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# Why volunteer? Towards a deeper understanding of motivations for participation in voluntary work

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*Submitted*



## ABSTRACT

Volunteering is an important activity contributing to active and healthy ageing. However, it is still unclear why some older individuals volunteer, whereas others do not. The aim of the current study, therefore, is to improve our understanding of the role of motivations in participation in voluntary work among older adults. The *Dutch Comparative Scale for Assessing Volunteer Motivations among Volunteers and Non-Volunteers* is used to compare volunteer motivations among volunteering and non-volunteering individuals aged 60-80, who participated in the Lifelines 'Daily Activities and Leisure Activities add-on Study'. Logistic regression analyses are conducted to assess associations between volunteer motivations, individual resources and volunteer status. Older individuals who perceive larger benefits from volunteering in terms of the opportunity to (a) express altruistic concerns (*Values* motive), (b) learn new things (*Understanding* motive) or (c) enhance personal growth (*Enhancement* motive), are more likely to volunteer. Moreover, older individuals who mainly perceive benefits from volunteering in terms of the opportunity to (a) protect one's mental state (*Protective* motive), (b) express normative behavior (*Social* motive) or (c) enhance the chance of success for paid work (*Career* motive), are less likely to volunteer. Associations between volunteer motivations and actual volunteering seem not to be moderated by the availability of individual resources. The current study shows that especially the *type* of benefits of volunteering as perceived by older adults is important for participation in voluntary work.

## INTRODUCTION

Volunteering is an important activity for active ageing<sup>1</sup>, contributing to better physical<sup>2,3</sup>, cognitive<sup>4</sup> and mental health<sup>2,5</sup>, as well as higher personal satisfaction, fulfillment, and involvement in society<sup>6</sup>. Psychological, social and physical benefits from volunteering may be even larger in later life than in midlife<sup>7,8</sup>. During their working lives, older adults have acquired useful skills and knowledge, which are particularly valuable for volunteering<sup>9</sup>. The growing population of older adults, especially those who are retired and still enjoy good health, is usually considered as a valuable pool of (potential) volunteers<sup>10</sup>. Understanding the antecedents of volunteering is important for improving recruitment strategies aiming to target potential volunteers, as well as retention strategies targeting currently active volunteers<sup>11-13</sup>. Although substantial research is available on the relationship between individual resources and volunteering, to date, the role of preferences in the decision to either opt for volunteering or not, is still unclear. Therefore, the aim of the current study is to improve our understanding of motivations for participation in voluntary work in later life.

Volunteer motivations are of great importance in understanding why some people decide to volunteer, whereas others do not. A rich literature on volunteer motivations in volunteering individuals is available, which has improved our knowledge of why individuals volunteer. Volunteer motivations have consistently been shown to be differentially distributed across social groups, for example across age, gender, socio-economic status, family status and religion<sup>14</sup>. Moreover, volunteer motivations change over the life course: younger individuals are more strongly motivated by the desire to establish social relationships, whereas middle-aged individuals aim to find a sense of purpose by volunteering, and older individuals are interested in emotional gratification and strengthening social ties<sup>14</sup> (p.74). However, little is known yet about volunteer motivations of non-volunteering individuals, because the majority of studies assessing volunteer motivations is conducted in samples solely including individuals currently participating in voluntary work; only a few studies included non-volunteering individuals<sup>14</sup>. As a result, it is not clear whether volunteers can be distinguished from non-volunteers based on their volunteer motivations<sup>14</sup>. "With no comparison group of people who have chosen not to volunteer, we cannot be sure that motivation is making any difference at all"<sup>14</sup> (p.56). Comparison of volunteer motivations among volunteering and non-volunteering individuals is needed in order to improve our understanding of the role of volunteer motivations in actual volunteering behavior. The few studies that did compare motivations of volunteers and non-volunteers<sup>15-17</sup> provide indications that

motivations inducing individuals to volunteer may differ from motivations that make individuals abstain from participation in voluntary work. However, these studies all used the Volunteer Functions Inventory<sup>18</sup>, which is a valid and reliable measurement instrument for assessing volunteer motivations in volunteer samples, but by which motivations across volunteers and non-volunteers cannot meaningfully be compared, as demonstrated previously<sup>19</sup>. The recent development of the *Dutch Comparative Scale for Assessing Volunteer Motivations among Volunteers and Non-Volunteers*<sup>19</sup>, based on the Volunteer Functions Inventory<sup>18</sup>, enables the assessment of volunteer motivations in volunteering and non-volunteering individuals, and allows for the comparison of volunteer motivations among volunteers and non-volunteers. Our first research question is:

RQ1. What is the association between volunteer motivations and participation in voluntary work?

Actual volunteering behavior is determined by several factors simultaneously<sup>14</sup> and, therefore, assessing the interplay between volunteer motivations and individual resources in relation to actual volunteering is important to understand the role of motivations in participation in voluntary work. Research on the antecedents of participation in voluntary work in later life mainly included studies on either individual determinants of volunteering, such as age<sup>20-23</sup>, marital status<sup>20,22,24</sup> and health<sup>7,20,22,23,25,26</sup>, or motivational factors related to volunteering<sup>27</sup>. To date, little is known about the relationship between individual resources and volunteer motivations<sup>28</sup>. Principi et al.<sup>28</sup> assessed the association between different types of individual resources (in terms of human, social and cultural capital) and different motivational drivers, and showed that older adults with different sets of individual resources are motivated to volunteer for different reasons, and that the strength of the motivations to volunteer seems to be related to the amount of resources available to the individual<sup>28</sup>. Therefore, it may be that the associations between volunteer motivations and the likelihood to volunteer depends on the availability of individual resources. Our second research question is:

RQ2. Are the associations between volunteer motivations and participation in voluntary work moderated by the availability of individual resources?

Existing research on volunteer motivations suffers from a few limitations. First, most studies assessing volunteer motivations in volunteering individuals are based on non-representative samples (for example including volunteers from voluntary organizations only), limiting the generalizability of results<sup>27</sup>. Second, most research on volunteering in later life, including research on volunteer motivations, is conducted within the United States<sup>29</sup>. Research conducted in Europe is scarce. The relatively few studies on volunteering among older adults that have been conducted in Europe have, moreover, limited comparability, because European countries are quite heterogeneous regarding volunteerism in terms of volunteering rates, dynamics and stability among older adults<sup>22,30</sup>. By assessing the interplay between volunteer motivations, individual resources, and actual volunteering among a representative Dutch sample of both volunteering and non-volunteering older adults, and by using a measurement instrument that allows for comparison of volunteer motivations between volunteering and non-volunteering individuals, we can improve our understanding of the role of volunteer motivations in participation in voluntary work in later life.

## CONCEPTUAL FRAMEWORK AND HYPOTHESES

### Volunteer motivations

In general, volunteering is seen as an altruistic activity, which is reflected in commonly used definitions of volunteering. According to Wilson<sup>31</sup>, volunteering means "any activity in which time is given freely to benefit another person, group, or organization" (p. 215). The International Labor Organization<sup>6</sup> describes voluntary work as "unpaid non-compulsory work; that is, time individuals give without pay to activities performed either through an organization or directly for others outside their own household" (p. 13). Although by volunteering a certain group or cause is served, and it thus benefits recipients of voluntary work, individuals may opt for volunteering for self-oriented reasons, too. Clary et al.<sup>18</sup> propose a theoretical framework for volunteer motivations that is based on a functional approach, in which it is assumed that all individuals have the same basic psychological needs. The theory states that volunteering behavior is determined by the extent to which volunteering is believed to serve one or more psychological needs. Six different psychological functions are distinguished that can be served by volunteering, including self-oriented as well as other-oriented reasons for volunteering<sup>18</sup>. These six are (a) the *Values* function: the opportunities that volunteerism provides for individuals to express values that are important to the self, related to altruistic and humanitarian concerns for others,

(b) the *Understanding* function: the opportunity for volunteers to gain and sustain knowledge, skills and abilities, (c) the *Enhancement* function: by participation in voluntary work the individual can enhance self-esteem, it centres on ego growth and development, (d) the *Protective* function: participation in voluntary work can protect oneself from negative feelings about oneself, it can help the individual to eliminate negative aspects surrounding the ego, (e) the *Social* function: volunteering offers opportunities to improve social relationships, it helps individuals to fit in and get along with social groups that are important to them, and (f) the *Career* function: participation in voluntary work may increase future job opportunities.

