

## Planting Seeds: Fostering Preschool Children's Interactions with Nature and Enhancing Intergenerational Relationships in a Campus Community Garden

Judy Gleeson

Judy Gleeson, RN, PhD, is an associate professor in the School of Nursing and Midwifery at Mount Royal University, Calgary. Her research interests include health equity and eco-health. She has been a participant-researcher in an intergenerational campus community garden project since 2015. Email: [jgleeson@mtroyal.ca](mailto:jgleeson@mtroyal.ca)

*Since 2015, children aged 3–6 years attending a childcare centre on a university campus in western Canada have been part of an intergenerational community gardening initiative called Planting Seeds. This article provides an overview of the project to date and explores the positive outcomes for children who took part, namely, the fostering of intergenerational relationships, an increased understanding of where food comes from, and an enhanced knowledge of planting, nurturing, growing, and consuming plants, including food (herbs, fruits, and vegetables).*

**Key words:** preschool children; community garden; intergenerational relationships; eco-health



Figure 1. Horticultural therapist Janet Melrose facilitating learning across the generations.

### Children and nature

Children need nature. Nature is not optional; not a mere amenity, but rather, has important implications for children's health and well-being. Moreover, the natural environment is "essential infrastructure" to which all citizenry ought to have access. (Wells, Jimenez, & Martensson, 2018)

Numerous research studies have found that children are increasingly disconnected from nature, choosing to spend much of their time indoors watching television and on computer screens (Hofferth, 2010; Louv, 2005; Rideout, Foehr, & Roberts, 2010). This tendency has been associated with an array of adverse health and social outcomes in the areas of decreased social interaction and social cohesion, lowered cognitive functioning and academic performance, increased myopia (short-sightedness), increased childhood obesity, and negative health effects, including hypertension, type 2 diabetes, sleep apnea, and depression (Centers for Disease Control and Prevention, 2010; Ogden, Carroll, Kit, & Flegal, 2014).

Part of the initial impetus for bringing the childcare centre into the Planting Seeds program was an attempt to counteract this disconnection from nature (and attendant negative effects) by regular immersion into nature through gardening activities, and to encourage the children to experience the cycle of planting, growing, tending, harvesting, and consuming healthy food. This article outlines the evolution and development of an intergenerational campus community garden initiative and describes the benefits for participants, young and old.

## The intergenerational community garden project

In 2013, faculty members in the School of Nursing and Midwifery at a university in western Canada started a community development project focused on facilitating local community groups' participation in a community garden. The initial aim of the project was to bring vulnerable adults and their caregivers onto campus to participate in a community garden, and to increase their exposure to nature and gardening in a therapeutic environment.

Two years into the project, in 2015, a decision was made to include children from the campus childcare centre. This ongoing collaboration has resulted in many benefits, not least of which has been the development and fostering of rich intergenerational relationships among participants.

Initially, a community outreach process was conducted to determine interest in the Planting Seeds project. The first to express interest was a group of older adults (aged 55–75 years) with mental health issues and their caregivers living in a nearby residential home. Shortly afterwards, participation expanded to include adult clients of a nearby developmental disabilities resource centre program and their community support workers. The gardening group, facilitated by a horticultural therapist (Janet Melrose) and assistant (Angela Foster), met weekly in the community garden. The program included planting, growing, and harvesting fruits and vegetables, as well as preparing healthy snacks together that were enjoyed at the end of each session.

### *Intergenerational participation, stage 1*

In May 2015, a group of eight community nursing students and their instructor partnered with the project to help integrate children from the campus childcare centre. Initial steps included building relationships and discussing the aims of the project with the childcare manager, staff, and parents. The staff at the centre agreed that the community gardening project was a good fit, as their curriculum and teaching approach already included a strong emphasis on outdoor learning in spaces that encouraged learning through exploration. Planting Seeds was also congruent with the recently adopted province-wide curriculum framework (Makovichuk, Hewes, Lirette, & Thomas, 2014), which focuses on four core tenets: democratic citizenship; equity; intercultural competence and communication; and environmental sustainability. Environmental sustainability was incorporated into the Planting Seeds program through elements such as composting, seed saving, and repurposing of materials, for example, using large coffee bean sacks donated by a local coffee roaster as grow bags for potatoes. Intercultural context is being considered as we move toward the establishment of an indigenous garden within the existing space.

