positive about age
practical about life

The impact of volunteering on well-being in later life

A report to WRVS

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May 2012

Making Britain a great place to grow old

Contents

Introduction

This report describes the rationale and methods for, and findings and conclusions from, a study examining the relationship between volunteering and well-being in later life. The overall aim of this study was to examine whether volunteering improves well-being in later life. Specific objectives were to:

1. Map the characteristics of volunteers in later life;
2. Examine the relationship between volunteering and changes in well-being over time and identify the extent to which any relationship could be causal;
3. To understand the influence of contextual factors on the relationship between volunteering and well-being in later life.

Data from the English Longitudinal Study of Ageing are used to address these objectives.

Background

The UK population is rapidly ageing, largely as a result of increases in life expectancy, and with that comes both opportunities and challenges. Challenges are largely centred around how to provide for the potentially increasing number of older people who are, to a greater or lesser extent, dependent on services. The opportunity comes from the increasing number of healthy and active older people who can contribute to society in a number of ways, including through volunteering. Life post-retirement and post-raising children might increase the opportunity for volunteering for many, even if reductions in health might decrease the ability to engage in voluntary work.

The potential of increasing engagement in voluntary activities in later life connects with contemporary policy debates. The promotion of volunteering has been a priority for government for some time, in the expectation that increasing levels of volunteering could make significant contributions to meeting social needs (Rochester 2006). Increasing the level of volunteering was seen as a key challenge for the Labour Government in its final years in office, reflected in its "V" initiative for young volunteering and the establishment of Volunteering England. Similarly the current Coalition Government has emphasised the importance of volunteering through its Big Society proposals.

In addition to the benefits of volunteering to society, there is a strong possibility that volunteering has a positive impact on the health and well-being of those who engage in it. This is a topic that has been studied to only a limited extent, and hardly at all in the UK. A report summarising an extensive review of the published academic literature of the relationship between volunteering and health, which was conducted on behalf of Volunteering England, identified only 43 papers that examined the health effects of volunteering (the remaining papers they included in their review examined the impact of volunteering on the recipients of the activity) (Casiday *et al*. 2008), of which only twenty-seven were quantitative investigations, necessary to estimate of the significance and size of associations. All of these studies were observational rather than experimental, seventeen were longitudinal (based on nine surveys), so were able to investigate changes in health and well-being for volunteers compared with non-volunteers, with the remaining ten using cross-sectional designs. Despite the small number of studies and their variable quality, the authors of the review were able to conclude that the studies they had reviewed show an 'overwhelmingly' positive impact of volunteering on health in almost every case. The health outcomes the papers they review examined included a range of classic outcomes directly relating to health, such as: mortality, self-rated health, activities of daily living, and frequency of hospitalisation. The review also included papers relating to factors that might influence health, such as: family functioning, social support and interaction, self-efficacy and the adoption of healthy lifestyles. Of more direct relevance to the focus of this report is that the review included papers that focussed on markers of well-being, such as: life satisfaction, depression, psychological distress, burnout, quality of life and self esteem. In relation to the later group, the only study included in the review that suggested a negative effect of volunteering on well-being compared volunteers with paid workers in relation to 'caregiver satisfaction' rather than a broader well-being measure, and was cross-sectional in design (Ferrari *et al*. 2007).

Another relevant finding to emerge from this review was that the relationship between volunteering and health was greater for older people than younger people (Casiday *et al*. 2008). For example, Li and Ferraro (2006) compared those aged 40-59 with those aged 60 and older and found a positive relationship between volunteering and changes in mental health and physical functioning for the older group, but not the younger group. And Van Willigen (2000) showed that volunteers aged 60 and older experienced greater increases in life satisfaction and improvements in perceived health as a result of the time they spent volunteering than younger volunteers, although the effects were significant for both groups.

The review also suggested the possibility of 'dose' effects, with both an increasing amount of time spent volunteering and a greater number of organisations involved in associated with better levels of health in some, but not all, of the studies included in the review (Casiday *et al*. 2008). Since that review there have been a small number of additional papers published. Borgonovi (2008) also showed that voluntary work is associated with better self-assessed health and higher levels of happiness and Meier and Stutzer (2008) showed that volunteering led to increased life satisfaction in a longitudinal study in Germany.

However, Casiday *et al* (2008) noted that the majority of the papers their review covered were based on data from the United States, and they identified the need for further research in the UK. This was particularly the case for the longitudinal studies, all of which were conducted in the US. While, of the cross-sectional studies only one had been conducted in the UK (a small study of volunteers working in a hospice compared with paid-workers in a hospice and other NHS professionals providing palliative care), with five based on data from the US and four using data from elsewhere.

Why volunteering might improve health and well-being remains uncertain, but there are a number of possibilities. It is likely that volunteering improves the employability of volunteers, which provides engagement in a socially meaningful role and, in the medium to long term, might lead to better standards of living, both of which could positively impact on health and well-being. In addition, volunteering might promote social integration, enhance the social networks of volunteers and increase their access to social support. Finally, engaging in volunteering might directly provide a social role that gives meaning and purpose in life. Indeed, given their altruistic nature, volunteering roles may be more valued than other roles, both by the individual undertaking the role and by those she/he interacts with. Engagement in socially valued roles is likely to enhance identity and self-esteem positively, providing a sense of worth and status.

Given these possibilities it is reasonable to expect that the benefits of volunteering extend to older people in the UK. In fact, in the case of older people who are post-paid employment and post-raising children, an engagement in volunteering may be particularly important in providing a route, or opportunity, to remain engaged in socially meaningful and valued roles. Retirement has historically been perceived as linked with the adverse effects of a loss of financial stability, sense of purpose and social activity derived from employment (Moen 1996). Indeed, in the 1940s Parson identified the question of the 'roleless role' of the retired person (Parsons 1942), and in the 1960s Cummin and Henry focused on the need for social and psychological adjustment of the older person to post-work life using 'disengagement' theory (Cummin and

Henry 1961). However, Laslett (1996) and others (Gilleard and Higgs 2000) have identified the potential transformation of retirement into a period of health, activity and cultural engagement, a period of undertaking the self-enriching activities that has been labeled the 'Third Age', although the experience of growing older is not, of course, homogenous and there are inequalities in accessing the opportunities represented by the Third Age (Higgs and Nazroo 2010, Scherger *et al*. 2011, Hyde *et al*. 2004).

