Sensory Gardens in Under-Resourced Early Childhood Development Centers

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Abstract: The objective of this study is to investigate the possible incorporation of a sensory garden in early childhood development (ECD) centers located in Mamelodi, a township adjacent to Pretoria, South Africa. This article reports on efforts to empower ECD practitioners to provide children with opportunities to interact with nature. The study involved a five-week course with brief weekly sessions for thirty ECD center practitioners. The participants were provided resources to develop a small sensory garden at their ECD centers. The researchers visited fourteen ECD centers whose staff indicated they had created a sensory corner. The visits were used to determine if the ECD center practitioners applied the acquired knowledge to develop a small sensory garden that could be used for teaching and learning. Thereafter, the participants completed a reflective survey on the course, the process, and the challenges they experienced. The study revealed that additional basic training was required to encourage ECD practitioners to integrate sensory elements into preschools. While many ECD centers were able to introduce fundamental sensory garden concepts, practitioners encountered challenges in the upkeep and utilization due to limited space, water shortages, inadequate plant care knowledge, and a lack of understanding of how to integrate sensory gardens into teaching practices. The study also served as a benchmark for potential similar projects in the township and led to further studies stemming from the original research. This project may be of interest to ECD practitioners and scholars, as well as education policymakers. Recommendations for future research, policy, and practice are offered.

Keywords: *Sensory Garden, Early Childhood Development Practitioners, Mamelodi, South Africa*

Introduction

Sensory gardens are intentionally designed spaces that integrate plants and various features of the natural and human-made environment to create an experience for the user. They build upon and activate all human senses. Human beings are part of the natural world, and our relationship with the natural world is integral to our existence. During the past century, sensory gardens have been used with various populations of all ages for therapeutic purposes (Vukovic and Mingaleva 2023). In particular, sensory gardens are used with children with disabilities and in early childhood education settings. Children learn through the exploration of their environments, and natural environments may support the development of children's creativity, autonomy, and self-esteem (Summers et al. 2019). Sensory environments are known to have a range of benefits for users, including health and well-being (Franco et al. 2017).

This study sought to explore the use of professional development for early childhood education practitioners around the benefits and practice of establishing and maintaining

sensory gardens. The study was conducted through the University of Pretoria and included outreach to local ECD practitioners.

The Mamelodi Campus of the University of Pretoria is located on the eastern side of Mamelodi, a township situated east of Pretoria. Mamelodi is among the seven townships that surround the city of Pretoria in South Africa and is inhabited by over a million residents. Townships were created during apartheid to segregate Black community members and despite the end of apartheid in the early 1990s, they continue to be racially and socio-economically segregated residential areas. Despite Mamelodi's significant population, a considerable number of Black children and families still reside in makeshift homes without access to basic amenities such as electricity and running water. The ECD centers involved in the study were located in both the formally structured area of the township and the informal section of the township.

This article explores the journey of how ECD practitioners were empowered to create sensory gardens in preschools. The project aimed to encourage ECD practitioners to develop personal agency and take responsibility for creating sensory gardens at their schools. The ultimate goal was for practitioners to realize the value of a sensory garden in their preschools and use it as part of their teaching and learning practices. The project aimed to train ECD practitioners and support them in starting and sustaining a sensory garden at their schools.

Literature Review

Sensory gardens are special spaces designed to facilitate humans' appreciation of and interaction and engagement with nature. Initially, sensory gardens were primarily associated with people who had mobility issues or other impairments. They were often attached to special schools or homes for the elderly (Hussein 2010). At the time, sensory gardens were viewed as inclusive of persons with disabilities, but visually impaired individuals challenged the concept of gardens for the blind (Hussein 2012). More recently, Kopeva et al. (2020) used principles of universal design to provide recommendations for a sensory garden for a school for visually impaired children. Today, sensory gardens are designed to cater for a wide range of people: those with impairments and those without. They offer an opportunity for people to engage with nature and gain numerous sensory experiences, such as sight, sound, touch, and smell (Kang and Kim 2019).

In our fast-paced and technology-driven modern world, sensory gardens are increasingly recognized as a valuable tool to promote well-being. Researchers in the fields of horticulture, psychology, and occupational therapy are studying the benefits of these practices (Kang and Kim 2019). Vukovic and Mingaleva (2023) discuss sensory gardens in the context of urban health and well-being and the United Nations Sustainable Development Goals.

