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Volunteering and depression: the role of psychological and social resources in different age groups

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Abstract

There are a number of reasons why volunteering might yield mental health benefits, especially to older people. Volunteer work improves access to social and psychological resources, which are known to counter negative moods such as depression and anxiety. Analysis of three waves of data from the *Americans' Changing Lives* data set (1986, 1989, 1994) reveals that volunteering does lower depression levels for those over 65, while prolonged exposure to volunteering benefits both populations. Some of the effect of volunteering on depression among the elderly is attributable to the social integration it encourages, but the mediating effect of psychological resources is very small. Volunteering for religious causes is more beneficial for mental health than volunteering for secular causes but, again, the effect is confined to the elderly.

Keywords: USA; Volunteering; Aging; Depression; Elderly; Mental health

In recent years, sociologists have extended attention to unpaid work beyond household labor by beginning to examine other forms of unpaid labor, such as volunteer work. Most of this research has been devoted to identifying exogenous factors that influence rates of engagement in volunteer activities (Janoski & Wilson, 1995; Wilson & Musick, 1997). While this research agenda treats volunteering as having both benefits as well as costs to the volunteer, research on benefits is relatively rare. Nevertheless, a burgeoning literature on the relationship between social integration and physical and mental health suggests very strongly that volunteering might well have beneficial effects for the volunteers as well as the people they are trying to help.

Most people say that helping others makes them feel good (Wuthnow, 1991, p. 87). Volunteers are often rewarded with gratitude and, not infrequently, social recognition and approbation. "Making the world a better place" is an important value for many people, and any time we act in accordance with our values we feel better about ourselves. Some see community work as a civic obligation, and doing one's duty is intrinsically rewarding. Giving to others can provide us with a purpose, a sense of mission, which gives our lives some meaning and structure. Helping others can also build trust between people, creating a sense of security and acceptance for the giver as well as the receiver of the gift. Many acts of benevolence are social: they occur in organizational settings and engage people in social interactions that are usually positive and emotionally warm. On many occasions, acts of benevolence allow us to use personal skills and strengths in which we take pride or allow us to develop these aptitudes and thus enhance our sense of self.

Understandably, volunteer recruiters "often seem eager to prove that volunteering makes people happier and healthier" (Fischer & Schaffer, 1993, p. 185). Nor is it surprising that many volunteers are themselves convinced they have become more self-assured as a result of their work. Some even believe their work has changed their lives (Omoto, Snyder, & Berghuis, 1993, p. 334). However, it is not enough to rely on the testimony of volunteers, because those who have not benefited might have dropped out. Convenience-based samples of volunteers also limit our ability to generalize

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to the population at large. It is preferable to use nationally representative samples to test for the effects of volunteer work on well-being using objective measures, comparing volunteers with non-volunteers.

Looking at the accumulated research findings on volunteering and well-being, it is possible to see a pattern emerging, showing a positive, if modest, relationship between the two (Thoits & Hewitt, 2001; Van Willigen, 2000; Wheeler, Gorey, & Greenblatt, 1998). However, a number of important issues remain unresolved. The first is that of causal attribution. For example, it is unclear whether healthier people are more likely to volunteer or volunteering makes people healthier (Chambré, 1987, p. 41). Although two waves of data can be used to distinguish selection from causation effects (Thoits & Hewitt, 2001) and answer this question, three waves are preferable.

The second issue concerns with the links between the two phenomena. While scientists have long noted an association between social relationships and health, the mechanisms and processes linking them are far from clear (House, Umberson, & Landis, 1988, p. 543). What are the psychological and sociological factors that might help account for the positive effects of volunteering? A third set of issues has to do with the duration of the volunteer work. If a little volunteering is good for you, is a lot even better? Is there a threshold effect of volunteering? Does volunteer work have to become part of one's life before its benefits can become enjoyed? A fourth set of issues concerns the role context in which volunteer work occurs. Volunteering does not take place in a vacuum of social relationships. In some cases it is mediated by the relationships we have to other people, while in others it is constrained by the obligations we have to others. Under some circumstances, volunteer work is part of a larger complex of work obligations, paid and unpaid, while in others it might be a person's only obligation. Finally, we must pay attention to the kind of volunteer work that people undertake to do. What is the "field" in which they choose to contribute their time? Is it one where the work is framed by a larger sense of purpose and meaning which might help overcome the temporary frustrations and disappointments all volunteer work brings? In what follows, we will review the literature on volunteering and well-being with each of these questions in mind.

Social mechanisms

According to Lin, Ye, and Ensel (1999), research on stress and other topics has documented that social structural positions can have an effect on individual levels of well-being. They identify two types of mechanisms that might account for this impact. We can use each of these ideas to link volunteering to well-being.

