Planting the Seeds of Health and Resilience

Shawna Beese
Teresa Bigand
Providence
Marian L. Wilson

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Planting the Seeds of Health and Resilience

Shawna Beese 1, MBA, BSN, RN, NE-BC, PhD student, Teresa Bigand 2, PhD, MSN, RN, CNL, CMSRN, and Marian Wilson 1, PhD, MPH, RN-BC

1 College of Nursing, Washington State University, Spokane, WA and 2 Providence Health Care, Spokane, WA

Purpose/Aims

Primary aim
- Investigate self-reported garden use among food bank recipients

Secondary aims
- Query whether food bank recipients have interest in using gardens as a nutritional resource
- Determine whether self-reported health differences exist among garden users compared to non-garden users
- Explore food insecurity among garden users versus non-garden users

Rationale/Background

Food bank recipients represent a vulnerable population to explore the benefits of garden access because they are at higher risk to experience:
- insufficient access to fruits and vegetables
- increased prevalence of adverse health symptoms such as depression and obesity
- high levels of food insecurity

Creating access to gardens may offer a low-cost public health nursing approach to increase access to nutrient-dense food for this at-risk population. Gardening has been indicated in the literature to promote many secondary health benefits, such as:
- Elevating mood
- Reducing anxiety
- Improving cardiovascular health
- Increasing life satisfaction

Lastly, the presence of gardens in urban agriculture has been linked to expanding a sense of community and socialization. The study and development of gardening as a viable nursing intervention may enable new frontiers in improving population health determinants.

Method

Surveys were originally distributed to adults 18 years and older at community food bank drop-off events (n = 207)

Descriptive statistics were used to characterize garden use and health variables among the sample
- body mass index (height and weight)
- pain (Patient Reported Outcomes Information System [PROMIS] pain interference)
- sleep (PROMIS sleep disturbance)
- depressive symptoms (Patient-Health Questionnaire-8 [PHQ-8])
- food insecurity (U.S. Household Food Security Survey two-item screening)

Spearman's correlations were run among the analyzed sample to determine relationships between self-reported garden use and interest in using gardens.

A series of t-tests and chi-square analyses tested for differences in health variables among food bank recipients who
- indicate use of home or community gardens
- and recipients who did not

Relative Risk in reporting food insecurity was analyzed.

Results

A total of 207 participants, several participants neglected to answer questions about whether:
- gardens represent a source of nutrition (missing n = 32)
- there was interest in using a community garden (missing n = 43).

Primary aim

Table 1. Frequency Table

<table>
<thead>
<tr>
<th></th>
<th>Home or Community Garden use</th>
<th>Garden interest</th>
<th>Garden use and interest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>49</td>
<td>64</td>
<td>24</td>
</tr>
<tr>
<td>No</td>
<td>126</td>
<td>100</td>
<td>68</td>
</tr>
<tr>
<td>Total</td>
<td>175</td>
<td>164</td>
<td>92</td>
</tr>
</tbody>
</table>

Secondary aims

- A significant positive relationship was noted between food bank recipients who expressed interest in gardens and those who reported home or community gardens as a source for food (r = 0.24; p = 0.05).
- No significant differences were observed for those using home or community gardens as a source for food among any of the measured health variables (pain, depressive symptoms, sleep disturbance, body mass index).
- Participants who reported using home or community gardens showed a clinically relevant 18% reduction in relative risk for reporting food insecurity, compared to those who reported not using a garden as a food source (p >0.05).
- Of those who are interested in gardens, more than half (53%) reported running out of food due to lack of money.

Discussion

Gardening is a promising public health nursing intervention to promote wellness for both individuals and households. Gardens can provide a low-cost way to:
- Mitigate downstream health effects of malnutrition
- Aide in easing food insecurity
- Provide secondary psychosocial and cardiovascular health benefits.

Food bank recipients are a vulnerable population who are receptive to using gardens as a possible food source.

Limitations of Study

- Self-report measures used as opposed to objective measures of type of nutrition gained from gardens.
- Lack of quantification of garden use among participants
- Power analysis not conducted to determine adequate sample size for statistical significance of findings

Recommendations for nurses researchers and public health practitioners are to:
- Advocate for inclusion of gardening questions be added to national databases such as:
  - Behavioral Risk Factor Surveillance System (BRFSS)
  - National Health and Nutrition Examination Survey (NHANES)
- Explore opportunities to influence food and land use policy
- Increase food resilience by increasing gardening capacity for communities and individual residences
- A future longitudinal study is needed to detect:
  - relationships between gardening and possible secondary health benefits
  - the impact of obtaining nutrition from gardens on food security among food bank recipients

Acknowledgments & Affiliations

Shawna.Beese@WSU.edu | 509.844.4729