

Elderly Volunteers: Analysis of Participation and Time Commitment

Using the 1989 Current Population Survey, this study examines participation and time commitment of the elderly volunteers. The results of sample selection model show that being a female, being married, living in the Midwest, having a higher income and education, home ownership and seeking employment are positively related to participation in volunteer work whereas living in a large city and having more household members are negatively related. Those with a college education and young children under 18 spend more hours, and home owners spend fewer hours in volunteer work than non home owners.

Soo Yeon Kim, Purdue University¹
Gong-Soog Hong, Purdue University²

Introduction

Volunteering has played an important role in shaping American society throughout its history (Sundeen, 1990). The history of the elderly volunteering goes back to the Great Depression in the 1930s, World War II, and continues to the present. The range of services offered by volunteers is broad and they perform many socially important functions (Caro & Bass, 1995). Their volunteer services are provided on an organized or an informal basis. Organized volunteer work by the elderly ranges from small local programs (i.e., churches, museums, libraries, schools and nursing homes) to large national programs (i.e., Retired Senior Volunteer Corps (RSVP), Foster Grandparents Program (FGP), American Association of Retired Persons (AARP) and Independent Sector). On an informal basis, a continuous spectrum of helping and assisting others such as providing transportation, serving foods, tutoring, baby-sitting, homemaking, and caregiving are regarded as volunteer activities.

As the proportion of the aged population increases, more educated and productive elderly people participate in volunteer work. The 1993 national statistics presents that 47% of the elderly 55 to 64 participated in volunteer work, followed by 43% of people aged 65 to 74 and 36.4% of the aged 75 and over (U.S. Bureau of the Census, 1995). As baby boomers are aging, it is projected that more elderly will participate in volunteer work since they are expected to have a higher income and education, and better health than current older Americans.

Despite the importance of the elderly, volunteering, research on elderly volunteering is limited: existing research only focused on either descriptive information or theoretical explanation. Therefore, this study will establish a profile of the

current elderly volunteers aged 55 and over, and identify volunteer organizations served by the elderly. It will further examine and contrast the factors associated with the likelihood of participating in volunteer work and the time commitment in volunteer work for both the retired and non-retired households.

Conceptual Approach

Much of the literature with regard to volunteer work has been developed from queries about the underlying motivations. Largely, altruism, utility interdependence, time-use, human capital, and the activity theories have provided theoretical bases. Altruism, in particular, is widely recognized as the underlying motivation associated with philanthropic behavior such as volunteering (Becker, 1976; Unger, 1991), although some studies contended that altruism is just one of the complicated motivations that influence volunteer participation (Andreoni, 1989; Cnaan & Goldberg-Glen, 1991).

The utility interdependence theory developed by economists illustrates that the utility of a volunteer is influenced by others' utility levels as well as his or her own utility level (Unger, 1991). Becker (1974) focused on the interaction between the income and consumption of individuals, and those of the other persons, and he incorporated the standard of living of poorer persons into the utility functions of richer ones. That is, the consideration of income and consumption of the individual is not limited to his or hers alone, but involves the needs of the community and society as a whole. Therefore, a family and a society are interdependent organizations.

Another economic view on volunteer work is derived from a labor-leisure analysis. A traditional labor-leisure analysis has been applied to examine the

time use and the opportunity cost of volunteering (Bryant, 1992). The time-use study may be linked to human capital investment, in that the time used in volunteering results in increased productivity in the future (Bryant, 1992). Bryant related volunteer work to human capital investment by categorizing the activities performed by households into four categories: market work, household work, leisure, and voluntary activities. Bryant's contention was that volunteering can promote market productivity through a higher labor force participation and wage rate. Thus, it may be that the current time spent on human capital investment is likely to affect future time use.

On the other hand, there are several studies on elderly volunteers focusing on psychological or attitudinal aspects in the gerontological literature. The activity theory, in particular, has been utilized to elucidate the effect of volunteer participation on the behavioral or attitudinal aspects of the elderly. This theory suggests that life-satisfaction and the well-being of the elderly are improved by maintaining social interactions after middle age (Havighurst et al., 1968; Herzog et al., 1989).