The first type of mechanism might be called *psychological resources*. The idea here is that structural positions provide psychological resources (e.g., self-esteem, self-efficacy) useful for managing stress (Lin et al., 1999). The theory is that, through volunteering, people become more self-assured, they change their perceptions of themselves and their abilities, they gain in confidence (Midlarsky, 1991). According to this theory, volunteering generates positive cognition and affect and thereby counters negative moods like depression and anxiety. That is, volunteering improves well-being because it increases self-esteem. There is indeed a positive relation between volunteering and self-esteem (Wuthnow, 1991) and low self-esteem is a powerful predictor of sub-clinical depression (Turner, Lloyd, & Roszell, 1999). Omoto et al. (1993) found that after 12 months of working with people with AIDS, volunteers were less lonely and felt better about themselves than they did when they began their work.

The second type of mechanism might be called *social resources*. This idea draws on Durkheim's theory of suicide, from which many sociologists have derived the proposition that psychological well-being is linked to social integration (House et al., 1988; Okun, Stock, Haring, & Witter, 1984; Thoits, 1983; Umberson, Chen, House, & Hopkins, 1996). It refers to the amount of social interaction people have with others. Frequent interaction with a wide range of others increases the chances of finding social support, useful information and helpful social contacts (Lin et al., 1999, p. 345). Social isolation is depressing (Mirowsky & Ross, 1989, p. 141). One reason why volunteering might contribute to mental health is because it increases social integration (Moen, Dempster-McClain, & Williams, 1992).

Volunteers are known to be more socially active than non-volunteers and to have more social contacts with people in their community, regardless of the hours spent volunteering, level of education, number of group memberships, employment status, neighborhood income, church membership and number of children (Wuthnow, 1998, p. 235). In turn, this kind of social engagement has a positive effect on mental health. For example, Rietschlin (1998) finds that participation in voluntary associations has a negative effect on psychological distress. Rietschlin's study is cross-sectional, but a longitudinal study by Lin et al. (1999) confirms that belonging to community and voluntary organizations reduces the likelihood of experiencing depression.

Sustained volunteering and mental health

A recent analysis of women's volunteering over a 10-year period revealed an interesting pattern. On six occasions during that decade, the women were asked whether they had volunteered. Half had never

volunteered. Of the remainder, 17% volunteered only once and a mere 6% had volunteered on all six occasions (Wilson & Musick, 2000). These panel data reveal more clearly than cross-sectional studies the enormous variety in people's level of immersion in volunteer work. Some are entirely uninvolved, others make a virtual career of it, while others are engaged sporadically or move in and out of the volunteer labor force. A variety of structural factors can help determine the level at which a person sustains his or her volunteer work (Wilson & Musick, 1999) but a high level of engagement would appear to indicate that the volunteer role is *salient* to that person (Stryker & Serpe, 1994). Rather than moving in and out of volunteering as social needs and personal circumstances dictate, the person identifies him or herself as one who helps others. She moves from one volunteer activity to another to express and affirm that identity. Research on blood donors gives some support to this hypothesis. Regular blood donors are more likely than those who rarely donate to identify themselves as charitable people and to believe that others regard them as a giving person (Callero, 1985; Piliavin, Evans, & Callero, 1984). For these reasons, we believe it is important to distinguish the effects of volunteering measured at one time from the effects of volunteering over a more prolonged period. The more sustained the volunteering, the less likely the volunteer is to be depressed.

Role context, volunteering and mental health

As a form of unpaid labor, volunteer work is always performed in the context of the other social roles people play, a number of them more obligatory than volunteering. Time for volunteer work has to be found in the spaces between paid work, household chores and caregiving of a more informal but often more pressing kind. Each of these other roles contributes in some way to the individual's sense of well-being. Volunteering might complement or substitute for these effects as far as depression is concerned, or any effect volunteering might have had on mental health is squeezed out by these other factors. One way of framing these changing role contexts is to think of volunteering over the life course (Van Willigen, 2000). As the individual's role-sets change the meaning and significance of volunteer work might also change, altering the effect it has on well-being.

Gerontologists have long been interested in the question of whether social activities such as volunteering have positive effects on the psychological well-being of older people (Chambré, 1987; Fischer & Schaffer, 1993; Hunter & Linn, 1980; Jirovec & Hyduk, 1999; Krause, Herzog, & Baker, 1992; Mannell, 1993; Midlarsky & Kahana, 1994, p. 218; Okun et al., 1984; Wheeler et al., 1998). The question is whether volunteer work is of *special* importance to the mental health of older people. Rarely are the effects of volunteering on the psychological well-being of younger and older populations compared. In one of the few studies to examine life-cycle effects on the relation between volunteering and mental health, Van Willigen (2000) finds that volunteering does indeed have a stronger effect on the life satisfaction of older than younger people.

