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Abstract

Volunteering in later life attracts attention because its benefits older volunteers, voluntary associations, and society. Unfortunately, researchers and practitioners struggle with the complexity of predicting who volunteers. The authors ask whether a rough identification of older volunteers solely based on age is possible. The authors answer this question by means of structural equation modeling, analyzing international survey data. The findings show that the direct effect of age on the time older people spend volunteering is negligible. Moreover, the age patterns in volunteering created by retirement and declining health are weak. Those findings make age an unsuitable indicator for volunteering in later life. The authors recommend that voluntary organizations and policy makers use personal characteristics, such as health status, when defining their target groups for programs that encourage volunteering. In addition, researchers should not use an age group when referring to the third age, meaning the active and productive part of old age.

Keywords

age stratification, volunteering, old age, international comparison, structural equation modeling

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Introduction

Older people improve their own situation, contribute to voluntary organizations, and support welfare states when they volunteer. Older volunteers experience increased well-being and a sense of purpose, which enhances their quality of life (Fraser, Clayton, Sickler, & Taylor, 2009). Voluntary organizations gain resourceful helpers, who volunteer more hours in organizations than middle-aged and young people do (Hendricks & Cutler, 2004). Welfare states, finally, witness an active voluntary sector, which increases social cohesion (Putnam, 2000). All those benefits draw attention to older formal volunteers, meaning older people who work in associations without pay, out of philanthropic reasons (Hong, Morrow-Howell, Tang, & Hinterlong, 2009).

Voluntary organizations and policy makers have a practical interest in older volunteers: They want to encourage volunteering to increase the benefits for older people, voluntary organizations, and welfare states (Minkler & Holstein, 2008; Reed & Selbee, 2000). To reach this goal, they often install programs that encourage volunteering in later life, for example, in Germany and Australia (Bundesministerium für Familie, Senioren, Frauen und Jugend, 2006; Vellekoop Baldock, 1999). Such programs can be particularly effective when they target those older people who are predisposed to volunteer. A simple indicator that captures the predisposition for volunteering in later life would be a valuable tool for such programs. It would simplify the planning of programs that encourage volunteering in later life and increase their impact at the same time.

Unfortunately, research has not yet identified a simple and concise indicator for volunteering in later life. On the contrary, current research on older volunteers focuses on the complexity of the decision to volunteer. It shows, for example, that volunteering in later life depends on previous volunteering experience, educational level, health, gender, age, occupational group, and country of residence (see, for example, Einolf, 2009, *in press*; Erlinghagen & Hank, 2006; Kim, Kang, Lee, & Lee, 2007; Van der Meer, 2006; Webb & Abzug, 2008). Only research on third agers attempts to simplify the identification of older volunteers. Third agers (synonymously: the young old) are healthy retirees (Laslett, 1996). They have sufficient time and the physical capability to volunteer. Some researchers, therefore, assume that volunteering in later life is concentrated in the life years after retirement and before health declines (Minkler & Holstein, 2008; Neugarten, 1974). This assumption suggests that age could be a sufficient indicator for identifying older volunteers.

However, previous research did not establish which age group best represents older volunteers. Consequently, researchers use different age groups side by side. The age groups usually start between 55 and 65 years of age and end between 74 and 79 years of age (e.g., Morris & Caro, 1997; Neugarten, 1974; Sorensen, 2006). This study strives to refine our knowledge of the suitability of age as an indicator for volunteering in later life. It does this by asking two questions: Does age influence volunteering in later life? If so, which age group best represents older volunteers? The answers to these questions will not only help voluntary organizations and policy makers to support older volunteers, as previously described, they will also expand our knowledge of third agers

and older volunteers. Researchers, for example, can use this knowledge to decide which age groups to include in studies on third agers and on older volunteers.

To answer the research questions, we analyze international survey data in a multi-group structural equation model. This technique can test whether the influence of age is universal or whether it differs within and between countries (Blunch, 2008). A universal influence allows researchers to use one age group for the entire population and for different countries. This universalism simplifies country comparisons and efforts to support older volunteers. An influence that varies within and between countries, in contrast, requires the use of different age groups side by side. This diversity complicates country comparisons and efforts to support older volunteers. We test within-country differences between men and women because gender influences whether and when people volunteer. It determines whether volunteering competes against paid work and informal caregiving and at which age unstructured time is available for volunteering (Themudo, 2009; Van der Meer, 2006). We test between-country differences between Denmark, Germany, Greece, and the United States because those countries represent different types of welfare states (i.e., welfare regimes; see Esping-Andersen, 1990; Ferrera, 1996). The welfare regime influences the importance of and opportunity for volunteering in a country (Erlinghagen & Hank, 2006; Hank & Erlinghagen, 2010).

