

Growing Plants, Growing People:

Older volunteers in botanic gardens

May 2011



National Seniors Australia
Productive Ageing Centre



Australian Government
Department of Health and Ageing

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FOREWORD

Volunteering in botanic gardens presents itself as one way to enable people to engage with the natural environment. But what do we know about how older people engage with botanic gardens? What motivates them to volunteer their time to help out in various ways in the gardens? What are the benefits to older volunteers, and how do the gardens and the wider community benefit?

This study set out to explore older people's engagement in volunteering at botanic gardens. It investigated what roles they played, what benefits they gained and what impact their efforts had. It was designed to give us a fuller picture of productive ageing through volunteering roles.

The premise behind this study was that if the levels of engagement that older people have with botanic gardens were better defined and evidence-based, the benefits from volunteering could be improved, and the lessons learned applied in other gardens and communities.

The study confirmed and quantified the value of volunteering to older Australians. For most volunteers, the personal benefits gained included feeling valued, meeting other people and keeping an active mind. There were also benefits for the gardens, garden staff and the wider community. This study supplements earlier work by the National Seniors Productive Ageing Centre that quantified the enormous economic benefit to volunteering by older Australians.

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May 2011

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The authors of the original study upon which this report is based are Dr Emily Moskwa, Dr Gary Crilley and Jessica Clark from the Centre for Tourism and Leisure Management at the University of South Australia.*

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In memory of Dr Gary Crilley, foundation Director of the Centre for Tourism and Leisure Management, and his immense passion for research in the leisure industry and the enjoyment he found in researching all facets of botanic gardens' management.

*The original study is available in full at www.productiveageing.com.au

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INTRODUCTION

Volunteering is an important lifestyle activity for older Australians. With significant numbers of older and retired people tending to volunteer more of their time (Onyx & Warburton, 2003), it is important to understand these volunteers' particular requirements, motivations and benefits gained.

The most popular retirement activities for Australians are travel, hobbies and volunteer work (AXA, 2008), and volunteering by older Australians has increased steadily over the past decade. The volunteering rate (the number of volunteers in an age group expressed as a percentage of the total population in that age group) for older age groups (65 plus) has increased to a greater extent than younger age groups. In 2006, 29.7% of older Australians (almost 1.5 million people) participated in voluntary work (ABS, 2007b).

It has been estimated that the economic contribution of older Australians who were working as volunteers was \$2 billion dollars in 2006, based on an average of two volunteer

hours per week per volunteer (NSPAC, 2009). The results were calculated on a typical hourly rate of \$13.73, but are considered conservative as they do not include the volunteering value to the individual or to other seniors, or the economic contribution of seniors who provided unpaid care.

It has been reported also that there are still significant barriers to older Australians wanting to work or volunteer (NSPAC, 2009). From a volunteering perspective, some barriers include the need to meet strict criteria at many organisations, the need to complete a minimum number of shifts, and having to pay out-of-pocket expenses. Given these barriers, and knowing the enormous economic contribution of older volunteers, it makes sense to learn more about older people and volunteering and suggest improvements.

Interaction with plants

In an increasingly urbanised world, people are spending less time in physical contact with plants and animals, with unknown

consequences (Maller et al., 2002). Historically, plants are associated with healing. Today, this therapeutic use is widely acknowledged to include both medicinal treatment and mental health rehabilitation (Lewis, 1996; O'Brien, 2004). Restorative and therapeutic benefits of gardening are used in a variety of settings such as hospitals, aged care centres, schools, and prisons. In relation to aged care, Browne's (1992) study not only identified the strong preference for natural landscapes or pleasantly landscaped grounds in choosing retirement homes, it also described the positive effect of contact with plants and nature on well-being. The five key benefits to older people identified were:

1. psychological well-being,
2. environmental stimulation,
3. self-expression and personalisation,
4. motivation for physical exercise, and
5. social interaction and networking.

The benefits gained through our exposure to nature, or more specifically to plants, relate to our emotional responses to the natural world. The research literature discusses the innate connection humans have with living nature, and the positive feelings evoked by plants, and draws attention to the benefits gained particularly by people with disabilities and the elderly (Maller et al., 2002). This study sheds light on whether older volunteers in botanic gardens receive similar benefits.

Botanic gardens are popular with Australians of all ages. More than one-third of Australians visited botanic gardens in 2005-06 (ABS, 2008), and older people share this enthusiasm. Visits to botanic gardens by persons aged 55 and older quadrupled in the last decade, increasing from 384,700 in 1999 to reach 1,578,400 in 2005-06 (ABS, 2007a).

This study investigates the benefits of volunteering at botanic gardens from three key perspectives: for individuals who volunteer (with a focus on older people, defined as those aged 50 years and over); for botanic gardens as organisations, and for the wider community.

In this study, botanic gardens are considered natural areas (as per Ballantyne et al., 2006), offering restorative aspects of the environment and outdoor sensory experiences. Visitors and volunteers are able to absorb the atmosphere of a botanic garden's environment and gain an opportunity to connect or interact with plants and nature.