Why should volunteering be of special benefit to the elderly? One argument is that, in our society, being productive or useful is an important source of self-esteem and identity and that unpaid labor can substitute for the paid work that earlier provided these benefits (Midlarsky, 1991, p. 241). Volunteering can reduce feelings of powerlessness that often accompany the transition to retirement (Fischer, Rapkin, & Rappaport, 1991, p. 262). Okun (1994) believes that volunteering is particularly useful for older people because its productive nature offers a way of gaining social approval as well as improved self-esteem. This argument invokes personal resources as a mechanism. In one of the few studies to compare the effects of volunteering on people of different age ranges Omoto, Snyder, and Martino (2000, p. 189) found that the self-esteem of the older volunteers went up while the self-esteem of the younger and middle volunteers went in the opposite direction—a result explained, perhaps, by the fact that the site of the volunteer work was a hospice.

Another argument concerning the mediating effect of role context invokes social resources as a mechanism. The elderly, it is argued, might experience social withdrawal as the result of retirement and other life changes (Moen, 1995, p. 242). At a stage of our lives when we are losing roles, the chance to acquire a role, in the form of volunteer work, might assume special importance. Chambré (1987, p. 82) also thinks changing role contexts is a reason to expect volunteering to have different effects on older age people. Volunteering among the elderly, she points out, occurs in the context of a different set of obligations than it does among younger people, for whom volunteer work is much more closely tied to demands of work and family. Among the elderly, there is much more scope for choice, and this in turn increases the chances of positive health outcomes (Herzog & House, 1991). Midlarsky and Kahana (1994, p. 38) similarly argue that helping behavior which is not entirely voluntary but is given in response to demand because of the individual's role-set will be less beneficial to the volunteer.

The impact of volunteering sector on mental health

Although sociological research clearly indicates a link between volunteering and mental health, no attempt has been made thus far to differentiate *types* of volunteering when considering its effect on health outcomes. This

makes little sense, considering that volunteer work covers an enormous range of activities. Unfortunately, there are no clear conceptual guidelines as to how to distinguish among the many different kinds of work people do as volunteers. This study takes a speculative step in this direction by distinguishing between secular and church-related volunteering. Our justification for drawing this distinction is as follows. Much volunteering work includes some element of compassion for others or concern for an abstract principle, such as distributive justice. Some of it, however, is an extension of some other social role: the parent volunteers for the PTA, the factory worker volunteers for the union, the home owner volunteers for the neighborhood watch group, the farmer volunteers for the growers' association. These kinds of volunteer work are, relatively speaking, driven less by values and conscience and more by the demands of the social position one occupies. These kinds of activities we would describe as instrumental or secular. At the other end of the spectrum, volunteer work is guided by ultimate values in light of which helping others is a moral duty imposed by one's beliefs and supported by one's faith community. Wuthnow (1995, p. 269) found that young people who volunteered through their churches were less likely than young people who volunteered through secular organizations to offer instrumental reasons for their behavior, such as expecting others to help them in return, making career contacts, developing job opportunities, or using their volunteering to improve their resume. In short, church-related volunteering is more likely to be undertaken for its own sake, and intrinsic activities tend to be more rewarding.

The second reason we believe that church-related volunteering is more likely to yield benefits is the social context in which it is likely to take place. Fischer and Schaffer (1993, p. 124) comment that the family metaphor is "particularly appropriate" for volunteer organizations because of its connotations of caring and because of the personal attachments that form between volunteers and paid staff. While this is true to some extent of all non-profit agencies, it is particularly so in the case of religious congregations. They are expected to represent, and act out, the community's moral order (Ammerman, 1997, p. 367). Volunteering in the context of a religious congregation is not only volunteering within a bureaucracy but within a family and a moral community as well. Thus we propose that church-related volunteering will have more positive effects on well-being than secular volunteering.

Hypotheses and analytical design

To assess the arguments outlined above, the following hypotheses are suggested:

Hypothesis 1. Psychological resources mediate the negative effect of volunteering on depression.

Hypothesis 2. Social resources mediate the negative effect of volunteering on depression.

Hypothesis 3. The longer a person volunteers the fewer depressive symptoms that person has.

Hypothesis 4. The negative effect of volunteering on depression is stronger among the elderly.

Hypothesis 5. The effect of religious volunteering on depression is stronger than the effect of secular volunteering.