The notion of a Third Age is defined, in part, by participation in social activities. Many studies have shown that participation in social activities is associated with lower levels of disability (Mendes de Leon *et al*. 2003, Menec 2003), mortality (Glass *et al*. 1999, Lennartsson and Silverstein 2001, Menec 2003) and increased well-being in later life (Borgonovi 2008, Luoh and Herzog 2002, Morrow-Howell *et al*. 2003). And participation in social activities is likely to be most salient in the post-retirement age period when people tend to be less involved with the main life activities of paid employment and childrearing. For example, it has been suggested that volunteering is important in helping people manage the transition from paid work into retirement (Davis Smith and Gay 2005) and that for older people volunteering provides a sense of belonging and a reason for feeling useful with consequent positive impacts on self-confidence and self-esteem (Gale 2006). The *Helping Out* survey provided some evidence to support these possibilities (Low *et al*. 2007). For example, volunteers aged 65 or older compared with those aged 55-64 were more likely to say that volunteering is important because it helps them meet people (91 versus 84 percent), helps them get 'out of myself' (82 versus 57 per cent), helps them feel needed (76 versus 63 per cent), gives a position in the community (40 versus 25 per cent), and gives a sense of personal achievement (85 versus 79 per cent) (Low *et al*. 2007).

Despite this evidence on the positive impact of being engaged in volunteering, attention should also be paid to its potential negative impacts on well-being, however socially meaningful it may be. Here attention has largely been placed on involvement in multiple roles, with the risk of 'role-strain', not having the capacity to cope with competing demands on one's resources (time, energy, emotion, etc.). For the older population, and for volunteering (which, by its very nature, involves the potential for a less formal commitment to involvement in the activity), this may be less of an issue. More relevant may be the quality of the voluntary activity involved in, particularly the extent to which the volunteer has autonomy, or control, over his/her activity, and the extent to which she/he feels adequately appreciated for the work done.

To examine this some studies have examined the implications of the possibility that engagement in socially productive activities, such as volunteering, is based on the societal norm of reciprocity (Gouldner 1960), in which the effort of doing the activity is made in anticipation of an equivalent reward that reflects the value of the effort involved (Siegrist *et al*. 2004). The proposition is that when there is an imbalance between the rewards received in relation to the effort expended, the norm of reciprocity has been broken, and that this elicits strong negative emotions of injustice that influence well-being and health. There is good evidence to support this in relation to employment (for example, Chandola *et al*. 2005, Siegrist 2005, Marmot *et al*. 2006 and Pikhart *et al*. 2004). However, only two studies have examined the relevance of reciprocity in relation to involvement in social activities in later life. Both suggest that it is important here as well, finding that participation in socially productive activities was associated with well-being, but that this relationship varied according to the reciprocal nature of the activity (Wahrendorf *et al*. 2006,

McMunn *et al*. 2009). Voluntary work was included among the socially productive activities these papers considered. Wahrendorf *et al*. (2006) examined the relationship between volunteering, perceived reciprocity, and quality of life and depression in study of older people in mainland Europe. They found that volunteers who reported being appreciated had better quality of life and less depression than non-volunteers, while volunteers who reported no appreciation did not (Wahrendorf *et al*. 2006). McMunn *et al*. (2009) showed that while participation in volunteering was associated with increased quality of life and life satisfaction and decreased likelihood of being depressed, the effects on life satisfaction and quality of life (but not depression) were different for volunteers who did and did not feel appreciated for their volunteering. Those who felt appreciated had higher quality of life and life satisfaction scores than non-volunteers, which was not the case for those who did not feel appreciated (McMunn *et al*. 2009).

Analytical approach

As described earlier, this study set out to examine the relationship between volunteering and well-being in later life, using data from the English Longitudinal Study of Ageing. The discussion of existing evidence raises a number of issues that need to be considered in the analysis we present.

Most important is how to identify causal relationships in observational data. As described above many of the studies that have been conducted in this field suffer from one, or both, of two important drawbacks: they rely on small scale studies of a particular context and/or are cross-sectional in nature. Cross-sectional work cannot convincingly identify causal relationships. Although well-being may be correlated with engaging in volunteering, it may be that those with greater well-being are more likely to engage, or that some other factor, such as physical health, is driving the correlation. Consequently, the association we observe might well be a selection effect, those with greater well-being being more likely to be in the group who volunteer, rather than volunteering leading to improvements in well-being. One way to address this problem of identifying causality is to conduct experimental research, to randomly allocate individuals into volunteering and non-volunteering roles and observe the relative impact on their well-being. However, such an approach is often impractical and the experiences of those involved are often not reflective of the 'real life' experiences of volunteers and non-volunteers. An alternative is to conduct longitudinal observational studies, where changes in the well-being of volunteers and non-volunteers are observed over time and compared. Such approaches still face the problem of volunteers having different characteristics to non-volunteers, but multivariate analytical techniques can be used to adjust for differences between these groups in factors such as age, health and economic position. This is the approach to analysis that will be used here, although it is worth noting that this might lead to a conservative estimate of the impact of volunteering on well-being. Longitudinal analysis examines the extent to which a change in the outcome (well-being) between two points of time can be predicted by the value of the causal variable (volunteering) at the first point in time. This leads to a problem of possible over-adjustment for selection effects; because the analysis is on *changes* in levels of well-being it ignores causal associations that have occurred at, or prior to, the first time point.

Causality can also more convincingly be identified if we observe dose effects (Bradford-Hill 1965). So if levels of well-being correlate not only with volunteering, but do so in proportion to the time spent volunteering and number of volunteering activities engaged in we have stronger evidence to support a causal interpretation of the observed association. Consequently the analysis presented will examine such dose effects. If the relationship between volunteering and well-being is causal, we might also expect the benefit to stop once volunteering is stopped. Ideally we would examine this by examining the correlation between trajectories of volunteering and well-being over time. A more straightforward approach, though, is to see what happens when volunteers stop volunteering, which is the approach adopted here. Finally, in terms of identifying causal effects, the evidence suggests that we should find differences between reciprocated and non-reciprocated volunteering. The analysis conducted here examines this in relation to feeling appreciated for the effort put into volunteering and feeling obliged to volunteer.

