"Being Grounded": Benefits of Gardening for Older Adults in Low-Income Housing

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This study reports the findings of a qualitative evaluation of gardening programs for low-income minority older adults living in senior housing. A total of 20 individuals from three senior housing buildings participated in focus groups to discuss the benefits of and motivations for community gardening. The nine main themes of why seniors choose to participate in gardening were mental health benefits, the end product (fruits and vegetables), continuation of a past life, something to do/responsibility, beauty and connection to growth, connecting with others, physical health, learning something new, and helping each other out. These findings are placed in the context of theoretical perspectives and past studies. Implications for policy and relevance to senior housing are offered.

KEYWORDS senior housing, gardening, older adults, low-income, age-friendly, aging in place

INTRODUCTION

Gardening for older adults has recently gained the attention of many interdisciplinary professionals as a sustainable, age-friendly option for improving the quality of life for older adults (Armstrong, 2000; Austin, Johnston, & Morgan, 2006; Milligan, Gatrell & Bingley, 2004). There are many practical and subtle benefits to gardening for older adults. Specifically, the therapeutic benefits of horticultural therapy include lessening an individual’s sense of loss and providing opportunities for creativity, self-expression, social interaction, and sensory stimulation; improving self-esteem; practicing fine and gross motor

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skills; and improving eye-hand coordination (D’Andrea, Batavia, & Sasson, 2007). Gardening is also considered to be a moderate to rigorous form of exercise (Armstrong, 2000), thus producing physical health benefits as well. It may also promote mental and physical stimulation and be cognitively protective (Infantino, 2004).

Gardening can be used as an activity or program for older adults and can be done individually or as a group. Horticulture (or eco-therapy) encompasses a wide range of activities, from simply being in nature, to flower arranging, to actual gardening of plants, fruits, and vegetables. Because it can be implemented simply, there is increasing interest in gardening for older adults as both a leisure activity and a therapeutic activity.

Community gardens that focus on harvesting fruits and vegetables are unique in several ways. They offer a way of integrating open space, nutrition, and community development (Saldívar-Tanaka & Krasny, 2004). Unlike public parks, gardening may also provide a sense of safety and cultural continuity for minority and low-income individuals (Saldívar-Tanaka & Krasny, 2004). Community gardens offer a way to reflect the uniqueness of its population (Saldívar-Tanaka & Krasny, 2004). Community gardening also may foster collaborations between agencies and groups (Austin et al., 2006).

The purpose of this study was to determine the perceived benefits of older adults’ participation in a community gardening program within low-income senior housing. Specifically, these programs were community garden of fruits and vegetables tended by older adults living in a senior housing building. This study was conducted at three low-income senior housing buildings in low-income areas in Philadelphia, Pennsylvania. These sites have established community gardening programs that grow fruits and vegetables for the residents. This study is unique in four ways:

1. To the authors’ knowledge, this is the first study that specifically looked at the effects of growing fruits and vegetable gardening.
2. This study contained a sample made up of exclusively of members of low-income ethnic minorities.
3. The gardening program is embedded within community housing programs.
4. This study was conducted in an urban area, where there are challenges for a green space.

BACKGROUND INFORMATION

This project is part of a larger effort entitled Age-friendly Philadelphia (AfP) (Clark, 2011). AfP is based on the understanding that supportive physical and social environments create more opportunities for healthy living, vibrant neighborhoods, and community engagement, all of which promote healthy aging in place (Clark & Glicksman, in press). This effort has focused on
four areas, taken from the Environmental Protection Agency’s Age-friendly Framework:

1. Staying Active, Connected, and Engaged: Where and how we choose to live can affect our health and well-being.
2. Development and Housing: Healthy neighborhoods offer diverse housing choices, gathering places, and ways to connect.
3. Transportation and Mobility: We can build choice back into our transportation system—and make it easier for people of all ages to get around.
4. Staying Healthy: Finding healthy food, keeping active, and getting healthy when you need it can be easier in an age-friendly community.