In research on volunteer motivations, it is often implicitly assumed that individuals with stronger volunteer motivations are more likely to volunteer than individuals with lower levels of volunteer motivations<sup>10,14</sup>. In this study, we will test this assumption, and therefore expect that volunteers can indeed be distinguished from non-volunteers by the strength of the volunteer motivations. We hypothesize that higher scores on each of the volunteer functions (*Values, Understanding, Enhancement, Protective, Social* and *Career*) are associated with a higher likelihood to volunteer (H1a).

The six motives for volunteering can be classified as either *other-oriented* or *self-oriented* motives. Clearly, the *Values* function can be viewed as an *other-oriented motive* for volunteering; it is an expression of altruistic concerns, in which the desire to serve the well-being of others predominates. The other functions seem to be *self-oriented motives* for volunteering. The *Understanding, Enhancement* and *Protective* functions are expressions of the opportunities to strengthen the human psyche by learning (*Understanding*), enhancing personal growth (*Enhancement*), and protecting one's mental state or well-being (*Protective*). The *Social* function is an expression of normative behaviour; in other words, it reflects the desire to behave according to societal norms, enhancing social inclusion. Finally, the *Career* function reflects that volunteering, as a type of unpaid work, is an activity that can serve the goal of enhancing the chance of success for paid work, as by volunteering, one can acquire experience, skills and knowledge useful for paid work. We expect that volunteers can be distinguished from non-volunteers mainly by differences in the strength of other-oriented motivations. When aiming to express the desire to help others, participation in voluntary work is an obvious choice. Other types of helping behaviours, such as providing informal care or caretaking of grandchildren, can also serve the psychological need to express the desire to help others, but the possibilities

to conduct these types of helping behaviours are strongly dependent on the need for help among people within the social network. Thus, little substitute activities for volunteering seem to be available to individuals who strongly desire to help others, when there is no request for help from people within the personal social network. In aiming to serve the other five, more self-oriented, psychological needs, more substitute activities are available for adhering to these motives, for example, participation in paid work, education, social activities and leisure activities. Therefore, we expect that the association between the *Values* function and participation in voluntary work is stronger than the associations between the *Understanding, Enhancement, Protective, Social and Career* functions and participation in voluntary work (H1b).

### Individual resources

Possibilities for volunteering are influenced by the availability of individual resources<sup>32</sup>. Individual resources can be described in terms of human, social and cultural capital<sup>32</sup>. Human capital is defined as "the resources attached to individuals that make productive activities possible"<sup>32</sup> (p.698). Human capital is constituted by factors such as educational attainment, household income, employment status and health status<sup>31,32</sup>. Social capital is constituted by the resources that strengthen the participation in actions performed for collective goods<sup>28</sup>, which are resources related to social connections, embedded in the individuals' social network and family relations<sup>31,32</sup>. Social connections can provide information, pooled labor and trust, which can contribute to volunteering<sup>32</sup>. Cultural capital, finally, is the sum of resources promoting ethical behavior<sup>28</sup> and is often made up by altruistic values and religious behaviors<sup>32</sup>.

Higher levels of human, social and cultural capital are consistently found to be associated with a higher likelihood to volunteer<sup>32,33</sup>, and these forms of individual capital have been shown to be particularly important for volunteering in later life<sup>34</sup>. However, individuals who are comparable in their degree of volunteer motivations, can differ with respect to their volunteer status. The extent to which individuals are able to express their volunteer motivations by volunteering, could possibly be explained by the availability of individual resources. The importance of certain volunteer motivations for volunteering could be different for individuals possessing lower versus higher levels of individual resources. Specifically, we firstly expect that the association between the *Understanding* motive (i.e. the desire to strengthen the human psyche

by learning new things) and participation in voluntary work, is stronger among higher educated individuals than among lower educated individuals (H2a). Higher educated individuals could have a stronger tendency to search for opportunities for personal development, such as enhancing knowledge and obtaining new skills, than lower educated individuals. Cachioni et al.<sup>35</sup> investigated which motivational factors are important for attending a continuing education program among a sample of adults aged 50 and over, and found that individuals who completed high school education are more likely to attain a program for continued education in later life, for reasons related to the desire to enhance their general knowledge, than individuals with elementary education. We expect that a stronger desire to learn new things among higher educated older individuals than among lower educated older individuals, is also reflected in a higher importance of the *Understanding* motive for volunteering among higher educated individuals. Secondly, we expect that the association between the *Protective* motive (i.e. the desire to protect one's mental state or well-being) and participation in voluntary work is stronger among individuals with health problems, than among individuals in good health (H2b). Schanowitz & Nicassio<sup>36</sup> investigated whether older adults with health problems, living in residential care facilities, have a different likelihood of positive psychosocial functioning, according to their type of coping with their health issues (i.e. active coping versus passive coping strategy). Active coping (i.e. the use of strategies to function in spite of pain, and to cope with pain directly) was shown to be correlated with higher positive affect, whereas passive coping (i.e. the use of strategies to avoid activity, depend on others and take pain-medication) was shown to be correlated with higher negative affect<sup>36</sup>. So, older individuals with health problems seem to have higher levels of well-being if they take-up active coping styles rather than passive coping styles. Therefore, for individuals with a lower self-rated health, the *Protective* motive (i.e. protecting one's mental state and well-being, by eliminating negative aspects surrounding the ego) may be more important for the likelihood to volunteer than for individuals with a higher self-rated health.

Thirdly, we expect that the association between the *Social* motive (i.e. the desire to socially behave conform societal norms, enhancing social inclusion) and participation in voluntary work is stronger among individuals without a partner (H2c), and among individuals with smaller network sizes (H2d). Individuals aim to fulfill their need for behavioral confirmation, in order to produce well-being<sup>37</sup>. This social need (i.e. the need for behavioral confirmation) is conceptually closely related to the *Social* motive

for volunteering; it is fulfilled by "relationships that give you the feeling of doing the "right" thing in the eyes of relevant others and yourself"<sup>37</sup> (p.282). Although behavioral confirmation is subject to age-related declines (e.g. as a result of losing certain social roles and activities)<sup>38</sup>, it can also be fulfilled by helping others, for example through volunteering. Therefore, we expect that for individuals with lower levels of social capital in terms of marital status and social network size, the importance of the *Social* motive for volunteering is stronger than for individuals with higher levels of social capital.

Fourthly, we expect that the association between the *Values* motive (i.e. the desire to express altruistic concerns) and participation in voluntary work is stronger among individuals with religious affiliations (H2e), and among individuals with a higher church attendance (H2f). Major religions worldwide emphasize the importance of helping other people in need (Lundberg 2010 in Krause<sup>39</sup>). Therefore, religious individuals, living according to the values and norms incorporated in their religion, are probably more likely to volunteer than non-religious individuals. For individuals with higher church attendance, the association between the *Values* motive and volunteering may even be stronger, because the values and norms are often emphasized in religious meetings. Fifthly, we expect the association between the *Social* motive and participation in voluntary work to be stronger among individuals with religious affiliations (H2g), and among individuals with a higher church attendance (H2h). "Religion is a social phenomenon"<sup>40</sup> (p.257) and individuals who receive more spiritual support from fellow church members (i.e. assistance provided by fellow church members aiming to stimulate religious beliefs and behaviors) have an increased likelihood to volunteer<sup>39</sup>. The study by Krause<sup>39</sup> shows that this association is explained not so much by increases in religious commitment, and not only by an increased compassion for strangers, but also by other mechanisms. An important potential explanation is that by enhancing spiritual support, also the internalization of group norms are promoted, as well as the desire to comply with these in-group norms as a means to gaining acceptance from fellow church members<sup>39</sup>. Therefore, among religious individuals and individuals who attend church more frequently, the association between the *Social* motive and volunteering may be stronger, than for non-religious individuals or individuals who attend church less frequently.