So the analysis presented in the results section of this report does the following:

1. Maps the characteristics of volunteers in later life;
2. Examines the relationship between volunteering and changes in well-being over time;
3. Explores the extent to which any identified relationship can be explained by differences in the demographic, economic and health characteristics of volunteers and non-volunteers;
4. Explores whether role overload/role strain impacts on the well-being of volunteers by taking account of other roles engaged in: paid work and caring;
5. Examines whether the relationship between change in well-being and volunteering relates to perceived appreciation for the effort involved;
6. Examines whether any positive impact of volunteering on well-being ends when individuals stop volunteering;
7. Explores whether type of volunteering, number of volunteering activities engaged in, and time spent volunteering relate to level of well-being;
8. Examines whether the cross-sectional relationship between volunteering and well-being relates to feeling obliged to volunteer and feeling appreciated for the effort involved.

Methods

Data and sample

The data used in this analysis are drawn from waves 2 to 4 of the English Longitudinal Study of Ageing (ELSA) (Banks *et al*. 2006, 2008, 2010 Marmot *et al*. 2003). ELSA is a multidisciplinary study that contains detailed information on the health, economic and social circumstances of a representative sample in England aged 50 and over. Respondents are interviewed every two years, enabling changes in their circumstances to be observed over time. The multidisciplinary focus of data collection in ELSA gives coverage of: physical health, mental health, a range of well-being measures, economics, social networks, volunteering and social, civic and cultural participation. All of the measures were developed by expert groups and represent 'cutting-edge' design leading to high quality data with a depth and breadth of coverage not available elsewhere in a UK data source. ELSA's multidisciplinary and longitudinal design makes it a uniquely powerful resource to study processes in later life.

ELSA only introduced detailed measures of volunteering in its wave 4 data collection, so this wave of data collection is used for descriptive, but more detailed, analyses. However, the earlier waves did include a measure of volunteering and, from wave 2, rewards from volunteering. Consequently, the longitudinal models examine the relationship between volunteering at waves 2 and 3 and change in well-being between waves 2 and 3, and between waves 3 and 4.

All of the analyses presented here include only those post-state pension age. For men this means those aged 65 or older. For women it is those aged 60 or older. So, the cross sectional analysis of associations between volunteering and other characteristics, which uses wave 4 data, includes 5,512 respondents (one of whom did not answer the volunteering questions). For the longitudinal analysis only those respondents who had answered relevant questions at each of wave 2, 3 and 4 were included, giving a total of 3,632 respondents.

Measures

Volunteering

One widely accepted definition of voluntary work is that, in addition to it being voluntary, it: takes place within a formal organisational structure, is self-governing, is not profit distributing and is independent of government (Salamon and Sokolowski 2001, Kendall and Knapp 1993). This has been described as formal volunteering and operationalised as volunteering taking place in the form of unpaid help as a part of a group, organisation or club (Staetsky and Mohan 2011). There are alternative ways to define volunteering, of course. Most commonly the definition is extended to include so-called 'informal' volunteering, so incorporating activities conducted outside of the structures of a voluntary organisation such as providing unpaid help to a friend or neighbour. Widening the definition of volunteering for a study such as this, however, runs the risk of incorporating activities that have heterogeneous impacts on quality of life; informal and formal volunteering may have very different meanings and significance to the roles and identities of the individuals concerned (Wilson and Musick 1997, Williams, 2003).

Volunteering was covered relatively briefly in waves 2 and 3 of ELSA. Two questions were asked, both of which required the respondent to have an understanding of the phrase 'voluntary work', without offering a definition and rather than using a more precise definition of volunteering along the lines described above. One asked the respondent to report each of the activities she/he was involved in during the previous month, one of which (the third on the list) was voluntary work. The list also included: paid work, self-employment, caring for someone, looking after the home or family and education. About 14 per cent of the respondents reported volunteering in the last month in response to this question. The second asked the respondent to report how frequently she/he engaged in voluntary work, with responses including: twice a month or more (about 17 per cent of respondents), about once a month (a further four percent), every few months (two percent), about once or twice a year (two percent), less than once a year (one per cent) and never (74 per cent). Almost all of those who reported volunteering in response to the first question also reported volunteering in response to the second question (although some reported that they engaged in volunteering less than monthly). Consequently, responses to the second question are used to define volunteers. However, those who reported volunteering less than once a year are not included in the definition of volunteering used here.

To examine whether the relationship between volunteering and well-being depends on consistency of volunteering the analysis considers whether there is a difference for those who volunteer at both waves 2 and 3 compared with those who volunteer only at wave 2.

To examine the issue of reciprocity those who volunteer are differentiated between those who do and do not feel appreciated for the volunteering undertaken. For this, respondents who reported volunteering were asked the question: 'do you feel adequately appreciated for your voluntary work?'. Response categories for this question were 'strongly agree', 'agree', 'disagree' and 'strongly disagree'. These were reduced to two categories, so that 'strongly agree' and 'agree' were combined and 'strongly disagree' and 'disagree' were combined.

Wave 4 of ELSA contained more detailed measures of volunteering, allowing a descriptive analyses of the association between various dimensions of volunteering with well-being. The more detailed measures allowed us to distinguish between:

- Frequency of volunteering;
- Number of different types of volunteering activities involved in;
- Types of volunteering activities involved in, distinguishing between organisation-related activities (for example, raising money, campaigning, sitting on a committee, helping with an event, and carrying out administrative work) and 'person-based' volunteering (for example, visiting/befriending, education/counselling, helping with household tasks, and providing personal care);
- Those who did and did not felt obliged to volunteer (an option in response to a question asking respondents their motives for volunteering).