Social mechanisms are best revealed by three waves of data, where the mediating variables can be measured in between the independent and dependent variables. Three waves of data are also the minimum required for testing the hypothesis of sustained volunteering. To test hypotheses 1, 2, 4 and 5 we regressed Time 3 level of depressive symptoms on religious and secular volunteering measured at Time 1, controlling for level of depression at Time 1. This strategy allowed us to assess the effect of volunteering on changes in depression over time (Finkel, 1995). By estimating separate models for those aged under 65 and those aged 65 or more, we tested Hypothesis 4. We tested Hypothesis 1 on the mediating effect of psychological resources in the same way, using a measure of self-esteem taken at Time 2. We tested Hypothesis 2 on the mediating effect of social resources by using a variable measuring attendance at organizational meetings and a variable measuring informal social interaction. These variables were measured at Time 2. Once again, separate models for the two different age groups were estimated. We compared the effects on Time 3 depressive symptoms of volunteering for one, two and three waves, thus testing for Hypothesis 3. In the last model no distinction between types of volunteering was possible because many respondents switched from one volunteer field to another.

In all models a number of controls were used. These have to do with factors that are related to both volunteering and depression. Since our focus was the possibility that religious and secular volunteering have different effects on depression, we controlled for level of church attendance to rule out the possibility that any stronger positive effects of religious volunteering might be attributable to religiosity: there is a strong relation between being active in a church and volunteering for church-related activities (Caro & Bass, 1995, p. 81).

Methods

Data

Data for the study came from the *Americans' Changing Lives* (ACL) study (House, 1995). The data were collected by the Survey Research Center at the University of Michigan on a stratified, multi-stage, area probability sample of non-institutionalized persons aged 25 and over and living in the coterminous United States. African Americans and persons aged 60 and over were sampled at twice the rate of non-African Americans and persons under age 60. Initial face-to-face interviews lasting 86 min on average were completed in the homes of 3617 respondents between May and October of 1986. The response rate was 70% among sampled households and 68% among sampled individuals. This study used data from the first wave as well as two additional waves collected in 1989 ($n = 2867$) and 1994 ($n = 2348$). The 1989 wave was collected using face-to-face interviews, but the 1994 wave relied on telephone interviews. The data were weighted in all analyses to adjust for variations in probabilities of selection and in response rates.

As is true for most prospective data sets, the ACL sample had significant attrition over time. By the third wave, 35% of the original sample were counted as attrition, 19% of which were due to death. Numerous studies of mortality, including those using the ACL data (e.g., Lantz et al., 1998; Musick, Herzog, & House, 1999) have shown that mortality is patterned by certain factors (e.g., income, sex). Other forms of attrition are not random. For these reasons, analyses that incorporate multiple waves of data without taking account of the selection issue may be biasing their regression estimates. In preliminary analyses, we dealt with this attrition problem using Heckman two-step maximum likelihood estimation models (see Breen, 1996; Winship & Mare, 1992). Having conducted these analyses and compared their results to those generated by ordinary least squares regression, we found very few differences. The small differences that did exist were not enough to warrant a different interpretation of the modeled effects. In the interest of simplicity in modeling, we have opted in these analyses to use ordinary least squares regression. Estimates using the Heckman selection models are available from the authors upon request.

Missing cases in the first wave were handled in several ways. First, missing cases on single item indicators were imputed with the sample mean. If the variable was dichotomous, the modal value was assigned. Second, indices with missing cases were assigned the score of the index for the remaining items if they totaled at least half of the items in the index. Missing data handled in these two ways comprised no more than 1.2% for any given variable. The level of missing data for income, however, was somewhat higher (8.6%). For this reason, missing values on income were imputed based on a prediction equation. Sensitivity analyses indicated no substantial differences in the effects of income based on whether imputed values were included. Missing data on the third wave outcome were not imputed.

Measurement

Depression (T1 and T3)

We measured depression using the 11-item version of the Center for Epidemiologic Studies Depression scale (Radloff, 1977). The scale has been used in numerous studies to assess levels of depressive symptoms and is known to be both a reliable and valid indicator of that outcome (Ensel, 1986). The index was the standardized mean of the 11 component items; higher scores indicate more depressive symptoms.

Volunteering (T1)

Respondents to the ACL were asked if they had done any volunteer work in connection within the following areas: (a) church, synagogue or other religious organization; (b) school or educational organization; (c) political group or labor union; (d) senior citizen group or related organization; and (e) other national or local organization. For each area, respondents were asked whether they had volunteered for an organization within that area. Those who reported volunteering for two or more areas could be involved in both the secular and religious sectors (e.g., a church group and an educational organization). We therefore coded as secular all those respondents who, in the first wave, mentioned *only* secular activities (23% of the total sample) and as religious those who mentioned either church-related activities alone or who gave mixed responses (25% of the total sample). The result is two dummy variables, one related to any volunteering for the church (with or without secular volunteering) and the other related to volunteering for solely secular activities. The reference category is no volunteering.

