Journal of Extension
www.joe.org

April 2017
Volume 55
Number 2
Article # 2RIB5
Research In Brief

Extension Wellness Ambassadors: Individual Effects of Participation in a Health-Focused Master Volunteer Program

Abstract

We present findings from a pilot implementation of the Extension Wellness Ambassador Program, a health-focused master volunteer program, and briefly describe the program approach and purpose. Program participants received 40 hr of training and completed assessments of self-efficacy, physical activity, and functional fitness at baseline and 3-month follow-up. Paired-samples *t*-tests showed significant positive changes in mean for general self-efficacy, self-efficacy for practicing health behaviors, physical activity, and nearly all functional fitness measures. Our findings demonstrate that participation in a health-focused master volunteer program can positively influence participants' lifestyle behaviors as they work to improve health and quality of life in their communities.

Lisa T. Washburn
Associate Professor
Cooperative Extension Service
University of Arkansas Division of Agriculture
Little Rock, Arkansas
lwashburn@uaex.edu

LaVona Traywick
Assistant Professor
University of Central Arkansas
Conway, Arkansas
lavonat@uca.edu

Lauren Copeland
Program Associate
Cooperative Extension Service
University of Arkansas Division of Agriculture
Little Rock, Arkansas
lncopeland@uaex.edu

Jessica Vincent
County Extension Agent
Cooperative Extension Service
University of Arkansas Division of Agriculture
Hot Springs, Arkansas
jvincent@uaex.edu

Introduction

Throughout its 100-year history, Extension has relied on volunteers to deliver programs to improve quality of life. Despite the need for community-based approaches for improving health, few volunteer-driven Extension programs have been implemented specifically targeting community health. The Extension Wellness Ambassador Program (EWAP) bridges this gap by training volunteer lay leaders to assist their local communities with health promotion and improvement activities and projects. EWAP graduates use knowledge gained to plan and conduct programs and implement projects to help others live more healthful lives, positively affecting their own health and the health of those in their communities.

EWAP is a health-focused master volunteer program providing in-depth training on a range of lifestyle behaviors and health issues, with special emphasis on physical activity. The program provides structured opportunities for volunteers to develop leadership skills by identifying, planning, and conducting projects to improve health in their communities as they fulfill their commitment of a minimum of 40 hr of service in the year following training. This article briefly describes the EWAP approach and presents individual-level results from a pilot implementation.

Program Overview

The aim of EWAP is to engage community members in using their knowledge in a service role helping others live

more healthful lives. By doing this, EWAP graduates increase Extension's capacity to deliver health education and outreach programs. As demonstrated by other volunteer-led Extension health programs (Washburn, Cornell, Phillips, Felix, & Traywick, 2014), graduates also increase program access in rural communities, including access to Extension exercise classes, and improve their own health in the process.

Participants in the EWAP pilot implementation, conducted from October 2013 to August 2015, received 40 hr of training delivered over five or six weekly face-to-face sessions (32 hr) and independent study (8 hr). The training involved the use of research-based curricula delivered by county Extension agents, state Extension faculty, and other content experts. Table 1 lists training hours by content area. Fifteen counties were involved in the training, which was provided to four multicounty groups that each comprised participants from three or four adjoining counties. Sessions involved adult learning and teaching techniques and incorporated skill development and application opportunities. Extension agents, the ambassador trainees, and community partners worked together throughout the training process to assess community assets and needs and identify and plan community projects. Ambassador trainees were required to score 80% on a 50-question certification exam to graduate from the program.

Table 1.

Hours Dedicated to Extension Wellness Ambassador Program (EWAP) Training Content Areas

Content area	Hours
Food and nutrition	4.5
Fitness/physical activity	8.5
General health, chronic disease, mental health	8
Project planning process, Extension background	7
Program evaluation	4
Take-home activities	8
Total	40

EWAP is based on principles of health behavior theory, such as social-ecological theory, which states that people influence and are influenced by the other individuals and communities with whom they come into contact (McLeroy, Bibeau, Steckler, & Glanz, 1988). Social cognitive theory constructs of self-efficacy and modeling shaped the content of the training sessions (Bandura, 1977). The program approach was influenced by empowerment theory, which emphasizes the ability of people to create and engage in solutions to improve quality of life at multiple levels (Minkler & Wallerstein, 2002; Zimmerman, 1995), and community-based participatory research principles that acknowledge and build on community strengths and resources, involve community members as partners, and focus on sustainability (Israel, Eng, Schulz, & Parker, 2005).

