

Demographics and Perceptions of Master Gardener Volunteers in Oregon

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Abstract

Master Gardener is a university-sponsored program, where trained volunteers expand the outreach of faculty members by delivering research-based education and advice to home and community gardeners. It requires substantial resources to effectively train Master Gardener volunteers. Thus, volunteer resource managers can maximize this initial investment by retaining high quality volunteers after they have completed their initial training and service obligation.

To understand the best ways to recruit and retain high quality volunteers, we conducted a statewide survey of the Oregon State University Extension Master Gardener program to assess the benefits that Master Gardener volunteers receive from their participation in the program. The survey also focused on volunteer demographics. The majority of the 781 individuals who responded to the survey were Caucasian, female and between the ages of 56 and 85. Volunteers identified access to information about horticulture, as well as understanding and knowledge, as the strongest benefits of volunteering. Survey results suggest that recruitment and retention of volunteers will work best when programs offer a variety of high-quality training opportunities for both new and continuing volunteers, and when trainings, service requirements and plant clinics can be offered evenings and weekends as well as during weekday hours. Future studies will assess whether or not alternative offerings significantly broaden the demographics of Master Gardener volunteers in Oregon.

Key Words: Master Gardener, volunteer retention, volunteer demographics

Introduction

Since 1976, the Oregon State University Extension Master Gardener program has trained and certified volunteers to provide information and technical assistance to the public about horticulture and sustainable gardening. To become a Master Gardener volunteer, individuals complete a 48–66 hour training program, pass a comprehensive exam, and volunteer

in their community through their local University Extension office. Master Gardener volunteers broaden the educational reach of Extension faculty and staff (Bobbit, 1997; Finch, 1997; Ruppert, Bradshaw & Stewart, 1997; Mechling & Schumacher, 2001; Swackhammer & Kiernan, 2005) and greatly affect their communities (Braker, Leno, Pratt & Grobe, 2000). However, the substantial resources associated with

training Master Gardener volunteers means that volunteer administrators won't recoup expended costs if volunteers leave shortly after they are trained (Meyer & Hanchek, 1997). By collecting contemporary data on factors that influence volunteers, volunteer resource managers can more effectively plan their programming to engage and retain high quality volunteers (Rohs, Striblnt, & Westerfield, 2002).

We conducted a statewide survey to assess what volunteers perceive to be the benefit(s) of the Oregon State University Master Gardener program. Via this survey,

we also characterized the demographics of Oregon's Master Gardener volunteers. Surveys of Oregon Master Gardener volunteers were conducted in 1992 (McNeilan, 1993) and 2001 (Kirsh and VanDerZanden, 2002). However, the program has grown substantially since that time (Table. 1), despite diminishing programmatic resources in Oregon and nationwide (McDowell, 2004). Understanding the contemporary factors that motivate participation in this increasing volunteer base is critical to the continued success of the program.

Table 1

Total number of active volunteers and cumulative hours volunteered by Oregon Master Gardeners, from 1992 to 2011.

Year	Number of	
	Volunteers	Hours Volunteered
1992	2,137	73,844
2000	2,759	115,176
2008	3,504	173,270
2011	4,009	181,163

Materials and Methods

Survey questions and materials (e.g. postcards, invitation letters, informed consent documents) were submitted to the Institutional Review Board (IRB) and approved in February 2008. The study was exempt from full IRB review, as it posed minimal risks to participants.

The survey was mailed March 4, 2008 to 3,000 volunteers who were active in the program in 2007. Participation was optional. Participants could complete the survey online or call to request a paper copy. The survey remained online until April 8, 2008.

The survey consisted of 22 questions. The first six questions assessed the demographic make-up of the program, by asking for information on race, gender, age, years as a Master Gardener volunteer, hours volunteered in 2007, and county of residence. An additional 16 questions were

adopted from Schrock, Meyer, Ascher, and Snyder. (2000). Volunteers were asked how strongly they agree or disagree with statements about benefits of the Master Gardener program.

