

# The Impact of Horticultural Programs in Long-Term Care Services

Eva Kwong

Douglas College Therapeutic Recreation Student Researcher

## INTRODUCTION

In 2011 there were 224,280 people living in in nursing homes, chronic care or long-term care hospitals in Canada (Statistics Canada, 2011).

It is important that long-term care facilities offer interesting programs to residents, even though they may have limited functioning (Tak, Kedia, Tongumpun, & Hong, 2015).

Research suggest that horticultural programs could offer people with varying degrees of limitations an opportunity to improve cognitive, social, emotional and physical domains (Carman, 2011; Pfeffer & Deyton, 2009; Slavens, 2007; Wang & Macmillan, 2011)

## DEFINITIONS



“**Long-term residential care services** provide 24-hour professional supervision and care in a protective, supportive environment for people who have complex care needs and can no longer be cared for in their own homes or in an assisted living residence.” (Province of British Columbia, 2017)



**Horticultural programs** are purposeful multi-sensory activities using plant materials to engage people in a recreational activity that can improve or maintain functioning and quality of life.

## PURPOSE

The purpose of the research is to develop strategies for running mobile one-to-one horticultural programs for older adults living in complex care facilities and to explore the benefits of these programs.

## METHOD

### Participants

There was a total of 11 participants:

#### 7 Residents

- Recruited using convenience sampling
- Criteria of being a resident
- 50 and over
- Ability to read English
- Sessions were recorded
- Observations and inferences were documented

#### 4 Staff

- Recruited using convenience sampling
- 3 face-to-face interviews with recreation aides
- 1 e-mail response with staff from another department

### Data Collection

#### Qualitative

- Observations based on residents participation in horticultural activities
- Transcripts from 9 sessions of horticultural activities. 2of the 7 residents participated in two sessions
- Interview notes from 4 staff members
- Field notes

#### Quantitative

- Number of sessions and length of session
- Activity chosen
- Number of laughs

## FINDINGS

### Mobile One-to-One Horticultural Activity Cart

#### Horticultural activity choices

##### Flower arranging:

- creating a floral arrangement

##### Repotting:

- transplanting a sedum into a pot

##### Garden magazine:

- visual and reading material

##### Sensory.

- Dried pressed leaves



#### Activities selected by participants

First session (5 participants)	Second session (2 participants)
5 flower arranging	2 flower arranging
1 repotting	1 sensory
1 garden magazine	1 garden magazines
1 sensory	
1 viewing cart	
* Participants selected at least one activity	

#### Duration

The duration of the sessions lasted from 11:13 minutes to 25:34 minutes.

##### Second session

spent more time on the second session compared to their first session



#### Observations

- Demonstrated ability to walk carrying her flower arrangement to the dining room (Participant #2, 2016)
- Demonstrated ability pull out flowers by the stem and give it to me (Participant #2,# 5, #6, #8, 2016)

- Demonstrated ability to recall names of flowers from the cart (Participant #1, #5, #8, 2016)
- Demonstrated ability to make decisions about which flowers to choose from the bucket and where to place it in their vase (Participant #2, #4, #5, #7, 2016)

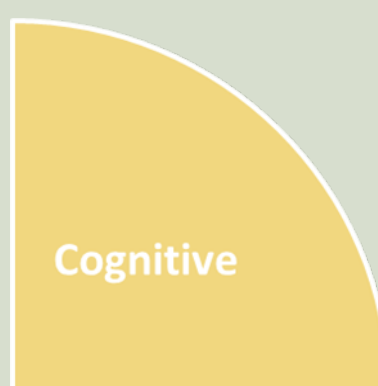
- Demonstrated ability to respond to questions (Participant #1, #2, #3, #4, #5, #6, #7, 2016)
- Demonstrated ability to ask questions (Participant #1,#2, #3, #4, #5, #6, #7, 2016)

- Demonstrated smiling (Participant #1,#2,#3,#4, #5,# 6, #7, 2016)
- Demonstrated laughter (Participant #1,#2,#3, #4, #5, #6, #7, 2016)

### Themed Narratives of Resident Participants



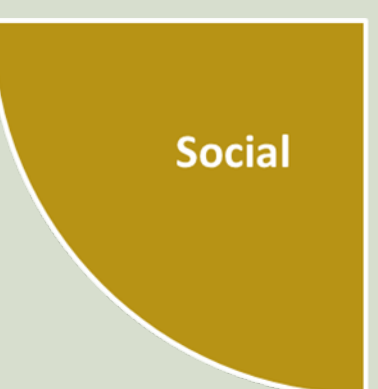
“*Probably down to my finger is. Where my lower finger is*”..(Participant #5, 2016)



“*I had a plot around the garage and around the house and I had various..rose plants..I had some rhododendron bushes..they kept on growing*

...*yellow one. It was pretty one of my grandsons wanted it for his place*” (Participant #1, 2016)

*Do you think I should have water in that*” (Participant 2, 2016)