The Influence of Age on Volunteering in Later Life

Age is a common explanation for individuals' engagement as volunteers. Most quantitative studies on older volunteers include it in their analyses, and researchers often find it so self-evident that they do not explain the mechanism behind it (e.g., Erlinghagen & Hank, 2006; Sorensen, 2006). However, the findings are contradictory. Some studies find no influence (e.g., Tang, 2008), while others find a decline in the number of volunteers and in volunteering time as people age (e.g., Choi & Chou, 2010; Hank & Stuck, 2008). Those contradictory findings show that the effect of age on volunteering in later life is neither self-evident nor self-explanatory. We will, therefore, discuss how age could affect volunteering in later life. We first discuss the direct effect of age, which is often assumed in studies on older volunteers (e.g., Tang, 2008). We then discuss the age effects created by retirement and declining health, which are often underlined in studies on third agers (e.g., Laslett, 1996). These effects lead us to formulate six hypotheses on the age pattern in volunteering. The hypotheses are summarized in Table 1.

The Direct Effect of Age

Age can directly affect volunteering in later life in three ways. First, it can change the behavior of individuals. The disengagement theory states that aging individuals gradually withdraw from social interaction to prepare for death (Cumming & Henry, 1961). The socioemotional selectivity theory specifies that the withdrawal is limited to social interaction that is perceived as not emotionally significant (Carstensen, 1995). Both

Table 1. Hypotheses About Age Patterns in Volunteering

Hypothesis	Explanation	Changes in age pattern	Differences	
			Gender	Country
1	Volunteering naturally declines with age	Gradual	No	No
2	Age pattern in volunteering results from cohort differences	Abrupt	No	Yes
3	Age pattern in volunteering results from selection effect	Gradual	Yes	Yes
4	Paid work declines with age; volunteering increases when paid work declines	Abrupt	In Germany and Greece	Effect in Germany, Greece, and Denmark
5	Paid work declines with age; volunteering decreases when paid work declines	Abrupt	In Germany and Greece	Effect in Germany, Greece, and Denmark
6	Health declines with age; volunteering declines when health declines	Gradual	Yes	Yes

theories portray a mechanism that is inherent to all individuals. Therefore, our first hypothesis,

Hypothesis 1: Volunteering gradually declines in old age, without gender or country differences.

Second, age can reflect different logics of action. The cohort effect attributes differences between age groups to different historical events witnessed by individuals. The historical events witnessed shape how individuals act and think (Gilleard & Higgs, 2002, 2007; Rotolo & Wilson, 2004). They, consequently, also shape the individuals' attitude toward volunteering. Because all inhabitants of a country witness the same historical events, this explanation indicates no gender differences in the effect of age on volunteering. Because many historical events are country specific (Gilleard & Higgs, 2007; Karisto, 2007), this explanation indicates country differences in the effect of age. This leads us to a second hypothesis, which competes with the first one:

Hypothesis 2: Volunteering abruptly changes in later life, revealing a country-specific pattern without gender differences.

Table 2. Indicators for the Relation Between Age, Paid Work, and the Health Status, 2004

	Denmark	Germany	Greece	United States
Paid work				
Mandatory retirement age (men/women)	67/67	65/65	65/60	none
Health status				
Public health care expenditures per capita (purchasing power parity)	2,600	2,400	1,200	2,700

Note: The data on the healthy life expectancy are from the year 2003.

Source: Organization for Economic Co-operation and Development, 2006 and 2009.

Third, age can indicate an individual's characteristics. A selection effect occurs in later life because some individuals are more likely to survive than others. This selection is based on individual characteristics, which makes some characteristics overrepresented in old age. For example, a high educational level, high income and the female gender are particularly common in old age (Arber & Cooper, 1999; Naess, Hernes, & Blane, 2006). Because those characteristics affect engagement in volunteering, gradual age differences in volunteering result. That the age differences are due to individual characteristics causes gender and country differences in the effect of age. We, therefore, formulate a third hypothesis that competes with the previous two:

Hypothesis 3: Volunteering gradually declines in old age, revealing a gender and country characteristic pattern.

An Age Pattern Created by Retirement

Age probably owes its most pronounced influence on volunteering to workforce participation. Many Western countries have a mandatory retirement age, which determines at what age people must retire from paid work. This regulation closely links age to workforce participation (Gauthier & Smeeding, 2003; Kohli, 2007). Workforce participation, in turn, influences the engagement in volunteering. As a result, the mandatory retirement age links age to volunteering.