We propose the following conceptual model, the volunteer model, in which we depict our hypotheses:

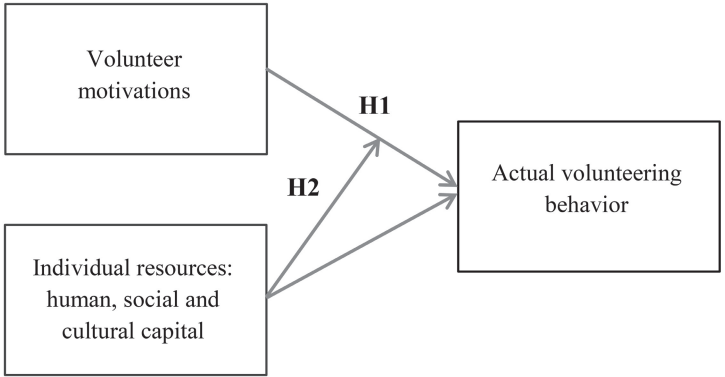


Figure 1 The volunteer model

## METHODS

### Study Design and Participants

The Lifelines cohort study is a multi-disciplinary prospective population-based cohort study examining in a unique three-generation design the health and health-related behaviors of 167,729 persons living in the North of the Netherlands. It employs a broad range of investigative procedures in assessing the biomedical, socio-demographic, behavioral, physical and psychological factors which contribute to the health and disease of the general population, with a special focus on multi-morbidity and complex genetics. The study profile of Lifelines is described elsewhere<sup>41,42</sup>. Briefly, participants were recruited between 2006 and 2013. Inhabitants (aged 25 to 50 years) of the three Northern provinces of the Netherlands were invited by their General Practitioners (GPs) if they met eligibility criteria. Subsequently, respondents' family members were invited, leading to a unique three-generation design. Additionally, inhabitants of the Northern provinces of the Netherlands could also self-register via the Lifelines website. Baseline assessment (T1) consisting of physical examination, collecting fasting blood and urine samples, interviews and self-report questionnaires was conducted between 2006 and 2013. Participants are followed-up every 1.5 years by additional questionnaires and every 5 years by physical examination. The Lifelines Cohort Study is approved by the medical ethical committee of the University Medical Center Groningen, the Netherlands. All participants signed an informed consent form. Lifelines is a facility that is open for all researchers. Information on the application and data access procedure is summarized on [www.lifelines.nl](http://www.lifelines.nl).

### ***Lifelines Daily Activities and Leisure Activities add-on Study (Lifelines DALAS)***

All adults aged 60 to 80 who completed one of the two parts of the fourth Lifelines questionnaire at least six months before the start of the Lifelines 'Daily Activities and Leisure Activities add-on Study (Lifelines DALAS)' were invited to participate in Lifelines DALAS ( $N=15,655$ ). The Lifelines DALAS questionnaire consists of a broad range of measures related to health, quality of life and lifestyle as well as a broad range of questions assessing the daily activities (i.e. employment, providing informal care and voluntary work, caretaking of grandchildren) and leisure activities (i.e. sports, cultural activities, traveling, social contacts) of participants. A full section of the questionnaire is devoted to participation in voluntary work, containing questions about current and former participation in voluntary work, the frequency, duration, intensity and type of volunteering as well as the motives underlying volunteering.

### **Variables**

The variables used in the current study are mainly extracted from the Lifelines DALAS questionnaire. In case variables from other Lifelines waves were used, we denote this explicitly below.

#### ***Outcome variable***

In the current study, we focus on formal volunteering, that is, "working as an unpaid volunteer for community benefit under the auspices of an organization"<sup>23</sup> (p.29). For determining *volunteer status*, we use the question "Do you do formal voluntary work (i.e. voluntary work for an organization or association, for example a charity organization, school, sports club, seniors club, religious organization, or music association)?" (1 = Yes, 0 = No).

#### ***Volunteer motivations***

We use the *Dutch Comparative Scale for Assessing Volunteer Motivations among Volunteers and Non-Volunteers*<sup>19</sup> for assessing volunteer motivations. This comparative scale is based on the Volunteer Functions Inventory (VFI)<sup>18</sup> and contains the six original functions of the VFI, which are the *Values, Understanding, Enhancement, Protective, Social, and Career* functions. In total, the comparative scale consists of 18 items. The wording of the items is formulated slightly different for non-volunteers than for volunteers. The volunteer and the non-volunteer version of the *Dutch Comparative Scale for Assessing Volunteer Motivations among Volunteers and Non-Volunteers* are

presented in Appendix A and B. The factor *Values* contains items 3,9 and 12; the factor *Understanding* contains items 11,16 and 18; the factor *Enhancement* contains items 4 and 7; the factor *Protective* contains items 13 and 15; the factor *Social* contains items 2,5,10 and 14; and finally, the factor *Career* contains items 1,6,8 and 17. For each volunteer motivation, sum scores are calculated by adding the scores on the relevant items.

### ***Individual resources***

Human capital is measured by level of educational attainment and by level of self-rated health. The variable *Education* measures the individuals' educational attainment (1 = elementary, 2 = lower secondary, 3 = upper secondary, 4 = tertiary) and is extracted from the Lifelines baseline questionnaire. The variable *Self-rated health* is measured by means of the following question "How do you, in general, rate your health?" (1 = poor, 2 = moderate, 3 = good, 4 = very good, 5 = excellent).

Social capital is measured by social network size and by marital status. *Social network size* is measured by the question "On average, with how many different people do you have contact within a period of two weeks, in which you talk about personal matters?". *Marital status* contains three categories: 1 = single / no partner, 2 = in a relationship, not cohabiting, 3 = married / cohabiting.

Cultural capital is measured by religious affiliation and by frequency of church attendance. *Religion* is measured by the question "Are you religious?" (0 = no, 1 = yes). *Church attendance* is measured by the question "How often have you attended a religious meeting in the past 12 months?" (1 = never, 2 = once, 3 = less than once a month, 4 = once a month, 5 = once per two weeks, 6 = once per week, 7 = several times per week).

### ***Potential confounding variables***

Age, gender (0 = female, 1 = male), informal caregiving status (0 = no, 1 = yes), caretaking of grandchildren (0 = no, 1 = yes) and employment status (0 = not employed, 1 = employed), are included as covariates. Paid work has previously been included as a form of human capital, among the young-old<sup>43</sup>, or as form of social capital among older individuals<sup>24,28</sup>. Also grandparental caretaking has previously been included as form of social capital, among older individuals<sup>28</sup>. However, we do not include these factors as part of individual capital. For individuals aged 60 and over, we expect

employment status, informal caregiving status and grandparental caretaking to be of importance mainly because of the time investment required; individuals who contribute time to paid work, informal care or caretaking of grandchildren, have restricted time available to spend on formal volunteering.

## Statistical Analysis

Missing data on volunteer motives, resources and confounding variables are imputed using multiple imputation by chained equations. We follow the methods described by White, Royston, & Wood<sup>44</sup>. Descriptive statistics are used to present the demographic characteristics of the full sample, the volunteer sample and the non-volunteer sample. Also, descriptive statistics are used to describe the 18 items included in the *Dutch Comparative Scale for Assessing Volunteer Motivations among Volunteers and Non-Volunteers*. Moreover, factor mean scores for the six volunteer functions (*Understanding, Career, Values, Protective, Social, and Enhancement*) are calculated. In order to compare the demographic characteristics as well as the factor mean scores between the volunteer and non-volunteer sample, Chi-square tests are used for the categorical variables. Moreover, either Independent Samples T-Tests or Independent Samples Mann-Whitney U Tests are used for the nominal variables, depending on whether they are normally distributed or not.

We apply both univariate and multivariate logistic regression analysis. In model 1a, volunteer status is regressed on the six volunteer motivations. In model 1b, volunteer status is regressed on the volunteer motivations, individual resources and the potentially confounding variables. Subsequently, in model 1c, we add several interaction terms to test whether associations between specific volunteer motivations and actual volunteering are moderated by individual resources.

IBM SPSS statistics software version 25 is used for all analyses.

## RESULTS

### Sample Characteristics

A total of  $N=15,655$  participants were invited to participate in the Lifelines DALAS study. A total of  $N=7,638$  participants filled out the questionnaire (response rate of 49.0%), with volunteer status being provided by  $N=7,611$  respondents (99.6%). Of these,  $N=4,207$  respondents (55.3%) indicated to participate in voluntary work at the time

of filling out the questionnaire, and  $N=3,404$  (44.7%) indicated not to participate in voluntary work.

Background characteristics for the full sample as well as the volunteer and non-volunteer samples separately, are presented in **Table 1**. Volunteers are on average slightly older ( $M=67.06$ ,  $SD=4.73$ ) than non-volunteers ( $M=66.06$ ,  $SD=4.93$ ). Moreover, volunteers are on average higher educated, more often male, retired and religious, attend religious meetings more frequently, have a larger social network size, rate their health better, and more often provide informal care and grandparental caretaking than non-volunteers. Also, volunteers were on average less often employed, and received disability insurance less often than non-volunteers. Finally, Table 1 shows that almost half (46.9%) of the non-volunteer sample had previous volunteering experience.