Statistical Analyses

Descriptive statistics (sample size, mean, standard error, 95% confidence limits) were computed for each survey statement. For comparison, means from Schrock et al. (2000) are presented next to the means and 95% confidence limits computed from this survey. Where the means from this comparison study fall outside of the 95% confidence limits computed for this study, the means can be considered significantly different at the 5% protection level (Fernandez-Duque, 1997; Brandstätter, 1999).

Analyses of variance were conducted to assess the effects of demographic characteristics on Likert rankings. To guard against Type I error, a Bonferroni adjustment for multiple comparisons was used. Because we tested the significance of each question as a function of six demographic characteristics, alpha was set to 0.008 for the rejection of the null hypothesis. Where a significant effect was found, Tukey's HSD was used to test for differences among means.

Results

A total of 781 individuals completed the survey, for a response rate of 26%. This is a lower response rate than the 46% (McNeilan, 1993) and 51% (Kirsch and VanDerZanden, 2002) response rates of previous surveys of Oregon Master Gardener volunteers. However, the total number of responses received was larger for

this survey, relative to the 1992 (n=276) and 2001 (n=132) surveys.

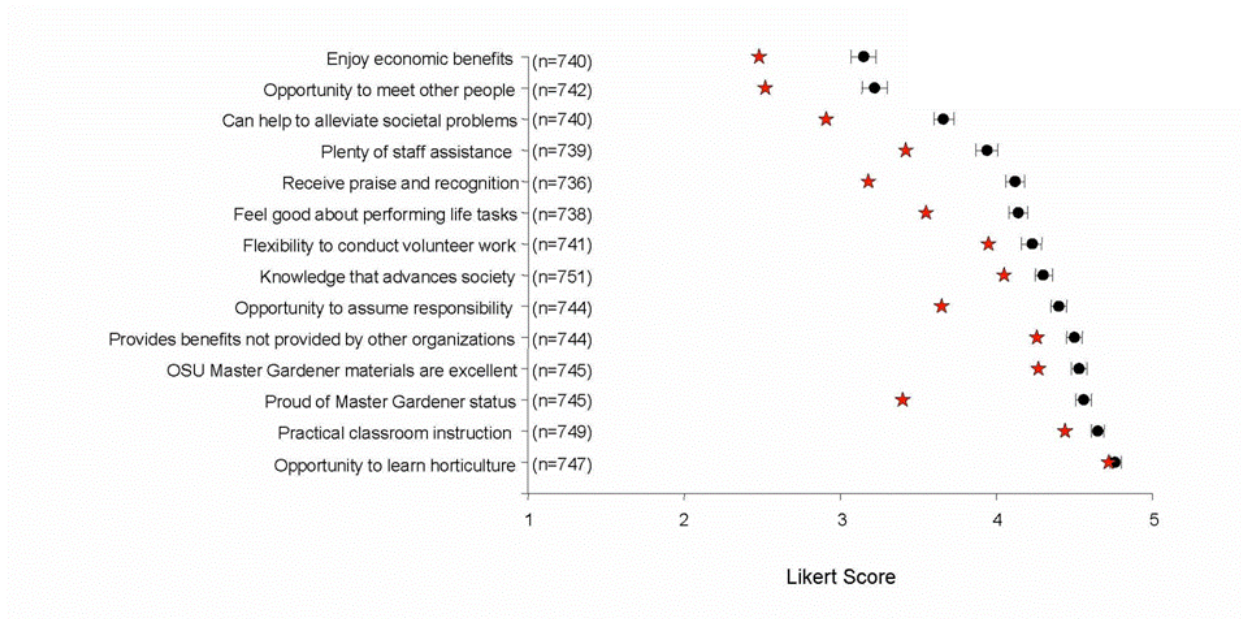
The majority of the respondents were Caucasian (95.2% of individuals who answered this question, n=754), female (73%, n = 765), and between the ages of 56 and 85 (74%, n=770). Most respondents had been a Master Gardener for three to four years (27.5%) and volunteered 50 or fewer hours during 2007 (52%).