Senior gardening became a focus of AfP because it is believed that it encourages staying active and staying healthy. The effort to support senior gardening began as a program offered by GenPhilly, an organization sponsored by Philadelphia Corporation for Aging, comprising people in their 20s and 30s who are attempting to encourage emerging leaders in various fields to think about the kind of city in which they would want to grow older. One goal common to AfP and GenPhilly is to bring together professional networks from inside and outside the field of aging to see how collaborations can be developed. On February 1, 2011, GenPhilly sponsored “Germinating Partnerships: Connecting Seniors with Community Gardens.” The program featured speakers with expertise in gardening and in working with older adults. One request that attendees at the meeting had was the need to evaluate the effect of gardening on the well-being of older adults. The Director of Research of Philadelphia Corporation for Aging then spoke with the first author about conducting a study of older adults and gardening. The ensuing discussions eventually culminated in the focus groups described below. It is the intention of AfP to continue working with senior gardening as both a policy initiative and, building on this study, a way to better understand how gardening can affect senior health. In particular, the potential for a gardening project to build stronger trust between elders and the professional staff at senior centers, senior housing, and similar sites presents a major opportunity for sharing trustworthy and reliable information about healthy behaviors with a population who may hold a very low trust in the formal health system.

Three low-income housing sites participated in this project. Site one has 155 units and provides Section 8 affordable housing to low-income seniors and individuals with disabilities in North Philadelphia. Their gardening program has been in existence for approximately 30 years. This site allots a plot of land to each participant in the program, who has sole responsibility for the plot. Because each plot is considered exclusive property of an individual, many of the residents have decorated the fences around their plots to personalize them. Sites two and three are US Department of Housing and Urban Development (HUD) 202 low-income housing
buildings in West Philadelphia and are run by an agency that operates several other residences in the city. One site has 50 apartments and the other has 75. These two sites were in their first year of their gardening programs, which consisted of raised wooden garden beds that were approximately $4 \times 6$ feet in area and are shared among the participants. One benefit to these elevated beds is the reduced need for excessive bending and squatting, and they are accessible to individuals who use wheelchairs (see Figures 1 and 2 for photos of the gardening plots).

Each gardening program is run by the building's staff or management, who are ultimately responsible for the program. The gardens are located onsite on the outdoor property, and the residents leave their apartments to gather in the common area of the gardens. These gardens are mostly used for growing produce, such as tomatoes, herbs, eggplant, and peppers; however, there are some flowers and other decorative botany.

METHODS

This qualitative study used focus groups held at each of the three sites. After a planning meeting with the sites, institutional review board approval was obtained from the principal investigator's home institution at the time.

![Figure 1](image1.png)

**FIGURE 1** Photo of elevated beds. (Color figure available online)
FIGURE 2 Photo of individual plots. (Color figure available online)

The data were collected in June 2011 by the principle investigator. Participants were recruited by the site staff and were purposively selected based on their participation in the program and their potential to contribute meaningful insights into the research questions. The following questions were used to guide the focus groups:
1. Why do you participate in gardening?
2. How do you benefit from gardening?
3. What would you do if you were not gardening?
4. Does gardening contribute to your overall health?
5. If you could modify the program in any way, what changes would you make?

Each participant completed a short survey, administered immediately following the focus groups, that requested demographic information and assessed the level of their agreement to various statements regarding why they choose to garden. The questions in the survey were developed based on theory, literature, and input from staff at the agency.

RESULTS

The three focus groups consisted of 2, 12, and 6 participants, respectively, for a total of 20 participants. Mean age of the sample (based on 17 usable surveys) was 71.5 years. The majority of the sample were women (70.5%) and were mostly African Americans (88.2%), with one person reporting as Hispanic (5.8%), and one person reporting as biracial/multiracial (5.8%). The majority of the sample had previous gardening experience (76.5%).

Focus Group Results

The data were first analyzed using open coding, in which the researcher read through each transcript and noted key phrases. After this was completed, the researcher compared and contrasted key words with one another. From there, keywords were grouped together to form themes. The content (or phrases from the focus groups) were then given particular themes. The following are the themes that emerged, in order of prevalence, along with various phrases and quotes from the focus group to support and illustrate the theme: mental health benefits, the end product (fruits and vegetables), continuation of a past life, something to do/responsibility, beauty and connection to growth, connecting with others, physical health, learning something new, and helping each other out. Interestingly, the participants did not really choose to focus on the negative aspects of the conversation (i.e., questions 3 & 5), and directed the conversation toward the positive aspects of their experiences. In the spirit of qualitative research, we, as researchers, remained flexible and allowed the participants to drive the conversation and talk about what was important to them (Padgett, 2008).
MENTAL HEALTH BENEFITS

Relaxation, or clearing the mind, was the first theme to emerge in each of the focus groups and was also voiced by several participants.