The first cohort from the childcare centre who were invited to be part of the Planting Seeds project was a group of 16 4- to 5-year-olds and two early childhood educators. Over a period of six Friday morning sessions from May to June 2015, the children and educators took part in the Planting Seeds program, together with the other participants (older adults with mental health issues and adults with developmental disabilities). Most sessions were held outside in the garden. On particularly wet or cold days, the session was moved to a campus classroom. Activities included planting, tending, and harvesting produce (including potatoes, tomatoes, zucchini, and herbs), nature-related craft activities, and preparing and eating healthy snacks from garden produce.

### *Intergenerational participation, stage 2*

In the spring of 2016, a second group of eight community health nursing students and their instructor evaluated whether participation in Planting Seeds enhanced children's knowledge of healthy eating and where food comes from. The research took place over a period of six weeks. Nine children aged 4–5 years old who were participating in Planting Seeds were selected through convenience sampling and paired with a nursing student buddy. A questionnaire was prepared with the goal of obtaining an initial understanding of the children's prior

understanding of healthy foods and gardening. The questionnaire consisted of six simple questions. The children were asked questions regarding their prior knowledge of healthy foods, gardening, and where they believed food comes from. A follow-up survey asking the same questions was conducted with the original children during the last garden day, and the results were compared to the initial data.

After they had conducted the initial survey (through informal conversations with the children using guiding questions), the responses were analyzed by the nursing students. The informal survey revealed that all nine of the children had initially expressed an interest in gardening and had a relatively good idea about what healthy eating was. In the follow-up questionnaire, 89% of children had an idea about where food comes from (as compared to 66% in pre-project questionnaire), 100% expressed an interest in gardening (100% in pre-project questionnaire), 89% chose a healthy food item when asked about their favourite food (56% in pre-project questionnaire), and 89% of children had a good understanding of what healthy food is and how it helps the body. Although it was only a small sample, from this data we concluded that the children demonstrated an increased knowledge about healthy eating and where food comes from as a result of their participation in the Planting Seeds project.

### **Nurturing intergenerational relationships**

Following the integration of the children into the garden sessions, the research team observed and noted the developing intergenerational interactions between participants in the garden. We were aware of a body of literature supporting the benefit of intergenerational programming (Heyman, Gutheil, & White-Ryan, 2011; Weaver, Naar, & Jarrott, 2017) and were interested to learn more about this aspect of Planting Seeds. Analysis of our interview transcripts revealed a notable benefit for both child and adult participants in regard to fostering positive intergenerational relationships between children and adults participating in Planting Seeds. This benefit was well articulated by the interviewees (all names have been changed to protect privacy). Below are excerpts of interviews with Simona, an early childhood educator, and Ella, a personal support worker for a young adult with developmental disabilities attending the program.

**Simona:** *I had noticed some children from the childcare centre wanting to pick some specific people that they saw to come and work with them. Whether it was one of the elderly people that were there or a student that was part of the [nursing] program. There were lots of great connections. The interactions between the older people who were involved and the children.*

**Interviewer:** Can you explain more about the connection piece between the older generation and the younger generation?

**Simona:** *A lot of the connections being made were from the younger ones assisting the older ones with picking stuff and with the older generation helping the younger with writing their name on stuff. It was a good interaction. It was neat to see that it was a reciprocal relationship, where the kids helped them and they helped the kids.*

**Interviewer:** What do you think the overall value of the Planting Seeds program has been for the preschool children who took part?

**Simona:** *Great opportunities, great interactions for the kids. Brings it back to some skills that should be taught within the education system that would benefit everyone. The world is having a disconnect with skills to be able to do that kind of stuff. Taking care of yourself. Having your own garden and taking care of yourself. A lot of times, people aren't bothering with that, so people aren't growing up with that experience. We grew up seeing a part of it. It makes you appreciate it more and where it's coming from. It makes you respect the earth more.*

**Interviewer:** What do you think the overall value of the Planting Seeds program has been for you and your client?

**Ella:** *Lots of us remember cooking with our grandmothers. I myself am at the age of a grandmother already. It's lovely because the children that were there made name tags. They spelled the names out and there was a gift from them in that. They also brought a dog with them one day too and that was a shared experience for the people there. They could enjoy the kids playing with the dog. People in care centres don't get to see a lot of kids out and active and interact with them. People were respectful of each of the people who were older and the people who had mixed abilities. Some had greater abilities, we all do.*

Several program participants mentioned that they appreciated having the preschool children involved in the program; for example, they enjoyed the energy the children brought to the project. An interesting finding was that even adult participants who had not been observed directly communicating with the children during the sessions said that the children's participation in Planting Seeds was a positive aspect of the program for them.