**Table 1** Demographic characteristics of the full sample ( $N = 7,638$ ), the volunteer sample ( $N=4,207$ ) and the non-volunteer sample ( $N=3,404$ )

Variables	Full Sample ( $N = 7,638$ )	Volunteer sample ( $N=4,207$ )	Non-Volunteer sample ( $N=3,404$ )	P-value <sup>1</sup>
Age, M <sup>2</sup> (SD)	66.62 (4.84)	67.06 (4.71)	66.06 (4.93)	<0.01
Gender (Female), N(%)	3,938 (51.6%)	2,122 (50.4%)	1,800 (52.9%)	<0.05
Work Situation, N(%) <sup>3</sup>				
- Employed	2,318 (30.3%)	1,048 (24.9%)	1,263 (37.1%)	<0.01
- Retired	4,858 (63.7%)	2,926 (69.6%)	1,918 (56.3%)	<0.01
- Unemployed	263 (3.4%)	158 (3.8%)	103 (3.0%)	0.08
- Disability insurance	269 (3.5%)	121 (2.9%)	146 (4.3%)	<0.01
- Social benefits	54 (0.7%)	38 (0.9%)	16 (0.5%)	0.03
- Housewife/Houseman	1,890 (24.7%)	1,073 (25.5%)	810 (23.8%)	0.09
- Following education	395 (5.2%)	243 (5.8%)	150 (4.4%)	<0.01
Providing Informal Care (Yes), N(%)	2,116 (28.0%)	1,336 (31.8%)	772 (22.7%)	<0.01
Taking Care of Grandchildren (Yes), N(%)	4,450 (58.6%)	2,594 (61.7%)	1,841 (54.1%)	<0.01

1 Obtained by conducting  $\chi^2$  test (categorical variables) or Independent Samples Mann-Whitney U Test (continuous variables)

2 Mean and standard deviation

3 For the work situation variables, dichotomous measures are used (employed versus not-employed, retired versus not retired, unemployed versus not unemployed and disabled from work versus not disabled from work). The percentages in the table are based on these dichotomous variables and therefore do not add up to 100%. Some respondents do not belong to any of these four categories and others belong to several categories (for example, a respondent can both be employed and disabled from work for a certain percentage of his or her working hours).

Table 1 Continued

Variables	Full Sample (N = 7,638)	Volunteer sample (N=4,207)	Non-Volunteer sample (N=3,404)	P-value
Educational Attainment, N(%) <sup>4</sup>				<0.01
- Elementary	187 (2.5%)	81 (2.0%)	105 (3.2%)	
- Lower Secondary	2,670 (36.1%)	1,318 (32.3%)	1,343 (40.8%)	
- Upper Secondary	2,142 (28.9%)	1,173 (28.7%)	958 (29.1%)	
- Tertiary	2,405 (32.5%)	1,512 (37.0%)	889 (27.0%)	
Self-rated Health, N(%)				<0.01
- Poor	17 (0.2%)	3 (0.1%)	13 (0.4%)	
- Moderate	428 (5.6%)	197 (4.7%)	228 (6.7%)	
- Good	3,341 (43.8%)	1,739 (41.3%)	1,595 (47.0%)	
- Very Good	2,715 (35.6%)	1,606 (38.2%)	1,098 (32.3%)	
- Excellent	1,128 (14.8%)	661 (15.7%)	462 (13.6%)	
Social Network Size, M (SD); Range	5.95 (6.05); 0 - 100	6.44 (6.16); 0 - 50	5.36 (5.87); 0 - 100	<0.01
Marital Status, N(%)				0.34
- Married/Cohabiting	6,563 (86.0%)	3,637 (86.5%)	2,903 (85.3%)	
- Relationship not cohabiting	205 (2.7%)	109 (2.6%)	95 (2.8%)	
- Single/No partner	865 (11.3%)	458 (10.9%)	404 (11.9%)	
Religious (Yes), N(%)	3,187 (41.8%)	2,158 (51.3%)	1,014 (29.9%)	<0.01
Church Attendance				<0.01
- Never	4,574 (60.0%)	1,996 (47.5%)	2,565 (75.5%)	
- Once	563 (7.4%)	320 (7.6%)	240 (7.1%)	
- Less than once a month	531 (7.0%)	338 (8.0%)	191 (5.6%)	
- Once a month	281 (3.7%)	202 (4.8%)	78 (2.3%)	
- Once per 2 weeks	447 (5.9%)	359 (8.5%)	88 (2.6%)	
- Once per week	1,013 (13.3%)	822 (19.6%)	184 (5.4%)	
- Several times per week	216 (2.8%)	166 (3.9%)	50 (1.5%)	
Previous experience with volunteering (Yes), N(%)	-	-	1,597 (46.9%)	-

Descriptive statistics, including mean and SD, median, skewness and kurtosis, for the *Dutch Comparative Scale for Assessing Volunteer Motivations among Volunteers and Non-Volunteers*, are provided in Appendix C. For both the volunteer sample and the non-volunteer sample, data are highly non-normally distributed for almost every item.

In **Table 2**, the subscale mean scores for all six functions (*Values, Understanding, Enhancement, Protective, Social, and Career*) are presented. Independent samples Mann-Whitney U Tests were conducted to test whether the mean scores differed between the volunteer and non-volunteer sample. Volunteers rated the *Values, Understanding, Enhancement, Protective, and Social* factors on average higher than non-volunteers. Volunteers and non-volunteers scored similarly on the *Career* factor. The mean scores for the *Career* factor are low, both in absolute value as well as compared to the mean scores on the other five factors. This is, however, not surprising

4 All percentages are valid percentages (excluding missing cases)

given the age of the study population (60 to 80 years) and the high percentage of retired individuals (63.7%). The ranking of the importance of the volunteer motivations seems to be comparable between the volunteer and non-volunteer samples. The mean scores in both groups are highest for the *Values* motive, followed by *Understanding* and *Enhancement* and *Social*, and are lowest for the *Protective* and *Career* motive.

**Table 2** Subscale mean scores for the Dutch Comparative Scale for Assessing Volunteer Motivations among Volunteers and Non-Volunteers in the volunteer sample ( $N=4,207$ ) and the non-volunteer sample ( $N=3,404$ )

Subscales	Volunteer sample ( $N=4,207$ )		Non-Volunteer sample ( $N=3,404$ )		P-values comparing subscale mean scores <sup>5</sup>
	Mean	SD	Mean	SD	
<b>Values</b>	4.70	1.50	3.85	1.61	<0.001
<b>Understanding</b>	3.53	1.64	2.32	1.49	<0.001
<b>Enhancement</b>	3.06	1.65	1.72	1.15	<0.001
<b>Protective</b>	1.79	1.27	1.48	0.97	<0.001
<b>Social</b>	2.77	1.38	2.26	1.24	<0.001
<b>Career</b>	1.51	0.97	1.53	1.01	0.858

In Appendix D, correlation coefficients are presented for the subscale mean scores of the Dutch Comparative Scale for Assessing Volunteer Motivations among Volunteers and Non-Volunteers. Relatively high correlations are found between *Enhancement* and *Understanding* (spearman's rho = 0.637) and *Social* and *Understanding* (spearman's rho = 0.523).

## Missing values

Missing values for the outcome variables, volunteer motives, resources, and potential confounding variables, are presented in Appendix E. A total of  $N=27$  respondents did not provide an answer on the outcome variable *Volunteer Status*. These cases are excluded from the analysis. Missing values on the other variables were imputed. The analysis sample contains  $N=7,611$  respondents.

<sup>5</sup> Obtained by conducting Independent Samples Mann-Whitney U Test (continuous variables)

## Results of the uni- and multivariate logistic regression analyses

For all six volunteer motivations, the linearity assumption is violated (non-linear association between each volunteer motivation and the log odds of the likelihood to volunteer). Therefore, these continuous variables are transformed into categorical variables. The variables *Values*, *Understanding*, *Enhancement* and *Social* are transformed into quartiles, in which the number of respondents is approximately equally distributed over the quartiles. The association between the volunteer motivations quartiles and the log odds of the outcome variable is approximately linear, and therefore these categorical variables containing quartiles are included as continuous variables in the models. For the variables *Protective* and *Career* it is not possible to use quartiles, because of the highly skewed distribution of these variables: 62.0% of the respondents had a value of 4 on the *Career* sum score (range 4 – 28), and 61.9% of the respondents had a value of 2 on the *Protective* sum score (range 2 – 14). Therefore, we included dummy variables for the *Protective* and *Career* sum scores in the analyses, in which the value of 0 is assigned to respondents with the lowest possible score (value 4 for the *Career* sum score, and value 2 for the *Protective* sum score) and the value of 1 to respondents who indicated to be driven at least a little by the specific motivation.