Sustained volunteering (T1, T2, and T3)

The volunteering questions noted above were asked in all three waves. In constructing the measure of sustained volunteering we used only information about whether respondents volunteered or not. We summed the number of periods for which respondents mentioned volunteering and then created three dichotomous variables, each indicating a different number of periods (i.e., one, two or three periods). The reference category for these three variables was no volunteering in any wave.

Mediating variables

Social resources (T2)

Social resources were measured using an item (*meeting attendance*) in which respondents were asked how often they attended meetings of groups or clubs from (1) never to (6) more than once a week, and an item (*informal social interaction*) in which respondents were asked (a) how many times in a typical week they talk on the telephone with friends or relatives, and (b) how often they get together with friends or relatives. Responses for the first item ranged from (1) never to (6) more than once a day, and for the second item from (1) never to (6) more than once a week.

Psychological resources (T2)

Psychological resources were measured using an index of *self-esteem* ($\alpha = 0.58$) consisting of three items: (a) I take a positive attitude toward myself; (b) at times I think I am no good at all; (c) all in all, I'm inclined to feel I am a failure. Responses to the questions ranged from (1) strongly agree to (4) strongly disagree. The first item was reverse coded so that higher scores on the index indicate more self-esteem.

Control variables

Health conditions (T1)

We included two health variables as control factors. Both address the physical conditions of respondents and so can be tied to the ability of respondents to do volunteer work; they are also likely to affect mental health outcomes, such as depression (George, 1989). The first physical health measure assessed *functional impairment* and was coded from 1 (confinement to a bed or chair all day) to 4 (no functional impairment). Because of the negative skew, the variable was dichotomized such that 0 indicated no impairment and 1 indicated some impairment. The second measure was a sum of *life threatening conditions* reported by the respondent. Possible conditions included heart attack, stroke, lung disease, diabetes, and cancer.

Physical activity (T1)

Respondents rated how often they (a) worked in their garden or yard; (b) engaged in active sports or exercise; and (c) took walks, from (1) never to (4) often. The index was constructed by taking the standardized mean of the items.

Church attendance (T1)

Respondents were asked how often they attended religious services, from (1) never to (6) more than once a week. Sociodemographic variables included: *Gender* (*T1*) 0 = male; 1 = female, *Race* (*T1*) 0 = non-black; 1 = black, *Age* (*T1*) in years, range 24–90, *Education* (*T1*) in years, range 0–17, *Income* (*T1*) 10 categories, range <$5000–$80,000+, *Marital status* (*T1*) 0 = not married; 1 = married. *Employment status* (*T1*) 0 = in labor force; 1 = not in labor force.

Results

Table 1 presents the descriptive statistics for the entire sample by type of volunteering and by role context using age as a proxy indicator. To simplify tables, variability estimates are omitted but available from the authors upon request. According to the means in the table, those who volunteered for either type in wave 1 had fewer depressive symptoms in wave 3, 1994, than those who did not volunteer; this effect was stronger for religious volunteering. Older and younger respondents reported similar levels of depression in 1994, but older respondents reported fewer symptoms in wave 1, 1986. Older people were slightly more likely to volunteer for church-related activities but less likely to volunteer for secular causes. This is compatible with other research on volunteering, showing that older people devote more of their volunteering to church-related causes than younger people (Caro & Bass, 1995, p. 75). The sustained volunteering variable shows that volunteers for church related activities in the first wave were much more likely than volunteers for secular causes to volunteer across all three waves. Younger people were more likely than older people to volunteer once or twice but there were no age differences in volunteering across all three waves. As far as the mediating variables are concerned, Table 1 shows that, at the zero order level, volunteers for both religious and secular activities had higher self-esteem, attended meetings more frequently, and had more informal social interaction than non-volunteers.

The results of testing hypotheses 1, 2, 4 and 5 are shown in Table 2. Hypothesis 1 states that self-esteem mediates the negative effect of volunteering on depression. The first panel of Table 2 shows the effects of volunteering on depression adjusted only for the control factors. According to these figures, volunteering for both religious and secular groups had a negative effect on depression, but only for the 65+ group. Panel 2 (mediating effects I) shows the impact of self-esteem, which has a negative effect on depression (younger: $b = -0.15$, $p < 0.001$; older: $b = -0.11$, $p < 0.01$); that is, higher self-esteem was associated with fewer depressive symptoms for both age groups. However, in the older age group, inclusion of self-esteem appears to have had little effect on the association between volunteering and depression in that the volunteering coefficients were not substantially reduced.