It is so relaxing. It just makes me feel peaceful inside. I love doing it. It's second nature to me. I really love, love the land, love the earth, I just love... I grew up on a farm, first of all. There's nothing like it. Sometimes I just go out under the tree and I sit there. I appreciate the trees and the grass. Everything so much. It's kind of hard to explain, but it do. It relaxes your mind. It gives you that calmness, you know? You can't always get that everywhere, especially in the city. But try going to the park, down by the water, or gardening.

We have some tomatoes planted back there you just have to come out in the afternoon and water them let your mind float.

For me, it's relaxing.

To me, it's like when I go out there in the morning and I get a cup of coffee and you're out there all by yourself and you got problems, it takes your mind away.

Makes you feel real good... very good. If you got a problem, it takes your mind off of it. That's if you have problems out there.

You don't think about what's on your mind. It's your own little world.

I get a lot of inspiration from it. I don't think about having that next cigarette or anything like that. So it clears a lot of my thoughts away. This is a cleansing situation for me.

THE END PRODUCT: FRUITS AND VEGETABLES

The tangible benefit of receiving the fruits and vegetables was also voiced as a major reason for participating in the gardening program. Having access to food that they would not ordinarily have, as well as what they perceived as good quality food, were things the participants were excited about. In addition, cost and saving money also emerged as a perceived benefit.

The good thing you get out of it once you have grown it, tended to it, you can enjoy eating it.

It's good to have a garden. All those herbs, I'm waiting for them to get ripe. Then use them for salad and cooking. And that's expensive in the store.

I love tomatoes, and all I could think about was the tomato bushes. It's a sense of accomplishment.

Because you, your food tastes different your tomatoes taste different, there's no pesticide on them. Everything you plant you know you've grown it with your own hands and you watch it grow, that's one thing, you go out some days it's light green the next it's red, all the little beans
and soon you have a full grown garden. It doesn’t have to be perfect, it’s just you’re a part of that. And then the end of the year comes, you pack up your stuff out there; pull up your overalls or whatever. But next spring, you’re always looking forward to the next year, especially when you get to our age you’re looking forward to another year.

You have a lot of problems. Your paying bills here and there and you’re stretching every penny. Yes that’s the reason why you do gardening and anything else you could do, it will help you but also you can save a few dollars if you can get your plants free.

Someone says you know what you are eating for your health.

They were the best potatoes I ever tasted, like with stews and with sour cream.

A “Way of Life”: Continuing a Past Tradition

Many of the participants discussed how gardening was “how they were raised,” and that their current gardening was just a continuation of what they have always done. Gardening was extremely familiar to the majority of the participants. Many were raised on farms, and now that they were living in an urban environment felt that gardening was one way of connecting to their roots.

Because I’ve always been interested in gardening. As a child, I first started with my grandmother. And she would let me have my own little garden in the corner of her garden. And I think I was about... maybe nine or ten when I first started. And I’ve always had a garden at my home in my backyard. I was always planting something. If it wasn’t out in the yard, it was in the house. And I’ve always had houseplants. I love plants, I love the earth.

I was raised up on three farms.

We had everything, carrots, lettuce, stuff that we didn’t even eat, but we had it anyway. So that’s how I learned, from my mom.

Ever since I was a little girl and as I grew up and began to be a mother, a wife, and all those burdens it was therapeutic for me. It let me clear my mind and different things, you know. It’s serenity, you know? Just being one in tune with nature it helps your mind.

We lived off the land, so that’s the way it’s been all my life.

I was born in 1931, about 18 miles from the beach in the south. It was not only a way of life but it was necessary in order to live. My father was a smart person, we never went hungry. He knew how to earn for us. For about 80 families in that county, gardening was a necessity. You raised potatoes and sugar cane and corn and beans and cucumbers and tomatoes and turnip greens and collard greens and you name it, anything you can grow, okra butter beans, peas, green peas, snow peas.
SOMETHING TO DO/RESPONSIBILITY

The theme of "giving them something to do" was repeatedly discussed. A duty (or sense of responsibility) was also expressed on several occasions. In addition, a sense of pride and accomplishment was expressed by many of the participants.

It keeps you busy.