Well-being

Well-being is a multidimensional concept and there is some value in attempting to tackle as many dimensions of this as possible. Three axes of well-being are worth considering. The first

is to cover both positive and negative dimensions of well-being (Huppert and Whittington 2003). The second is to consider hedonic and eudaimonic dimensions (Beddington *et al*. 2008, Vittersø 2004). The hedonic dimension of affect is concerned with happiness and satisfaction, and is typically assessed using measures of emotional state reflecting evaluative responses to life circumstances. The eudaimonic dimension covers capability and functioning that is reflected in autonomy, or self-determination and the pursuit of valued goals. Participating in voluntary activities is a component of the eudaimonic dimension, so the focus here will be on the hedonic dimension of well-being. The third axis of well-being to consider is evaluated versus experienced well-being (Kahneman and Riis 2005). There is increasing interest in contrasting how life is evaluated in broad terms and the experience of affect while engaged in particular activities. It is possible that negative or positive affect while conducting an activity is not fully reflected in how one feels in general about one's life, and such differences might be meaningful for the choices we make and the outcomes we experience (Kahneman and Riis 2005). In the case of volunteering such a distinction would be very interesting to pursue, however there are no appropriate data on experienced well-being in ELSA currently.

Consequently the measures of well-being used here focus primarily on negative and positive elements of hedonic well-being. Four well-established measures are included:

- Level of depressive symptomatology was measured using the Centre for Epidemiological Studies-Depression scale, using the abbreviated eight item version, with the score ranging from zero to eight and higher scores indicating greater depression (Radloff 1977);
- Quality of Life was measured using the CASP-19 score, a 19 item measure specifically developed for use with older people covering dimensions of control, autonomy, self-realisation and pleasure, with scores that range from zero to 57 and a higher score indicating better quality of life (Hyde et al. 2003);
- Life satisfaction was assessed using the Diener five-item scale. Scores range from one to 35, with a higher score indicates higher life satisfaction (Diener et al. 1985);
- Social isolation was measured using a five item measure covering lacking companionship, feeling left out, feeling isolated, not feeling in tune with others, and feeling lonely, with scores ranging from one to 15 and lower scores indicating less feeling of isolation.

Demographic, socioeconomic, health and role measures

A range of measures are used to identify differences in the characteristics of volunteers and non-volunteers and to adjust for these differences in the analyses that are conducted to estimate causal effects. These are:

- Age, treated as a continuous variable;
- Gender;
- Marital status, for the models this is used as a binary variable (married versus not-married);
- Self-perceived social status using responses to a question asking respondents to place themselves on a ten-rung ladder reflecting their standing in society (Adler et al. 2000), which is treated as continuous variable;

- Wealth, using a population quintiles, which is treated as a continuous measure in the models;
- Self-reported general health, using the standard five-point Likert scale, treated as a continuous scale in the models;
- A disability score, calculated by summing responses to a range of questions on Activities of Daily Living, Instrumental Activities of Daily Living and a list of problems with mobility, treated as a continuous scale in the models;
- Economic activity, distinguishing between those in and not in paid employment during the past month;
- Involvement in caring, used to indicate whether or not the respondent has provided care for someone in the past month.

Statistical analysis

Waves 2 to 4 of ELSA are used to examine the impact of volunteering on later well-being within longitudinal models. The models used here are based on linear regression, adjusted for baseline well-being (so the coefficients reported in the tables indicate size and direction of change in the score of the well-being measure compared with non-volunteers). The models take the form:

$$\textbf{Well-being}_{t} = \textbf{Well-being}_{t-1} + \textbf{Volunteering status}_{t-1} + \textbf{Controls}_{t-1} + \textbf{Constant}$$

Where t indicates a variable measured at the outcome wave and t-1 indicates a variable measured at the wave preceding the outcome wave. For these models we estimate the change in well-being between waves 2 and 3 for respondents who reported volunteering at wave 2, between waves 3 and 4 for respondents who reported volunteering at wave 3 but not at wave 2, and between waves 2 and 3 for respondents who did not report volunteering at either wave. This means that each coefficient reflects relative change in well-being score over a two year period compared with non-volunteers.

The control variables, which potentially explain the relationship between volunteering and well-being, are added to the model in steps so that their contribution to the 'raw' association between volunteering and well-being can be assessed.

Multivariate linear regression analyses were also used to examine the cross-sectional relationship with well-being for different types of volunteering (compared with non-volunteers) after adjusting for other relevant characteristics – age, marital status, physical health, socioeconomic position, etc.

For both the cross-sectional and longitudinal analyses appropriate sample weights were used. These account for non-response to follow-up interviews and calibrate the sample to the characteristics of the population of England.

Results

Characteristics of volunteers

Analysis of wave 4 of ELSA (conducted over the period 2008-9) showed that just over a quarter (25.3%) of the post-state pension age (60 or older for women, 65 or older for men) population reported that they were involved in voluntary work. Of the volunteers around two thirds (66%) volunteered more than monthly, around one in seven engaged in voluntary activities approximately monthly (15%) and one in five volunteered less than monthly (19%). These findings are broadly consistent with the review conducted by Staetsky and Mohan (2011) of volunteering in the total population. They report that findings from the British Household Panel Survey (BHPS) indicate that around 20% of people volunteered in the last year, without much change over the period of 1996-2006. Not surprisingly, perhaps (see discussion), studies that had a stronger and more comprehensive focus on volunteering have identified higher volunteering rates. Staetsky and Mohan (2011) report that the Citizenship Survey identifies volunteering rates at more or less twice the BHPS rate and that the National Survey of Volunteering identified an even higher rate at about 50 per cent. Volunteering is not a principle focus of ELSA, which is the likely reason for the ELSA estimates being similar to those found in other general purpose surveys.

Table 1 shows the distribution of volunteering by key demographic, economic and health characteristics. These are descriptive findings and do not identify anything more than associations (for example, the association between age and volunteering may be a consequence of the relationship both of these have with health).

In terms of demographic characteristics there is a suggestion that women volunteer more than men, but this difference is small. Younger people are more likely to volunteer than older people, although the decline in volunteering does not appear to happen until around age 75 (note, the youngest category shown in the table, those aged 60-64, are only women because men in this age group are not yet at state pension age). However, amongst those who volunteer the frequency of volunteering does not decline until age 80. Marital status was not related to volunteering, although there is some suggestion that those who were widowed were a little less likely to report volunteering. This group are, of course, more likely to be older.