Hypothesis 2 states that the two social resources, meeting attendance and informal interaction, mediate

Table 1
Ranges and means of variables by volunteering type and age

	Range	Mean	Means by wave 1 volunteering[a]			Means by age[b]	
			No volunteer	Any vol. for church	Vol. secular only	Age<65	Age 65+
Depression							
Wave 3	−1.15–4.74	−0.23	−0.13	−0.39***	−0.28**	−0.24	−0.19
Wave 1	−1.18–4.47	−0.03	0.07	−0.21***	−0.04*	−0.00	−0.18**
Volunteer type							
Any vol. for church	0–1	0.25	—	—	—	0.24	0.29†
Vol. for secular only	0–1	0.23	—	—	—	0.24	0.15***
Sustained volunteering							
1 wave	0–1	0.23	0.31	0.09***	0.21***	0.24	0.16**
2 waves	0–1	0.21	0.14	0.23***	0.34***	0.21	0.15**
3 waves	0–1	0.27	0.00	0.68***	0.45***	0.28	0.26
Mediating factors							
T2 self-esteem	−4.33–1.15	0.09	0.04	0.13*	0.15*	0.08	0.12
T2 meeting attendance	1–6	2.90	2.35	3.93***	3.04***	2.89	3.01
T2 informal interaction	−3.07–1.32	0.06	−0.08	0.19***	0.21***	0.04	0.16*
Control factors							
Female	0–1	0.52	0.50	0.57**	0.54	0.50	0.67***
Black	0–1	0.10	0.11	0.12	0.06***	0.10	0.08
Age	24–90	44.38	45.00	46.04	41.17***	40.53	70.73***
Education	0–17	12.71	12.07	13.18***	13.66***	12.92	11.25***
Income	1–10	5.64	5.12	6.07***	6.32***	5.87	4.05***
Not married	0–1	0.28	0.33	0.19***	0.27**	0.26	0.40***
Unemployed	0–1	0.27	0.31	0.27*	0.20***	0.20	0.78***
Impairment	0–1	0.10	0.13	0.08***	0.06***	0.08	0.28***
Health conditions	0–3	0.14	0.17	0.11**	0.12*	0.11	0.34***
Physical activity	−2.47–1.50	0.10	−0.02	0.27***	0.16***	0.13	−0.15***
Rel. service attendance	1–6	3.30	2.82	4.96***	2.60**	3.23	3.74***

[a] Asterisks indicate a significant difference ($p<0.05$) between mean scores for that volunteering group and no volunteering.
[b] Asterisks indicate significance differences between age groups.
†$p<0.10$; *$p<0.05$; **$p<0.01$; ***$p<0.001$.

the association between volunteering and depression. The third panel of Table 2 reports the results of this test. According to that panel, only meeting attendance had a significant negative effect on depression scores (younger: $b=-0.04$, $p<0.01$; older: $b=-0.06$, $p<0.01$); that is, for both age groups, higher levels of attendance were associated with fewer depressive symptoms. However, inclusion of the social resources factors only moderately reduced the effect of volunteering on depression. The final panel displays the effects of volunteering adjusted for both self-esteem and social resources. According to these results, volunteering remained a significant negative predictor of depression among older adults even after controlling for both sets of mediating factors.

The fourth hypothesis states that the association between volunteering and depression would be strongest in the older age group. This hypothesis receives support in Table 2, which consistently shows that the association between volunteering and depression was significantly stronger for older adults.

The fifth hypothesis proposes that the effects of volunteering should vary by type of activity. The full effects model in Table 2 enables us to compare the effects of secular and church-related volunteering with all the other variables in the model. The coefficient for church-related volunteering being larger, we can conclude that its effect on well-being was more beneficial, at least for people in the older age group.

Table 3 reports the effects of sustained volunteering on depression. Here the distinction between different types of volunteering was dropped and three dummy variables were used to estimate the effects of volunteering for one, two or three waves where the contrast category was no volunteering at all. Note that we used the wave 1 equivalents of the self-esteem and social resource variables as controls in this model. We made

Table 2
Estimated net effects of volunteering type and other controls on T3 depression (ordinary least squares regression estimates)[a]

	Main effects		Mediating effects-I		Mediating effects-II		Full effects	
	Age < 65	Age ⩾ 65	Age < 65	Age ⩾ 65	Age < 65	Age ⩾ 65	Age < 65	Age ⩾ 65
Volunteering								
Any vol. for church	−0.02	−0.39***[b]	−0.02	−0.38***[b]	0.02	−0.32***[b]	0.01	−0.31***[b]
Vol. for secular only	0.05	−0.29**[b]	0.05	−0.27**[b]	0.08	−0.22*[b]	0.07	−0.21*[b]
Psychological resources								
T2 self-esteem	—	—	−0.15***	−0.11**	—	—	−0.14***	−0.11**
Social resources								
T2 meeting attendance	—	—	—	—	−0.04**	−0.06**	−0.04**	−0.06**
T2 informal social interaction	—	—	—	—	−0.02	−0.04	−0.01	−0.01
Intercept	−0.45	−0.74	−0.42	−0.77	0.47	−0.87	0.44	−0.87
Adjusted R^2	0.30	0.27	0.31	0.28	0.30	0.28	0.32	0.29

[a] Unstandardized estimates are shown. All models are adjusted for T1 depression sex, race, age, education, income, employment status, marital status, functional impairment, chronic health conditions, physical activity, and religious service attendance.