For age and social network size, the linearity assumption is also violated. Therefore, instead of the continuous variable for age, we include age groups (4 quartiles) in the models with the youngest age group (60-64 years) as the reference category. The continuous variable social network size is divided into four quartiles, and this categorical variable is included as a continuous variable in the models. For educational attainment, only a small number of respondents are represented in the lowest category (elementary education, 2.5%) and, therefore, the categories elementary and lower secondary are combined. The educational attainment variable containing three categories is included as a continuous variable. For self-rated health, the number of respondents in the lowest category is also very small (poor health, 0.2%) and, therefore, this category is combined with the category representing moderate health. This variable for self-rated health containing 4 categories is included in the model as a categorical variable (poor to moderate health is the reference category). The categorical variable church attendance contained seven categories and is transformed in a variable containing four categories. The categories *less than once a month*, *once or twice a week*, and *at least once a week* are included as dummy variables in the models, with the category *never* as the reference category.

In **Table 3**, the results of the uni- and multivariate logistic regression analyses are presented. The univariate regression analysis shows that all volunteer motivations, except *Career*, are positively associated with volunteer participation. These results are largely in line with our expectations, as we expected positive associations between all volunteer motivations and participation in voluntary work. Moreover, all individual resources containing measures of human, social and cultural capital (except for marital status) are positively associated with the likelihood to volunteer. In model 1a, the six volunteer motivations are simultaneously regressed on volunteer status. As Table 3 shows, the *Values*, *Understanding* and *Enhancement* volunteer motivations are positively associated with participation in voluntary work, whereas the *Protective*, *Social* and *Career* motivations are significantly negatively associated with participation in voluntary work. These results are unexpected, and different from the results of the univariate analysis. Several factors could explain the unexpected negative associations between the *Protective*, *Social* and *Career* motives and participation in voluntary work. A first explanation is that methodological aspects could play a role. All volunteer motivations are strongly positively correlated to each other (see Appendix D). These strong positive correlations could reflect the tendency of individuals to agree relatively often with the items proposed in the measurement instrument used for assessing volunteer motivations. This positive response bias may cause the associations between each of the volunteer motivations (except *Career*) and volunteering, to be positive. However, the relative importance of the volunteer motivations, as considered by the respondents, is not reflected in the univariate results. The relative importance of the motivations, by which we mean the value attached to each of the volunteer motivations as compared to the values attached to the other volunteer motivations by each respondent, could play an important role in explaining the variability in participation in voluntary work. In order to obtain more insight in this mechanism, we conducted additional analyses. In short, we transformed the volunteer motivation scores by adjusting them for the overall tendency of respondents to give higher or lower scores and use these adjusted scores to assess the relative importance of the volunteer motivations. The results of these additional analyses confirmed that the results of the multivariate analysis in model 1a indeed mainly reflect the relative importance of the volunteer motivations, and especially that the type of benefits as perceived by respondents is important for their likelihood to volunteer. A more detailed description of these additional analyses and the corresponding results are presented in Appendix F. A second explanation for the unexpected results, is that the majority of the respondents does not consider the *Career* and the *Protective* motives relevant at all. Respondents' scores on these

factors are strongly skewed. The results of the additional analyses (Appendix F) show that higher scores on the *Career* motive are correlated with higher scores on the *Protective* motive, and that these motives are strongly negatively associated with all other volunteer motives. Individuals who attach a relatively high importance to the *Career* and *Protective* motives, attach apparently a relatively low importance to the other volunteer motives, resulting in a lower likelihood to volunteer. In the discussion section, we will elaborate further on these mechanisms.

Results for the full model, including all individual resources and covariates (model 1b), show that the associations between the volunteer motivations and volunteer status do not change as a result of including the individual resources. Moreover, the results of this model show that individuals with higher levels of resources - in terms of human, social and cultural capital - have a higher likelihood to volunteer than individuals with lower levels of resources available to them. Educational attainment (human capital), self-rated health (human capital), social network size (social capital), being religiously affiliated (cultural capital) and a frequency of church attendance (cultural capital) are all positively associated with participation in voluntary work. Marital status (social capital) is not associated with participation in voluntary work.

### ***Moderation analysis***

In model 1c, we added interaction terms between specific sets of resources and volunteer motivations, in order to assess the potential moderating role of individual resources on the associations between volunteer motivations and volunteer status. We expected that the importance of certain volunteer motivations for volunteering could be different for individuals possessing lower versus higher levels of individual resources. Specifically, we expected that the association between the *Understanding* motive and volunteering would be stronger among higher educated individuals than among lower educated individuals; that the association between the *Protective* motive and volunteering would be stronger among individuals with lower levels of self-rated health; that the association between the *Social* motive and volunteering would be stronger among individuals without a partner, with smaller social network sizes, who are religious and who attend church more frequently. Moreover, we expected that the association between the *Values* motive and volunteering would be stronger among religious individuals and individuals who attend church more frequently. None of the interaction terms were statistically significant. Therefore, our expectations regarding the differential importance of specific volunteer motivations for participation in voluntary work between individuals with lower versus higher levels of resources available to them could not be confirmed.

**Table 3** Uni- and Multivariable Logistic Regression Analysis for the Likelihood to Volunteer (N=7,611)

	Univariable Analysis				Multivariable Analysis				Model 1c	
	B	SE	B	SE	Model 1a $r^2 = 0.300$	B	SE	Model 1b $r^2 = 0.405$	B	SE
Constant					-2.336**	0.091	-4.123**	0.195	-3.968**	0.348
Volunteer Motivations										
Values (quartiles)	0.483**	0.022	0.286**	0.030	0.208**	0.033	0.162**	0.039		
Understanding (quartiles)	0.636**	0.029	0.477**	0.044	0.489**	0.047	0.596**	0.082		
Enhancement (quartiles)	0.685**	0.022	0.745**	0.032	0.742**	0.034	0.741**	0.034		
Protective (binary)	0.415**	0.050	-0.371**	0.077	-0.385**	0.085	-0.186	0.240		
Social (quartiles)	0.268**	0.023	-0.178**	0.033	-0.257**	0.036	-0.430**	0.092		
Career (binary)	-0.088	0.048	-1.147**	0.072	-0.954**	0.079	-0.953**	0.079		
Human Capital										
Educational Attainment	0.277**	0.028			0.270**	0.035	0.397**	0.085		
Self-rated Health										
Poor to moderate	Ref.				Ref.		Ref.			
Good	0.282**	0.102			0.317*	0.123	0.458*	0.186		
Very good	0.576**	0.104			0.557**	0.126	0.662**	0.187		
Excellent	0.554**	0.113			0.528**	0.139	0.576**	0.200		
Social Capital										
Social Network Size (quartiles)	0.207**	0.021			0.125**	0.026	0.028	0.063		
Married or Cohabiting	0.098	0.066			-0.018	0.083	-0.254	0.191		
Cultural Capital										
Religious Status	0.908**	0.049			-0.048	0.085	-0.043	0.248		
Church Attendance										
Never	Ref.				Ref.		Ref.			
Less than once a month	0.674**	0.069			0.646**	0.092	0.136	0.273		
Once or twice per month	1.470**	0.093			1.476**	0.127	1.504**	0.382		
At least once a week	1.690**	0.079			1.577**	0.116	1.565**	0.345		

Table 3 Continued

		Univariable Analysis			Multivariable Analysis					
		B	SE	B	SE	B	SE	B	SE	Model 1c <i>r</i> <sup>2</sup> = 0.449
		Model 1a <i>r</i> <sup>2</sup> = 0.300			Model 1b <i>r</i> <sup>2</sup> = 0.405					
Covariates										
Age										
	60-64 years	Ref.		Ref.		Ref.		Ref.		
	65-69 years	0.583**	0.055	0.429**	0.077	0.438**	0.077	0.438**	0.077	0.077
	70-74 years	0.507**	0.064	0.434**	0.090	0.435**	0.090	0.435**	0.091	0.091
	75-79 years	0.446**	0.092	0.240	0.124	0.248*	0.124	0.248*	0.124	0.124
	Male	0.098*	0.046	0.268**	0.061	0.263**	0.061	0.263**	0.061	0.061
	Employed	-0.576**	0.050	-0.429**	0.075	-0.427**	0.075	-0.427**	0.076	0.076
	Taking Care of Grandchildren	0.308**	0.047	0.147*	0.059	0.148*	0.059	0.148*	0.059	0.059
	Providing Informal Care	0.458**	0.053	0.357**	0.065	0.361**	0.065	0.361**	0.065	0.065
Interaction terms										
	Educational Attainment * Understanding					-0.052		-0.052		0.032
	Poor self-rated health * Protective					Ref.		Ref.		
	Good self-rated health * Protective					-0.280		-0.280		0.249
	Very good self-rated health * Protective					-0.209		-0.209		0.256
	Excellent self-rated health * Protective					-0.040		-0.040		0.287
	Married or Cohabiting * Social					0.099		0.099		0.071
	Social Network Size * Social					0.040		0.040		0.023
	Church Attendance (Never) * Values					Ref.		Ref.		
	Church Attendance (Less than once a month) * Values					0.456		0.456		0.089