A sensory garden is a specific area where sensory experiences can be managed, adjusted, heightened, lessened, provided on their own or in combination, and organized for active or passive engagement to cater for the user's requirements (Gonzalez and Kirkevold 2014; Hernandez 2007). They can be categorized into four themes based on their principal function:

leisure and recreation for disabled individuals, therapy for treating disorders or conditions, education for promoting learning and development, and multifunctional spaces for leisure, therapy, and education (Hussein 2012). These designs are increasingly popular in garden contexts, particularly in special schools for educational purposes and hospitals and nursing homes for rehabilitation and health benefits (Hussein 2012, 2020; Jasmin et al. 2023).

Children can derive many benefits from sensory gardens. The natural material in a sensory garden can facilitate spatial–cognitive awareness, physical competence and skills, and socialization. Children also develop all-important life skills such as emotional control and independence (Cooper 2015). According to Hussein (2009), a sensory garden offers children an avenue to encounter and experience various textures, tastes, and sounds to which they may not otherwise have been exposed. Such sensory stimulation is essential for the development of a healthy brain in children. Creating a multisensory environment with soft landscaping involves incorporating fast-growing plants, shady vegetation, and plants that offer visual stimulation through color, texture, and scent. Additionally, climatic factors such as temperature, wind, and rain play a crucial role in providing sensory experiences that can trigger users' senses. Sensory gardens may offer particular benefits to children with sensory processing issues, such as autism and other disabilities (Barakat et al. 2019; Cooper 2015). Sensory gardens provide a secure and relaxing environment where children with sensory processing disorders can engage with sensory stimuli without feeling overwhelmed by sensory overload (Cooper 2015). Research has also found that sensory gardens help to deal with and improve concentration (Yusop et al. 2020). Voola and Kumari's (2022) pilot study found them to be effective in an experimental research study focused on children with attention deficit hyperactivity disorder.

According to Williams and Dixon (2023), garden-based education (GBE) is a teaching approach that utilizes a garden as a learning resource. This method emphasizes hands-on experience and is implemented within the dynamic environment of the garden. GBE is beneficial for all students, as it accommodates diverse learning styles and developmental stages. It is not merely a remedial curriculum for struggling learners or marginalized youth, but rather an effective tool for engaging and instructing students who may have been categorized in such a manner.

Prins et al.'s (2022) meta-analysis describes the importance of nature-based play in early childhood education contexts. They argue that the quality of play is impacted by the environment in which children play. Prins et al. (2022) identified studies which showed children's creativity is facilitated in nature-based play and that children experience joy and enthusiasm in nature-based play. Garden-based interventions have also been used in early childhood settings to promote healthy eating habits and other health outcomes although evidence is limited with regard to home-based gardens for nutrition in early childhood (Skelton et al. 2020).

An association with the natural world is an essential, albeit sometimes overlooked, element of well-being (Capaldi et al. 2015). The difficulty lies in identifying the specific type of interaction with nature that is necessary and how it can be incorporated into everyday life, including in studies, work, and other activities.

This study is informed by the salutogenic model. Salutogenesis is a medical concept developed by Antonovsky (1996, as cited in Souter-Brown et al. 2021), which seeks to identify factors that drive human health rather than causes of disease. Similarly, Souter-Brown et al. (2021) also drew upon this model in their study of the value of sensory gardens in the context of workplace well-being. The salutogenic model is aligned with sensory gardens, given the focus on extending and expanding human vitality and wellness.

Vygotsky's theory of cognitive development (Vygotsky and Cole 1978) and Kolb's experiential learning theory (Kolb 1984) underpinned the project. In the South African context, with increasing numbers of learners experiencing learning difficulties, Vygotsky's theory informed practitioners of learners' development levels and the importance of aligning pedagogies and content presentation. Kolb's experiential learning theory directed the project and gleaned practitioners' level of understanding of childhood development principles and training needs. The researchers also used the theory's reflection ideologies to inform the training program offered to practitioners.

The following question frames the argument: What are the conditions of possibility for ECD sensory gardens as an area of knowledge and practice? To answer this broader question, the following subquestions were addressed:

1. What is the understanding of ECD practitioners' conceptualizations of integrating a sensory garden in their ECD centers?
2. What are the challenges experienced by ECD practitioners in a township to incorporate a sensory garden in their ECD centers?