Perceived Benefits of Volunteering

The mean Likert value of statements used to examine the perceived benefits of being an OSU Extension Master Gardener volunteer varied from 3.15 (equivalent to 'neither agree or disagree') to 4.76 (equivalent to 'strongly agree') (Fig 1). Notably, for all statements, the mean from Schrock et al. (2000) falls outside of and below the 95% confidence limits for Likert rankings of statements in this study (Fig. 1).

Figure 1.

Mean Likert scores of responses to questions from our 2008 survey (black circles) and Schrock et al.'s 2000 survey (red stars), on the benefits of being an Extension Master Gardener volunteer.



Respondents identified access to information or knowledge and understanding as the greatest benefits of being an OSU Master Gardener volunteer (range of means = 4.25 to 4.76). Secondary benefits included opportunities for personal growth (range of means = 3.66 to 4.56). Statements about career, protective, and social benefits were ranked lower (mean of 3.15, 3.42 and 3.43, respectively) than statements about knowledge or personal growth. However, it is important to note that only a single statement was used to assess respondents' perception of the benefits.

Effects of demographic characteristics on survey replies

Neither race nor age significantly influenced the Likert scores of the 16 survey statements. However, the lack of a race effect is likely due (at least in part) to the lack of variation in race (92% Caucasian) among Master Gardener volunteers.

Gender had an influence on two of the Likert rankings of statements about the benefits of the Master Gardener program. Specifically, females were more likely to agree that the Master Gardener program teaches knowledge (mean Likert score = 4.34) and skills (mean Likert score = 4.30) that advance society, relative to males (mean scores = 4.18 and 4.10, respectively). These

differences were significantly different for the knowledge ($F_{1,739} = 6.99$, $P = 0.008$) and skills ($F_{1,726} = 10.38$, $P = 0.001$) questions.

Years as a Master Gardener Volunteer

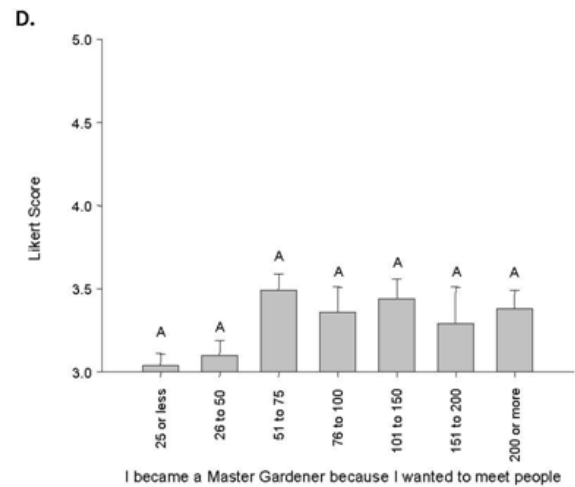
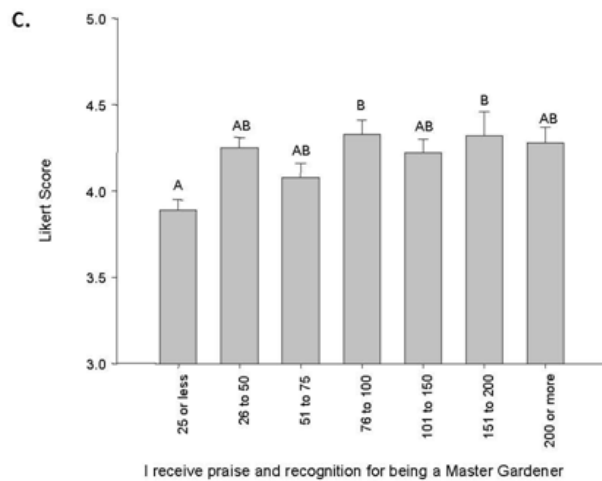
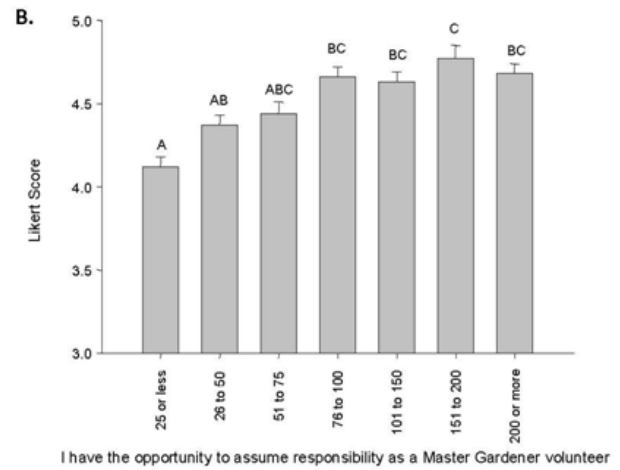
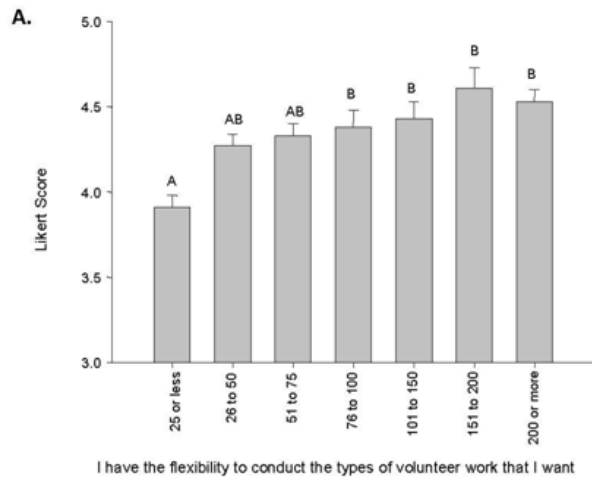
The number of years an individual has been a Master Gardener volunteer did not significantly influence the Likert scores of the 16 survey statements.

