

6-1-2017

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Recommended Citation

Takle, B., Haynes, C., & Schrock, D. (2017). Using Demographic Survey Results to Target Master Gardener Volunteer Recruitment. *Journal of Extension*, 55(3), Article 4. <https://tigerprints.clemson.edu/joe/vol55/iss3/4>

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Using Demographic Survey Results to Target Master Gardener Volunteer Recruitment

Abstract

We conducted a survey of Iowa master gardener volunteers to identify demographics of program participants. Majorities of respondents were female, 50 years old or older, and college educated, similar to participants in previous master gardener studies. Highly engaged older individuals may not be able to continue to participate at their current levels into the future. Consequently, recruitment and retention of younger and/or more diverse participants would be beneficial to sustaining the program and maintaining long-term community connections. Identifying the demographics of volunteers allows program coordinators to focus future recruitment and retention efforts. Additionally, implications of the study may be applicable to volunteer coordinators in other states.

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Introduction

Due to a dramatic shift to suburban lifestyles in the 1960s, county Extension agents across the United States quickly found themselves overwhelmed by the increasing volume of questions and inquiries regarding home gardening. They were well equipped for the commercial agricultural questions of the past, but this new trend brought new challenges. To help answer this call for reputable, locally based horticultural information, Cooperative Extension in the state of Washington launched the master gardener program in 1972.

The master gardener program has since expanded, with programs in 49 states, Washington, DC, and other countries. Results from a recent nationwide survey by the National Extension Master Gardener Committee (eXtension, 2015) indicated that the Extension master gardener program is one of the largest volunteer organizations in the country, with more than 83,000 volunteers providing more than \$122 million in value of service annually. From 2014 to 2015, master gardeners interacted directly with more than 1 million clients and reached 51 million more through their media efforts (print, broadcast, and online) (eXtension, 2015).

The program has remained viable because it helps local Cooperative Extension educators disseminate information, involves tailored horticultural information distributed at the local level, and ensures that quality information from land-grant universities is being presented (McAleer, 2005). Over 82 million households in the United States participate in some type of home gardening activity (Matheny, Traunfeld, Raupp, & Brown, 2009), and the demand for dependable horticultural information remains high.

We conducted a survey to explore the demographics of Iowa master gardener volunteers in order to improve recruitment and enhance programming. Implications of the study can be used by Iowa master gardener coordinators (Takle, Haynes, & Schrock, 2016). Moreover, the implications may be useful to volunteer coordinators in other states whose master gardener volunteers are similar to those in Iowa.

Methodology

We surveyed Iowa master gardeners using an instrument created in Qualtrics Survey Software. Iowa State University's institutional review board approved the research project prior to pilot testing and full distribution.

Survey Instrument Development

The survey instrument consisted of 49 closed- or open-ended questions formulated to address the following objectives: (a) identify the demographics of Iowa master gardeners, (b) distinguish their preferred topics and delivery methods for continuing education, and (c) determine their motivations for involvement in the program. The data for this article were derived from answers to 10 closed-ended questions that were embedded in the larger survey and addressed the first objective.

Iowa master gardener county coordinators who were also active Iowa master gardener volunteers served as participants in pilot testing of the survey. The pilot survey was sent to 31 individuals. Feedback was solicited from pilot test participants regarding question design and overall usability. Based on participants' input, minor revisions were made to the instrument before full distribution.

Participants

The survey distribution list was assembled from the online hours-reporting system used by active Iowa master gardeners to record volunteer service and continuing education hours. The two counties that did not use this system provided lists of email addresses of their active master gardeners.

Data Collection

One day prior to full distribution of the survey, our lead researcher sent an email to Iowa master gardeners giving a brief background about the project, describing the purpose of the survey, and explaining that participation would be voluntary and anonymous. This email was delivered through Qualtrics and, therefore, came from an email address that likely was unfamiliar to many of the recipients. To confirm the legitimacy of the survey, our lead researcher sent an additional email from an Iowa State University email address explaining the survey and mentioning the state coordinator and the professor-in-charge for the Iowa master gardener program.