Context of the Study

One of the niche areas of the University of Pretoria's Mamelodi Campus is the establishment of educational pathways. The campus identified four educational pathways from ECD centers, primary schools, high schools, and university education networks. The project's collaborative effort responds to the University's vision. Researchers in the literature support the early introduction of science, technology, engineering, and mathematics (STEM) education in the ECD phase (Hapgood et al. 2020; Hassan et al. 2019; Tippett and Milford 2017).

During the ECD phase (from birth to 7 years), a significant challenge arises, as many of the ECD centers are not registered with the Department of Basic Education (DBE). As a result, they do not receive funding, monitoring, and support from key stakeholders like the Department of Health, the Department of Social Development (DSD), and the DBE, which can hamper the

children's growth and development (Matjokana and Bipath 2024). Furthermore, the majority of ECD practitioners in underprivileged areas lack formal qualifications, with only 12 percent holding training credentials recognized by the DBE under the National Qualifications Framework (NQF) (Biersteker et al. 2016). In April 2022, the administrative process of all the ECD functions, roles and responsibilities of the DSD moved to the DBE (South African Government, n.d.). The DBE initiated a mass registration drive to ensure that preschools are recorded and accounted for (DBE—Republic of South Africa, n.d.).

Township ECD centers face challenges in providing quality teaching due to the limited education and training of staff and the socio-economic struggles of parents, resulting in limited infrastructure resources. Parents may have limited education themselves, may be illiterate, may be working multiple jobs, and thus may have limited time and resources to communicate and partner with early childhood centers. Many parents are unable to afford the center fees, putting the centers in a position where they struggle to obtain necessary learning resources (Aina and Bipath 2022). In 2024, only 16 percent of the ECD centers qualify for funding from the government (Azzakani 2024). Furthermore, ECD centers in low-income communities do not have the necessary teaching tools (De Witt 2010). Most ECD centers in Mamelodi are located in existing houses or are part of a residential property with small yards and minimal vegetation. The focus is primarily on classroom-based teaching, with limited exploration of the environment and plant life. However, classroom spaces may also be rather small, and children may be confined to sitting for extended periods of the day.

Methodology

The research project received ethical clearance from the Ethics Committee of the University of Pretoria's Faculty of Education (Protocol No. EDU106/22). With the assistance of the South African Higher Education Network grant, the Head of Community Engagement and Research at the University of Pretoria's Mamelodi Campus extended an invitation to all ECD practitioners in Mamelodi through a WhatsApp group that had been established for the ECD centers in Mamelodi. The WhatsApp group had been created to share applicable training opportunities and grant opportunities with the ECD centers. All the participants signed an informed consent form before joining the project. The first thirty-five practitioners from twenty-five ECD centers who applied to be part of the project were selected to attend a weekly session over five weeks, from September 21, 2022 to October 18, 2022. Of the thirty-five practitioners who had applied, thirty-three attended the training. The sessions focused on empowering ECD practitioners to integrate sensory garden elements into their ECD centers. A manual was developed to be used during the training and follow-up training sessions. It provided a detailed explanation of how to start a sensory garden and what plants to include in such a garden.

All the ECD practitioners are running a preschool in the Mamelodi township and the adjacent Eersterust and Bronkhorstspruit areas. Only two of the ECD centers were registered with the Gauteng Department of Basic Education and only two of the ECD centers were not situated in a house or an extension of a house, but in a center provided by the local community in a community hall. Most of the ECD practitioners were unqualified. The school fees at all the ECD centers were very low, running from USD$24 a month to $42 a month. All the schools provide lunch for the learners. Most of the schools had a high teacher–learner ratio ranging from 1:20 to 1:35. All the ECD centers were run by women, showcasing women's critical role in ECD and education within these communities.

The training included the following:

- Session 1: September 21, 2022: Introductory lecture on sensory gardens and a practical session to add features, including the names of different plants in the garden.
- Session 2: September 27, 2022: A practical session to add features in the garden, including a bird feeder. Participants made pottery structures and bird feeders. Each member received a lavender and a strawberry plant.
- Session 3: October 4, 2022: A session on the value of the incorporation of the senses in teaching and learning for ECD phase learners by a lecturer from Merrimack College, USA, through Zoom.
- Session 4: October 11, 2022: A presentation by a master's in education–student of the University of Pretoria, focusing on her master's research related to sensory gardens.
- Session 5: October 18, 2022: A visit to a well-resourced preschool in one of the suburbs of Pretoria to view an established sensory garden.