Table 2 shows the mandatory retirement age and the effective retirement age in the four countries we study: Denmark, Germany, Greece, and the United States. The three European countries—Denmark, Germany, and Greece—have a mandatory retirement age, which means that retirement occurs rather abruptly in these countries. The United States, in contrast, has no mandatory retirement age, which means that the link between age and workforce participation is weaker. In Greece and Germany, age is less relevant for women's workforce participation. The culture of both countries stresses women's

responsibility for caregiving and household chores. Therefore, women often refrain from paid work before retirement age to look after their family (Pfau-Effinger, 2004; Sainsbury, 1999). This behavior weakens the link between age and paid work among women in those countries.

Age differences in working time can translate into age differences in volunteering, though the nature of the effect is disputed. Some scholars argue that retirement facilitates volunteering. Upon retirement, men might experience a loss of purpose, which they try to fill with volunteering (Choi, Burr, Mutchler, & Caro, 2007). Moreover, they have more time available for volunteering once they retire (Mutchler, Burr, & Caro, 2003). Those mechanisms are less pronounced for women because they often provide care to kin and friends before and after retirement (Themudo, 2009; Van der Meer, 2006). Those caregiving activities help them to maintain a sense of purpose and take up time that could otherwise be used for volunteering. Other scholars argue that retirement hampers volunteering. Retirement reduces contact with coworkers, who might provide information on volunteering possibilities and act as a link to voluntary organizations. In addition, retirement ends volunteering that is intended to facilitate business contacts and to acquire job-related skills (Mutchler et al., 2003).

The dispute about the effect of retirement on volunteering leads to two alternative hypotheses. Thus, the fourth hypothesis,

Hypothesis 4: Volunteering abruptly increases in old age among Danish women and men, and German and Greek men.

The alternative, and fifth, hypothesis is,

Hypothesis 5: Volunteering abruptly decreases in old age among Danish women and men, and German and Greek men.

An Age Pattern Created by Declining Health

Aging brings about deteriorating health, which in turn relates to engagement in volunteering. This way, declining health can link age to volunteering. Because health often declines gradually (Leinonen, Heikkinen, & Jylhä, 2001), the change in volunteering is probably also gradual.

The aging process is usually associated with deteriorating health. Scientists attribute this deterioration to, for example, free radicals and somatic mutation (Shringarpure & Davies, 2009). Social scientists have shown that numerous personal characteristics, such as income, educational level, and marital status, are also influential (Huisman, Kunst, & Mackenbach, 2003; Rostad, Deeg, & Schai, 2009). Both biological and social influences are unevenly distributed between men and women and between countries. We, therefore, expect gender and country differences in the pattern of declining health in old age. Country differences are further enhanced by the country-specific structure

of the health care system, for example, the existence of public health insurance and access to care services (Gauthier & Smeeding, 2003). Table 2 illustrates country differences in health care systems, using public health care expenditures per capita as an example. In 2004, the expenditures per capita ranged from 1,200 purchasing power parities (ppp) in Greece to 2,700 ppp in the United States.

Declining health can hamper volunteering. Generally speaking, declining health makes physical activities more challenging. Individuals with deteriorating health might, therefore, choose to reduce their physical activities—among them volunteering. Some scholars consequently conclude that declining health reduces the engagement in volunteering (Gauthier & Smeeding, 2003; Suanet, Broese van Groenou, & Braam, 2009). However, other scholars argue that there might also be a reversed effect. Volunteering can enhance well-being and life satisfaction, which in turn can enhance health (Bennett, 2005; Choi et al., 2007; Li & Ferraro, 2006). For the study at hand, the first effect is of interest. This consideration leads us to formulate a sixth hypothesis:

Hypothesis 6: Volunteering gradually declines in old age, revealing a gender and country characteristic pattern.