This study assumes that the elderly volunteers are motivated by altruism, and that their volunteer activities can be illustrated by the utility interdependence, where one's own utility level is interrelated with the level of other persons' utility. It also conceptually relies on the activity theory that elderly people could enhance their life satisfaction and well-being through participation in volunteer work. Lastly, the traditional economic theory is applied to volunteer work since rational human behavior can be determined by a person's own utility function subject to time and budget constraints.

Methods

Data and Sample

The data are taken from the 1989 Current Population Survey (CPS) conducted by the Bureau of the Census for the Bureau of Labor Statistics. The CPS contains a representative sample of the non-institutional population of the United States. The 1989 CPS includes supplemental data which contain detailed information on organized volunteer work. This survey is a unique data source that supplies information on volunteer participation, the amount of time volunteered, and the type of volunteer organization served by volunteers. The sample used in this study consists of 11,040 older persons aged 55 and over. The sample is stratified by the current retirement status to compare the retired elderly (N=7,544) with the non-retired elderly (N=3,496).

Variables and Hypotheses

The dependent variable used in the volunteer participation model is dichotomous, coded 1 if the respondent participated in volunteer work over the past 12 months, 0 otherwise. The dependent variable in the time volunteered model is continuous. It is measured by the number of hours spent in volunteering over the past 12 months. Based on the theory and previous research, five groups of independent variables are identified. Demographic factors include age, age squared, gender, race, household size, and region. Age is expected to have a curvilinear relationship with volunteering since health deteriorates as an individual ages (Herzog et al., 1989).

Socio-economic factors are household income, education, and home ownership. Household income and education had a positive relationship with volunteering (Perry, 1983). Time constraints are reflected by the presence of children under 18 and the flexibility of work schedule (for non-retired sample). Having young children and a tight work schedule are expected to have a negative influence on volunteering since the presence of young children increases the demand for parental time and flexibility at work may also affect the volunteering decision, having a flexible employment may increase volunteering opportunities (Bryant, 1992).

The utility-interdependence are presented by the percentage of persons in a state below the poverty line in 1989 and the population size. Population size is a proxy for the free-rider tendency. Those who live in large cities tend to have a higher expectation of having a free-rider tendency than those residing in small cities (Unger, 1991). The percentage of persons below the poverty line reflects community needs for volunteering support. Thus, the elderly residing in small communities and states with fewer people in poverty are more likely to participate in volunteer work.

Analysis

For the sample used in this study, approximately 10% of the elderly aged 55 and over participated in volunteer work. For the limited dependent variable with a censored problem, tobit analysis has been the preferred technique (Kennedy, 1994). Tobit analysis, however, is not appropriate for this study because it may ignore the two-step nature of the decision process, assuming that the relationship between the independent variables and the likelihood of volunteer participation is identical to the relationship between the independent variables and the number of hours volunteered. Therefore, as an alternative approach to the tobit model, a sample selection model is used (Blundell & Meghir, 1987).

The sample selection model consists of the first-hurdle probit model and the second-hurdle selection tobit model.² In the probit analysis, the probability of volunteer participation by the elderly age 55 and over is estimated, and the factors affecting volunteer participation are identified. Based on the first model, the sample selection tobit model is estimated by the maximum likelihood procedure (Greene, 1995). The tobit model with selectivity assumes that the values of time volunteered and the parameters are only observed when the respondent participated in volunteer work, given that time volunteered is censored at zero.

Results and Discussion

Less than 10% of elderly people aged 55 and over participated in volunteer work and the non-retired elderly had a higher participation rate and degree of involvement. About 8% of the retired elderly participated in volunteer work, while 12.2% of the non-retired in this study were volunteers. The average number of hours volunteered for the total sample over the past 12 months was 13.42 hours. For the retired, the annual time spent on volunteering was 11.70 hours and the non-retired elderly spent 17.12 hours in volunteering.

Results of the Probit Analysis of Volunteer Participation

The results of probit analysis for participation model is presented in Table 1. As expected, age and age squared were found to be significant with different signs for the total and retired groups. These findings suggest that there is a curvilinear relationship between age and the likelihood of volunteer participation by the elderly. That is, the elderly were more likely to participate up to their late sixties. But, participation was likely to decline after that age.

For both the total and retired samples, Midwesterners were more likely to volunteer than those who resided in other regions. Gender was a significant factor for the total and retired group, which was consistent with previous studies (Hayghe, 1991; Herzog et al., 1989). As expected, women were more likely to participate in volunteer work than men.