Study overview

The study collected qualitative and quantitative data on the benefits older Australians gain from their engagement with botanic gardens. It comprised three phases of data collection: focus groups, interviews and a survey using a self-administered questionnaire.

Volunteers participated in the study in two key ways: as focus group participants, and as respondents to self-completion, hard-copy questionnaires.

Volunteer Focus Groups

Seven focus groups (including one pilot focus group), with approximately 7 to 12 people per group, were conducted on site at six botanic gardens in five different Australian states to identify benefits from structured programs involving older people associated with gardens. They were drawn from 'Friends of Gardens', volunteer groups and council representatives. The botanic gardens were all members of Botanic Gardens of Australia and New Zealand.

Focus group participants were selected in cooperation with local garden staff to ensure representative samples of the volunteers in gardens were involved. These were identified as a combination of volunteers only recently engaging with the gardens (e.g. in the last 12 months) along with those longer-standing volunteers, and volunteers participating in a variety of roles (e.g. tour guiding, administration, physical gardening).

Volunteer questionnaires

The focus group discussions informed development of the questionnaire, which was later distributed to volunteers of the botanic gardens that had participated in the focus groups.

In total, 580 questionnaires were distributed to volunteers. In consultation with garden staff, questionnaires were mailed to a contact person at each garden, who then distributed them to active members of their volunteer group for self-completion. 382 volunteers over 50 years of age were directly involved in the study; 59 participated in focus groups in five Australian states, and 323 completed the questionnaires. The majority of volunteers involved in the study were women (76%).

In total, 199 of the respondents to the questionnaire (62%) volunteered with botanic gardens located in the capital cities of four Australian states and one territory. The remaining 124 respondents (38%) volunteered with regional botanic gardens located in three states.

The use of a written questionnaire allowed researchers to reach geographically dispersed volunteers. The sample frame of possible respondents was determined to be all currently active volunteers at participating botanic gardens, who were 50 years of age or older at the time of surveying. Selection of botanic gardens was determined by invitation to gardens with which researchers held existing working relationships, as well as an invitation to other gardens throughout Australia. The invitation for gardens to participate was to include a cross section of gardens by size, location, and known involvement with older volunteers.

Staff Interviews

Interviews were conducted with key garden staff involved with volunteer management to further explore organisational benefits, and better understand the wider community benefits arising from seniors and volunteer engagement. Some telephone interviews were conducted due to

practicalities of distances between researchers and garden sites.

The interview was designed to provide data covering a number of areas:

- staff involvement and interaction with volunteers,
- volunteer management,
- volunteering roles, motivations and benefits,
- organisational benefits gained through volunteer engagement, and
- community benefits gained through volunteer engagement.

Volunteering patterns in Australian botanic gardens

Over 60% of volunteers gave 80 hours or more to their botanic gardens in the past 12 months, the equivalent to more than one and a half hours per week (Table 1). More than one quarter of volunteers (28%) indicated they dedicated between 20-79 volunteer hours in the past 12 months, while less than 10% volunteered up to 20 hours of their time in the 12 months.

TABLE 1
How many hours have you given to these gardens in the past 12 months?

	%
Less than 20 hrs	9
20-39 hrs	12
40-79 hrs	16
80-159 hrs	35
160 hrs or more (=3 or more hrs/week)	28

“60% of volunteers give 80 hours or more a year to their botanic gardens, the equivalent to more than one and a half hours per week.”

What did the volunteers do?

The most common role for volunteers was as a garden guide (42%), with a further 25% involved in hands-on gardening, and 14% were committee members (Table 2). Other roles nominated by volunteers included volunteering at an Information Centre or coffee shop, fundraising and promotion, and general administrative tasks.

TABLE 2
What are your main three roles as a volunteer at these gardens?

	1ST ROLE %	2ND ROLE %	3RD ROLE %
Garden guide	39	3	-
Gardening	23	2	-
Committee member	12	2	-
Visitor Information Centre	6	1	1
Fundraising or promotion	4	-	1
Cafe or kiosk attendant	4	1	1
General administration	3	3	1
Plant education or research	3	2	1
Special events or displays	1	1	1
Other	5	3	-

Why did they volunteer?

Volunteers were typically motivated by a love of gardens (including gardens in general, or the specific botanic garden at which they volunteered). Approximately one-third of volunteers were primarily motivated by their desire to contribute to society, or give back something to their local community. The development of social networks (meeting new friends, staying in touch with existing friends, meeting visitors and the opportunity to interact with like-minded people) was an equally strong motivator (Table 3).

TABLE 3
What are your main motivations for volunteering at these gardens?

	1ST MOTIVATION %	2ND MOTIVATION %
Love of gardens	42	15
Contribute to society/ give to community	19	12
Develop social networks	9	22
Environmental advocacy	8	15
Learn about plants and gardening	6	18
Personal satisfaction	5	8
Keep active during post-retirement	4	2
Environmental preservation	2	4
Maintain horticultural connection	2	1
Historical appreciation	1	2
Other	2	2

Participant profile

Almost half (48%) of the volunteers surveyed were aged 60-69 years, with all age groups 55-59 through to 75+ relatively evenly represented (Table 4).