Table 3 Continued

	Univariable Analysis			Multivariable Analysis		
	B	SE	B	SE	B	SE
				Model 1a $r^2 = 0.300$	Model 1b $r^2 = 0.405$	Model 1c $r^2 = 0.449$
Church Attendance (Once or twice per month) * Values			0.220			0.130
Church Attendance (At least once a week) * Values			0.131			0.115
Religion * Values			-0.027			0.083
Church Attendance (Never) * Social			Ref.			
Church Attendance (Less than once a month) * Social			0.055			0.089
Church Attendance (Once or twice per month) * Social			-0.216			0.129
Church Attendance (At least once a week) * Social			-0.125			0.113
Religion * Social			0.027			0.082

## DISCUSSION

The aim of the current study was to improve our understanding of the role of motivations in participation in voluntary work. By using the recently developed *Dutch Comparative Scale for Assessing Volunteer Motivations among Volunteers and Non-Volunteers*<sup>19</sup>, based on the Volunteer Functions Inventory<sup>18</sup>, we were able to compare volunteer motivations between volunteering and non-volunteering individuals. To our best knowledge, the current study is the first comparing volunteer motivations by using a valid scale for assessing volunteer motivations among volunteering but also non-volunteering individuals.

We expected that the six volunteer motivations would be positively associated with participation in voluntary work (H1a), because in research on volunteer motivations it is often assumed that volunteers have stronger volunteer motivations than non-volunteers<sup>10,14</sup>. A comparison of the subscale mean scores between volunteering and non-volunteering individuals showed that volunteers indeed score significantly higher on all volunteer motivations, except for the *Career* function. The mean scores of volunteers and non-volunteer for the *Career* function are comparable. This is also reflected in the univariate analysis, in which all volunteer motivations were separately regressed on participation in voluntary work. The multivariate regression analysis shows that individuals who are more strongly motivated to volunteer for reasons related to the desire to express altruistic concerns (*Values* function), learn new things (*Understanding* function), and enhance personal growth (*Enhancement* function), are indeed more likely to volunteer, partially confirming hypothesis H1a.

Although we expected that individuals with stronger volunteer motivations in terms of the desire to protect their mental state (*Protective* function), enhance social inclusion (*Social* motive), or improve possibilities for paid work (*Career* function), were also more likely to volunteer than individuals with lower scores on these volunteer motivations, the results of the multivariate analysis contradict this expectation. Individuals with higher scores on the *Protective*, *Social* and *Career* motive, are *less*, instead of more, likely to volunteer than individuals with lower scores on these volunteer motivations. So, although the mean scores for the *Protective* and *Social* function are significantly higher among volunteering individuals than among non-volunteering individuals, stronger volunteer motivations in terms of the opportunities for protecting well-being and enhancing societal confirmation, are associated with a lower likelihood to volunteer. By conducting additional analyses, we showed that especially the *relative*

importance of the volunteer motivations, as perceived by individuals, is important for participation in voluntary work, much more than the *absolute* importance attached to the six volunteer functions. We assessed the relative importance of the volunteer motivations for participation in voluntary work, by correcting each factor mean score for the overall mean score on all subscales together. This analysis showed that, in *relative values*, volunteers only rated the *Values, Understanding and Enhancement* motives higher than non-volunteers, and non-volunteers rated the *Protective, Social* and *Career* motive higher, which is in line with the findings in model 1a. The results of the multivariate regression analysis in model 1a reflect the relative importance of the volunteer motivations, instead of their absolute importance. The results of the univariate regression analysis, however, showed that, in *absolute values*, volunteers rated all volunteer motivations higher than non-volunteers (except for the *Career* motive). Apparently, volunteering individuals more strongly recognize the opportunities of volunteering in terms of all volunteer motivations than non-volunteering individuals. Yet, only higher scores on the *Values, Understanding and Enhancement* motives are associated with a higher likelihood to volunteer. We conclude that for participation in voluntary work, especially the *type* of benefits as perceived by older individuals (and reflected by specific volunteer motivations) is important for participation in voluntary work. Older individuals who perceive larger benefits from volunteering in terms of opportunities to (a) express altruistic concerns (*Values* motive), (b) learn new things (*Understanding* motive), or (c) enhance personal growth (*Enhancement* motive), are more likely to volunteer than individuals who perceive these benefits to be smaller. Moreover, older individuals who mainly perceive benefits from volunteering in terms of possibilities to (a) protect one's mental state (*Protective* motive), (b) express normative behavior (*Social* motive), or (c) enhance the chance of success for paid work (*Career* motive), are less likely to volunteer than individuals who perceive these benefits to be smaller. Our results moreover show that certain types of volunteer motivations tend to cluster together. Individuals who perceive larger benefits from volunteering in terms of the possibility to learn new things (*Understanding* motive), often perceive larger benefits in terms of enhancing personal growth (*Enhancement* motive) too. Furthermore, individuals who perceive larger benefits from volunteering in terms of enhancing the chance of success for paid work (*Career* motive) often also perceive larger benefits in terms of protecting one's mental state (*Protective* motive).

We, moreover, expected that volunteers and non-volunteers could be mainly distinguished based on their desire to express altruistic concerns (H1b). Our results show that this hypothesis could not be confirmed. The association between the *Values* motive and participation in voluntary work is stronger than the association between the *Social* motive and volunteering, but weaker than the associations between all other motivations and volunteering. Although individuals who perceive more benefits in terms of the opportunities volunteering provides to help others are indeed more likely to volunteer than individuals who perceive these benefits to be smaller, other volunteer motivations seem to be of equal or higher importance for actual volunteering. The comparison of the factor mean scores between volunteering and non-volunteering showed that both volunteering and non-volunteering individuals perceive large benefits of volunteering in terms of the opportunities to express altruistic concerns. Apparently, other volunteer motives differentiate volunteers from non-volunteers more strongly.

Furthermore, we expected that higher educated individuals would be more strongly motivated to volunteer for reasons related to the desire to learn new things; that individuals with health problems would be more strongly motivated to volunteer for reasons related to the opportunity volunteering provides to protect the mental state; that individuals with lower levels of social capital would be strongly motivated to volunteer for reasons related to the opportunities volunteering provide to enhance social inclusion; and finally, that religious individuals and individuals who attend church more frequently, would be more strongly motivated to volunteer for reasons related to the opportunities to help others in need, and to live up to societal norms. However, none of these hypotheses could be confirmed. For our findings regarding the level of education, it could be that higher educated individuals perceive more opportunities for acquiring new skills and obtaining new knowledge from enrolling in educational programs for seniors, than from volunteering. Older individuals, who are mainly driven by a desire to learn new things, may thus be more likely to take-up education again, instead of voluntary work. For individuals with health problems, other activities may be available to improve well-being, that may be less physically demanding than volunteering. These individuals could probably prefer to improve their well-being by increasing their time spend with close family and friends. Furthermore, individuals with lower levels of social capital and a desire to improve this, may be more likely to use their time and energy to strengthen their social ties, or to invest in social relationships and social activities that are easily accessible, instead

of choosing voluntary work as a possible means to increase their social capital. Finally, for religious individuals with a desire to improve their social inclusion or to express altruistic concerns, plenty of options may be available within their religious community. For example, increasing the frequency of church attendance, joining other religious meetings, and adhering to important religious norms and values, other than taking care of others, may enhance social inclusion. Providing informal help to fellow church members can enhance social inclusion and, at the same time, serve as an opportunity to express the desire to help others in need. Other examples of possibilities to express concerns for others within religious communities are praying, and collecting money for people in need. Participation in formal voluntary work may just be one of the many options available to religious individuals to enhance social inclusion and express altruistic concerns.

Significant positive associations were found between all individual resources and participation in voluntary work, except for marital status. In previous research, married people have consistently been found to have a higher likelihood to volunteer than unmarried people<sup>31</sup>. In the current study, the reference group contains single older adults, older adults who are in a relationship but who are not cohabiting, but also widowed older adults. These groups are very different, also in terms of volunteer motivations. Previous research shows that older adults who lost a partner rank all volunteer motivations (except for *Career*) higher than both married and single individuals<sup>28</sup>. With the available data, we could not differentiate between widowed older adults and other groups of unmarried older adults.