Table 1 provides the attendance per session, as well as the number of ECD centers that attended each session. Nine ECD practitioners attended all the sessions.

Table 1: Number of ECD Practitioners That Attended the Sessions

	Session 1	*Session 2*	*Session 3*	*Session 4*	*Session 5*	*Total*
Number of attendees	17	23	21	19	23	33
Number of ECD centers	13	16	16	15	19	23

All the participants received plants and seeds to add to their sensory gardens. The participants were invited to take part in a small competition, and their assignment was to develop a small sensory garden area. During the training sessions, the South African researcher shared tips and ideas with the practitioners daily on WhatsApp on incorporating sensory garden ideas into their preschools.

The researchers from South Africa and the US visited the fourteen schools that had indicated that they wanted to be part of the competition on October 25 and 26, 2022, to view

the sensory gardens and to understand the participants' experiences in developing and using the gardens. The visits were crucial for building relationships and conducting assessments. It was important for the researchers to gain a better understanding of the environments in which the practitioners worked and to identify potential development needs for both the practitioners and the ECD centers. These ECD center visits were crucial for gaining a deeper understanding of the environments in which these ECD practitioners operate. This insight will help them comprehend their professional development needs and the requirements of their ECD centers. These visits were also highly valuable for fostering relationships and conducting needs assessments. After visiting the preschools, all the attendees were invited to attend the final session, where everyone who participated in the five-week-long training received an attendance certificate and the practitioners who took part in the competition received small prizes, including potholders, watering cans, and seeds. Although the certificates are not indicative of formal higher educational credentials, participants appreciated the certificates and were proud to receive them.

An ArcGIS StoryMap was created to describe the process and outcomes of the training and showcased at the celebration event. A final reflection questionnaire was distributed among the practitioners and completed by nineteen participants. The following questions were asked of ECD practitioners at the end of the training:

1. What did you learn during the sessions?
2. What was the value of having a STEM sensory garden for your preschool?
3. Which part of the training did you enjoy the most?
4. Which part of the training did you enjoy the least?
5. What was the most challenging issue with including a STEM sensory garden at your ECD center?
6. What should be added to the training in the future?

Findings

The sensory gardens that were visited ranged from one or two tires filled with plants to fairly elaborate gardens with a range of plants and materials for children to interact with. Some participants used only the seeds provided, while others incorporated other plants. All participants relied heavily on recycled materials such as tires, bottles, and DVDs. Other creative materials used included water balloons and painted stones. Many participants expressed pride in sharing their centers and their sensory gardens. In many instances, the children in the ECD centers were present during these visits.

Many of the preschools were rooms in the homes of the directors. They were small spaces with little room in which to move around. Outside space varied as well, from smaller yards to larger exterior spaces. However, in all cases, with practitioners thinking about how to

incorporate more outside time into the children's school days, there was the possibility of more space and more movement for the children.

Discourse: Resources for Thinking About and Practising Sensory Gardens

In this section, discourses for thinking about and practising sensory gardens are reviewed that are likely to be available to ECD practitioners as resources for thinking, talking about, and utilizing sensory gardens in their teaching. From the feedback of the ECD practitioners, the following themes were identified in the participants' feedback on what they had learned during the training sessions.

1. Child Development and Education: Most of the participants (78.9%) addressed the importance of creating spaces for children. The participants indicated that they had learned about the importance of creating free and open spaces for children, implying a focus on child-centered learning environments. The importance of nature in education was one of the points that the ECD practitioners reflected on. They understood the importance of teaching and learning beyond the classroom and that nature plays a crucial role in education. Participant 11 indicated, "I have learnt that teaching is not only in the classroom, but nature is very important in our lives."
2. Horticultural Skills: The ECD practitioners reflected on the skills they had developed, maintained, and decorated in garden creation and decoration. Innovative gardening is mentioned in the reflection, and the use of recycled materials to create gardens indicates an emphasis on sustainability and innovation. The ECD practitioners learned about different plants and their habitats (Participant 9), suggesting that a component of the program was dedicated to botany or environmental science.
3. Sensory Development: Many of the participants (42%) discussed learning how to create sensory gardens, which are designed to stimulate all five senses. The ECD practitioners learned to understand the role of sensory stimulation in the development and learning of children and how to engage children's senses in educational activities (Participants 13, 18, and 19).
4. Practical Life Skills: After the sessions, the ECD practitioners highlighted the importance of patience and encouraging others, skills that are vital in education and leadership (Participant 10). They also indicated their appreciation for using what is available without the need for significant funding, fostering creativity, and resourcefulness (Participant 17).
5. Environmental Awareness: The ECD practitioners acknowledge the value of plants and nature in life, indicating an awareness of environmental importance (Participant 4).
6. Engagement with Nature: The ECD practitioners reflected that the program taught them about stimulating the five senses through engagement with nature, which can

be particularly useful in ECD. They also provided information on how to incorporate natural elements into learning activities, such as making bird feeders and understanding the sensory aspects of flowers (Participant 13).