TABLE 4
Percentage distribution of participants by age

	%
50-54 years	4
55-59 years	14
60-64 years	24
65-69 years	24
70-74 years	16
75 + years	13
Not stated	5

76% of surveyed volunteers were females, from four states and one territory, and came from English-speaking homes in 98% of cases. In total, 58% of volunteers in the study had lived in their local area for more than 20 years, with a further 16% living in their local area for 11 to 20 years (Table 5). Only 10% of volunteers were relatively new to their community, having lived there for less than four years.

TABLE 5
How long have you lived in this area, or nearby?

	%
Less than 1 year	4
1 to 3 years	6
4 to 10 years	16
11 to 20 years	16
More than 20 years	58

Almost two-thirds of volunteers had completed a tertiary level of education (Table 6), and 70% had retired from paid employment (Table 7).

TABLE 6
What is the highest level of education you have completed?

	%
Some secondary	7
Secondary	18
Vocational/Technical	11
Tertiary/University	64

TABLE 7
Which category best describes your present commitments?

	%
Unemployed, seeking work	3
Unemployed, not seeking work	5
Employed (part time)	12
Carer/home duties	4
Retired	70
Other	6

The demographic questions also revealed that while 41% of volunteers described their household composition as 'family – no child(ren) living at home', families with children still living at home, couples (with no children), and single person households were also well represented. Furthermore, 16% of volunteers identified themselves as having a chronic illness or permanent disability (Table 8). Estimates from the Australian Bureau of Statistics show that about 19% of the total population reports a disability. (ABS, 1999). This suggests volunteering at botanic gardens is relatively inclusive and accessible for the wider population.

TABLE 8

Do you have a chronic illness or permanent disability?

	%
No	84
Yes*	16
None/mild support	12
Moderate support	4
High support	-

*Of those who indicated 'yes', volunteers were asked to indicate their level of support needs for activities of daily living.

Garden staff and community representatives participated in the study through interviews with the researchers, assistance in questionnaire distribution, and focus group organisation. The nine garden staff interviewed worked at six different botanic gardens in Australia, including capital city and regional gardens. Some represented relatively newly established gardens whilst others represented older botanic gardens. The staff members' roles ranged from horticultural botanists and collection managers, to volunteer officers or volunteer program coordinators and community education managers.

"16% of volunteers identified themselves as having a chronic illness or permanent disability."

STUDY RESULTS

Selected highlights from the research findings are summarised in this section.

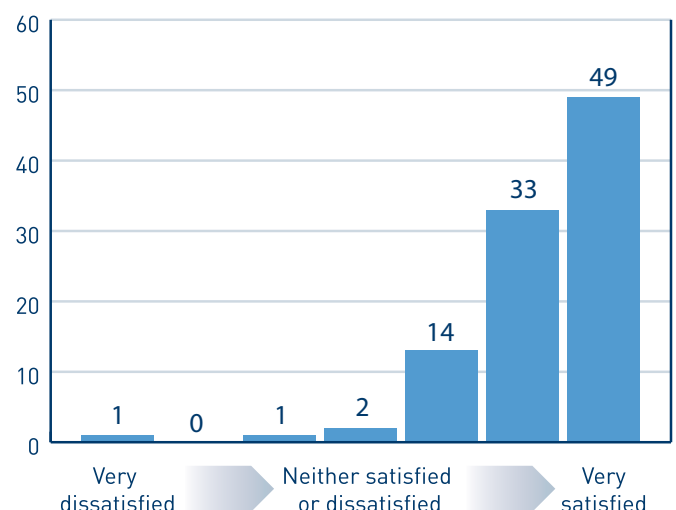
Findings from written questionnaires

Questionnaires were distributed to 16 Australian botanic gardens, with a total of 323 volunteers choosing to participate. The response rate for volunteers was roughly 57%. Response rates from the volunteers at individual gardens participating in the research varied greatly, from 5% to 93%, with eight botanic gardens giving response rates of 50% or more.

Satisfaction with volunteering

High levels of satisfaction with volunteering were evident. In total, 95% of volunteers were satisfied with their volunteering experiences at the botanic garden, with almost half 'very satisfied' (Figure 1).

FIGURE 1
Overall, how satisfied are you with volunteering at this garden?



Whilst satisfaction did not correlate with the gender or age of volunteers, there was a relationship between satisfaction levels and the number of volunteer hours given to the garden in the past 12 months. On a scale from 1 'very dissatisfied' to 7 'very satisfied', the mean overall satisfaction with volunteering was 6.2, with the mean for those volunteering less than 20 hours being 5.6, compared to 6.5 for those volunteering over 160 hours (in the past 12 months). Higher levels of volunteering were accordingly associated with higher satisfaction of volunteering at botanic gardens.

Volunteers also recorded high levels of recommendation for volunteering at their garden. A total of 98% of volunteers would recommend the garden to potential volunteers, with 60% willing to 'very strongly recommend' the garden. Those contributing more than 160 hours in the past year had higher levels of recommendation than those volunteering for less than 20 hours.

Relationship to the garden

Volunteers were asked to rate their level of agreement with a series of statements relating either to 'place identity' or 'place dependence', both of which refer to the relationship between people and their local environment.