Hours volunteered

Those volunteering 25 or fewer hours in 2007 (less than the minimum payback required by most Oregon counties) were significantly less likely to feel they had the flexibility to conduct the type of service that they wanted (Likert Mean = 3.91; Fig. 2A) or to assume responsibility (Likert Mean = 4.12; Figure 2B). In addition, although these same individuals agree that they receive praise for their work as a volunteer (Likert Mean = 3.89), their response was once again less enthusiastic than those volunteering more hours (Fig. 2C). Those volunteering less than 25 or fewer hours in 2007 were among the most ambivalent when asked if they joined the program to meet people (Likert Mean = 3.04), although their reply was not significantly different from those volunteering more hours (Fig. 2D).

Figure 2.

Mean Likert scores (and associated standard errors) for answers to questions that address the flexibility of the Master Gardener program (A), responsibility assumed by volunteers (B), recognition received by volunteers (C) and importance of the social aspects of Master Gardening to volunteer recruitment (D). Responses on the y axis are grouped according to the number of hours volunteered in 2007. For each graph, unique letters above bars indicate those means that were significantly different from one another.



Discussion

The Master Gardener program continues to grow in Oregon. More individuals are collectively donating more hours of service to their local communities as OSU Extension Master Gardener volunteers. Volunteer resource managers are thus challenged to effectively train and manage more volunteers, often in the face of diminishing resources.

Racially, the program is relatively homogenous, consistent with previous surveys of OSU Master Gardeners. Both McNeilan (unpublished data) and Kirsch and VanDerZanden (2002) found that 95% of respondents were Caucasian. Even when

adjusted for numbers of minorities within Oregon (U.S. Census Bureau, 2009), there are relatively few Hispanic (0.66%), African American (0.40%) or Asian (0.53%) OSU Master Gardeners. This lack of diversity in volunteers likely impacts the program’s ability to provide educational opportunities for a broad array of Oregonians.

Women and individuals who are 56 years of age or older currently constitute the majority of Master Gardener volunteers. Although the proportion of male Master Gardeners has decreased from 42% in 2002 (McNeilan, 1993) to 26% in 2001 (Kirsch and VanDerZanden, 2002), the proportion of

male volunteers remained steady at 26% in the present study.