Method

Data

This study uses data on people aged between 50 and 84 years in 2004, which were collected in two surveys: the Survey of Health, Ageing and Retirement in Europe (SHARE), and the Health and Retirement Study (HRS). Because HRS provided a model for SHARE, both data sets are compatible (Börsch-Supan & Juerges, 2005). We obtain data on 17,695 U.S. Americans from HRS and 1,535 Danes, 2,877 Germans, and 2,547 Greeks from SHARE. An analysis of missing data shows that data are missing at random, and therefore, we exclude cases with missing data casewise. Data in both studies are clustered within households. We correct for the clustering by randomly selecting one individual per gender from each household. Keeping one man and one woman per household is possible because we treat men and women as separate groups in the analysis. Finally, we correct the HRS sample for its comparatively large sample size and for the oversampling of people below the age of 70 years. We do this by drawing a sample of 1,200 men and 1,200 women with the following age distribution: 45% aged between 50 and 59 years, 28% aged between 60 and 69 years, 20% aged between 70 and 79 years, and 7% aged between 80 and 84 years. The new sample from the United States has an age distribution that corresponds to the age distribution in the U.S. population in 2004 (U.S. Census Bureau, 2005). Table 4 presents the age distribution of the final sample by gender and country. The final sample contains 2,400 cases from the United States, 1,524 from Denmark, 2,788 from Germany, and 2,434 from Greece. Table 3 presents the number of cases for each step of data selection.

Table 3. The Sample Size During the Process of Data Selection, by Gender and country

	Denmark		Germany		Greece		Untied States	
	Men	Women	Men	Women	Men	Women	Men	Women
Original data set	730	805	1,356	1,521	1,201	1,346	7,601	10,094
Deleting casewise	722	802	1,324	1,487	1,160	1,283	7,558	10,055
Selecting per household	722	802	1,322	1,466	1,156	1,278	7,513	9,990
Drawing sample U.S.	722	802	1,322	1,466	1,156	1,278	1,200	1,200

Measures

The variable *age* is categorical, with each category standing for five consecutive years of age. We use age as a categorical variable because it allows us to capture abrupt and gradual changes. A continuous variable, in contrast, could only capture gradual changes. Table 4 shows the age distribution in our sample. It illustrates, for example, that 3 out of 5 people in our sample are between the ages of 50 and 64 years.

The variable *working time* expresses the time spent on main and secondary jobs in hours per week. SHARE asked for main and secondary jobs: “Regardless of your basic contracted hours, how many hours a week do you usually work in this job, excluding meal breaks but including any paid and unpaid overtime?” The amount of hours was totaled. HRS asked, “How many hours a week do you usually work on this job/in this business?” Respondents either named an amount of hours or gave a minimum and a maximum value. In the latter case, we calculated the mean. The responses range from 0 to 126 hr per week.

“Health status” expresses in how many activities of daily living (ADL) an individual is limited (see Katz, 1983). The respondents of the surveys reported whether they had difficulties lasting more than 3 months due to physical, mental, emotional, or memory problems in any of these seven ADLs: Using a map to get around in a strange place, preparing a hot meal, shopping for groceries, making telephone calls, taking medications, doing work around the house and garden, and managing money (Kuder-Richardson 20 is 0.78 in Denmark and Germany, 0.81 in Greece, and 0.65 in the United States). When we added up the number of ADLs an individual is limited in, we obtained a scale of 0 to 7.

The variable *volunteering time* expresses the time spent on any kind of voluntary or charitable work in hours per month. HRS, which contains data on the United States, asked whether respondents had spent any time in the past year doing volunteer work for religious, educational, health-related, or other charitable organizations. Possible answers were *none, approximately 50, 100, or 200 hr, or one of the categories 0 to 50,*

Table 4. Sample Characteristics

	Denmark		Germany		Greece		United States	
	Men	Women	Men	Women	Men	Women	Men	Women
Explanatory variable: Frequencies (in percent)								
Age								
50-54	23	19	17	20	23	24	24	22
55-59	20	22	15	15	21	17	21	23
60-64	19	17	20	20	16	15	14	12
65-69	13	12	22	19	15	14	14	15
70-74	12	12	12	11	13	13	12	13
75-79	8	11	11	9	7	10	8	8
80-84	5	7	3	6	5	7	7	7
Mediating variables: Mean and standard deviation								
Paid work (h/w)	20 (22)	13 (18)	16 (23)	9 (17)	19 (25)	7 (16)	23 (24)	15 (20)
Limitations iADLs	0.2 (0.8)	0.4 (1.0)	0.2 (0.8)	0.3 (0.8)	0.2 (0.8)	0.4 (1.0)	0.3 (0.8)	0.6 (0.9)
Explained variable: Frequencies (in percent)								
Volunteering > 0 h/m	25	22	20	19	28	49	17	19
Explained variable: Mean and standard deviation								
Volunteering (h/m)								
Per person	1.1 (2.6)	0.9 (2.5)	0.9 (2.6)	0.8 (2.3)	1.3 (2.9)	1.6 (2.7)	0.6 (1.5)	0.7 (1.6)
Per volunteer	4.3 (3.7)	4.2 (3.9)	4.7 (4.1)	4.3 (3.6)	4.8 (3.6)	3.2 (3.2)	3.5 (1.8)	3.6 (1.8)

Notes: h/m = hours per month; iADL = instrumental activity of daily living.