Place identity is a term concerning the significance of places to their inhabitants or users. More specifically, the term encapsulates how the human psyche connects to certain places and helps create a sense of belonging. Place dependence is a term that relates to how one place compares to other places.

The results showed higher place identity (3.9 mean of means) than place dependence (3.5 mean of means) (Table 9). The item with the highest mean was 'I am very attached to this botanic garden' (4.5), followed by 'this botanic garden means a lot to me' (4.4). Over 90% of volunteers had 'high' or 'very high' levels of agreement with these two statements.

TABLE 9
Place identity and place dependence

	MEAN*
Place Identity (mean of means)**	3.9
I am very attached to this botanic garden	4.5
This botanic garden means a lot to me	4.4
I identify strongly with this botanic garden	4.1
I feel this garden is a part of me	3.4
I feel happiest when I am at this garden	3.4
I really miss this garden when I am away from it for too long	3.3
Place Dependence (mean of means)**	3.5
This garden is the best for what I like to do	3.8
I wouldn't substitute other volunteering for doing the things I do at this garden	3.7
I get more satisfaction visiting this garden than any other	3.3
No other botanic garden can compare to this one	3.1

* Measured on a scale where 1=very low and 5=very high.

**The mean of means refers to the 'group' mean, i.e. the average of all ratings by all volunteers for the combined statements comprising each group (with 'place identity' one group, and 'place dependence' another).

Significantly higher place attachment was evident when volunteers contributed more volunteer hours to their botanic garden.

Benefits of volunteering

A key focus of the questionnaire was to estimate the levels of personal benefit both sought and gained from volunteering in a botanic garden. The most sought-after benefits related to contributing to a good cause, and connecting with plants and the natural environment. These benefits can be related to the most common motivation for volunteering being a 'love of gardens'. Those benefits sought to a lesser extent included 'enhancing my professional abilities' and 'escaping the pressures of daily life and relaxing'.

The benefits reported as most gained by volunteers corresponded to those that were most sought after by volunteers. In the same way, the benefits that were sought to a lesser extent by volunteers received lower 'benefits gained' means.

Table 10 depicts the 'gap' between benefits sought by volunteers, and benefits gained. The gap is described as the extent to which the benefits sought by volunteers are matched by the perceived benefits gained. The gap figure is generated by subtracting the 'mean of benefits sought' from the 'mean of benefits gained'. Identifying a difference (or gap) between the benefits a person regards as a priority or motivator, and what is actually achieved, is indicative of a person's fulfilment or goal attainment. This in turn will reflect a person's self-assessment of personal benefits or achievement.

TABLE 10
'Gap' between benefits sought and benefits gained

	MEAN OF BENEFITS SOUGHT*	MEAN OF BENEFITS GAINED*	GAP BETWEEN BENEFITS SOUGHT & GAINED**
Enjoying the aesthetics of plants and gardens	4.4	4.4	0.0
Making a contribution to a good cause	4.4	4.4	0.0
Connecting with plants and the natural environment	4.3	4.3	0.0
Learning about plants and the natural environment	4.3	4.3	0.0
Meeting people and socialising	4.1	4.2	+0.1
Challenging myself to do new or different things	4.1	4.1	0.0
Improving my general health and well-being	3.9	3.9	0.0
Escaping the pressures of daily life and relaxing	3.5	3.7	+0.2
Enhancing my professional abilities	3.3	3.4	+0.1

* Measured on a scale where 1=very low and 5=very high.

** Maximum low= -5.0, maximum high= +5.0. In interpreting the table, the 'mean of benefits sought' can be taken as indicative of the volunteers' priority for the benefit. Therefore a gap of 0.0 indicates the benefits gained by volunteers' are equally matched to their priorities or motivators to volunteer.

Results in Table 10 suggest older volunteers in the study, on average, are consistently meeting their own expectations on nine items, or benefits, which are associated with involvement in botanic gardens and a person's general health. No negative 'gaps' were recorded.

Statistical analysis did not show significant differences between the level of benefits gained and the number of hours spent volunteering over the past 12 months. This suggests that volunteers gain a wide range of benefits regardless of the time commitment they have with their botanic garden.

Statistical testing did, however, reveal that there was a significant difference between volunteers who were garden guides and those who were not. Based on their performance ratings, guides received higher levels through:

- Enjoying the aesthetics of plants and gardens;
- Connecting with plants and the natural environment;
- Learning about plants and the natural environment;
- Challenging myself to do new or different things; and
- Enhancing my professional abilities.

In contrast, there was no significant difference between the level of benefits gained for 'making a contribution to a good cause' and 'meeting people and socialising', suggesting a wide range of volunteer roles provide volunteers with these types of benefits.

Lifestyle and well-being

In a self assessment of present health, 83% of older volunteers in the study rated their overall health as positive, with some variation according to age groups. Only 3% rated their health as poor, while 13% selected 'neither poor nor excellent'.

The majority of volunteers (88%) visit friends or family two to three times a week or more, and

almost one-quarter of volunteers phone or email family or friends on a daily basis. In total, 78% communicate with family and/or friends two to three times a week or more.