7. Personal and Professional Development: The ECD practitioners reflected that the program provided them with information on how to develop their ECD centers and knowledge that they can use to develop their establishments further. The participants reflected that the learning experience was rich and impactful, even if it was short (Participant 13).

The feedback indicates that the sessions successfully taught practical horticultural skills, fostered an appreciation for the environment, emphasized the importance of sensory learning, and encouraged creativity and resourcefulness. These elements are particularly relevant in educational contexts where holistic development is valued.

Based upon survey responses, participants most valued the practical and interactive experiences provided by the program, specifically visiting a sensory garden, using technology for communication, hands-on activities, engaging with nature, and creative expression:

1. Visiting Sensory Gardens: Many participants (31.6%) mentioned the enjoyment and educational value of visiting places like the Eduplex sensory garden, where they could see and practice concepts learned during training (Participants 4, 7, 8, 10, 13, 14, and 19).
2. Using Technology for Communication: The opportunity to use technology, such as participating in Zoom meetings with professionals like the professor in the US, was a novel and enjoyable experience for many participants (Participants 2, 4, 13, and 20).
3. Hands-On Activities: Engaging in activities such as painting, making bird feeders, and working with clay was highlighted as being particularly enjoyable. Participant 10 indicated, "My value is that I have learnt a lot of things, and I can teach children how important a garden is because most people do not take it seriously."
4. Engaging with Nature: Teaching out of nature and allowing children to learn from natural environments was an aspect that was appreciated and found to be mind-opening. Participant 14 reflected, "It was improving my children's physical fitness, health, mood, and cognition."
5. Creative Expression: Activities that involved creativity in creating hardscaping for the sensory garden were also favorites among the participants (Participants 4, 6, and 16).

These themes suggest that the aspects of the training that involved active participation, real-world application, and tactile experiences were the most engaging and enjoyable for the participants. This feedback aligns well with experiential learning theories, which posit that learning is enhanced when individuals are actively involved in a hands-on process.

The most common issue for participants concerning including a sensory garden in their centers seems to be related to space constraints. Space-related challenges mentioned by

practitioners include limited yard space, stones, informal settlements, planting difficulties, and involvement of children:

1. Limited Yard Space: Several participants (15.8%) indicated that the size of the yard or available space was too small (Participant 1) to comfortably accommodate a sensory garden.
2. The Space Has Many Stones: The presence of stones or debris that needs to be cleared out was mentioned as a hindrance to creating a garden space (Participant 5).
3. Informal Settlements: Living in informal settlements poses challenges, including limited space (Participant 19) and a desire for more resources like wood (Participant 18).
4. Planting Difficulties: Knowing the proper depth for planting seeds (Participant 4) was a common technical challenge, suggesting a need for more detailed horticultural guidance.
5. Involvement of Children: The presence and involvement of children during the gardening process were challenging for some, as children were either "all over" during the creation of the sensory garden or were uprooting the plants (Participant 2).

Despite these challenges identified by some participants, other participants noted that they found no challenges and enjoyed the experience, indicating that there was also a range of responses in terms of perceived difficulties. Some participants expressed that the sessions had opened their minds and taught them how to be resourceful with the materials at hand, such as using recycled items. The feedback suggests that, while the concept of a sensory garden was well received and educational, the practical implementation in their specific environments presented challenges primarily related to physical space and the management of the children during the gardening process.

Out of the fourteen preschools that aimed to integrate a sensory garden aspect into their facilities, only eight were able to do so successfully. The primary challenges faced by these schools included limited space on their premises, water shortages experienced in the townships, insufficient experience with plant care, despite clear instructions being provided with the seeds, and a lack of understanding of how to incorporate sensory gardens into their teaching practices. These obstacles significantly impeded the successful implementation of the sensory garden initiative. Furthermore, ECD practitioners demonstrated a limited understanding of the benefits of sensory gardens. Their lack of ECD training qualifications, resources, and funding to equip the ECD centers was attributed to the socio-economic backgrounds of the children's families.

