

Benefits of Sensory Gardens to Promote Inclusive Play

Introduction

Play is essential to the overall development of children. Children are curious about the world they live in and are eager to learn and play. They have the need to exert energy and relieve stress. While relieving stress and energy, children can use this opportunity to engage in learning experiences with their surrounding environment and peers. Children that interact with each other in an inclusive outdoor environment can be exposed to more learning experiences (Beattie, 2015). A playground that is inclusive promotes a healthy environment for children of all abilities to learn from and accept each other.

Many children are still restricted by the environment built around them especially on playgrounds. Cooper (2015) suggests that “children most likely to benefit from an outdoor play and learning environment are less likely to have access to one” (p. 85). Children with disabilities are mainly the group of children who experience this restriction in their physical environment, limiting the time and space in which they are able to engage in play. Play promotes the social, cognitive, physical, and emotional well-being of children with and without disabilities.

Playgrounds can provide children with opportunities to explore their senses, learn about the environment, reduce stress, and enhance education (Gill, 2014). The most effective playgrounds allow children to engage in play in the least restrictive environment that promotes inclusion among all peers. According to Jordan (2011), inclusion is defined as the concept and practice of diversity into action by creating an environment of involvement, respect, and connection. A least restrictive environment promotes independence and normality as much as possible in order to create a setting in which both children with and without disabilities are able

to interact with one another. This introduces the concept of universal design in which any modifications or adaptations that are made to the environment can be used to benefit both people with and without disabilities (Steinfeld, 1994).

Sensory Stimulation

A sensory garden focuses on stimulating several bodily senses which include touching, smelling, hearing, seeing, sometimes taste, as well as body awareness and balance (Wagenfeld, 2009). Children with hypo- or hyper-sensitivities can benefit from a sensory garden with a controlled sensory stimulation setting. Hyposensitivity is defined as a less than normal response to stimuli and it sometimes leads to sensory seeking. Hypersensitivity is also known as “sensory defectiveness” in which individuals experience a greater than normal response to environmental stimuli (George, 2016). According to Flick (2012), in the case of a hypersensitivity, children can gradually be exposed to greater amounts of stimuli. On the other hand, children with hypo-sensitivities are able to engage in sensory seeking activities while remaining in a safe environment.

Pathways or sidewalks that allow children to have access from one area to another are essential in playgrounds that include uneven surfaces areas which would be difficult to play in. Including pathways that are clear of obstacles is important especially for children with physical impairments in order to have equitable participation of all children. Materials such as soft leaves, bright flowers, and aromatic herbs allow children to explore and learn about plants while stimulating senses in a controlled and relaxing environment. Providing a safe outdoor environment can also reduce injuries and conflict. In a study conducted by Stordal, Follo, and Pareliussen (2015), staff in classrooms reported that there were less injuries and damage to the

environment while spending the day out in nature rather than inside the classroom. When a safe environment is created, it reduces the need for adult intervention and allows children to freely engage in physical activity and include the environment in their play. The outdoor environment can provide children with several areas and objects to explore minimizing the amount of conflicts that often arise from sharing toys or objects inside the classroom.

Enhanced Education

While promoting sensory stimulation in an inclusive environment, sensory gardens also provide children with learning opportunities while interacting with nature. According to Beattie (2015), due to the increase in adults' concern about lack of direct exposure that children have with nature, there has been an increase in the implementation of nature learning models in child care centers. Increasing the availability of a natural outdoor play environment can help increase children's level of physical activity, social interaction, concentration, and learning through interacting with and manipulating objects in their environment. Typical playground equipment can provide children with opportunities to expend energy and relieve stress which is beneficial to children. However, children's interactions with each other and the environment can be challenged more. A sensory garden can increase the level of interaction that children have with the outdoor environment while providing benefits, such as, increased educational development, concentration, skill, development, ecological awareness, and academic learning.

Hussein (2010) suggests that sensory gardens promote exploration and learning which leads to improved educational and social development in the classroom for children with and without disabilities. Hussein compares the findings of two case study sensory gardens and the observed behavior of children with disabilities. Both studies identified several benefits of

sensory gardens including an increase in education development and social interaction with peers and teachers. Similarly, Cooper (2015) found that spending more time outdoors increases concentration and positive behavior in the classroom. With increased concentration and positive behavior, the quality of children's education improves and children are more engaged in learning experiences.

Children also increase their ecological awareness by spending time in gardens.

Vandermaas-Peeler & McClain (2015) summarize the findings of several research studies which find that children increase skill development, personal growth, and academic learning with an increase in gardening experiences. Gardening also has a positive influence on vegetable consumption and increased knowledge about fruits and vegetables in children. In addition to learning about where food comes from and how to eat healthy children are also able to make connections with math and science in the garden (Vandermaas-Peeler, McClain 2015). When children actively interact through hands on learning in the environment and are engaged it can promote respect for their surrounding environment.