But I would do stuff even with my back problem. I would do what I got to do. I do a little bit, stop, sit down, get up, go back and do a little more. It feels like a job. It's not like you're obligated to do this, you do it because you really like it and you enjoy. You know?

Watching it grow every day, for senior citizens, I think that's nice because what else do we have to watch?

It's just another major step for us in our life. To have our garden you know. Maybe next year we're going to compete against the other people's garden, so we could get the blue ribbon. Now that would be fun.

BEAUTY AND CONNECTION TO GROWTH

The participants discussed how growing fruits and vegetables was a connection with a growing and living thing. An appreciation for the land, soil, environment, and Earth was also apparent.

I like to see... how they are growing so nicely. I was told that there was going to be large green peppers. I like to see things, like, what are they going to do?

Watching this stuff grow, watching it blossom out there....

I used to sit in the dirt. Just sit in the dirt. And do my gardening. Because it's me. Barefoot, sitting in the dirt, enjoying the earth. And it has a good feeling. .. the soil. It smells good... Did you ever smell the soil? Especially after a rain? It smells so good. And don't look at me like I'm crazy. [laughter]

CONNECTING WITH OTHERS

Participants expressed enjoyment in being with one another and with staff. In one instance, a participant talked about how gardening was a way of sharing with her daughter.

I took my daughter out there last week and she was amazed at the plants. She was so surprised! And she said, "Oh mother, you're making it in a baby bed [referring to the elevated wooden beds]." But it's not a baby bed. But I love looking at them from the window.
Other participants found connection with other staff and residents from the housing complex.

We all work in the garden, we have one another.
She [staff member] has really stuck with us though thick and thin. I don't think we would have gotten as far as we are with this garden if it wasn't for her.

**PHYSICAL HEALTH**

Although physical health emerged as a benefit when prompted by the researcher, surprisingly, it was not a primary motivator for the participants. Rather, the participants saw this as more of a secondary outcome of gardening.

I had a pretty bad fall a year ago, and I'm still sort of recouping from that. So, I can't say that right now I'm getting too much benefit because I'm, well, aside from maybe the exercise from going out there an watering and little things like that. But then, eventually, I expect real benefit. Especially the exercise and trying to get back in shape. I feel that that would help some too, but I'm limited to some degree right now.

A few years ago I had cancer, and a year after the doctor had told me that I was cancer free I began start planting out there and every day I learned something new and let me tell you that my cancer had gone away for quite a few years and that's one of the things that have (sic) helped me out a lot.

I can't bend over too much; I have knee issues, but if you can do that for 1 hour and 30 minutes out there every day. It just seemed to take everything away.

You could be sick or something or feel bad but when you come down start working in that garden it goes away.

**LEARNING SOMETHING NEW**

I don't know everything, and I'm still learning a whole lot. I see gardens around here that these people do and they look beautiful. So you can learn a lot from each other too.

We learn something new every day.

**HELPING ONE ANOTHER OUT**

She helped me because I wouldn't have a garden if it wasn't for her. I can't bend over. So my garden is up high enough so that I can plant without, you know, bending over.
Mr. [name withheld] is very helpful; I will ask him to water my garden for me until I feel better. Sometimes my health is not really good. But as far as somebody in my garden, my husband included, I don't want nobody (sic) trampling around. You don't know where you're walking breaking stuff down. Everybody can't water a garden because the water pressure be (sic) too harsh and it breaks your vegetables. Mr. [name withheld] he's very helpful.

But let me tell you something, without that extra help that you get, we get the men to do it.

I'll be happy helping somebody. That's in me. I love helping people; I would be somewhere helping somebody.

You [addressing another resident] help us when you encourage, you (sic) helping greatly, you just don't know that. We need that; we need your ideas. Don't go away, stay with us.

Self-administered Survey Results

Based on a four-point Likert scale, the respondents were asked to indicate how strongly they agreed with various reasons why they garden. Data were collected to verify and triangulate the findings from the qualitative methods. The results are presented in the Table 1.