Perhaps surprisingly, those in paid work were more likely to volunteer than those not in paid work (those who were unemployed, long-term sick, looking after the home and retired). However those volunteers who were not in paid work engaged in voluntary activities much more frequently than those volunteers who were in paid work (just over two thirds of volunteers not in paid work volunteered twice a month or more, compared with just under a half of those who were in paid work).

Wealth was strongly related to volunteering, with increasing wealth associated with increasing likelihood of volunteering. Rates of volunteering were particularly high amongst the richest fifth of the population, at more than two in five. Among those who were volunteers levels of wealth were not, however, related to frequency of volunteering.

Self-reported health was also strongly related to volunteering, with increases in health related to increases in likelihood of being a volunteer. Around one in twelve of those with the poorest health volunteered, compared with more than two in five of those with the best health. Among those who were volunteers levels of self-reported health were not related to frequency of volunteering.

Table 1: Who volunteers?

Cell percentages for volunteers, row percentages for frequency

		Frequency (volunteers only)			
	Volunteers	Twice a month	Once a month	Less than once a month	*Base*
Gender					
Male	23.2	66.4	15.4	18.2	*2192*
Female	26.5	66.0	14.3	19.7	*3812*
Age					
60-64*	32.7	57.8	16.4	25.7	*1098*
65-69	29.2	68.7	12.3	18.9	*1494*
70-74	28.8	71.6	16.3	12.1	*1447*
75-79	22.2	70.4	14.0	15.6	*894*
80 plus	15.9	60.1	14.7	25.2	*1071*
Marital status					
Single	28.7	63.3	15.9	20.8	*293*
First marriage	28.4	65.9	15.8	18.3	*3051*
Remarried	24.3	67.5	14.3	18.2	*619*
Divorced/separated	24.4	67.8	11.1	21.1	*597*
Widowed	19.7	66.0	13.2	20.8	*1444*
In paid work					
No	24.8	68.5	14.1	17.4	*5316*
Yes	30.2	48.2	19.1	32.6	*653*
Wealth quintile					
Poorest	13.2	63.7	16.8	19.5	*1119*
Second	19.5	65.3	13.8	20.9	*1130*
Third	24.6	65.1	13.3	21.6	*1230*
Fourth	28.7	71.7	13.5	14.9	*1221*
Richest	42.5	64.6	16.1	19.2	*1197*
Self-reported health					
Poor	8.5	66.9	16.6	16.6	*467*
Fair	16.5	66.0	12.5	21.6	*1284*
Good	27.7	66.8	14.9	18.3	*1952*
Very good	33.7	64.4	14.8	20.8	*1564*
Excellent	41.3	68.4	15.9	15.7	*572*

*Women only, because this analysis is based only on those post-state pension age.

The findings shown in Table 1 are broadly consistent with the findings from the *Helping Out* survey, although that study covered the full age range and considered fewer demographic factors (Low *et al*. 2007). Also consistent with these findings, Mohan (2011), using data from the Citizenship Survey, reports that a core 31 per cent of the population, who are more likely to be middle-aged, have higher educational qualifications and be owner occupiers, provided 87 per cent of volunteer hours.

Change in well-being for volunteers compared with non-volunteers

Table 2 shows the impact of volunteering on change in the four well-being measures (depression, quality of life, life satisfaction and social isolation) over a two year period. The models are all linear regressions and adjust for the respondents' baseline score on the well-being measure so show relative change in well-being score over the period up to the following wave, compared with those who do not volunteer. Looking at the first cell (number) in the table, for example, this means that the depression score for volunteers decreases by 0.4 points relative to the score for volunteers over a two year period. As described in the methods section, the depression score uses an eight point scale, so this is a sizable relative reduction. Whether the coefficient represents a statistically significant difference between volunteers and non-volunteers is indicated by asterisk, with the level of significance indicated in the footnote to the table.

The models are built as a series of hierarchical steps, reflected in the series of columns shown for each well-being measure. Only the baseline score of the outcome measure is included at the first step, so the first column represents the 'raw' association with change in well-being – each figure shows the relative change in well-being score for volunteers compared with non-volunteers over a two year period. So the depression score drops by 0.4 points (as described above), the quality of life score and the life satisfaction score increase by 1.3 and 0.9 points respectively, and the social isolation score decreases by 0.16 points. Subsequent columns show the relative change in well-being scores for volunteers compared with non-volunteers once other potential explanatory factors are added. These are added in a series of four steps, reflected in the four additional columns. These steps sequentially include: demographic measures (age, gender and marital status), wealth quintiles and perceived social status, health (self-reported health, activities of daily living, instrumental activities of daily living and mobility), and whether the respondent is involved in paid work or caring. The full models underlying the figures in this final column are shown in Table A1 in the appendix.

For each of the well-being outcomes there is a strong positive effect of volunteering on subsequent well-being (the decline in the depression and social isolation scores reflect improvement, as do the increases in quality of life and life satisfaction scores), and this effect remains after adjusting for demographic factors (the first and second columns of the table).

The third column includes adjustments for wealth and social status differences between volunteers and non-volunteers. This adjustment reduces the size of the coefficients (compare the third with the second columns), so suggests these factors moderate the effect of volunteering to a certain extent, with the largest change being a decline by a quarter for the depression coefficient. This suggests that some of the apparent volunteering effect on improving the well-being of volunteers compared with non-volunteers is in fact a wealth or social status effect.

The fourth column includes additional adjustments for health differences between volunteers and non-volunteers. This leads to a further decline in the estimate of the positive effect of volunteering on well-being, particularly in relation to the quality of life measure where around two fifths of the effect is explained by these health differences.

The fourth column includes joint adjustments for demographic, wealth, social status and health differences between volunteers and non-volunteers. Comparing the coefficients (numbers) in the first and fourth column suggest that differences in the characteristics of volunteers and non-volunteers explains around half of the association observed between volunteering and the depression, quality of life and social isolation measures, and a quarter of the effect on life satisfaction. However, after these adjustments the association between volunteering and improvement in well-being remains significant for three of the four measures (depression, quality of life and life satisfaction, but not social isolation).

The final column includes additional adjustments for involvement in paid work and caring, in an attempt to explore the possibility that role strain might detract from the benefits of volunteering. However these adjustments make little difference to the models.