Other questions about psychological and emotional well-being received consistently positive responses, suggesting that these volunteers rate their health and well-being favourably.

Findings from focus groups

The analysis of the focus groups is summarised in this section. The main purpose of the summary is to show trends and patterns that reappeared both within single focus groups and across the various focus groups.

Seven focus groups were conducted at six Australian botanic gardens, with a total of 59 participants. Participants were asked a series of questions with the responses providing a qualitative component of the research further contributing to a detailed analysis of volunteering benefits. The following results also include examples of quotes provided to demonstrate volunteers' perceptions and insight into their volunteering role.

Roles of volunteers

The focus groups involved volunteers with a variety of roles in botanic gardens. Whilst many were garden guides, other roles included hands-on gardening, committee members, visitor information centre, front of house, café or kiosk attendants, library volunteers, herbarium volunteers and fundraising and event coordinators.

“Volunteers gain a wide range of benefits regardless of the time commitment they have with their botanic garden.”

Volunteers described their roles with feeling (e.g. I enjoy all aspects of the process). When they spoke of guiding, they did not merely refer to the physical act of conducting a guided educational walk, but of an enjoyable and exciting interaction with the public, and pride in representing the garden in a friendly way:

“The volunteers are the face of the garden. The public come to us with their questions or to ask for directions. We either answer those questions or refer people to the appropriate staff member. In addition we give ‘soul’ to the garden through our interpretive walks. Most people can walk through a botanic garden and actually see/understand very little. We open their eyes (educate them) in the ways of nature and man’s interaction with the plant world.”

Similarly, for volunteers not involved in guiding, they spoke of finding a niche within an organisation that gives a purpose, being part of growing groups, putting ideas forward, encouraging visitors to respond to surveys, and using their skills to create and sell crafts. They spoke of serious versus less serious roles, meaning some of their roles require a large amount of planning and professionalism, compared to others that enable activities to be undertaken in a more relaxed way. Many roles were also seen as educational in character.

In reviewing the focus groups, an ‘ambassador’ role best conveys most volunteers’ perceptions of their main role at gardens. To use the words of volunteer guides, they are enlighteners for visitors and the friendly face of the gardens.

How volunteers help the gardens

Volunteers were asked to indicate how they felt their volunteering has helped the gardens over the last 12 months. The two key components of being ambassadors (to enlighten and to be a friendly face) also best reflects the way that volunteers perceive they contribute most to the gardens:

“The gardens benefit I believe from having a ‘human face’. Visitors have the opportunity to have someone local who can interpret the gardens for them.”

“Friendly face says hello. Good-day to strangers visiting.”

“Imparting/teaching skills to participants who can then be more knowledgeable re the plants and therefore the botanic gardens which feeds back through networking/promoting gardens.”

It is the enthusiasm of the volunteers that enables them to fulfil these roles. The benefits to gardens that volunteers discussed were equally benefits to the public, or the visitors of the garden (as opposed to benefits directly related to the garden itself). Whilst numerous benefits of fundraising and promotions were recognised, these were generally targeted at visitors. For example, one volunteer organises an annual music program for people of [the city] and visitors. For one committee member, the benefit for the garden was input from volunteers regarding the direction/philosophy of the garden and the vital role it plays in the community, again emphasising the benefits to the public. The volunteers help the garden serve a wide range of visitors through beneficial activities such as helping them spread the word on conservation and making it more accessible to the public.

In summary, volunteers perceived the greatest benefits to the garden to be through helping the garden interact with the public and interpreting the environment for their visitors.

Volunteers benefitting others

Volunteers were asked if they thought their volunteering had helped any other person(s), group or organisation outside of their garden in the past year.

Table 11 shows the wide range of ‘others’ that volunteers believed their volunteering also benefitted.

TABLE 11
Benefits to others (% of total 'others')

	%
Specific community groups (e.g. youth groups, church groups)	23
The public/wider community in general	14
Schools or Universities	8
Other volunteers/members of 'Friends of Garden' groups	8
The environment	7
Volunteers' partner or spouse	7
Volunteers' other family members	7
The city/local council	7
Tourists	5
Volunteers' friends	4
Coach tours	3
Garden staff members	3
Other tourist venues	2
Australian/Aboriginal culture	2

The following quotes provide examples of how volunteers see other individuals or groups benefitting from their volunteer behaviour:

"Community in general benefits because without volunteers such as me programs would be non-existent – no-one to administer them, no-one providing the income."

"When I am in the Info Centre I promote other tourist venues to overseas visitors in particular."

"Environment benefits by our raising awareness of importance of plants to life."

"Carers often bring their patients for a cuppa as it is a friendly place."

"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 healthy attitude helps relationships with friends and family."

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

Personal benefits of volunteering

It was clear that many types of benefits gained could not be separated from each other. The majority of roles volunteers perform involve communication and the sharing of knowledge with other people (whether they be visitors, staff, or other volunteers). Volunteering was accordingly seen as equally contributing to seniors' mental and social well-being. For example, one volunteer guide referred to enjoying the (mental) challenge of adapting guided tours to suit individual people's needs (their plant interests), whilst very much appreciating that their guiding enabled them to meet interesting members of the public. Another volunteer said that the most important benefit is keeping your brain going, but at the same time, spoke of the vital friendships with other volunteers. One participant responded simply that it helps seniors a lot.