Most ECD practitioners were initially unaware of the concept of a sensory garden, but later expressed how they had learned about its importance and the value of integrating it into their teaching practices. For example, one participant mentioned, "I learnt how to create a sensory garden and the importance of having one" (Participant 3), while another highlighted the

significance of incorporating the sensory garden in teaching, stating, “Teaching is not only in the classroom; nature is very important in our lives” (Participant 11).

Limitations

The study had certain limitations, including a relatively small sample size of only thirty ECD practitioners. Even though there are a large number of ECD centers in Mamelodi and adjacent townships, the study targeted only twenty-five preschools. The researchers assumed that the ECD practitioners knew how to plant and care for the plants and that they would have access to water. This assumption was corrected in follow-up training, where training was provided on how to plant the plants. The training was conducted in English and translated informally by their peers. Training expenses were covered but participants had to cover transport to and from the campus themselves. The project was a brief and introductory initiative aimed at acquainting the participants with the concept of a sensory garden. Nonetheless, this study served as a benchmark for further research on incorporating sensory gardens in ECD centers.

Discussion

Akkari (2022) describes the need for the development of the field of early childhood education across Africa, including a focus on the preparation of early childhood educators. It is timely and important to consider the kinds of professional development experiences that will support the advancement of early childhood education in South Africa.

The region in which the project took place is one in which many plants, trees, birds, and sensory experiences are available, even though there is, at some places, a challenge with water. In future iterations of this project, we can highlight that just building upon what is already present can be effective. Helping children appreciate and respect nature can help children respect living things, and it stimulates the development of their senses.

Training is provided to new cohorts of ECD practitioners, and the training as well as the results of this research are now being shared through online sessions with other ECD groups in different provinces. This can also be extended internationally.

The research findings indicated a clear need for additional training. The sensory garden located at the University of Pretoria’s Mamelodi Campus proved to be an excellent setting for other academic faculties to engage students in community projects, with campus staff demonstrating a strong sense of ownership of the garden. To equip ECD practitioners with the knowledge and skills to integrate sensory garden concepts into their teaching methods, a subsequent study was carried out involving students enrolled in the ECD program. Additionally, students from the Faculty of Engineering, Built Environment and Information Technology contributed to enhancing the sensory garden by introducing more interactive elements. The University Library also launched an annual project focused on storytelling

within the sensory garden, and occupational therapy students devised sensory concepts to promote children's learning.

The importance of university–community partnerships to assist in the development of ECD practitioners cannot be overstated. These partnerships provide valuable opportunities for knowledge exchange, mentorship, and practical training, enabling ECD practitioners to enhance their skills and stay updated with the latest research and best practices. By bridging the gap between academic expertise and on-the-ground implementation, these partnerships contribute significantly to the professional growth and effectiveness of ECD practitioners, ultimately benefiting the well-being and development of young children.

Recommendations

There is rather limited research available on the topic of sensory gardens in ECDs, and the authors did not identify any literature on professional development for ECD practitioners on the value and practical implementation of sensory gardens. This study begins to fill that void, and future research on the topic is recommended.

Across South Africa and globally, sensory gardens can be used in preschool contexts to stimulate children's learning. Colleges and universities can offer professional development programming to ECD teachers to help them understand the benefits of sensory gardens and, practically, how to start and maintain a sensory garden. Interdisciplinary partnerships across universities and involving faculty and staff in early childhood education, special education, social work, community engagement, and other disciplines can initiate and oversee this work. Colleges and universities can develop model sensory gardens on their campuses. These can benefit students, staff, faculty members, and administration and be an exemplar for preschool teachers who visit campus. Colleges and universities can support such initiatives by providing resources and incentives to faculty and staff to partner with one another and to develop and sustain this work.

Sensory gardens need not be costly and can utilize natural and recycled materials. Therefore, they are relatively accessible to all, regardless of socio-economic status. They require maintenance, however, and a plan needs to be in place for who will be responsible for this work. Sensory gardens can capture the imagination and creativity of students and teachers alike.

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The authors declare that generative AI or AI-assisted technologies were not used in any way to prepare, write, or complete essential authoring tasks in this manuscript.

Informed Consent

The authors have obtained informed consent from all participants.

Conflict of Interest

The authors declare that there is no conflict of interest.

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