EWAP participants were recruited at the county level and selected through an application and interview process. Recruitment tools included newspaper articles, social media posts, exhibits, informational brochures,

presentations at local group meetings, and personal invitations extended by county Extension agents.

The long-term goal of EWAP is to empower participants to improve health in their communities. Short-term outcomes measurable in the pilot project were increased knowledge and self-efficacy for positive health behaviors, increased physical activity, and improved functional fitness among the ambassadors. Increased knowledge is a standard outcome of individual-level educational programs. However, it has been established that knowledge is not sufficient to change behavior (Sallis & Owen, 2002). As a multilevel approach, EWAP aimed to engage trained volunteers in community health improvement efforts. Community-level outcomes are beyond the scope of this article; individual-level results, both as predictors and indicators of individual behavior change, are presented here.

Methods

At the start of the program (baseline) and 3 months after program start, the ambassador trainees completed several individual-level assessments: General Self-Efficacy Scale, Healthy Eating Self-Efficacy Scale, and Physical Exercise Self-Efficacy Scale (Schwarzer & Renner, 2009); Healthy Physical Activity Participation Questionnaire (Canadian Society for Exercise Physiology, 2003; Shephard & Bouchard, 1994); and six measures of functional fitness from the Senior Fitness Test (Rikli & Jones, 2001). Items on each self-efficacy assessment involved a 4-point scale with response options ranging from *very unsure* to *very sure*. Responses to the Healthy Physical Activity Participation Questionnaire yielded a score ranging from 0 to 11, with higher scores indicating higher levels of physical activity. The Senior Fitness Test was selected as most appropriate for the project given participants' age range, the need to measure consistency across participant groups, and ease of administration. Norm reference values are available for ages 60 and above; for younger participants, scores are compared for each data collection point. All data except those from the Senior Fitness Test were collected through the use of a pen-and-paper survey administered at the start of the program and at a 3-month follow-up meeting. The Senior Fitness Test was administered by trained Extension faculty.

Statistical analyses were performed through the use of SPSS software, version 22 (IBM Corp., Armonk, NY). Paired-samples *t*-tests were used for determining whether there were statistically significant mean differences between assessment scores at baseline and at 3-month follow-up. Project protocol and data collection methods were approved by the University of Arkansas Institutional Review Board.

Results

Participants (n = 57) ranged in age from 23 years to 92 years, with a mean age of 58 years. Table 2 presents EWAP participant characteristics.

Table 2.
Extension Wellness Ambassador Program (EWAP)
Pilot Implementation Participant Characteristics

Characteristic	No.	%
Race/ethnicity		
Caucasian	49	86%
African American	8	14%

Gender		
Female	51	89.5%
Male	6	10.5%
Highest education level completed		
Grade 12 or GED	4	7%
College, 1–3 years	17	29.8%
College, 4 years	19	33.4%
Graduate degree	17	29.8%
Marital status		
Married	40	70%
Divorced	8	14%
Widowed	4	7%
Never married	4	7%
Separated	1	2%

Assessment outcome data are displayed in Tables 3 and 4. The numbers of participants for which we collected both baseline and 3-month follow-up data varied by outcome, as indicated in Tables 3 and 4. According to the results of paired-samples *t*-tests, positive changes in mean general self-efficacy and self-efficacy for healthy eating were statistically significant. Mean exercise self-efficacy increased from baseline to 3-month follow-up, but that change did not reach significance. There was a statistically significant positive change in mean physical activity score. In addition, paired-samples *t*-tests showed significant positive changes in mean scores for lower and upper body strength, aerobic endurance, lower body flexibility, and agility and dynamic balance from baseline to 3-month follow-up. Changes did not reach significance for upper body flexibility.

Table 3.

Mean Changes in Self-Efficacy and Physical Activity

	Baseline		3-months			95% CI for mean		Sig. (2-
Outcome	***M***	***SD***	***M***	***SD***	**No.**	**difference**	***t***	**tailed)**
General self-efficacy	33.28	4.81	34.44	4.54	32	0.514–1.79	3.67	.001*
Healthy eating self-efficacy	15.48	3.39	16.68	3.36	31	0.360–2.02	2.92	.007*
Exercise self-efficacy	14.24	3.76	15.64	3.13	33	0.554–2.52	2.51	.170
Physical activity	6.71	4.35	7.94	3.17	34	0.318–2.153	2.74	.010*

*$p < .05$

Table 4.