The following quotes further demonstrate the views of the volunteers related to both mental stimulation and learning, and social interaction benefits:

"It's a way to do two things at once – meet up with friends while helping the gardens."

"To meet people from all walks of life and try to make the botanical world interesting to them."

"Connecting with people is so rewarding."

"Meeting visitors and learning from them."

"Sharing with others. Guiding gives me an opportunity to share/educate/interpret the plant world."

Also highly beneficial was the satisfaction of making a contribution to a worthy cause and the pleasure received from, for example, growing plants or making craft items to sell, helping visitors, or the gratification of learning more about plants, the garden, and the environment.

To encapsulate the full range of benefits identified by volunteers, three major benefits categories are suggested:

- intellectual and mental stimulation and increased knowledge,
- social interaction and friendships, leading to a sense of belonging to a group, and
- positive emotional state (e.g. feeling of worth and achievement/satisfaction of contributing).

There were also additional benefits of general well-being from volunteering with botanic gardens. These included the physical activity of walking tours and hands-on gardening, and relaxation from being in a peaceful and beautiful environment. Throughout the focus groups it became evident that the location of the volunteering was very important to the seniors in the study. An underlying theme enabling the three major benefits to be experienced was that of the garden environment. Many volunteers discussed the importance of being out in the open and amongst a pleasant garden environment, or the privilege to be in beautiful surrounds:

“I love working in the beautiful and peaceful gardens so I get a feeling of well-being when I spend a day volunteering in the tea house.”

As several volunteers commented, they shared a common bond of enjoying the gardens:

“The common thread of “love of garden” is one that holds tight. Even if our hands are incapable of digging – we can always boil a kettle!”

Findings from interviews

This section highlights themes from the analysis of the interviews with nine staff of botanic gardens in Australia, who work with garden volunteers (primarily aged 50 years and over). Both the words that interviewees used and the intensity of their responses are considered.

Their professional positions included volunteer managers/coordinators, marketing/project officers, a botanist, a community education manager and a collections manager. Within these positions, direct

contact or liaison with volunteers varied from half a day per week to three full days per week.

The interviewees referred to their positions as not only working with, but being responsible for volunteers. The majority of volunteer programs have volunteer policies associated with them; in this way there are important management considerations for staff members. They find themselves trying to ensure the smooth running of the [volunteer] program by addressing any issues that arise, by liaising with volunteers and ensuring adequate induction is provided to new volunteers.

Staff perceptions

The interviewees described their perceptions of the roles that volunteers perform with botanic gardens. In contrast to the descriptions given by volunteers, the staff members described the volunteer roles in a factual way. Where volunteers used phrases referring to their ambassador roles, their welcoming greeting to visitors, and their contribution to visitor learning, staff members described how volunteers provide twice-daily walks, guiding on demand, prepare herbarium specimens, provide customer service in the visitor information centre, develop special exhibitions, and fundraise.

Although staff descriptions of volunteer roles were more literal and less emotive than those given by the volunteers, their examples of positive experiences with volunteers showed great appreciation. Their efforts were commonly described as enthusiastic and particularly useful, carrying out meaningful work. Some staff declared that various facilities and/or services would basically not exist if the volunteer group did not exist. Examples include guided walks for visitors, plant identification services for the public, recreational events within the gardens, and other education services for visitors.

In referring to the guides, one staff member especially valued their great position ‘at the coal face’ to provide feedback from visitors, as this can be particularly useful for garden managers considering the varied purposes of botanic gardens.

Some staff felt that volunteers were sometimes too involved, having much time to put into volunteering projects while staff members were very busy and under-resourced. Staff members had to work with competing priorities and could not always act as quickly as volunteers would like. These may be viewed as management issues to be resolved by garden organisations.

Benefits identified by staff

Staff members identified many benefits for volunteers, themselves, and for the botanic gardens that they are associated with. For the volunteers, staff perceived the key benefits to be:

- intellectual stimulus from learning more about plants and the ability to carry out mentally stimulating and/or challenging tasks,
- social engagement, companionship and friendship, and
- the feeling of worth from volunteering and the rewarding nature of the experience itself.

These benefits largely concur with those identified by volunteers themselves, therefore confirming the three major benefit categories suggested earlier.

Staff further discussed that volunteers sometimes go out of their way to help each other. In this way volunteers 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 social benefits largely arose indirectly from the sharing of knowledge. This came through teaching people about plants and the environment on guided tours, attending monthly volunteer meetings to listen to guest speakers, attending social meetings in an area of interest away from the gardens, or involvement in various team projects such as coordinating special events and targeted fundraising. Successful outcomes of such activities in turn provide increased benefits relating to the feeling of worth and a sense of purpose for them.

