Senior Australians and Benefits in Botanic Gardens: Growing plants, growing people

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Research study conducted in the School of Management (Division of Business)

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- Funded by National Seniors Australia Productive Ageing Centre (NSPAC) & the Commonwealth Dept. of Health & Ageing

NSPAC: to advance knowledge & understanding into all aspects of productive ageing to improve the quality of life of people aged 50 and over
Outline of study:

• Research into seniors’ engagement with botanic gardens through volunteering (within the scope of productive and healthy ageing)

• To consider initiatives to maximise the personal, organisational & community benefits

• To replicate within a range of volunteering contexts for seniors (e.g. museums, art galleries, libraries, zoos)
Who participated?

• 370+ participants
  - 323 completed written questionnaires
  - 7 x focus groups
  - Interviews with 9 staff (6 gardens)

• 16 different botanic gardens in Australia
  - Adelaide
  - Australian Inland
  - Australian National
  - Booderee
  - Brisbane Mount Coot-tha
  - Geelong
  - Gold Coast Regional
  - Kings Park and Botanic Garden
  - Mackay Regional
  - Maroochy Regional Bushland
  - North Coast Regional
  - Orange Botanic Gardens
  - Royal Tasmanian
  - Warrnambool
  - White Hills
  - Wollongong
Why Seniors?
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- Funding opportunity advertised with National Seniors Australia
- Already aware of the high proportion of volunteers at gardens aged 50+ years
- Higher satisfaction and advocacy levels by older visitors to botanic gardens
- Research stream into ‘leisure and ageing’ already in place at UniSA
• It is argued individuals need to pursue 5 factors in work and non-work pursuits to provide a more productive lifestyle:

  - **involvement, satisfaction, autonomy, integration & creativity**  
    (Earle & Howat, 1986)

  - especially crucial for seniors because they facilitate options and choice at a time when this is particularly necessary

  - if an individual is no longer in paid full-time employment then their non-work activities will consequently have more weight in satisfying these factors

• Volunteering by senior Australians has increased steadily over the past decade (they tend to volunteer more of their time)

• The estimated economic contribution of older Australian volunteers = $2 billion dollars in 2006, based on an average of two volunteer hours per week per volunteer  
  (NSA, 2009)
Leisure's contribution to health has attracted attention since the early 1970s (Neulinger & Breit, 1971). More recently, there has been a growing interest in identifying specific types of leisure activities that contribute to well-being and understanding how leisure contributes (Driver, Brown & Peterson, 1991). General finding: leisure enhances health as it serves as a buffer to life's stressful events (and volunteering may be viewed as a form of leisure).

But what is health & well-being?

- Sometimes viewed narrowly as mental health, sometimes broadly as a combination of physical, mental, emotional, social & spiritual well-being (as per this study).

However it is operationalised, it is viewed as important to overall quality of life.
A number of recent studies have described the positive effect of contact with plants (and nature) on well-being (e.g. in hospital, school, nursing home, and prison settings), esp. from the restorative aspects of the environment.

The **5 key benefits to seniors** include:

- motivators for physical exercise
- environmental stimulation
- self-expression & personalisation
- psychological well-being
- social interaction and networking
• Over 60% of volunteers recorded an average investment of more than 1 ½ hours per week

• 9% of volunteers recorded < 20 hours in the last year

Most common roles:
  - guiding (42%)
  - hands-on gardening (25%)
  - committee members (14%)
  - Visitor Info Centre (8%)
  - cafe or kiosk (6%)
  - plant education or research (6%)
  - fundraising (5%)
Main motivations to volunteer:

- a love of gardens/gardening 28%
- desire to contribute to society 15%
- develop social networks 15%
- learn about plants & gardening 12%
- environmental advocacy 11%
• 76% were female

• Age group category
  50-59 years  17%
  60-69 years  48%
  70+         29%

• 64% tertiary education

• 70% retired, 12% employed part-time

• 16% with chronic illness or permanent disability

• Household composition:
  41% couple (children left home)
  24% live alone
  21% couple (no children)
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95% satisfied with their volunteering

98% would recommend it to others

Average satisfaction levels, by hours/year:

<table>
<thead>
<tr>
<th>Volunteer hours</th>
<th>Max. = 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 20 hours</td>
<td>5.6</td>
</tr>
<tr>
<td>20-39 hours</td>
<td>6.1</td>
</tr>
<tr>
<td>40-79 hours</td>
<td>6.2</td>
</tr>
<tr>
<td>80-159 hours</td>
<td>6.2</td>
</tr>
<tr>
<td>160 or more hours</td>
<td>6.5</td>
</tr>
<tr>
<td>All volunteers</td>
<td>6.2</td>
</tr>
</tbody>
</table>
Results showed high *sense of place (in the community)*, esp. for volunteers at the Botanic Gardens of Adelaide.

| Place Identity - significance of a place and how we connect with a place to create a sense of belonging |
| Place dependence - how one place compares to alternative places |

<table>
<thead>
<tr>
<th>Place Identity</th>
<th>All Seniors</th>
<th>Adelaide</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am very attached to this botanic garden</td>
<td>3.9</td>
<td>4.1</td>
</tr>
<tr>
<td>This botanic garden means a lot to me</td>
<td>4.5</td>
<td>4.7</td>
</tr>
<tr>
<td>I feel this garden is a part of me</td>
<td>4.4</td>
<td>4.7</td>
</tr>
<tr>
<td>I identify strongly with this botanic garden</td>
<td>3.4</td>
<td>4.0</td>
</tr>
<tr>
<td>I feel happiest when I am at this garden</td>
<td>4.1</td>
<td>4.3</td>
</tr>
<tr>
<td>I really miss this garden when I am away from it for too long</td>
<td>3.3</td>
<td>3.5</td>
</tr>
</tbody>
</table>

