A., & Oliver, S. (2015). The existing evidence-base about effectiveness of outdoor learning. *Institute of Outdoor Learning, Blagrave Trust, UCL and Giving Evidence Report UCL, & Giving Evidence*. <https://www.blagravetrust.org/wp-content/uploads/2015/11/The-Existing-Evidence-base-about-the-Effectiveness-of-Outdoor-Learning-Executive-Summary-Nov-2015.pdf>

- Frances, H. (2018). Outdoor learning spaces: The case of forest school. *Area*, 50(2), 222-231. <https://doi.org/10.1111/area.12360>
- Gillies, R. M. (2004). The effects of cooperative learning on junior high school students during small group learning. *Learning and Instruction*, 14, 197-213. [https://doi.org/10.1016/S0959-4752\(03\)00068-9](https://doi.org/10.1016/S0959-4752(03)00068-9)
- Kadury-Slezak, M., Tal, C., Faruchi, S., Levy, I., Tal, P., & Tish, S. (2023). Parents' perceptions of their children's outdoor activities before and during COVID-19 crisis. *Journal of Childhood, Education & Society*, 4(3), 354-372. <https://doi.org/10.37291/2717638X.202343276>
- Kourti, A., Stavridou, A., Panagouli, E., Psaltopoulou, T., Spiliopoulou, C., Tsolia, M., Sergentanis, T. N., & Tsitsika, A. (2021). Domestic violence during the COVID-19 pandemic: A systematic review. *Trauma, Violence, & Abuse*, 24(2), 719-745. <https://doi.org/10.1177/15248380211038690>
- Kuo, M., Barnes, M., & Jordan, C. (2019). Do experiences with nature promote learning? Converging evidence of a cause-and-effect relationship. *Frontiers in Psychology*, 10, 305. <https://doi.org/10.3389/fpsyg.2019.00305>
- Landy, C. (2018). *The state of outdoor education in Northeast Tennessee: Preschool teacher attitudes toward outdoor education* [Doctoral dissertation, East Tennessee State University].
- Lavi Alon, N., & Tal, T. (2021). Principles for out-of-classroom learning. *Ministry of Education and the Office of the Chief Scientist*. <https://meyda.education.gov.il/files/LishcatMadaan/Principlesforextracurricularlearning.pdf>
- Lavi, G. (2017). *All the world is a classroom: Why is it worth learning outside?* <https://www.edunow.org.il/edunow-media-story-252351>
- Mart, M. (2021). Parental perceptions of outdoor activities. *International Journal of Progressive Education*, 17(4), 358-372. <https://doi.org/10.29329/ijpe.2021.366.22>
- Maynard, T. (2007). Outdoor play and learning. *Education 3-13: International Journal of Primary, Elementary and Early Years Education*, 35(4), 305-307. <https://doi.org/10.1080/03004270701602400>
- McFarland, L., & Laird, S. G. (2018). Parents' and early childhood educators' attitudes and practices in relation to children's outdoor risky play. *Early Childhood Education Journal*, 46, 159-168. <https://doi.org/10.1007/s10643-017-0856-8>
- Ministry of Education. (2008). The preschool yard as a learning space. *Ministry of Education*. <http://meyda.education.gov.il/files/PreSchool/kindergarten-as-learning-space.pdf>
- Ministry of Education. (2021). Pathways to the future preschool. Guidelines for designing quality and relevant education in a changing reality. *Ministry of Education*.
- Orion, N. (2003). Out-of-classroom learning environment: What and how? *Eureka*, 17, 6-11.
- Orion, N. (2013). Motivation for learning and the out-of-classroom learning environment. *Kriyat Beinayim*, 21, 22-29.
- Ostermeier, E., Tucker, P., Tobin, D., Clark, A., & Gililand, J. (2022). Parents' perceptions of their children's physical activity during the COVID-19 pandemic. *BMC Public Health*, 22, 1459. <https://doi.org/10.1186/s12889-022-13829-y>
- Parsons, K. J., & Traunter, J. (2020). Muddy knees and muddy needs: Parents' perceptions of outdoor learning. *Children's Geographies*, 18(6), 699-711. <https://doi.org/10.1080/14733285.2019.1694637>
- Sela, L., & Regev, N. (2008). The preschool yard as a learning space-Sub-committee review of the role of the kindergarten yard. *Ministry of Education*. <https://meyda.education.gov.il/files/Pituach/kindrgarden-backyard.pdf>
- Shorgy, C. (2018). We went on a trip ... and what did we find? *Da-Gan*, 11, 27-32.
- Siskind, D., Conlin, D., Hestenes, L., Kim, S. A., Barnes, A., & Yaya-Bryson, D. (2022). Balancing technology and outdoor learning: Implications for early childhood teacher educators. *Journal of Early Childhood Teacher Education*, 43(3), 389-405. <https://doi.org/10.1080/10901027.2020.1859024>
- Spector-Levy, A., Azmon, D., & Schechter, T. (2013). Outline for planning a curriculum for environmental and sustainability education in pre-primary education. *Ministry of Education*. <http://www.sviva.gov.il/subjectsenv/education/greenkd/documents/preschool-plan-9.pdf>
- Tal, T. (2009). Environmental education and education for existence: Principles, ideas, and implementation. *Ministry of Education*.
- Turgeman, M. (2019). The future preschool. To be me, to belong, and to discover the world. *Da-Gan*, 12, 8-19.
- Tuuling, L., Õun, T., & Ugaste, A. (2018). Teachers' opinions on utilizing outdoor learning in the preschools of Estonia. *Journal of Adventure Education and Outdoor Learning*, 19(4), 358-370. <https://doi.org/10.1080/14729679.2018.1553722>
- Ulset, V., Vitaro, F., Brendgen, M., Bekkhus, M., & Borge, A. I. H. (2017). Time spent outdoors during preschool: Links with children's cognitive and behavioral development. *Journal of Environmental Psychology*, 52, 69-80. <https://doi.org/10.1016/j.jenvp.2017.05.007>
- UNICEF. (2021). *United Nations International Children's Emergency Fund*. <https://www.unicef.org/eap/media/8506/file>
- Vininger, A. (2020). Reopening Israeli institutions during COVID-19. *Israeli CNESET*. https://fs.knesset.gov.il/globaldocs/MMM/a32814a3-7a8b-ea11-8104-00155d0aee38/2_a32814a3-7a8b-ea11-8104-00155d0aee38_11_13813.pdf