An area of growth for the children came from the experience of working alongside young adults and older adults, many of whom had mental health or developmental challenges. We observed the development of ongoing and rewarding reciprocal intergenerational relationships in the garden space.

Janet, the program's horticultural therapist, noted in her reflective journal:

Another successful session. Everyone got involved in some aspect of gardening even if they remained at the table; And in the garden the generations were working easily together, clearly comfortable with the culture of the group of acceptance and inclusion; The children naturally got into the mix of things even as the adults were transitioning to the tables; And the addition of a story for the children was terrific. The session continued to accomplish our goals of: Building an integrated community of people from different generations, abilities, and walks of life, with the common interest in gardening and friendship. Building self-esteem and confidence through learning and developing skills in gardening.

Thus far, we have not collected any data (apart from anecdotal observational) concerning the children's perceptions of the intergenerational aspects of the program. This is something we would like to pursue as a future line of inquiry.

## Conclusion

Integrating preschool children from a campus childcare centre into an intergenerational community gardening program has proven beneficial in terms of nurturing positive intergenerational interactions, learning together, and enhancing children's knowledge and understanding of healthy eating, where food comes from and how to prepare and eat healthy food from garden produce. This project continues, with the addition of a second gardening program (Sprouting Seeds) held weekly at the childcare centre.

## Acknowledgements

Additional project and research collaborators are horticultural therapist Janet Melrose, horticultural therapy assistant Angela Foster, and project researchers Dr. Sonya Jakubec, Dr. Sonya Flessati, Dr. Joanna Szabo-Hart, Dr. Bev Matthison, Genevieve Currie, Elaine Schow, and Dr. Scott Hughes.

With thanks for the enthusiastic and ongoing support and participation of the childcare centre children, director, and staff.

## References

- Centers for Disease Control and Prevention. (2010) Obesity. Retrieved from <https://www.cdc.gov/healthyschools/obesity/index.htm>
- Heyman J., Gutheil, I., & White-Ryan, L. (2011). Preschool children's attitudes toward older adults: Comparison of intergenerational and traditional day care. *Journal of Intergenerational Relationships*, 9(4), 435–444. <https://doi.org/10.1080/15350770.2011.618381>
- Hofferth, S. L. (2010) Home media and children's achievement and behavior. *Child Development*, 81, 1598–1619. <https://doi.org/10.1111/j.1467-8624.2010.01494.x>
- Louv, R. (2005). *Last child in the woods: Saving our children from nature deficit disorder*. Chapel Hill, NC: Algonquin Books.
- Makovichuk, L., Hewes, J., Lirette, P., & Thomas, N. (2014). *Play, participation, and possibilities: An early learning and child care curriculum framework for Alberta*. Retrieved from <https://education.alberta.ca/media/482257/play-participation-and-possibilities-reduced.pdf>
- Ogden, C. L., Carroll, M. D., Kit, B. K., & Flegal, K. M. (2014). Prevalence of childhood and adult obesity in the United States, 2011–2012. *Journal of the American Medical Association*, 311, 806–814. <https://doi.org/doi:10.1001/jama.2014.732>
- Rideout, V., Foehr, U., & Roberts, D. (2010). *Generation M<sup>2</sup>: Media in the lives of 8- to 18-year-olds*. Menlo Park, CA: Henry J. Kaiser Family Foundation. Retrieved from <https://files.eric.ed.gov/fulltext/ED527859.pdf>
- Weaver, R., Naar, J., & Jarrott, S. (2017). Using contact theory to assess staff perspectives on training initiatives of an intergenerational programming intervention. *The Gerontologist*, 59(4), 770–779. <https://doi.org/10.1093/geront/gnx194>
- Wells, N., Jimenez, F., & Martensson, F. (2018). Children and nature. In M. Van den Bosch & W. Bird (Eds.), *Oxford textbook of nature and public health* (section 6.1). Oxford, UK: Oxford University Press.