Mean Changes in Senior Fitness Test Outcomes

	Baseline		3-months			95% CI for mean		Sig. (2-
Outcome	***M***	***SD***	***M***	***SD***	**No.**	**difference**	***t***	**tailed)**
Lower body strength	16.73	4.83	17.83	4.93	30	0.43–1.76	3.37	.002*
Upper body strength	19.94	6.79	24.03	6.59	36	3.02–5.26	7.51	.000*
Aerobic endurance	100.5	27.82	113.73	28.75	33	9.05–17.44	6.43	.000*
Lower body flexibility	1.92	4.52	3.28	3.89	36	0.475–2.32	2.87	.007*
Upper body flexibility	−1.22	3.77	−1.31	4.06	30	−0.545–0.349	−0.45	.656
Agility and dynamic balance	3.74	.997	3.97	.940	34	0.385–0.073	2.99	.005*

*$p < .05$

Discussion and Implications

Our study demonstrated that a health-focused master volunteer program can positively influence participants' self-efficacy for practicing healthful behaviors. The EWAP training focused on increasing knowledge of personal health risks and behavior and increasing confidence to change behavior, in addition to boosting awareness of community health issues. Participants worked as county groups to develop projects to address community needs, and in doing so, fostered group cohesion and social support, which increase long-term maintenance of personal changes when applied early in a change process (Burke, Davies, & Carron, 2014). Further, collective self-efficacy generated during the training process and continued through regular county group meetings following graduation may have positively influenced individual behavior change. Shared beliefs about ability to change personal and community health may support change of personal health habits (Bandura, 2004), as indicated by preliminary results reported here.

Indeed, our study demonstrated that a program such as EWAP can positively affect participants' physical activity and functional fitness levels. Physical activity participation, as a component of the EWAP training, was limited to 30–40 min during each of the five or six training sessions. Yet increased mean scores on the Healthy Physical Activity Participation Questionnaire suggest that participants were motivated to increase their overall physical activity levels as a result of EWAP involvement and that they did so absent of a regular exercise program provided through the program. Functional fitness improvements further support this finding. Improvements were found in all but one measure of functional fitness, suggesting that participants increased personal physical activity levels and continued this activity beyond program graduation. Ambassadors may have begun to view themselves as role models for healthful lifestyles, thereby experiencing boosted motivation for increased physical activity, and participating in the training may have provided tools they could use to increase planned physical activity (Bandura, 2004; Koring et al., 2012; Pratt & Bowman, 2008).

Volunteer engagement is a recognized strength of the Extension system nationwide (Michael, 1994). Lay leaders have been used effectively in health promotion programs for decades; however, EWAP is one of the first programs to employ a structured approach for engaging health volunteers within the Extension context. Volunteer engagement beyond traditional program areas, such as master gardeners and 4-H, is needed to

sustain programming when limited funding for Extension and budget cuts threaten to reduce reach. Embedding structured volunteer opportunities when educational programs are developed and implemented helps ensure that program participants are actively engaged as partners and promotes a community-based program approach (Bracht, Kingsbury, & Rissel, 1999; Brudney, 2010). This approach can be applied broadly to meaningfully involve constituents in a range of relevant issues where grassroots efforts are needed and sustained engagement is necessary.

There are several limitations to the findings presented here. First, 3-month follow-up data were not available for more than one third of those completing baseline assessments. Reunion meetings were held with each multicounty cluster for data collection and program updates, but travel distance, inclement weather, scheduling conflicts, and for some, release time from paid employment were barriers to attendance. Program records indicate retention of 92% of program graduates; the majority of participants with missing data remained active with EWAP at the county level, indicating that additional data collection methods not requiring attendance at a face-to-face meeting are needed to capture individual-level program outcomes.

Although it is not our intent to generalize findings to the broader population, an additional limitation is the influence of selection bias. EWAP training, which was offered during daytime hours, required a significant time commitment for volunteers. Those without daytime availability were not able to participate, a circumstance that excluded many with full-time paid employment. Additionally, the selection process, which involved an application and an interview, may have posed a barrier to those with less positive experiences in formal educational settings.

The racial diversity of the EWAP graduates mirrors that of the state overall; however, education levels were higher than is typical for state residents, and the graduates were predominantly female. Others seeking to initiate similar health-focused volunteer programs should consider these characteristics when determining participant recruitment strategies. Those with higher education levels may have higher self-efficacy levels at baseline and be more likely to participate in a master volunteer program.

Our findings suggest that positive changes were sustained beyond the 5- to 6-week training period and program graduation. More study is needed to determine whether positive changes are maintained beyond the 3-month period reported here. Additionally, research exploring the impact of community projects and programs conducted by EWAP graduates should be pursued.