Because of categorical differences, it was not possible to directly compare age distributions between surveys. However, several noteworthy qualitative comparisons can be made. For example, individuals aged 50 and older represented 65% and 71% of respondents in 1992 and 2001, respectively (Kirsch and VanDerZanden, 2002; McNeilan, 1993). In the present study, individuals aged 56 and older represented 74% of respondents. Similarly, individuals aged 40 and under represented 16%, 7% and 3% of respondents in 1992, 2001 and 2007, respectively (Kirsch and VanDerZanden, 2002; McNeilan, 1993). This shift towards older and away from younger Master Gardener volunteers cannot be attributed to a demographic shift in Oregon's population. Individuals aged 65 and older comprised roughly 13% of Oregon's population in 1990, 2000 and 2009 (U.S. Census Bureau 1990, 2000, 2009).

Although we cannot be sure of the mechanism underlying this gender and age bias, it is possible that women and/or older individuals have schedules that allow them to pursue Master Gardener training and volunteer opportunities. An alternative hypothesis is that women and older individuals have greater interest in gardening and/or service relative to their counterparts. These two hypotheses are not mutually exclusive.

As with previous surveys conducted in Oregon (Kirsch and VanDerZanden, 2002), Virginia (Relf & McDaniel, 1994) Missouri (Schrock et al., 2000) and Mississippi (Wilson and Newman, 2011), Master Gardeners in Oregon most valued the opportunity to learn through their training and volunteerism. A broader survey of Extension volunteers within Oregon (i.e. Master Gardeners, 4-H, Master Food Preservers, Extension Advisory Council,

etc.) also found that opportunities for personal growth and gains in knowledge and skills were rated highest among benefits of the Oregon Extension volunteer programs (Braker et al., 2000). Although we included statements addressing potential benefits associated with personal growth and community involvement, such benefits were not ranked high in this survey (Fig. 1).

Together, these results suggest that training programs should be primarily focused on developing and improving volunteers' skills and knowledge. Although friendships may naturally form among volunteers, results from our own study, as well as past surveys conducted in Oregon (Kirsch and VanDerZanden, 2002), Virginia (Relf & McDaniel, 1994) Missouri (Schrock et al., 2000) and Mississippi (Wilson and Newman, 2011) all suggest that individuals are not volunteering to meet people or expand their social network. Volunteer administrators should thus concentrate efforts on developing high quality educational programs, rather than arranging social activities.

A primary impediment to recruiting and retention of a diverse population of volunteers might be scheduling of training, service hours and recognition events. In most Oregon counties, these are predominantly scheduled during the workday hours of the week. This set-up prevents potential volunteers from participating in the program, and it also prevents current volunteers from being fully utilized and appreciated (Braker et al., 2000). In fact, our results found that individuals volunteering the least in 2007 (25 hours or less) were least likely to feel as if they had the flexibility to volunteer as they liked (Fig. 2A) or the opportunity to assume responsibility within the program (Fig. 2B). These volunteers were also the least likely to feel appreciated (Fig. 2C).

Increased adoption of alternative training models (e.g. weekend/evening trainings, online/hybrid trainings), service options (e.g. online Master Gardener clinics or hotlines) and social/recognition events might help broaden recruitment and increase retention of current volunteers. In 2008, two of 26 counties in Oregon offered Master Gardener training classes Saturdays and/or weekends. In 2009-2010, three of 29 counties offered Saturday training classes. Another county has offered a hybrid training, consisting of online and in person lessons, since 2008. An online Master Gardener training has also been made available since 2008, statewide, and plans are in the works to make online recertification available to current volunteers. Whether or not these programmatic additions broaden the diversity of volunteers remains to be seen, and will be the focus of a future study.

Survey results suggest that recruitment and retention of volunteers will work best when programs offer a variety of high-quality training and when opportunities for training and fulfilling service requirements can accommodate those who cannot take advantage of weekday classes and plant clinics. As technology becomes more available and acceptable to volunteers, many of whom are senior citizens, options for more access also should increase.

In addition, concerted and specific efforts should be made to recruit and train individuals from diverse cultural and ethnic backgrounds. One way to do this might be to increase outreach and educational events in ethnic neighborhoods, gardens or community groups, and to specifically include information on volunteer opportunities. By recruiting diverse individuals into the volunteer corps, opportunities for broadening outreach and education may also increase.

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