An underlying idea visible from the interviews was how the range and extent of benefits the volunteers received was an effect of their high levels of interest, enthusiasm and passion. In the same way that their eagerness to contribute resulted in their valuable input and benefits for the garden, it appeared to also result in immense benefits for the individual. Through sharing their enthusiasm with the public and with like-minded people, they gain long-lasting friendships with other volunteers and staff, they enjoy the intellectual stimulus to be found in learning about and talking about plants and a feeling of worth and contributing to a place they love.

The gardens in return gain a variety of benefits, with staff and visitors seen as the main beneficiaries. Examples of comments relating to benefits for individual staff included how volunteers:

“Enable me to continue with work that otherwise could not be completed.”

“Make my life easier by...contributing to new fundraising projects.”

“Give me a sounding board for things I’m not sure of.”

“Free my time for other work [by conducting visitor surveys for us in the garden].”

“Gives me that political or external support if I need it to put pressure on senior management.”

In many ways, garden staff considered volunteers the direct interface between the garden and the public. This contact is acknowledged as being essential for gardens to deliver quality visitor service.

“Staff and visitors are the main beneficiaries of older volunteers in botanic gardens.”

OTHER IDEAS FROM THE STUDY AS A WHOLE

Integration to new communities

As well as their home postcode, volunteers responding to the written questionnaire were asked how long they had lived in their local area. This question was included to consider any relationship between volunteering and a sense of integration rather than isolation for individuals moving into a new area.

There was some evidence, although not statistically significant, that people new to an area had slightly higher satisfaction levels from their volunteering and slightly higher 'place dependence means' (the relative value put on a particular garden compared to other places) than long-term residents.

A strong personal community of associates (e.g. family, friends, work mates or leisure sharers) is crucial to successful ageing (Earle, 1992). It is suggested that if seniors have stronger personal communities, they are more likely to be involved in leisure activities outside the home, such as volunteering. The higher place dependence means that for newer community members, they may reflect the value they place on their volunteering at a botanic garden in helping them feel part of a group and developing stronger networks in a new location.

Furthermore, the focus group analysis clearly showed a wide range of benefits related to social integration and networking, including meeting new friends, staying in contact with existing friends, and feeling a sense of belonging. The combined findings emphasising this sense of place may be of value for botanic gardens when considering ways to recruit new volunteers (e.g. targeting new residents), in their volunteer management planning, and in the way in which they reward their volunteers.

Motivations for volunteering

Understanding the relationship between volunteering and sense of place may be valuable

to botanic gardens in targeting new residents as volunteers. In the same way, understanding how motivations may relate to the benefits gained from volunteering may be useful in designing and managing volunteer activities and programs, recruiting new volunteers, and rewarding existing volunteers. For example, volunteers motivated by a love of gardens may best be involved in activities that foster learning about plants and the environment. These include preparing newsletter articles, researching interpretive materials for visitors, or conducting guided tours on specific topics. In contrast, activities that may be more suitable for volunteers driven by the desire to contribute to society may include roles such as fundraising or organising special community events or displays. For volunteers motivated by social/networking reasons, activities such as conducting guided walks and staffing a visitor information centre, cafe or kiosk may be particularly beneficial considering their stronger desire to meet people and socialise.

DISCUSSION AND IMPLICATIONS

This study showed that respondents were highly satisfied with their volunteering and were very likely to recommend volunteering to others. The study suggests volunteers feel very attached to the botanic gardens where they volunteer.

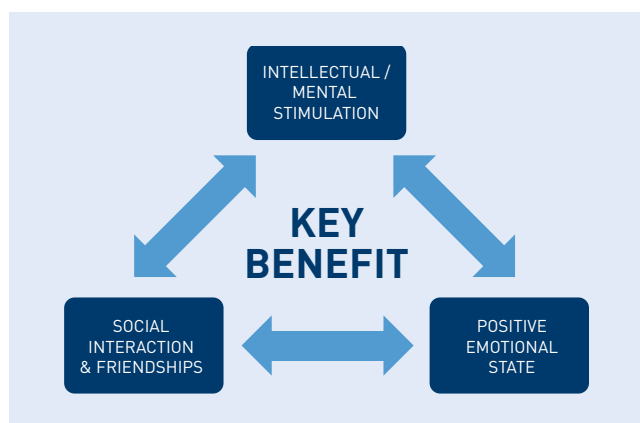
The data collected in the study explores how engagement with voluntary organisations can enable seniors to gain personal benefits such as meeting others, feeling valued, and keeping an active mind. Within the context of volunteering at botanic gardens, the well-being benefits of contact with nature are considered fundamental to the study.

Analysis from the questionnaires, focus groups and interviews suggests three major benefit categories, as illustrated in Figure 2. Benefits are wide and varied, but closely interrelated with each other. The setting of the botanic gardens appears to play a key role in enabling many of the benefits. These include the positive emotional state through 'enjoying the aesthetics of the

garden', or intellectual and mental stimulation through 'learning about plants and the environment'. Volunteers also felt they contributed to a good cause and enjoyed the benefits of meeting people and socialising with a group of like-minded individuals.

It is clear that volunteers gain a wide range of benefits from their engagement with botanic gardens regardless of their motivations, activities undertaken, sense of attachment to the garden or the time they give.