Regardless of retirement status, socio-economic factors including household income, education, and home ownership affected the likelihood of volunteer participation significantly. Consistent with previous studies (Mueller, 1975; Perry, 1983), elderly people with a higher income were more likely to participate in volunteer work than those who had a lower income. As reported in the existing literature

(Hayghe, 1991; Perry, 1983), it was confirmed that education is an important factor influencing elderly volunteering. As compared to the high school graduates, those who did not finish high school were less likely to participate in volunteer work. The elderly with a college or post-college education tended to participate more in volunteer work than the high school graduates. The homeowners were more likely to participate in volunteer work than the non-homeowners.

For both the total and retired samples, married elderly were more likely to participate in volunteer work than unmarried elderly. The job-seeking elderly, for the retired sample, were more likely to volunteer than those who had no intention to work.

The time-related factors including time flexibility and the presence of young children were significant only for the non-retired group. Flexibility of the work schedule was positively related to volunteer participation. Although the presence of young children under 18 was hypothesized to be a time constraint for volunteering, it was found to be positively related to volunteer participation. Consistent with previous studies (Mueller, 1975; Unger, 1991), those from less populated areas tended to participate more in volunteer work, as compared to those residing in a heavily populated area.

Results of the Sample Selection Tobit Analysis of Time Volunteered

As shown in Table 2, the findings differ from the results of the probit models indicating that the decision-making of volunteer participation and the time volunteered by the elderly were influenced by different factors. That is, the relationship between explanatory factors and the likelihood of volunteering was not identical to the relationship between the factors and the amount of time volunteered.

The effect of education associated with the time commitment for volunteer work was found to be significant only for the retired group. As expected, the college graduates among the retired were likely to spend more time for volunteer work than the high school graduates. Home ownership was negatively associated with the time devoted to volunteer work for the total and retired groups. Homeowners were likely to spend fewer hours in volunteer work than non-homeowners, although they tended to participate more in volunteer work as found in the probit analysis. The presence of children under 18 had a positive effect on the time volunteered for the retired group. More hours were spent on volunteer work by the retired elderly with children under 18 than the non-retired.

Table 1
 Factors Associated with Volunteer Participation: Results of Probit Analysis

Variables	Coefficients		
	Retired(n=7,544)	Non-retired(n=3,496)	Total(n=11,040)
Intercept	-6.86 (1.649)***	-5.084 (2.911)	-6.591(1.29)***
Demographic factors:			
Age	0.147 (0.047)**	0.1 (0.0902)	0.141 (0.037)***
Age squared	-0.001 (0.0003)***	-0.0007(0.0006)	-0.001 (0.0003)***
Region			
Midwest	0.216 (0.065)***	0.135 (0.085)	0.187 (0.051)**
Northeast	-0.047 (0.08)	-0.122 (0.104)	-0.772 (0.063)
West (South)	0.107 (0.07)	0.011 (0.093)	0.071 (0.056)
Household Size	-0.064 (0.031)*	-0.087 (0.035)*	-0.076 (0.022)***
White	0.076 (0.087)	0.167 (0.113)	0.125 (0.068)
Male	-0.188 (0.047)***	0.0176 (0.065)	-0.121 (0.037)**
Socio-economic factors:			
Household income	0.000 (0.000)***	0.000 (0.000)**	0.000(0.000)***
Education			
less than high school	-0.345 (0.073)***	-0.386 (0.14)***	-0.346 (0.064)***
college	0.162 (0.056)**	0.403 (0.068)**	0.266 (0.043)***
more than college (high school)	0.523 (0.092)***	0.635 (0.091)**	0.563 (0.063)***
Home ownership	0.198 (0.0775)*	0.326 (0.112)**	0.234 (0.063)***
Activity factors:			
Married	0.221 (0.073)**	0.108 (0.106)	0.183 (0.059)**
Employed			0.058 (0.044)
Full-time employed		-0.109 (0.075)	
Looking for work	0.717 (0.224)**		
Time-related factors:			
Time flexibility		0.223 (0.068)*	
Presence of children under 18	-0.034 (0.147)	0.297 (0.128)*	0.162 (0.095)
Utility Interdependence factors:			
Percent of persons below poverty line	0.003 (0.009)	-0.006 (0.012)	0.0003 (0.007)
Population size			
100,000-499,999	0.197 (0.074)**	0.322 (0.093)***	0.247 (0.058)***
500,000-999,999	0.278 (0.078)***	0.32 (0.099)**	0.295 (0.062)***
one million-4,999,999 (5 million or more)	0.145 (0.068)*	0.223 (0.084)**	0.183 (0.053)***
Log likelihood	-1891.98	-1184.48	-3101.22
Chi-squared	355.74	230.17	589.84

Note: Standard errors are in the parentheses

*p < .05. **p < .01. ***p < .001.