Table 2: Volunteering and change in well-being over two years

Change in score over time: volunteers compared with non-volunteers

	Level of adjustment				
	Baseline score	**+ Demographics**	**+ Wealth and social status**	**+ Health**	**+ paid work and caring**
Depression	-0.40*	-0.40*	-0.30*	-0.20*	-0.21*
Quality of Life	1.27*	1.20*	1.03*	0.64*	0.66*
Life satisfaction	0.92*	0.93*	0.86*	0.68*	0.69*
Social isolation	-0.16*	-0.17*	-0.13**	-0.09	-0.09

*p < 0.01, **p < 0.05

Voluntary work, reciprocity and change in well-being

Table 3 shows whether the impact of volunteering on change in well-being depends on whether the respondent reports feeling appreciated in their volunteering role. This analysis was conducted to examine the possibility that reciprocity for voluntary work undertaken – where the effort of doing the activity is rewarded to an extent that reflects the effort involved – is important for its impact on well-being, The possibility being examined is that when there is an imbalance between the rewards received in relation to the effort expended (here appreciation for volunteering), the norm of reciprocity has been broken, and that this elicits negative emotions that influence well-being over and above any positive rewards from undertaking voluntary work.

Again the models shown in Table 3 examine change over a two year period, this time contrasting volunteers who feel appreciated and volunteers who don't feel appreciated with those who do not report volunteering. As before, the models were built as a series of hierarchical steps. However for simplicity's sake only two steps are shown in the table, which are equivalent to the first and final columns of Table 2. The first step shown has adjustment for the baseline score of the outcome measure, and the final step has adjustment for all of the other potential explanatory factors considered: demographic measures (age, gender and marital status), wealth quintiles, perceived social status, health (self-reported health, activities of daily living, instrumental activities of daily living and mobility), whether involved in paid work and whether involved in caring.

The findings for depression in the model adjusted only for baseline scores suggest a slightly better level of improvement for those who feel appreciated for volunteering than is found for those who do not feel appreciated for volunteering, both compared with non-volunteers. In the fully adjusted model for depression, however, the difference is larger (coefficients of-0.22 for appreciated volunteers and -0.16 for unappreciated volunteers, both compared with non-volunteers) and the coefficient for unappreciated volunteers is not significant, suggesting there is no difference in change in well-being for unappreciated volunteers compared with non-volunteers, while the coefficient for appreciated volunteers remains significant compared with non-volunteers.

Table 3: Feeling appreciated in volunteering role and change in well-being over two years

Change in score over time: volunteers compared with non-volunteers

	Level of adjustment			
	Baseline score only		**Fully adjusted**	
	Appreciated	*Unappreciated*	*Appreciated*	*Unappreciated*
Depression	-0.41*	-0.38**	-0.22*	-0.16
Quality of Life	1.35*	0.63	0.74*	-0.08
Life satisfaction	0.98*	0.40	0.76*	0.17
Social isolation	-0.18*	-0.03	-0.11t	0.07

*p < 0.01, **p < 0.05, t <0.1

For the other three markers of well-being (quality of life, life satisfaction and social isolation) there is a much bigger improvement relative to non-volunteers for appreciated versus unappreciated volunteers. In all cases the coefficients for appreciated volunteers are significantly different from non-volunteers, while they are not significant for unappreciated volunteers, and they become very small for the unappreciated group in the fully adjusted models, while they remain large for the appreciated group and the difference in comparison with non-volunteers remains statistically significant for all but the social isolation measure, which is of marginal statistical significance.

So, in each case it seems that appreciated volunteers have an improvement in their well-being over time compared with non-volunteers, which is not the case for unappreciated volunteers. However, in no case is there a suggestion that unappreciated volunteers do worse than non-volunteers.

Consistency of volunteering

In order to test the causal relationship between well-being and volunteering further, the next step of the analysis considered whether the benefits of volunteering persisted for those who stopped volunteering. To do this the change in well-being between waves 2 and 3 of ELSA, relative to those who do not volunteer throughout this period, is compared for those who report volunteering at both wave 2 and wave 3, and for those who report volunteering at wave 2 only. Results of this analysis are shown in Table 4. As before, the models were built in a series of hierarchical steps. The table shows the first step, with adjustment for the baseline score of the outcome measure, and the final step with adjustment for all of the other potential explanatory factors considered: demographic measures (age, gender and marital status), wealth quintiles, perceived social status, health (self-reported health, activities of daily living, instrumental activities of daily living and mobility), whether involved in paid work, and whether involved in caring.

Table 4: Consistency of volunteering and change in well-being

Change in score over time: volunteers compared with non-volunteers

	Level of adjustment			
	Baseline score only		**Fully adjusted**	
	Volunteers at waves 2 and 3	*Volunteers at wave 2 only*	*Volunteers at waves 2 and 3*	*Volunteers at wave 2 only*
Depression	-0.45*	-0.09	-0.16**	0.04
Quality of Life	1.15*	0.67	0.43	0.27
Life satisfaction	0.85*	0.25	0.48**	0.40
Social isolation	-0.22*	-0.05	-0.09	0.00

*p < 0.01, **p < 0.05, t <0.1

Table 4 shows a marked difference between the coefficients for those who volunteer at both waves compared with those who volunteer at wave 2 only, suggesting that there is a large difference in the size of the association with well-being for these two groups in comparison with non-volunteers. In the models adjusted for baseline score only, those who volunteered at both waves had large and statistically significant improvements in their well-being scores compared with those who did not volunteer at either wave, while this was not the case for those who stopped volunteering between waves 2 and 3. There are also some significant differences in well-being scores between those who volunteered at both waves in the fully adjusted models, while for those who volunteered at wave 2 differences in comparison with non-volunteers were small and not statistically significant.

The clearest effects are found for depression and life satisfaction, where, for both the model adjusting for baseline score only and the fully adjusted model, those who volunteered at both waves have an improvement compared with those who did not volunteer at either of the waves, while this is not the case for those who volunteered only at wave 2. While the effect of volunteering at both waves is much reduced in the fully adjusted model, compared with the model adjusted just for baseline well-being scores, it is still statistically significant.