Caretaking of grandchildren and providing informal care were included in our models as potential barriers to volunteering, because of the time investment these activities require. Our results show, however, that caretaking of grandchildren as well as informal caregiving are positively associated with participation in voluntary work. These findings, therefore, may contribute to the debate on role extension and role overload theories. Productive activities can either be seen as substitute activities, as is assumed in role overload theory<sup>31,45,46</sup> or, in contrast, as complementary activities, as is assumed in role extension theory<sup>46</sup>. Among Dutch individuals aged 60 and over, volunteering and providing care, as well as volunteering and caretaking to grandchildren, seem to be complementary activities rather than substitute activities.

Assessing the mean scores of the six volunteer motivations among the volunteers and non-volunteers in our samples, shows that the pattern is very similar to the pattern in the study of Clary et al.<sup>16</sup>, within a nationally representative sample of Americans. In both our volunteer and non-volunteer sample, mean scores for the *Values* function are the highest, followed by the *Understanding*, *Enhancement* and *Social* functions, and the mean scores are the lowest for the *Protective* and *Career* functions. This ranking of volunteer motivations was also found in the Dutch, Italian and German older volunteer samples in the study by Principi et al.<sup>28</sup>, and broadly also in the studies of Yoshioka et al.<sup>17</sup> and Bowen et al.<sup>15</sup>.

Finally, our results show that volunteer motivations are of great importance for understanding volunteer behavior; they explain substantial variance in the likelihood to volunteer, on top of the individual resources, which is also in line with earlier findings<sup>16</sup>.

The current study is based on cross-sectional data. So, the motivations to volunteer are measured simultaneously with volunteer status. We assume that the volunteer motivations reflect the reasons for opting for volunteering. However, it could very well be that volunteer motivations of individuals opting for voluntary work change after having volunteered for a while. We cannot rule out the possibility that the volunteer motivations within the volunteer sample are indicative of the benefits from volunteering as perceived by the volunteers, rather their reasons for having started voluntary work<sup>14</sup>. As a result, differences in volunteer motivations between volunteers and non-volunteers could also partially reflect a change in the assessment of motivations, when comparing volunteer motivations of non-volunteering individuals (i.e. by asking them to imagine the potential benefits from volunteering), with volunteer motivations of those individuals who transitioned into voluntary work over time (i.e. by asking them to provide the benefits actually perceived from volunteering). And likewise, it could be that changes in volunteer motivations induce individuals to quit volunteering. In future research, the role of volunteer motivations in actual volunteering should be studied in a prospective cohort design, in order to rule out reverse causation effects and to assess the relationship between changes in volunteer motivations and volunteer cessation. As a result of the use of cross-sectional data, we have, moreover, not been able to assess changes in individual resources. Previous research has shown that changes in human, social, and cultural

capital are important for volunteering<sup>34</sup>. Future research should incorporate whether volunteer motivations change in accordance with changes in individual resources.

Our results provide important insights regarding policy measures aiming to recruit new volunteers, and retain current volunteers. Policy aiming to improve strategies for attracting new volunteers and retaining current volunteers should focus on trying to fit the voluntary work with the motivations to volunteer that were shown to be important for actual volunteering in the current study. In targeting Dutch older (aged 60 years and over) adults, voluntary jobs should provide possibilities for helping others in need, personal development (learn new skills or obtain new knowledge), and enhance personal growth.

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**Appendix A** Dutch Comparative Scale for assessing Volunteer Motivations among Volunteers and Non-Volunteers – *Short-Form VFI-V (Volunteer version)*<sup>6</sup>

Hieronder staan 18 mogelijke redenen voor het doen van vrijwilligerswerk. Wilt u steeds aangeven in hoeverre elk van de genoemde redenen op u van toepassing is?

1. Vrijwilligerswerk kan me helpen een voet tussen de deur te krijgen op een plek waar ik zou willen werken.
2. Mijn vrienden doen vrijwilligerswerk.
3. Ik ben betrokken bij mensen die het minder goed getroffen hebben dan ikzelf.
4. Door het doen van vrijwilligerswerk voel ik me belangrijk.
5. Mijn kennissen zijn geïnteresseerd in het leveren van een bijdrage aan de samenleving.
6. Ik kan nieuwe contacten opdoen die mogelijk van pas komen voor mijn bedrijf of carrière.
7. Vrijwilligerswerk verhoogt mijn gevoel van eigenwaarde.
8. Vrijwilligerswerk stelt me in staat verschillende carrièremogelijkheden te onderzoeken.
9. Ik leef mee met mensen die hulp nodig hebben.
10. Mensen die dichtbij me staan hechten veel waarde aan het leveren van een bijdrage aan de samenleving.
11. Door vrijwilligerswerk kan ik dingen leren door directe, praktische ervaring op te doen.
12. Ik vind het belangrijk anderen te helpen.
13. Vrijwilligerswerk helpt me mijn eigen problemen te verwerken.
14. Vrijwilligerswerk is een belangrijke bezigheid voor de mensen die ik het beste ken.
15. Vrijwilligerswerk is een goede afleiding van mijn eigen problemen.
16. Ik kan leren omgaan met verschillende soorten mensen.
17. Ervaring met vrijwilligerswerk staat goed op mijn cv.
18. Ik kan mijn eigen sterke punten verkennen.

1 = helemaal niet van toepassing / 7 = heel erg van toepassing.

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6 This measurement instrument can be used to (1) assess motives to volunteer, among volunteer samples, and (2) assess and compare motives to volunteer, between volunteer and non-volunteer samples, by using the *Short-Form VFI-V* and the *Short-Form VFI-NV* together.

**Appendix B** Dutch Comparative Scale for assessing Volunteer Motivations among Volunteers and Non-Volunteers – *Short-Form VFI-NV (Non-Volunteer Version)*<sup>7</sup>

Er volgen 18 mogelijke redenen voor het doen van vrijwilligerswerk. Wat zouden voor u redenen zijn om wel vrijwilligerswerk te gaan doen?

1. Vrijwilligerswerk zou me helpen een voet tussen de deur te krijgen op een plek waar ik zou willen werken.
2. Mijn vrienden doen vrijwilligerswerk.
3. Ik ben betrokken bij mensen die het minder goed getroffen hebben dan ikzelf.
4. Door het doen van vrijwilligerswerk zou ik me belangrijk voelen.
5. Mijn kennissen zijn geïnteresseerd in het leveren van een bijdrage aan de samenleving.
6. Ik zou nieuwe contacten opdoen die mogelijk van pas komen voor mijn bedrijf of carrière.
7. Vrijwilligerswerk zou mijn gevoel van eigenwaarde verhogen.
8. Vrijwilligerswerk zou me in staat stellen verschillende carrièremogelijkheden te onderzoeken.
9. Ik leef mee met mensen die hulp nodig hebben.
10. Mensen die dichtbij me staan hechten veel waarde aan het leveren van een bijdrage aan de samenleving.
11. Door vrijwilligerswerk zou ik dingen leren door directe, praktische ervaring op te doen.
12. Ik vind het belangrijk anderen te helpen.
13. Vrijwilligerswerk zou me helpen mijn eigen problemen te verwerken.
14. Vrijwilligerswerk is een belangrijke bezigheid voor de mensen die ik het beste ken.
15. Vrijwilligerswerk zou een goede afleiding van mijn eigen problemen zijn.
16. Ik zou leren omgaan met verschillende soorten mensen.
17. Ervaring met vrijwilligerswerk zou goed staan op mijn cv.
18. Ik zou mijn eigen sterke punten verkennen.

1 = helemaal niet van toepassing / 7 = heel erg van toepassing.

7 This measurement instrument can be used to (1) assess motives to volunteer, among non-volunteer samples, and (2) assess and compare motives to volunteer, between volunteer and non-volunteer samples, by using the *Short-Form VFI-V* and the *Short-Form VFI-NV* together.