[b] Indicates significant differences at $p<0.05$ between age groups. Coefficient difference statistics are calculated using the following formula:

$$\frac{b_1 - b_2}{[(\mathrm{SE}_1)^2 + (\mathrm{SE}_2)^2]^{1/2}}.$$

$^{\dagger}p<0.10$; $*p<0.05$;$**p<0.01$; $***p<0.001$.

Table 3
Estimated net effects of sustained volunteering and controls on T3 depression (ordinary least squares regression estimates)[a]

	Main effects	
	Age < 65	Age ⩾ 65
Sustained volunteering		
Volunteer 1 wave	−0.10	−0.05
Volunteer 2 waves	0.02	−0.32**[b]
Volunteer 3 waves	−0.11[†]	−0.42***[b]
Psychological resources		
T1 self-esteem	−0.07**	−0.01
Social resources		
T1 meeting attendance	0.02	0.01
T1 informal social interaction	−0.02	−0.01
Intercept	0.45	−0.49
Adjusted R^2	0.30	0.27

[a] Unstandardized estimates are shown. All models are adjusted for T1 depression, sex, race, age, education, income, employment status, marital status, functional impairment, chronic health conditions, physical activity, and religious service attendance.

[b] Indicates significant differences between age groups.

$^{\dagger}p<0.10$; $*p<0.05$; $**p<0.01$; $***p<0.001$.

this change because the wave 2 mediating effects hypothesis is unworkable given the longitudinal nature of the volunteering variable. For example, we cannot propose that volunteering in wave 3 "causes" the mediators measured in wave 2 because of the reverse temporal ordering.

Although the previous analyses failed to find any effect of volunteering on depression for the younger people in the sample, when volunteering was viewed cumulatively there was a small negative association significant at the $p<0.10$ level. Even for younger people, volunteering was associated with fewer depressive symptoms *if it was sustained over a longer period of time*. The effects were much stronger among the older population, however, and became more positive the longer the respondent has volunteered. Considering that the mean age for the 65 and over group in 1986 was 70 years and that volunteer work was measured over an 8-year period, these results speak forcefully to the benefits of a commitment to volunteering among elderly people as far as mental health is concerned.

It is possible that the results for the cumulative model are actually indicating that more recent volunteering is more beneficial than volunteering that has occurred 8 years before. In Fig. 1 we show that this possibility can be ruled out. We calculated adjusted mean levels of third

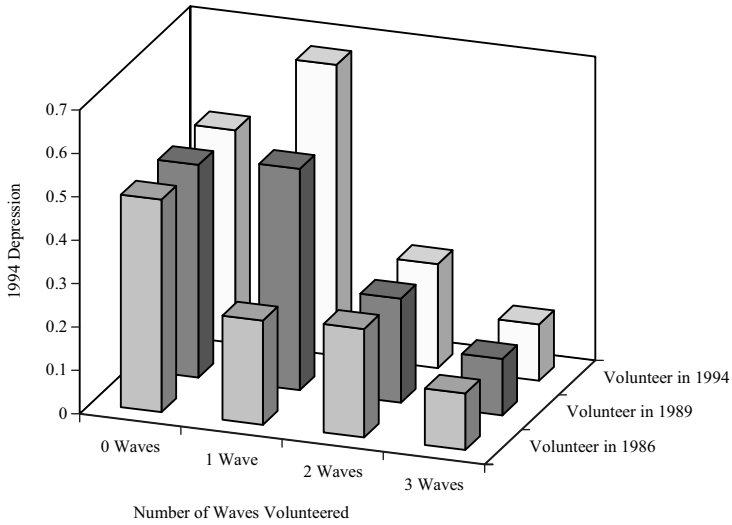

Fig. 1. Adjusted mean levels of wave 3 depression by volunteering.

wave depression by number of waves volunteered and year in which respondents volunteered. Each bar in Fig. 1 represents the mean level of depression for people volunteering in a given year and over a given period. According to the figure, we see that people who did not volunteer had some of the highest mean levels of depression. In contrast, those who volunteered for all three waves exhibited the fewest depression symptoms. If the recency effect were present, we should see roughly equivalent depression means for the 3 patterns of volunteering among those who volunteered in the third wave. Respondents who volunteered in only one wave but did so in 1994 would have the same levels of depression as those who volunteered in all three waves, and by definition 1994. However, this is far from the case. Respondents who volunteered only in 1994 reported the highest levels of depression. Those who volunteered in 1992 but also in another wave also reported higher levels of depression than the three-wave volunteers. According to these figures, we have little justification in believing that recency explains the strong effect of three-wave volunteering.