For quality of life and social isolation, there is a similar effect in the model adjusted for baseline scores only, where those who continue to volunteer at both waves have a reduction in their score relative to those who do not volunteer at either wave, an effect which is not present for those who only volunteer at wave 2. However the relationship between volunteering at both waves and improvement in quality of life and social isolation compared with those who do not volunteer at either wave is no longer statistically significant in the fully adjusted models.

Association between type and frequency of volunteering and well-being

This section presents findings from an examination of possible dose effects in the relationship between volunteering and well-being – that type of volunteering activity, number of volunteering activities engaged in and frequency of voluntary work will relate to the level of the association between volunteering and well-being. It is based on detailed cross-sectional analysis of ELSA wave 4 data. Earlier waves of ELSA did not include much detail on the nature of volunteering undertaken, so these questions could not be addressed through longitudinal analysis. Table 5 shows the cross-sectional relationship between type of volunteering, number of activities engaged in, frequency of volunteering and well-being. The models use linear regression methods and are adjusted for demographic factors (age, gender and marital status)

The ELSA questionnaire included two questions asking about type of volunteering and type of unpaid help in which the respondent engaged. In total these questions allowed volunteering activities to be distinguished into two types: organisation-related activities (for example, raising money, campaigning, sitting on a committee, helping with an event and carrying out admin work), and 'person-based' volunteering (for example, visiting/befriending, education/counselling, helping with household tasks, providing personal care).

For each of the well-being outcomes, findings show a similar advantage for both types of volunteering compared with non-volunteers, although coefficients for person-based volunteering are on average a bit smaller than those for organisation-based volunteering. However, there appears to be a marked difference for number of activities involved in. For both types of volunteering and for the measure combining the number of activities across the two types of volunteering, those involved in more activities have a larger difference compared with non-volunteers than those involved in fewer activities. This I present for each of the four well-being outcomes and the coefficients for the groups that are involved in more activities are more likely to be statistically significant for the life satisfaction and social isolation measures.

A higher frequency of volunteering also appears to be related to better well-being for each of the well-being outcomes. For depression there is a clear linear relationship, with coefficients

increasing in size with increasing frequency of volunteering. For the quality of life and life satisfaction measures, the size of the effect appears smaller for the lowest frequency group compared with the other two groups. And, for the social isolation measure the highest frequency group have the largest coefficient.

Table 5: Type of volunteering, number of activities engaged in and well-being

Change in score: volunteers compared with non-volunteers

	Depression	Quality of Life	Life satisfaction	Social Isolation
Organisation-based volunteering				
One activity	-0.46*	1.73*	0.53t	-0.15
Two or more activities	-0.65*	4.06*	1.39*	-0.45*
Person- based volunteering				
One activity	-0.35*	1.73*	0.27	-0.17**
Two or more activities	-0.53*	3.05*	0.92*	-0.32*
Any volunteering				
One or two activities	-0.41*	1.88*	0.49**	-0.12
Three or more activities	-0.67*	4.03*	1.15*	-0.40*
Frequency of volunteering				
Less than once a month	-0.39*	2.35*	0.75t	-0.32**
Once a month	-0.57*	4.21*	1.73*	-0.29
More than once a month	-0.68*	3.72*	1.33*	-0.40*

*p < 0.01, **p < 0.05, t <0.1

Quality of volunteering activity and well-being

Table 6 examines in more detail motivations for volunteering, specifically feeling obliged to undertake volunteering, and reports of feeling appreciated for volunteering. The models use linear regression methods and are adjusted for demographic factors (age, gender and marital status). It is worth noting that only five percent of volunteers reported feeling obliged to undertake their volunteering role and only six percent of volunteers did not feel appreciated for their contribution. This is a finding that is remarkably consistent with the *Helping Out* survey, which showed that 94 per cent of volunteers aged 65 or older reported that their efforts were appreciated by the organisation they volunteered for (95 per cent for all ages) (Low *et al*. 2007).

Feeling obliged to volunteer does not appear to affect the relationship between volunteering and well-being. For each well-being outcome the coefficient for those who felt obliged is not much different from those who do not and in all but one case (life satisfaction) the well-being scores for those who felt obliged to volunteer are significantly better than those of non-volunteers. However, there is a marked difference between those volunteers who feel appreciated and those who do not, echoing the findings from the longitudinal analysis shown in Table 3. For

depression, quality of life and social isolation those who feel appreciated have a statistically significant increase in their well-being compared with those who do not volunteer, while those who do not feel appreciated do not show this relative increase in well-being. And for life satisfaction, those who feel appreciated have a significantly better score than those who do not volunteer, while those who do not feel appreciated have a statistically significant lower score than those who do not volunteer.

Table 6: Feeling obliged to volunteer, reported appreciation for volunteering and well-being

Change in score: volunteers compared with non-volunteers

	Depression	Quality of Life	Life satisfaction	Social Isolation
Obliged to volunteer				
One activity	-0.46*	1.73*	0.53t	-0.15
Yes	-0.69*	3.59*	1.28t	-0.56**
No	-0.54*	3.70*	1.03*	-0.42*
Feels appreciated for volunteering				
Yes	-0.47*	3.20*	0.98*	-0.36*
No	-0.08	1.40t	-1.10**	-0.17

*p < 0.01, **p < 0.05, t <0.1

Discussion

This study set out to examine the relationship between volunteering in later life and well-being, with the specific aim of assessing the extent to which volunteering improves well-being. To do this, data from the English Longitudinal Study of Ageing (ELSA) were used to examine changes in well-being for volunteers compared with non-volunteers in the post-state pension age population (so men aged 65 or older and women aged 60 or older). Four indicators of well-being were used: depression symptoms, quality of life, life satisfaction and social isolation.