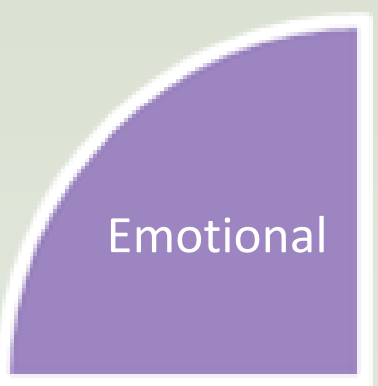
“*Thank you. Oh it makes a big difference. You look at that and you think of flowers and you think of your yard and your garden.*” (Participant #7, 2016)

*Would you like some coffee or something?* (Participant #2, 2016)

“*As far as I am concerned I think it is beautiful..*” (Participant #2, 2016)

“*Oh that would be fun.*” (Participant #2, 2016)

Total of 82 laughs (Participant #1,#2,#3,#4,#5, #6, #7, 2016)



#### Expressed benefit of Horticultural Program

After looking at the sedum plant and the pots participant # 4 stated:

“we could all start one..we could all have a pot..you could see it grow”

After completing flower arrangement participant #5 stated:

“adds some cheerfulness to your surroundings”

When asked if it would be good to have flower arranging in people's room participant #7 stated:

“I am sitting here and I can't get out to buy flowers. If you came around I could pick out..It's a terrific idea..There's are a lot of seniors who can't get out the door like myself right now.”

When (participant #2, 2016) saw the horticultural cart she stated: “ I think it is wonderful that you are doing this.”

## FINDINGS

### Themed Narratives of Staff Members

- All the recreation aide participants have had positive experience running horticultural programs and were looking forward to implementing horticultural programs in the workplace.
- They observed benefits for the residents that participated in the horticultural program.
- Other support staff indicated that seeing fresh cut flowers in the workplace generates positive emotions.

## CONCLUSION

- It is important to implement horticultural activities for this population as many residents have enjoyed horticulture in earlier years.
- Horticultural programming in long term care would normalize the experience.
- Participants voiced their interest in a desire to continue a past interest.
- Horticultural program carts are mobile, allowing the therapist to bring the program to residents' rooms.
- Choices of a variety of activities allow residents a locus of control.
- Evidence suggests that participating in horticulture activities engages physical, cognitive, social, and emotional functioning.
- Preplanning for a variety of adoptions in the program are important in allowing flow and empowerment for the residents.

## LIMITATIONS

- Limited participant demographic as only functional participants that could read English were able to participate.
- Inability to quantify changes of cognitive, physical, social and emotional functioning.
- Lack of control group to compare with.

## RECOMMENDATIONS

- Recognize benefits and interests for residents and provide one-to-one horticultural programing.
- Research more ways of adapting horticultural programs to improve accessibility.
- Bench mark abilities prior to starting program.
- Test results for after the 3 month program to make comparison.
- Program duration for twice a week for 3 months.
- Video tape sessions.
- Further research on individuals that have lower cognition
- Further research on ways to measure benefits of horticultural programs.

## REFERENCES

- Carman, J. (2011). Elders' Lifelong Connection with the Natural Environment. *Educational Gerontology*, 37(6), 488-498. doi:10.1080/03601277.2011.570203
- Pfeffer, J.C., Deyton, D.E., & Fly, J.M. (2009). Survey of Horticultural Therapy Programs in Tennessee. *Journal Of Therapeutic Horticulture*, 1924044.
- Province of British Columbia, (2017). Long-Term Residential Retrieved from Carehttp://www2.gov.bc.ca/gov/content/health/accessing-health-care/home-community-care/care-options-and-cost/long-term-residential-care
- Slavens, S. P. (2007). The Psychosocial Benefits of Exposure to Natural Settings in Long-term Care: An Evaluation of the Wellness Garden Program at Glacier Hills Retirement Community. *Journal Of Therapeutic Horticulture*, 1832-43.
- Statistics Canada (2011). Living arrangements of seniors. Retrieved from https://www12.statcan.gc.ca/census-recensement/2011/as-sa/98-312-x/98-312-x2011003\_4-eng.cfm#bx2
- Tak, S. H., Kedia, S., Tongumpun, T. M., & Hong, S. H. Activity Engagement: Perspectives from Nursing Home Residents with Dementia. *Educational Gerontology*, 41(3), 182-192. doi:10.1080/03601277.2014.937217
- Wang, D., & Macmillan, T. (2013). The Benefits of Gardening for Older Adults: A Systematic Review of the Literature. *Activities, Adaptation & Aging*, 37(2), 153-181. doi:10.1080/01924788.2013.784942

## ACKNOWLEDGEMENTS

I would like to thank Dr. Reid and my peers in Directed Research Studies for their support. In addition, I would like to extend my gratitude to Thrifty Foods for donating fresh cut flowers for the research project. Most importantly, I would like to acknowledge my appreciation to the residents and staff at the long term care home where I conducted the research.