Discussion and conclusion

We hypothesized that volunteering would enhance well-being because it boosts self-esteem and builds social resources. We found no association between volunteering and depression in the younger subsample; only for the 65+ age group did volunteering have a negative effect on depression. This effect of volunteering did not change upon the inclusion of self-esteem, indicating that the latter was not effective in mediating the volunteering–depression relationship. Because we used only one measure of psychological resources, we considered the possibility that other measures of self-concept might be better indicators of psychological resources. Two other psychological measures (i.e., sense of mastery and a sense of fatalism) were available in the ACL data set, but neither did a better job of connecting volunteering and depression. Nevertheless, it would be unwise in the face of contrary evidence from other studies to conclude from this study that volunteering does not modify our sense of self in some positive way.

The second set of theories concerning mechanisms point to the way in which volunteering draws people into social interaction which in turn improves mental health. Volunteers of all ages did attend more meetings than non-volunteers and did report higher levels of informal social interaction. But only attendance at meetings helped reduce the number of depressive symptoms reported, and only among the elderly. It is worth underlining that formal but not informal social interaction improves mental health. If volunteering improves access to social support, information, and secondary ties, its beneficial effects will be felt.

Our results showing that more sustained volunteering is associated with better mental health can be interpreted in terms of role salience. People for whom the role of the volunteer is salient do not cease volunteering simply because an opportunity dries up or the work turns unpleasant. They will seek out another opportunity to provide help. Furthermore, with sustained volunteering, a switch occurs from more external to internal motivation, which is more rewarding (Fischer & Schaffer, 1993). Without independent measures of role salience, this interpretation can only be tentative. However, these

results suggest that further attention should be paid to this more dynamic aspect of volunteer work, perhaps conceptualizing and measuring the idea of attachment to volunteer work in the same way that sociologists think about attachment to jobs.

The fact that volunteering seems to be beneficial for the mental health of the elderly but not younger population lends support to the argument that volunteer work is elevated in significance among populations whose other roles have been diminished. One problem with this conclusion is that important forms of role loss are controlled in our analyses. Older people are not getting more out of volunteering because it is a functional substitute for work roles or spousal roles. We determined this by investigating the possibility that employment status and marital status might moderate the effect of volunteering on depression and that this might be more so for the younger than the older population; however, this turned out not to be the case.

How is the difference to be explained if role loss is not the cause? First, older people are more likely to volunteer for church-related work and, as we see, this kind of volunteering provides more benefits. Second, as suggested by Herzog and House (1991), older volunteers are simply more in control of their "acts of benevolence" than younger people, many of whom see volunteer work as simply unpaid labor tantamount to a social obligation. A modification of social activity theory is relevant: only if the activity is an expression of individual choice do benefits accrue (Midlarsky & Kahana, 1994, p. 54). The theory of role salience might also throw light on this difference. Perhaps the volunteer role is indeed more salient to older people. They certainly have more positive attitudes toward volunteering than younger people (Midlarsky & Kahana, 1994, p. 135). A final possibility is that older people have different reasons for volunteering than younger people and these reasons are linked to mental health consequences. Surveys show that older people are less likely than younger people to be motivated to volunteer by material rewards for themselves or their families or by some prospect of gaining work experience or job skills (Fischer & Schaffer, 1993, p. 49). Since these are extrinsic rewards, we would expect them to be less efficacious with respect to relieving depression.

The distinction between church-related and secular volunteering proved to be useful because church-related volunteering was association with a greater change in depressive symptoms than was secular volunteering. While there might indeed be reasons for thinking that religiously inspired volunteering is more "empowering," in a psychological sense, we focus on the differences in the organizational context in which religious volunteering occurs. Fischer and Schaffer (1993, p. 124) have argued that the family metaphor is an effective one for volunteer organizations because of its connotations of caring and because of the personal attachments that often form among volunteers and between volunteers and paid staff. Religious congregations, as the organizational basis of volunteer work, help reinforce the value of caring better than secular organizations because of the way social relationships are defined within them. The more value attributed to the caring role, the more clearly institutionalized that role is, and the more rewarded it is within the community, the greater the individual benefits to be derived from it. It is worth noting, from Table 1, that the proportion of those who volunteered over three waves is much higher among those who were volunteering in a church-related context in the first wave than those who were volunteering in secular context. Religious volunteers would appear to be more committed to volunteering as part of their life (Wilson & Musick, 1999, p. 268). They benefit from the direct effect of the context in which they do their volunteering and from the fact that, because they are volunteering in that context, they will volunteer for a longer period of time.

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