In late January 2015, we distributed the Qualtrics survey link to 3,713 valid email addresses. From this distribution, 1,880 participants opened the email and 1,263 began or completed the survey. Two follow-up emails were sent via Qualtrics to each participant who had not yet completed the survey. The survey closed in late March 2015. According to standards established by the American Association of Public Opinion Research, the response rate was 34.0% (American Association for Public Opinion Research, 2008). According to Nulty (2008), this response rate achieves more than a 95% confidence interval for the size of the population sampled. Although not all participants completed the survey instrument, any completed questions from

incomplete surveys were accepted for data analysis.

Data Analysis

We analyzed the data using the SPSS software package. Additionally, we compared the data to similar data from published studies of other master gardener programs. Although the comparison data were more than 10 years old, they were the most recently published master gardener demographic data available.

Results

Table 1 shows demographic information related to respondent age, gender, and relationship status. The largest proportion of respondents were in their 60s (43.7%), and only a small percentage were less than 50 years old (11.6%). Respondents were predominantly female (79.9%) and married (78.4%) and had children (82.1%, data not presented).

Table 1.
Age, Gender, and Relationship Status Data for Iowa
Master Gardener Volunteers

Demographic variable	Frequency	Percentage
Age		
20s	6	0.6%
30s	40	3.8%
40s	76	7.2%
50s	256	24.2%
60s	462	43.7%
70+	218	20.6%
Gender		
Female	844	79.9%
Male	212	20.1%
Relationship status		
Married	822	78.4%
Divorced	95	9.1%
Widowed	72	6.9%
Single, never married	56	5.3%
Separated	3	0.3%

More than half of respondents claimed household earnings over \$70,000 (Table 2). Slightly more than half of

respondents either were retired (46.5%) or did not work outside the home (5.1%), meaning that about 48% worked outside the home full or part time and still made time to volunteer with the program. Respondents were well educated, with a majority having earned at least a bachelor's degree (34.0%) or a graduate degree (30.8%).

Table 2.

Income, Employment, and Education Data for Iowa
Master Gardener Volunteers

Demographic variable	Frequency	Percentage
Income		
Under \$30,000	63	6.8%
\$30,000–\$49,999	148	15.9%
\$50,000–\$69,999	209	22.5%
\$70,000 or greater	510	54.8%
Employment status		
Retired	482	46.5%
Works outside the home full time	340	32.8%
Works outside the home part time	162	15.6%
Does not work outside the home	53	5.1%
Education—highest level attained		
High school diploma	168	16.1%
Associate's degree	199	19.1%
Bachelor's degree	355	34.0%
Graduate degree	322	30.8%

Forty-five percent of respondents had been active in the program for 6 or more years, and the proportion of those in their first year (18.0%) was somewhat less than the proportion of those with 10 or more years of service (25.0%) (Table 3). In 2014, the annual volunteer service hours requirement for maintaining active master gardener status was 12 hr. More than 89% of respondents reported having surpassed this requirement, and 45% reported having provided more than 40 hr of service (Table 3). Moreover, 87% of respondents planned to continue to meet requirements for maintaining active status even though the time requirement would be increasing to 20 hr of volunteer service annually beginning in January 2015 (data not presented).

Table 3.

Years of Service and Level of Engagement Data for
Iowa Master Gardener Volunteers

Demographic variable	Frequency	Percentage
Years in program		
First year	218	18.0%
2–3 years	274	23.0%
4–5 years	177	15.0%
6–9 years	246	20.0%
10+ years	301	25.0%
Hours of volunteer service in past year		
None	13	1.0%
1–12 hr	102	10.0%
13–40 hr	418	43.0%
41–80	231	24.0%
>80 hr	208	21.0%

Discussion and Conclusions

Iowa master gardeners are older than those in master gardener programs in other states, according to previously published data (Kirsch & VanDerZanden, 2002; Schrock, Meyer, Ascher, & Snyder, 1999), yet the U.S. Census has reported only slight age differences among Iowans and residents of these other states (U.S. Census Bureau, 2010). Almost two thirds of Iowa master gardener volunteers who responded to our study were over the age of 60, which is older than the age of volunteers in general (U.S. Department of Labor, 2016). A report from the U.S. Bureau of Labor Statistics showed a decline in volunteerism among 55- to 64-year-olds from 2014 to 2015 (U.S. Department of Labor, 2016). This circumstance indicates a strong need to engage a younger audience to ensure long-term survival of the Iowa master gardener program.