Table 2

Factors Associated with Time Volunteered: Results of Sample Selection Tobit Analysis

Variables	Coefficients		
	Retired	Non-retired	Total sample
Intercept	-1507.2(1740.9)	81.37(3278.1)	-888.53(1382.5)
Demographic factors:			
Age	47.408(48.885)	-5.57(103.09)	29.81(39.35)
Age squared	-0.36(0.368)	0.055(0.82)	-0.229(0.31)
White	72.45(150.26)	64.85(174.66)	69.78(109.2)
Socio-economic factors:			
Household income	0.0001(0.0007)	0.0002(0.0012)	0.00007(0.0005)
Education			
less than high school	15.98(68.59)	-83.97(315.93)	-3.17(65.09)
college	84.31(37.08)*	-20.84(87.89)	47.20(32.61)
more than college (high school)	3.38(95.41)	-40.46(144.84)	-10.09(65.38)
Home ownership	-89.87(43.74)*	-6.211(114.94)	-77.12(39.28)*
Activity factors:			
Married	70.4(76.84)	6.212(118.48)	35.65(61.75)
Employed			-11.27(29.65)
Full-time employed		41.47(67.38)	
Looking for work	-26.52(180.84)		
Time-related factors:			
Time flexibility		10.91(79.75)	
Presence of children under 18	138.6(64.55)*	-78.58(229.17)	1.894(58.46)
Utility Interdependence factors:			
Percent of persons below poverty line	-8.029(5.75)	6.586(7.60)	-1.445(3.98)
Sigma(1)	312.8(17.38)***	326.36(14.36)***	318.2(8.43)***
Rho(1,2)	0.248(0.32)	0.057(0.645)	0.106(0.317)

Note: Standard errors are in parentheses.

*p < .05. **p < .01. ***p < .001.

Summary and Conclusion

This study examined the factors affecting volunteer participation and the time volunteered by the elderly using the 1989 Current Population Survey, based on demographic, socio-economic, activity, time-related and the utility interdependence factors. A sample selection model, one of the so-called double hurdle methods, was employed for model estimation.

The results of the probit analysis suggest that elderly volunteers have different characteristics depending on their retirement status. The significant variables for the retired sample were the same for the total group, while fewer and different variables influenced the volunteer participation of the non-retired sample. For the retired and total group, the likelihood of volunteering is positively associated with being

female, residing in the Midwest, having a college or post-college education, having a higher income, being married, home ownership, and looking for work. Larger household size and living in heavily populated areas are inversely related to the likelihood of volunteering. The elderly are more likely to volunteer up to their late sixties, but are likely to decrease their participation at a later stage of aging. Among the non-retired, those who have a higher income, a college or post-college education, a house, a flexible work schedule, and young children under 18 are more likely to volunteer than their counterparts.

The findings of sample selection tobit analysis show that, for the retired elderly, those who have a college education and children under 18 tend to spend more hours in volunteering than those with a high school education and those without young children

under 18. For the total and retired samples, home ownership is negatively related to the time devoted to volunteer work. No significant factors are found for the non-retired.

This study did not examine some important factors such as health status, religion and the poverty level at a community level due to the lack of information in the 1989 CPS data. The cost of time is also needed in a discussion of volunteer work. If the dollar value of various forms of volunteer work could be accurately measured, their economic contributions would be confirmed in an aging society. Hence, future research is recommended to explore the effect of these variables on volunteering. If varied forms of informal services performed in their neighborhoods and towns by the elderly are examined as well as organized volunteerism, future study will provide a better understanding of the elderly volunteering and a more accurate assessment of the productivity of the elderly in the United States.

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Endnotes

1. Graduate student, Consumer Sciences and Retailing, 1262 Matthews Hall, West Lafayette, IN 47907.
2. Assistant Professor, Consumer Sciences and Retailing, 1262 Matthews Hall, West Lafayette, IN 47907.