**Appendix C** Descriptive statistics for the *Dutch Comparative Scale for Assessing Volunteer Motivations among Volunteers and Non-Volunteers* in the volunteer sample ( $N=4,207$ ) and the non-volunteer sample ( $N=3,404$ )

Subscales	Items	Volunteer sample ( $N=4,207$ )				Non-Volunteer sample ( $N=3,404$ )			
		Mean (SD)	Median	Skewness	Kurtosis	Mean (SD)	Median	Skewness	Kurtosis
<b>Understanding</b>	11. Volunteering lets me learn things through direct hands on experience	3.44 (1.94)	4	0.119 (0.04)	-1.31 (0.08)	2.36 (1.67)	2	1.304 (0.04)	0.77 (0.09)
	16. I can learn how to deal with a variety of people	3.91 (2.00)	4	-0.198 (0.04)	-1.28 (0.08)	2.42 (1.78)	1	0.941 (0.04)	-0.40 (0.09)
	18. I can explore my own strengths	3.23 (1.97)	3	0.245 (0.04)	-1.31 (0.08)	2.19 (1.66)	1	1.167 (0.04)	0.13 (0.09)
<b>Career</b>	1. Volunteering can help me to get my foot in the door at a place where I would like to work	1.39 (1.10)	1	3.175 (0.04)	9.98 (0.08)	1.55 (1.30)	1	2.514 (0.04)	5.44 (0.09)
	6. I can make new contacts that might help my business or career	1.60 (1.31)	1	2.363 (0.04)	4.75 (0.08)	1.57 (1.25)	1	2.404 (0.04)	5.10 (0.09)
	8. Volunteering allows me to explore different career options	1.45 (1.09)	1	2.802 (0.04)	7.67 (0.08)	1.44 (1.07)	1	2.885 (0.04)	8.58 (0.09)
<b>Values</b>	17. Volunteering experience will look good on my résumé	1.57 (1.29)	1	2.495 (0.04)	5.51 (0.08)	1.56 (1.27)	1	2.464 (0.04)	5.34 (0.09)
	3. I am concerned about those less fortunate than myself	3.88 (2.17)	4	-0.118 (0.04)	-1.44 (0.08)	3.23 (1.995)	3	0.281 (0.04)	-1.26 (0.09)
	9. I feel compassion toward people in need	4.87 (1.73)	5	-0.844 (0.04)	-0.09 (0.08)	4.18 (1.85)	4	-0.329 (0.04)	-0.90 (0.09)
<b>Protective</b>	12. I feel it is important to help others	5.34 (1.49)	6	-1.090 (0.04)	0.89 (0.08)	4.16 (1.86)	4	-0.297 (0.04)	-0.96 (0.09)
	13. Volunteering helps me work through my own personal problems	1.85 (1.39)	1	1.757 (0.04)	2.34 (0.08)	1.49 (1.03)	1	2.438 (0.04)	5.95 (0.09)
	15. Volunteering is a good escape from my own troubles	1.72 (1.32)	1	2.001 (0.04)	3.33 (0.08)	1.47 (1.03)	1	2.553 (0.04)	6.39 (0.09)
<b>Social</b>	2. My friends volunteer	2.15 (1.67)	1	1.293 (0.04)	0.48 (0.08)	2.02 (1.58)	1	1.500 (0.04)	1.24 (0.09)
	5. People I know share an interest in community service	2.65 (1.79)	2	0.685 (0.04)	-0.83 (0.08)	2.09 (1.52)	1	1.304 (0.04)	0.77 (0.09)
	10. Others with whom I am close place a high value on community service	3.57 (1.91)	4	0.013 (0.04)	-1.26 (0.08)	2.93 (1.82)	3	0.497 (0.04)	-0.94 (0.09)
<b>Enhancement</b>	14. Volunteering is an important activity to the people I know best	2.72 (1.84)	2	0.679 (0.04)	-0.83 (0.08)	1.99 (1.50)	1	1.515 (0.04)	1.42 (0.09)
	4. Volunteering makes me feel important	2.84 (1.79)	2	0.512 (0.04)	-0.10 (0.08)	1.62 (1.17)	1	2.058 (0.04)	3.78 (0.09)
	7. Volunteering increases my self-esteem	3.30 (1.93)	3	0.197 (0.04)	-1.28 (0.08)	1.82 (1.39)	1	1.706 (0.04)	2.00 (0.09)

**Appendix D** Correlation matrix for the volunteer motivations<sup>8</sup>

	<b>1.Understanding</b>	<b>2.Career</b>	<b>3.Values</b>	<b>4.Protective</b>	<b>5.Social</b>	<b>6.Enhancement</b>
<b>1.Understanding</b>	1.000					
<b>2.Career</b>	0.443**	1.000				
<b>3.Values</b>	0.446**	0.174**	1.000			
<b>4.Protective</b>	0.497**	0.490**	0.224**	1.000		
<b>5.Social</b>	0.523**	0.379**	0.436**	0.393**	1.000	
<b>6.Enhancement</b>	0.637**	0.396**	0.362**	0.485**	0.475**	1.000

**Appendix E** Missing values

<b>Variables</b>	<b>N</b>	<b>Missing</b>
		<b>%</b>
Volunteer Status	27	0.4
Volunteer Motives		
Item 1	252	3.3
Item 2	261	3.4
Item 3	269	3.5
Item 4	267	3.5
Item 5	277	3.6
Item 6	284	3.7
Item 7	270	3.5
Item 8	272	3.6
Item 9	278	3.6
Item 10	275	3.6
Item 11	294	3.8
Item 12	289	3.8
Item 13	289	3.8
Item 14	304	4.0
Item 15	303	4.0
Item 16	309	4.0
Item 17	307	4.0
Item 18	310	4.1
Education	234	3.1
Self-rated Health	9	0.1
Social Network Size	54	0.7
Marital Status	5	0.1
Religion	11	0.1
Church Attendance	13	0.2
Age	0	0.0
Gender	0	0.0
Work Status	15	0.2
Providing Informal Care	72	0.9
Taking Care of Grandchildren	42	0.5

<sup>8</sup> All correlation coefficients are *spearman's rho* coefficients. \*\* represent significant correlations ( $P < 0.001$ )

**Appendix F** Additional analyses to assess the relative importance of volunteer motivations

In order to assess the relative importance of the volunteer motivations, the scores on the volunteer motivations need to be corrected for differences between respondents with regard to their tendency to give higher scores (their positive response bias). In order to do so, the average score on all six volunteer motivations are subtracted from each factor mean score. Factor mean scores for the corrected variables, for the volunteer sample and non-volunteer sample separately, as well as the correlation matrix for the corrected variables, are presented in this appendix. Comparing the factor mean scores of the corrected variables between the volunteer and non-volunteer samples reveals that when assessing the relative importance of the volunteer motivations, volunteering individuals score higher on the *Values*, *Understanding* and *Enhancement* motives, whereas non-volunteering individuals score higher on the *Protective*, *Social* and *Career* motives (see Table F1), which is in line with the findings of our multivariate analyses in models 1a and 1b in Table 3. The correlation matrix for the corrected variables (see Table F2) shows a positive correlation between the *Enhancement* and *Understanding* functions ( $r = 0.073^{**}$ ), as well as between the *Protective* and *Career* functions ( $r = 0.240$ ). So, these volunteer motivations tend to cluster together. Correlation coefficients for all other pairs of volunteer motivations are negative. This shows that individuals who assign higher scores to the *Protective* factor, often assign higher scores to the *Career* factor too, and that individuals who assign higher scores to the *Understanding* motive, also relatively often assign higher scores to the *Enhancement* motive. Moreover, individuals who assign higher scores to the *Protective* and *Career* function, in general assign lower scores to the *Understanding* and *Enhancement* functions.

**Table F1** Corrected subscale mean scores (factor mean score – overall mean score)

	Volunteer sample (N=4,207)		Non-Volunteer sample (N=3,404)	
	Mean	SD	Mean	SD
Corrected_Values	1.8392	1.190	1.6295	1.171
Corrected_Understanding	0.6651	1.051	0.0977	0.884
Corrected_Enhancement	0.2102	1.182	-0.5054	0.807
Corrected_Protective	-1.0762	1.035	-0.7470	0.776
Corrected_Social	-0.0898	0.866	0.0280	0.804
Corrected_Career	-1.3554	0.833	-0.6973	0.710

**Table F2** Correlation matrix for the corrected subscale mean scores (factor mean score – overall mean score)

	1.Corr_Und	2.Corr_Car	3.Corr_Val	4.Corr_Prot	5.Corr_Soc	6.Corr_Enh
1. Corr_Und	1.000					
2. Corr_Car	-0.349**	1.000				
3. Corr_Val	-0.159**	-0.404**	1.000			
4. Corr_Prot	-0.207**	0.240**	-0.335**	1.000		
5. Corr_Soc	-0.322**	-0.265**	-0.161**	-0.222**	1.000	
6. Corr_Enh	0.073**	-0.202**	-0.241**	-0.061**	-0.224**	1.000