According to these data, the most important reason why these individuals participate in the gardening program is for the fruits and vegetables. Interestingly, there is a discrepancy among the top reasons stated from the focus group and from the survey. Although the produce was verbalized as the second most frequently stated benefit by participants in the focus group, it emerged as the top reason from the quantitative data. This could be an indication that the researcher's probing during the focus groups could have swayed the direction of the participants' responses. In addition, the

<table>
<thead>
<tr>
<th>Reason (n = 17)</th>
<th>Strongly Agree, No. (%)</th>
<th>Agree, No. (%)</th>
<th>Disagree, No. (%)</th>
<th>Strongly Disagree, No. (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>For nutritious fruits and vegetables</td>
<td>16 (94.1)</td>
<td>1 (5.9)</td>
<td>0 (0)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Keep mind sharp</td>
<td>14 (82.4)</td>
<td>3 (17.6)</td>
<td>0 (0)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>To learn new things</td>
<td>15 (76.5)</td>
<td>4 (23.5)</td>
<td>0 (0)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Physical</td>
<td>12 (70.6)</td>
<td>4 (23.5)</td>
<td>1 (5.9)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>To connect or be with others</td>
<td>12 (70.6)</td>
<td>4 (23.5)</td>
<td>1 (5.9)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>To keep from being bored (n = 16)*</td>
<td>11 (64)</td>
<td>3 (17.6)</td>
<td>2 (11.8)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>To give back to the housing building</td>
<td>10 (58.8)</td>
<td>6 (35.3)</td>
<td>1 (5.9)</td>
<td>0 (0)</td>
</tr>
</tbody>
</table>

*One participant did not answer.
closed-ended choices that related to mental health did not capture the mental health benefits that were revealed through the focus groups, which could explain why these choices were not as highly endorsed.

DISCUSSION

The literature has shown that gardening may affect physical health and functioning, spirituality, and continuity (Heliker, Chadwick, & O’Connell, 2000; Infantino, 2004; Saldívar-Tanaka & Krasny, 2004). Although there are studies that address gardening for older adults for fruits and vegetables (Sommerfield et al., 2011), and there are studies that look at the urban environment (Wakefield et al., 2007), these findings are among the first to address older adults harvesting fruits and vegetables in an urban environment. Data from this study support previous studies that found that elderly people found mental health benefits and relaxation in gardening (Wakefield, Yeudall, Taron, et al., 2007); moreover, this study contributes an additional dimension of understanding. This is one of the first studies to look specifically at gardening fruits and vegetables, which has the capacity to affect the nutrition of the participants. This in return may increase health in a way not otherwise affected. One study that looked at nutritional benefits (Sommerfield, McFarland, Waliczek, & Zajick, 2011) found that gardeners were more likely to consume vegetables than nongardeners. Future research possibilities include the potential for a controlled study looking at nutrition and produce consumption among gardeners and nongardeners.

Also, the current study examined a community program in a community setting (D’Andrea, Batavia, & Sasson, 2007; Sommerfield et al., 2011), whereas many previous studies looked at individual gardening. Although this was not a central finding, it was evident that gardening may increase a sense of community and belonging. Although it appears that individual well-being, peace, and spirituality emerged as the main motivations for gardening, the community aspect also provides some benefit. An activity that produces sustainable results (e.g., fruits and vegetables) increases the value of the activity, reduces cost for these low-income individuals, and seems to be the preference of the participants to store bought produce, as noted by other researchers (Wakefield et al., 2007). Growing fruits and vegetables also increases an individual’s ability to age in place for older adults because it increases their access to fruits and vegetables. Furthermore, because the participants reported an abundance of fruits and vegetables, they mentioned that they often share with other residents who did not garden, thus the gardens have a direct benefit that reaches beyond the participants. The community was shown to be important in this study because residents helped one another when one was sick by tending to their gardens, as well as looking to others for assistance (or “the stronger men”) for some of the more physically
taxing jobs. This also reinforces the notion of communal gardening versus the lone gardener (Milligan et al., 2004).

Previous studies reported the potential physical benefits of gardening. Two studies looked at specific physical outcomes, finding that gardening may increase hand strength, body strength, and flexibility (Park & Shoemaker, 2009; Park, Shoemaker, & Haub, 2009). However, participants in this study did not focus on physical benefits as a primary benefit or motivation for their participation. Interestingly, the participants did not raise physical activity or physical health as a benefit for them until the authors’ directly inquired about it. The responses from the participants seemed to indicate that it was not a priority, mostly due to other physical health problems. One implication could be that for those who are frailer or in poorer health may not want to garden for physical health as much as a more healthy older adult trying to maintain or gain physical functioning. Nevertheless, even if the participants did not prioritize or communicate about the physical benefits of gardening, it does not mean that they do not gain those benefits. One advantage of the physical benefits is that an individual does not necessarily need to be aware of it for it to affect health and well-being. For example, if participants walked through the building on the way to the garden and would not have walked that way otherwise, they are still physically benefiting from gardening, even if they do not realize it or recognize it as a priority.