FIGURE 2
Interaction of benefits from volunteering



The botanic garden setting largely facilitates the volunteering benefits to be gained. The literature review found psychological benefits to health and well-being from contact with nature (e.g. Kaplan, 1995; Lewis, 1996), including a focus on the benefits for seniors (e.g. Browne, 1992). The benefits included feelings of pleasure, greater interest and attention, and a reduction of negative emotions such as anger or anxiety. Yet in a summary of evidence drawn from a literature review of the human health benefits of contact with nature, Maller et al. (2005) note that health promotion publications do not include this benefit.

IMPLICATION 1: There is a need for greater collaboration between researchers, social services and the environmental sector to help maximise the use of contact with nature in promoting population health, including seniors' health. This is particularly important in helping to reduce or avoid mental, behavioural and social health problems.

Over the last few hundred years, there has been wide-scale disengagement of humans with the natural environment (e.g. Katcher and Beck, 1987). Volunteering at a botanic garden is one way to enable people to successfully engage with the natural environment. Volunteers participating in this study expressed a great deal of pleasure related to their association with botanic gardens and nature. They also noted a variety of benefits relating primarily to their mental and social well-being, but also to their physical well-being.

IMPLICATION 2: Future research should reconsider the interdependence between people, their health, and their physical and social environments, particularly in volunteer settings. Such an approach may also cast more light on the link between volunteering and active ageing in Australia.

The economic and social value of volunteering activity by older Australians has been increasingly recognised in recent years (e.g. NSPAC, 2009; Productivity Commission, 2005). As the population ages, it becomes more important to maximise opportunities for older people to engage and contribute productively to society. This study has consequently identified the benefits of volunteering to gardens and the wider community as well as benefits to older volunteers.

Benefits accrue to the gardens as an organisation (and the state government /local council to which they belong), individual staff members of gardens, and importantly, visitors to gardens. The wider community benefits accrue to international and domestic tourists, school and university students, coach tours, and local residents. Those with closer relationships to the volunteers also benefit – for example, partners or spouses, grandchildren, neighbours and friends.

While the study did not measure the economic contributions to the community, it delivered insight into the range of social contributions gained through offering volunteering at botanic gardens.

IMPLICATION 3: Volunteer managers may be able to use the insights about social contributions to better manage volunteering activities at gardens,

and to improve recruitment and retention of volunteers. It may be beneficial to highlight to volunteers the wide variety of people, groups and organisations that their volunteering assists.

Using the research to improve volunteer management

There are several ways in which the research may be used to improve volunteer management. Knowledge about the specific benefits gained by volunteers of gardens may assist with future volunteer recruitment and retention. Promoting the benefits that current volunteers gain may inspire potential volunteers to be involved through demonstrating the potential benefits of volunteering.

Knowledge about the benefits sought by volunteers, and the 'gap' between benefits sought and attained, may also help volunteer managers and other botanic gardens staff members provide better services and programs specifically aimed at their volunteers. An understanding of the relationship between motivation, benefits and satisfaction will also contribute to the effective management of volunteers and volunteer programs in botanic gardens, and help management to create more positive outcomes for volunteers. Specific ways in which botanic gardens may fine-tune their management include:

- Acknowledging individuals have different motivations for volunteering, with the most common reasons being a love of gardens, to contribute to society, and develop social networks. Comparisons of benefits sought and attained reveal differences between these groups, and managers may be able to use this information to match individuals with particular volunteer roles in line with these findings.
- Given the wide range of potential personal benefits from volunteering at botanic gardens, managers may choose to advertise specific

benefits in their promotional materials when volunteer numbers are low in particular areas.

For example, if more volunteers are required to staff an information or visitor centre, recruiters could promote the benefits related to social interactions and friendships. If volunteers are required to develop self-guided walks, recruiters could promote the benefits related to intellectual or mental stimulation.

- For recruitment and retention purposes, managers should acknowledge that all volunteers gain a range of benefits, even those who contribute less than 20 hours a year.
- The personal benefits from volunteering are interrelated. If retention levels fall or there is evidence of lower satisfaction with volunteering, it may indicate that particular types of benefits require attention. Focus group discussions with volunteers may help managers identify improvements, such as expanding the volunteers' range of activities, and thereby increasing the possible benefits.
- Understanding the demographic profiles of volunteers at botanic gardens is useful for managers in planning and development (e.g., to consider needs for program flexibility or disability support for volunteers). Managers could also try to recruit new community members by promoting the high value newer residents place on volunteering, helping them to feel part of a group as well as gain social and networking benefits in a new location.
- Botanic gardens may also use the research to deepen the way in which staff view volunteers. For example, clearly acknowledging their community spirit is likely to be beneficial. Volunteers who feel that they have made a worthwhile contribution are more likely to continue to contribute in the future. Reminding volunteers of the many ways in which their volunteering benefits not only botanic gardens but also the wider community, is recommended.

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The National Seniors Productive Ageing Centre is an initiative of National Seniors Australia and the Department of Health and Ageing to advance research into issues of productive ageing. The Centre's aim is to advance knowledge and understanding of all aspects of productive ageing to improve the quality of life of people aged 50 and over.

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