Conclusion

Extension has an established record of success in training volunteers and engaging them in using their knowledge in service to others. The study reported here is, to our knowledge, the first assessment of individual-level outcomes for participants involved in a health-focused master volunteer program. Preliminary results suggest that positive changes among volunteers are sustained beyond the training period and that participants improve their own health by positively changing lifestyle behaviors as they work together to improve health and quality of life in their communities.

Acknowledgment

The project reported here was supported by the Rural Health and Safety Education Competitive Grants Program of the U.S. Department of Agriculture National Institute of Food and Agriculture, grant number 2013-46100-21466.

References

Bandura, A. (1977). *Social learning theory*. Englewood Cliffs, NJ: Prentice-Hall.

Bandura, A. (2004). Health promotion by social cognitive means. *Health Education and Behavior*, *31*(2), 143–164.

Bracht, N., Kingsbury, L., & Rissel, C. (1999). A five-stage community organization model for health promotion: Empowerment and partnership strategies. In N. Bracht (Ed.), *Health Promotion at the Community Level: New Advances* (2nd ed.). Thousand Oaks, CA: Sage.

Brudney, J. (2010). Designing and managing volunteer programs. In D. Renz (Ed.), *The Jossey-Bass Handbook of Nonprofit and Leadership Management* (3rd ed.). San Francisco, CA: Jossey-Bass.

Burke, S. M., Davies, K. M., & Carron, A. V. (2014). Group cohesion in sport and exercise settings. In M. A. Beauchamp & M. A. Eys (Eds.), *Group dynamics in exercise and sport psychology* (2nd ed.). London, UK: Routledge.

Canadian Society for Exercise Physiology (2003). *The Canadian physical activity, fitness & lifestyle approach: CSEP-Health & Fitness Program's health-related appraisal and counseling strategy* (3rd ed.). Ottowa, Canada: Author.

Israel, B., Eng, E., Schulz, A., & Parker, E. (2005). Introduction to methods in community-based participatory research for health. In B. Israel, E. Eng, A. Schulz, & E. Parker (Eds.), *Methods in community-based participatory research for health*. San Francisco, CA: Jossey-Bass.

Koring, M., Richert, J., Lippke, S., Parschau, L., Reuter, T., & Schwarzer, R. (2012). Synergistic effects of planning and self-efficacy on physical activity. *Health Education and Behavior*, *39*(2), 152–158. doi:10.1177/1090198111417621

McLeroy, K. R., Bibeau, D., Steckler, A., & Glanz, K. (1988). An ecological perspective on health promotion programs. *Health Education Quarterly*, *15*(4), 351–377.

Michael, J. A. (Ed.). (1994). *For the common good: A strategic plan for leadership and volunteer development.* Washington, DC: U.S. Department of Agriculture.

Minkler, M., & Wallerstein, N. (2002). Improving health through community organization and community building. In K. Glanz, B. Rimer, & F. Lewis (Eds.), *Health behavior and health education: Theory, research, and practice* (3rd ed.). San Francisco, CA: Jossey-Bass.

Pratt, C., & Bowman, S. (2008). Principles of effective behavior change: Application to Extension family educational programming. *Journal of Extension*, *46*(5), Article 5FEA2. Available at: http://www.joe.org/joe/2008october/a2.php

Rikli, R., & Jones, C. (2001). *Senior Fitness Test manual.* Champaign, IL: Human Kinetics.

Sallis, J., & Owen, N. (2002). Ecological models of health behavior. In K. Glanz, B. Rimer, & F. Lewis (Eds.), *Health behavior and health education: Theory, research and practice* (3rd ed.). San Francisco, CA: Jossey-Bass.

Schwarzer, R., & Renner, B. (2009). Health-specific self-efficacy scales. Retrieved from http://userpage.fu-

berlin.de/~health/healself.pdf

Shephard, R. J., & Bouchard, C. (1994). Population evaluations of health related fitness from perceptions of physical activity and fitness. *Canadian Journal of Applied Physiology*, *19*(2), 151–173.

Washburn, L. T., Cornell, C. C., Phillips, M. E., Felix, H., & Traywick, L. (2014). Strength training in community settings: Impact of lay leaders on program access and sustainability for rural older adults. *Journal of Physical Activity and Health*, *11*, 1408–1414. http://dx.doi.org/10.1123/jpah.2013-0007

Zimmerman, M. (1995). Psychological empowerment: Issues and illustrations. *American Journal of Community Psychology*, *23*, 581–600.