Overall just over a quarter of respondents to this nationally representative survey reported volunteering in the last year, with four fifths of them volunteering at least monthly. Volunteers were on average wealthier and healthier than non-volunteers, and more likely to be in paid employment and younger than non-volunteers. Examinations of changes in well-being over a two year period showed that volunteers had an improvement compared with non-volunteers for each of the well-being outcomes considered, and while the size of these improvements were reduced when adjustments were made for the differences in characteristics of volunteers and non-volunteers, they remained statistically significant for each well-being outcome except for social isolation. On its own, the longitudinal nature of this analysis and adjustments for a range of potential alternative explanatory factors (using high quality measures of differences between volunteers and non-volunteers in demographic, socioeconomic and physical health characteristics) provides strong evidence for a causal interpretation – that volunteering does improve well-being. This causal interpretation is strengthened by a number of additional findings:

- The relationship is present for three of the four measures of well-being, each assessing a contrasting dimension of hedonic well-being (Table 2). The fourth measure, social isolation, is more a contributor to well-being than a dimension of well-being;
- The size of the relationship relates to number of volunteering activities involved in and frequency of engaging in volunteering work, indicating a dose effect (Table 5);
- The relationship between volunteering and well-being is not present for those who stop volunteering (Table 4);
- As hypothesised, the improvement in well-being is only present for those who feel rewarded for the efforts they put into volunteering (Table 3).

Each of these refinements to the analysis provides a further test of a causal association, addressing five of the nine criteria put forward by the epidemiologist Bradford-Hill (1965) to assess causality: strength of association, specificity (the reward analysis), temporal relationship, dose-response relationship and reversibility (that benefits were not present for those who stopped). In conjunction with the wider literature a sixth of these criteria, consistency of findings across contexts and studies, is met. The remaining criteria (plausibility, coherence and analogy) relate to the theoretical sense made by the causal interpretation of the findings from the analysis. Considering all of these features of this study there is strong evidence supportive of a causal interpretation of the relationship between volunteering and well-being in later life.

Nevertheless, there are some cautions that need to be made when making this interpretation.

First, attributing causality in observational studies is limited by the possibility that the observed associations might be a consequence of selection, or endogenous effects. Here the concern is that differences in the outcome variable (in this case the well-being measures used) are a consequence of factors other than the proposed cause (in this case volunteering). This may be the case even if the observational study is longitudinal, examining changes in the outcome variable rather than associations at a particular point in time. There are a number of analytical approaches that can be used to minimise this problem (Nazroo 2011), but here we used the most straightforward approach – including in the models variables to adjust for differences in the characteristics of volunteers and non-volunteers. The variables used comprehensively accounted for differences in their demographic characteristics, socioeconomic factors and physical health. Although this explained some of the relationship between volunteering and change in well-being, the effects remained large and statistically significant.

A second concern is that the questions used in ELSA to identify involvement in volunteering may be inadequate. In the results section we showed that the prevalence of volunteering we have identified in the ELSA sample are somewhat below estimates derived from surveys more focussed on the topic of volunteering (such as the Citizenship Survey and the National Survey of Volunteering), even if they are consistent with estimates from more multipurpose studies (Staetsky and Mohan 2011). It is not surprising that different surveys using different methods produce different estimates of the prevalence of volunteering, even small differences in question order and wording are said to have an influence on the estimates (Mohan 2011). And it would not be surprising if studies with a declared focus on volunteering identified a higher rate of volunteering, either because of context effects (respondents knowing that they are participating in a study about volunteering), or because of design effects (questionnaires providing a more comprehensive coverage of volunteering activities). To a certain extent the ability to include accurately all types of engagement in volunteering in a count of volunteers is not crucial for a study concerned with examining the impact of volunteering. An underestimate of volunteering rates is perhaps not crucial to the more specific question of the impact of volunteering.
An unbiased undercount of volunteers would simply reduce the estimate of the size of the volunteering effect, because it would be diluted by the (random) inclusion of volunteers in the non-volunteer group. However, a biased undercount might lead to both under- and overestimates of the impact of volunteering on the outcome being assessed. If volunteering universally has a positive effect on well-being, regardless of the context of volunteering or the characteristics of the volunteer, the size of the effect would be underestimated because some volunteers are included in the non-volunteer group. However, if the impact of volunteering on well-being depended on context (such as the degree to which volunteering is engaged in, the rewards from volunteering, or the type of volunteering done) and those engaged in less volunteering, or whose volunteering work is less central to their lives, are less likely to report their voluntary work, the resulting bias would lead to an overestimate of the impact of volunteering on well-being. In the case of the analysis presented here, the second problem is largely addressed by the analyses that allowed us to identify the importance of context and show that the size relationship between volunteering and well-being depends on factors such as perceived reciprocity and extent of volunteering engaged in. The first problem would lead to underestimates in the size of effects we report, which is consistent with the conservative approach we have taken.

Despite these cautions, the study has a number of strengths: detailed measurement of well-being and of relevant characteristics of respondents, allowing us to control for differences in the characteristics of volunteers and non-volunteers, the longitudinal design and the representative nature of the sample.

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Appendix

Table A1: Volunteering and well-being, full models for longitudinal analysis

Change in score

	Depression	Quality of Life	Life satisfaction	Social Isolation
Volunteers	-0.21*	0.66*	0.69*	-0.09
Age (one year increase)	0.00	-0.05*	0.02	0.00
Gender (women compared with men)	0.14**	0.73*	-0.13	0.13**
Married (versus not married)	-0.07	0.40	0.46**	-0.32*
Perceived social status (increase)	-0.01*	0.04*	0.02*	-0.01*
Wealth quintile (increase)	-0.09	0.03	-0.10	-0.01
Self-rated health (worse)	0.11*	-0.81*	-0.26*	0.05t
Disability (worse)	0.09*	-0.18*	-0.09*	0.03"
In paid work	0.21	0.69t	0.21	0.05
Caring	0.19**	-0.07	-0.34	0.06
Baseline control	0.46	0.61*	0.65*	0.58*

*p < 0.01, **p < 0.05, t <0.1

Note: coefficients are not standardised across independent variables, nor across outcomes. This is done because standardised coefficients cannot be interpreted in absolute terms, although they can be used to compare size of effects across independent variables. This means that the coefficients in the table cannot be directly compared and account needs to be taken of differences in the range of the scales used to measure these variables.

WRVS is a charity and we are only ever as good as our volunteers. We currently have a team of **40,000** amazing volunteers of all ages, men and women, from all backgrounds – but we would like to be able to help more people across Britain.

If you think you could help and have a few hours to spare every week or fortnight, or if you would like to make a donation, please call us on **0845 600 5885** or visit **wrvs.org.uk**

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