Improved Behavior (Mental/Spiritual)

After a long day of activities and school work, children can become restless and stress can build up. Children who have difficulty communicating, tolerating change in schedules, feeling misunderstood, or even feeling tired or just not having a good day can benefit from having some time to themselves to take a moment to reflect and calm themselves. The use of a sensory garden aids in reducing stressors for children in settings such as schools or day care centers (Flick, 2012). Flick describes a reduction in stress through the use of soft fascinators such as water fountains, natural lighting, sounds and smells from nature, and activities that use

plant materials as a way to reduce stress which can all be implemented into sensory gardens. While spending time in nature, children have the opportunity to take their mind away from stressful situations which increases interest and motivation for learning.

Children who are exposed to greener outside environments are also more likely to demonstrate less aggression and mental stress (Cooper, 2015). Cooper explains that simply “viewing nature reduces physiological stress response, increases levels of interest and attention, and decreases feelings of fear and anger or aggression” (2015, p. 87). Outdoor environments provide several opportunities for children to develop new skills and reach milestones. In a safe environment, children can challenge themselves and take healthy risks which leads to improved self-confidence and higher self-esteem (Gill, 2014). With higher self-confidence and self-esteem children can lead healthier lives.

Social Relationships

Interacting in the environment with peers and adults can also strengthen the relationships children have with parents, teachers, and other children. Ginsburg (2007) mentions “children’s developmental trajectory is critically mediated by appropriate, affective relationships with loving and consistent caregivers as they relate to children through play (p. 183).” Play is an opportunity for parents and caregivers to interact with children and understand the world from a child’s point of view. When adults have a better understanding of a child’s world view, they can communicate more effectively with children and feel more connected (Ginsburg, 2007).

During free play, children are able to express any frustrations or emotions. Play can be especially beneficial for nonverbal children wanting to communicate with others (Ginsburg,

2007). Through play children have the power to manipulate objects and express what they are feeling. In an educational setting, play improves the social and emotional development of children through interactions with peers. Play among peers has proven to help children adjust to school by enhancing learning behaviors and problem solving skills (Ginsburg, 2007). Children are able to experience interactions with peers while also learning from those interactions and applying that knowledge to the classroom.

Conclusion

Play is an essential component to children's development. Outdoor learning environments have shown to enhance children's educational development, attitude towards nature, behavior in and out of the classroom, and social development while also providing an outlet for stress and sensory stimulation. Implementing sensory gardens into children's environment can provide an endless amount of learning opportunities in all domains of life. Sensory gardens can be used as a learning tool, a relaxing and calming environment for a child with is overwhelmed, or an environment in which a child can feel safe and have fun with peers and adults. As mentioned earlier, the children who would benefit the most from sensory garden environments usually do have the opportunity to experience the benefits. With an increase in research and awareness of sensory gardens, there has been an increase in sensory gardens for younger children. Sensory gardens vary from place to place and children are still able to experience the benefits as long as it meets the needs of the children that it was intended for.

Bibliography

- Beattie, E. A. (2015). A young child's perspectives on outdoor play: A case study from Vancouver, British Columbia. *International Journal of Early Childhood Environmental Education*, 3(1), 38-51.
- Cooper, A. (2015). Nature and the outdoor learning environment: The forgotten resource in early childhood education. *International Journal of Early Childhood Environmental Education*, 3(1), 85-97.
- Flick, K. M. (2012). The application of a horticultural therapy program for preschool children with autism spectrum disorder. *Journal Of Therapeutic Horticulture*, 22(1), 38-45.
- George, K. (2016). The differences between hyposensitivities and hypersensitivities in sensory processing disorder.
<https://www.chicagospeechtherapy.com/the-differences-between-hyposensitivities-and-hypersensitivities-in-sensory-processing-disorder/>
- Gill, Tim. (2014). The benefits of children's engagement with nature: A systematic literature review. *Children, Youth and Environments*, 24(2), 10-34.
- Ginsburg, K. R. (2007). The importance of play in promoting healthy child development and maintaining strong parent-child bonds. *Pediatrics*, 119(1), 182-191.
- Hussein, Hazreena. (2010.) Using the sensory garden as a tool to enhance the educational development and social interaction of children with special needs. *Support for Learning*, 25(1), 25-31.
- Jordan, T. H. (2011). Moving from diversity to inclusion.
<http://www.diversityjournal.com/1471-moving-from-diversity-to-inclusion/>
- Steinfeld, E. (1994). Center for inclusive design and environmental access.
<http://www.udeworld.com/dissemination/publications/56-reprints-short-articles-and-papers/110-the-concept-of-universal-design.html>
- Stordal, G., Follo, G., & Pareliussen, I. (2015). Betwixt the wild, unknown and the safe: Play and the affordances of nature within an early childhood education and care institution in Norway. *International Journal of Early Childhood Environmental Education*, 3(1), 28-37.
- Wagenfeld, A. (2009). It's more than seeing green: Exploring the senses through gardening. *Journal Of Therapeutic Horticulture*, 19, 46-52.

Vandermaas-Peeler, M., & McClain, C. (2015). The green bean has to be longer than your thumb: An observational study of preschoolers' math and science experiences in a garden. *International Journal of Early Childhood Environmental Education*, 3(1), 8-27.