A study by the National Gardening Association (2014) showed that younger (aged 18–34) food gardeners were the fastest growing segment of the national population of gardeners, increasing by 63% between 2008 and 2013. Our findings indicate that members of this age group currently make up only a small percentage of the Iowa master gardener population; given the trend shown by the National Gardening Association study, however, they should be targeted for volunteer recruitment.

Iowa's master gardener population at the time of our study was similar to that of some other state master gardener programs in that the majority of volunteers were female (Kirsch & VanDerZanden, 2002; Mayfield & Theodori, 2006; Schrock et al., 1999). The states where the studies were conducted had percentages of males

and females in their total populations nearly identical to those in Iowa's population (U.S Census Bureau, 2010). Our findings provide further evidence that the majority of master gardener volunteers not only have been female historically but also continue to be female. As a means of engaging male master gardeners, program coordinators could identify and target programming toward specific gardening topics of interest to males. For example, male Iowa master gardeners had a stronger preference for continuing education topics relating to integrated pest management, whereas female Iowa master gardeners had a stronger preference for topics pertaining to local foods and organic gardening (Takle et al., 2016).

Learning and education seem to be important to the current Iowa master gardener population and could be a focus of recruitment efforts. Findings separate from those reported here have shown that Iowa master gardeners primarily participate in the program to learn new horticultural knowledge and skills (Takle, 2015; Takle et al., 2016). Previous studies in Oregon and Missouri both showed that 53% of respondents had a 4-year college degree or higher (Kirsch & VanDerZanden, 2002; Schrock et al., 1999), whereas in our study, nearly two thirds of respondents had achieved that level of education.

More than half of respondents in our study fell into the highest household income category. This finding indicates that cost may be a barrier to joining and remaining active in programs such as the Iowa master gardener program (McBride, Sherraden, & Pritzker, 2006). Of concern to coordinators is making master gardener programs available to all who are interested. Initial program fees plus costs associated with travel to trainings, continuing education, and volunteer commitments can be substantial. Providing scholarships could decrease expenses and might make the program more accessible for all income classes. Overcoming this barrier could have an effect on future demographics of the program.

The Iowa master gardener program has maintained stable membership numbers for nearly a decade. Data from the Iowa master gardener hours-reporting system show approximately 2,400 volunteers providing over 105,000 hr of community service in 2014 (Iowa State University Extension and Outreach, 2015). The value of this volunteer time is estimated at \$23.07 per hour, or \$2.43 million (Independent Sector, 2015). However, a concern of Iowa master gardener program coordinators is the level of homogeneity shown by the current population. Highly engaged older individuals may not be able to continue to participate at their current levels into the future. Recruitment and retention of younger and/or more diverse participants would be beneficial to maintaining long-term connections to local community groups. For example, using technology such as social media and webinars could entice a younger audience. However, experiential education is essential for continued engagement.

Questions about ethnicity were not asked with our survey, but results likely would show limited diversity among program participants. This assumption is based on the fact that Iowa has a low minority population, less than 9% according to the 2010 census (U.S. Census Bureau, 2010). Efforts to understand cultural differences in minority populations could help with recruitment and retention efforts of a greater number of minority volunteers (Hobbs, 2001).

Our study establishes baseline data for Iowa that could be used for comparison in future studies. Very few states have established this type of baseline data about their master gardener program demographics. In comparing reported master gardener demographic data among states, some marked differences (gender, age) were apparent. This finding underscores the importance of gathering program-specific demographic information. Furthermore, the data with which we compared Iowa master gardener demographics are more than 10 years old, and demographics may have changed significantly in the ensuing years. Because of

potential changes in the audience, these data should be collected more frequently so that shifts in demographics can be identified. Knowing an audience enables coordinators not only to improve current practices but also to identify untapped demographics for targeted recruitment and programming.

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