*Measured on a scale where 1=very low and 5=very high.*
## Benefits for Volunteers

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<table>
<thead>
<tr>
<th>Benefit</th>
<th>All Seniors</th>
<th>Adelaide</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enjoying the aesthetics of plants and gardens</td>
<td>4.4</td>
<td>4.6</td>
</tr>
<tr>
<td>Making a contribution to a good cause</td>
<td>4.4</td>
<td>4.5</td>
</tr>
<tr>
<td>Learning about plants and the natural environment</td>
<td>4.3</td>
<td>4.5</td>
</tr>
<tr>
<td>Connecting with plants and the natural environment</td>
<td>4.3</td>
<td>4.4</td>
</tr>
<tr>
<td>Challenging myself to do new or different things</td>
<td>4.1</td>
<td>4.4</td>
</tr>
<tr>
<td>Meeting people and socialising</td>
<td>4.2</td>
<td>4.2</td>
</tr>
<tr>
<td>Improving my general health and well-being</td>
<td>3.9</td>
<td>4.1</td>
</tr>
<tr>
<td>Escaping the pressures of daily life and relaxing</td>
<td>3.7</td>
<td>3.8</td>
</tr>
<tr>
<td>Enhancing my professional abilities</td>
<td>3.4</td>
<td>3.6</td>
</tr>
</tbody>
</table>

*Measured on a scale where 1=very low and 5=very high.*
Statistical analysis showed that volunteers gain the same wide range of benefits regardless of the time commitment they have with their botanic garden.

Although ‘enjoying the aesthetics of plants and the environment’ and ‘contributing to a good cause’ recorded the highest average attainment levels, the focus groups revealed the importance of ‘meeting people and socialising’.

‘Connecting with people is so rewarding’

Individuals newest to their local community recorded the highest overall satisfaction with their volunteering, suggesting the important role volunteering may play with integration into new communities for seniors.

• A strong personal community of associations is crucial to successful ageing.
‘Community in general benefits because without volunteers such as me, programs would be non-existent’

‘My healthy attitude helps relationships with friends and family’

‘My friends – I give them suggestions of places to go to visit each garden, they ask my advice, I take them for walks for pleasure’

‘My husband...because we have a day apart and when we meet over dinner we have lots to talk about’

Volunteers are a ‘group of like-minded people’ who go out of their way to help each other. They not only help the gardens and gain personal benefits, but they bring benefits to each other too:

‘One member of the group has taken on the role of assisting older members with their work and this has meant some of the less physically able members are still able to come.’
The physical health benefits for individuals were not a key feature of discussion in focus groups, but rather an underlying one. Similarly, studies of the benefits of gardening focus equally on mental health benefits as physical health benefits (e.g. Brown, 1992).

Contact with nature is recognised as a motivator for physical exercise for older people. The inclusion of physical activity (e.g. hands-on gardening) while volunteering at gardens may assist overall health and well-being as it is an important factor in preserving and improving learning and memory. Working the brain and the heart at the same time helps brain cell functioning (extra blood to the head = extra oxygen and glucose to the brain cells = better performance). Taking guided tours at botanic gardens offers an ideal opportunity to gain these benefits.

Exercise is commonly said to improve attention, memory, accuracy and the processing of information. Contact with nature is understood to improve psychological well-being, and offer opportunities for self-expression, social interaction and environmental stimulation. Therefore the wide range of benefits of volunteering with gardens are inter-related and inseparable.
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Inter-related Benefits

Intellectual/mental stimulation

‘Extending knowledge for self and others’
‘An opportunity to share/educate/interpret the plant world’

KEY BENEFITS

‘Be part of a group’
‘To meet people from all walks of life’

Social interaction & friendships

Positive emotional state

‘My healthy attitude’
‘Without volunteers such as me programs would be non-existent’
Volunteering is viewed as a form of **leisure**
‘…relatively freely undertaken non-work activity’  (Roberts, 1978:3)

- Freedom
- Intrinsic motivation
- Enjoyment
- Satisfaction

→ contribution to health and well-being

The study proposes the use of volunteering in botanic gardens as one way to ‘look outside’ for solutions to some of the global health issues of today by demonstrating the wide range of interrelated benefits that can contribute to successful ageing.

Obstacles that hinder older people’s continued participation in leisure activities need to be overcome by policy and planning to help seniors age actively (in line with the *Activity Theory*).
- Use in volunteer recruiting & retention
  - For garden staff
  - For Friends of Gardens
  - Determining which roles are best suited to different people

  → maximise the benefits for individuals, gardens & community

- Use for promotion of healthy ageing
  - Involvement, satisfaction, autonomy, integration & creativity

- Use to help new residents adjust, & others stay connected

- Replicate in other leisure settings?
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Priceless people

The work of volunteers is vital to botanical research

Trained volunteers prepare plant specimens and file them into the herbarium collection. Their hard work preserves the specimen and facilitates botanical research. Volunteers gain knowledge and great satisfaction helping scientists document plant diversity.