There is a lack of studies that examine gardening in urban populations. Those in urban populations may not have access to green space, may be limited in their ability to navigate terrain, or may have limited exposure to natural spaces. This theme was important to many of our participants, who stated that they grew up on a farm and expressed the need to be outside in the dirt and in nature. Currently, to the authors’ knowledge there has only been one study (Orr, Mattson, Chambers, & Wichrowski, 2004) that looked at the benefits of older adults in an urban area. The current study contributes to our understanding of the need for nature and green space for individuals living in urban environments. In addition, the findings from this study also reinforce the benefits and advantage of community living and a structure that can offer the support to grow produce. It is possible that these older adults would not have the capacity to grow produce as individuals in isolation or without the support of the larger agency.

Theory Development

The data from this study garner support for many theories of aging (e.g., continuity, social exchange, and gerotranscendence). Continuity theory (Atchley, 1989) holds that individuals age more successfully when they are able to bring activities and familiarity from their traditions into their older age. This theory also maintains that when making adaptive choices, older adults
attempt to preserve and maintain internal and external structures and prefer to accomplish this by using strategies tied to past experiences.

With its roots in economics, psychology, and sociology, social exchange theory (Blau, 1964) states that people choose and engage in relationships and activities when there is a perceived benefit to match the effort. Likewise, according to socioemotional selectivity theory (Carstensen, Isaacowitz, & Charles, 1999), because people view time as limited (such as when one grows older) they become more selective in their activities. The activities chosen are those with the most value and benefit to them. In the case of gardening, the individuals in this study clearly were working for the outcome. Finally, gerotranscendence (Tornstam, 1999, 1994) is a theory that describes the progression to a more introverted, introspective state as one ages. Gerotranscendence has its roots in Erikson's theory of psychological development. Tornstam (1994) suggested that Erikson, who vaguely talked about wisdom, was intuitively speaking about gerotranscendence. However, gerotranscendence is different from Erickson's theory in that it implies a shift in the meta-perspective and it does not imply looking to the past, but rather looking forward and onward (Tornstam, 1994). Tornstam (1999) postulated that transcendence is the final stage of life and is a natural process toward maturation and wisdom. By simply living, not necessarily aging, a person experiences transcendence. The older adults who expressed that gardening was a way to increase internal peace of mind and calmness demonstrated the need to move away from superficial relationships to more of a relationship with one's self.

Implications

One benefit of gardening programs is the relatively low cost for a wide range of benefits (nutrition, physical, and mental health). Further examinations into the cost-benefits of such programs are needed. Gardening programs may be a way to engage volunteers and the community to promote intergenerational interaction and civic engagement. There are also policy implications for this as well because it may be a way to increase accessibility and reduce the cost of important nutritional items. Creating a sustainable program that produces tangible benefits such as produce engenders self-sufficiency and empowerment and contributes to creating an aging-friendly city that assists older adults to age in place.

All of the aspects of gardening discussed, such as providing older adults an opportunity to continue a past tradition, produce consumption, community, mental health benefits, creating green space, and safety, may also contribute to a more productive and improved ability to age in place. Gardening may contribute to creating an infrastructure to support the individual's ability to age in place, which provides a proactive, preventative approach to long-term care institutionalization (Lehning & Austin, 2010).
Limitations

Although the current study produced insights into the benefits of and motivations for community gardening among low-income, minority older adults, there are some limitations. First, there was a small sample size with fairly homogenous characteristics. However, this can be viewed as a strength. This study includes elements in the sample that are frequently excluded from research—minority and low-income. Second, a lack of anonymity, as well as allegiance to the program or agency, may sway the participants to react positively. Finally, the sample included individuals who were already interested in gardening programs. The results of these findings may not be applicable to those without such interest.

CONCLUSION

Regardless of the limitations, the results of this study show how gardening can improve the quality of life for older adults on many levels. The motivation to continue to learn as one ages, to remain connected to one's roots, and a concern for one's well-being were all indicated in this study. It is hoped that these findings will inform and affect other agencies interested in gardening programs, as well as advocates and policy makers interested in the well-being of older adults.

REFERENCES


