

A Pilot Study of the Benefits of Traditional and Mindful Community Gardening For Healthy Aging Among Urban Older Adults

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Introduction

- World population is aging and urbanizing
- What contributes to healthy aging in the growing population of city-dwelling older adults?
- Healthy aging conceptualized as physical, social, and cognitive engagement

- Research shows that contact with plants is linked to a variety of psychosocial benefits
- Limitations of the literature: Atheoretical; Few studies of community gardening; No randomized, controlled trials
- The study of community gardening is in its infancy within the field of psychology



Research Questions

- Is a randomized, controlled trial of community gardening possible?
- Can an urban community gardening intervention with or without mindfulness training enhance well-being among people age 55 to 79?
- If so, are the effects mediated through 3 pathways?
 - 1) Attention/mindfulness (Attention Restoration Theory)
 - 2) Social support (Socio-ecological Systems Thinking)
 - 3) Connectedness to nature (Biophilia Hypothesis)

Method

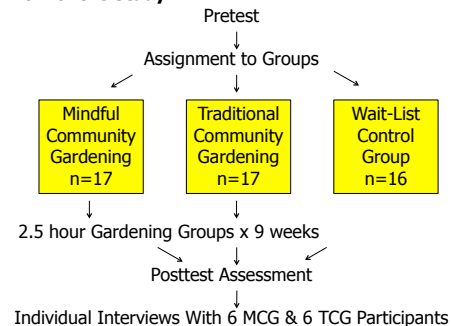
- Randomized, controlled, pilot study using a mixed methods approach
- Participants: Community-dwelling adults age 55 to 79
- N = 50

Independent Variable - Group assignment

Dependent Variables

- Subjective Well-Being
- Hypothesized Mediators (Attention/Working Memory, Mindfulness, Social Support, Connectedness to Nature)

Flow of the Study



Group Descriptions

- Traditional Community Gardening (TCG) - typical gardening activities undertaken collaboratively, e.g., planting, weeding, composting, harvesting
- Mindful Community Gardening (MCG) - a new approach to teaching mindfulness - same gardening activities as in TCG, with guided development of non-judgmental awareness as one gardens, eats, walks, etc.

Results

Feasibility

- A randomized, controlled trial of "quasi" community gardening is possible.
- Numerous obstacles were encountered and lessons learned: Field Study Complications, Attrition/Timing, Differences With "Real Life" Community Gardens

Sample

- Mean age = 63.4 (SD = 5.7), age range = 55 to 79
- 84% female, 86% White
- Physically & psychologically healthy sample - little room for improvement in the average participant
- Underpowered to detect small to medium effects

More Time In Garden (Dose) Improved Subjective Well-Being Outcomes

- Dose predicted higher quality of life at posttest for both MCG and TCG participants
- In TCG, those with a higher dose endorsed less negative affect at posttest than those with a lower dose



Community Gardening Enhanced Mindfulness

- Mindfulness was measured with 2 uncorrelated scales: 1) Kentucky Inventory of Mindfulness Skills - Observe subscale (KIMS), 2) Mindful Attention and Awareness Scale (MAAS)



- MCG increased the "acting with awareness" aspect of mindfulness, as measured by the MAAS. Accounted for 6% of the variance at posttest, compared to WL.
- TCG increased the "observation" aspect of mindfulness, as measured by the KIMS. Accounted for 14% of the variance at posttest, compared to WL.
- The groups did not measurably impact other quantitative outcomes in this small, healthy, high-functioning, pilot sample

Emergent Hypothesis: Individuals Under the Greatest Stress Benefitted Most From MCG/TCG

- Interviews revealed major stressors faced by participants: health problems, caregiving, bereavement, economic/work problems, marital/family discord, etc.
- These aspects of community gardening groups were cited as most helpful to coping:

- * Mindfulness training
- * Social support
- * Peaceful, restorative atmosphere of garden
- * Direct contact with nature & feeling part of the cycle of life
- * Escape/respite



Reconceptualizing Aging

- Seeing others' physical limitations increased own acceptance of own functional limitations, which had initially brought shame/embarrassment
- Some looking dimly at the aging process were inspired by others: "There were so many people that still had goals and dreams, still were looking forward to their lives. I thought that was very uplifting. Not everybody at this certain age is getting ready to go sit in a rocking chair."



Generativity - Continuing To Contribute

- Community gardening offered another way to be a participating, productive member of society
- Provided opportunity to realize how much one knows & sparked desire to share gardening knowledge, experience, and passion with others
- Several interviewees expressed desire to contribute to future generations by starting school-based community gardening programs

Additional Benefits Cited

- Social engagement - When asked what they liked most about being in the gardening group, the #1 response was *social interaction/support*
- Cognitive engagement - #2 response was *learning* more about gardening
- Physical activity - moderate activity, learned how to extend it into later years with adaptive tools
- MCG led to finding more enjoyment in daily life: "The walking meditation made an impression. I've walked down the street a hundred times and now I say, 'Oh, look at that! I never saw that before.' I enjoy walking more. It's more interesting. It's not just a means of getting there, it's an enjoyable act of walking to get there."



Discussion

- A large-scale, randomized, controlled trial is possible
- Even in a small, healthy, high-functioning sample, benefits accrued
- Most helpful to those with major stressors
- Future studies could be directed at clinical samples to address caregiver burden, depression, cognitive slippage, loneliness, other stress
- Important to make community gardening accessible to less functional individuals who might have greater need and benefit more
- Future research could assess physical activity benefits and nutrition effects
- Traditional Community Gardening could extend the benefits of mindfulness to more people, especially those who'd not otherwise practice
- Mindful Community Gardening offers an approach to teaching mindfulness with unique benefits
- Behavioral medicine specialists are encouraged to pursue community gardening research & practice to promote physical & mental health in an aging, urbanizing population



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