50 to 100, 100 to 200 hr, and more than 200 hr. To make all answers comparable, we imputed the categories with their means (25, 75, 150 hr), respectively, and assigned 250 hr for the highest category. The number of hours per year was transformed into hours per month. SHARE, which contains data on Denmark, Germany, and Greece, asked whether respondents had done any voluntary or charitable work within the last month. Answer categories were *almost daily*, *almost every week*, and *less often*. To make the answer categories of HRS and SHARE comparable, we transformed the answer categories in SHARE into amounts of hours per month. We did this by imputing the categories as 21, 3.3, and 0.1 hr per month. The imputations were obtained by relating the answer categories to each other (*almost daily* was interpreted as 6 days/week, *almost every week* as 50 weeks/year, *less often* as twice per year) and setting the highest amount (*almost daily*) to 250 hr per year (the highest possible amount in HRS). As a result, we received a scale with values ranging from 0 to 21 hr per month for the SHARE data set. This scale is identical to the scale in the HRS.

Table 4 shows sample characteristics. About every fifth individual in our sample volunteers, except for Greek women (among whom, every second individual is a volunteer).

The time each volunteer spends volunteering ranges from 3.2 hr per month among Greek women to 4.8 hr per month among Greek men.

Analysis

We calculated three separate models, one for each effect of age: the direct effect of age (Model 1), the age pattern created by retirement (Model 2), and the age pattern created by declining health (Model 3). Model 1 only contains the variables *age* and *volunteering time*. Model 2 additionally contains the variable *working time*. In this model, *age* influences *working time*, and *working time* influences *volunteering time*. Model 3 contains three variables: *age*, *volunteering time*, and *health status*. In this model, *age* influences *health status*, and *health status* influences *volunteering time*.

We calculate each model in three different ways to test the hypotheses developed earlier. First, we calculate a model treating each gender and country separately. This approach tests hypotheses about a gender- and country-specific effect of age. Second, we calculate a model for men and women in all countries simultaneously. This approach tests hypotheses about a universal effect of age, meaning an effect that is independent of gender and country. Third, we fit the model to the data. This approach can capture similarities between only men, only women, or only some of the countries. The hypotheses based on cohort differences and on the effect of retirement suggest such complex similarities.

We conduct the analyses in multigroup structural equations models, using the program AMOS 16.0.1. This analysis allows for three things. First, we can calculate regression weights for the genders and countries separately, while obtaining model fit indices for all genders and countries together at the same time. Second, we can test whether regression weights differ between genders, countries, and age groups. Third, we can calculate the indirect influences of age created by retirement and declining health. The indirect influences consist of two parts: (1) the influence of age on working time (respectively, on health status), and (2) the influence of working time (respectively, of health status) on volunteering time. In the model, we estimate both parts separately and then calculate the indirect influence by hand. An indirect influence is significant, if the regression weights for both of its parts are significant. The strength of the indirect influence equals the product of the regression weights of both of its parts. Because of the calculation, we know the regression weights, but not the standard errors of the indirect effects (Bollen, 1989).

We calculated model-fit indices and regression weights with a bootstrapping approach. Following this approach, researchers obtain a number of random resamples with replacement from the observed data set. Then, they calculate the sample estimates, such as the variance, from those replicates. The bootstrapping approach is useful when the assumptions underlying the chi-square test of model fit are violated. In our sample, nonnormality violated those assumptions (Blunch, 2008). To increase the comparability of the coefficients, we furthermore standardized the explanatory variables.

Table 5. Information and Indices on Model Fit

	Chi-square	df	p	Comparative fit index	Tucker–Lewis index	Root mean square error of approximation
Model 1: The direct influence of age						
Gender and country specific	173	164	.005	0.999	0.999	0.002
Universal	166	162	.005	0.999	0.999	0.002
Fitted to data	173	164	.005	0.999	0.999	0.002
Model 2: An age pattern created by retirement						
Gender and country specific	210	185	.005	0.997	0.997	0.004
Universal	464	214	.005	0.973	0.975	0.011
Fitted to data	227	203	.005	0.997	0.998	0.004
Model 3: An age pattern created by declining health						
Gender and country specific	211	201	.005	0.998	0.999	0.002
Universal	282	216	.005	0.090	0.090	0.006
Fitted to data	206	214	.025	1.001	1.000	0.000

Results

We interpret the results for each effect of age in two steps. In the first step, we consider the model-fit indices presented in Table 5. These indices show us which gender and country differences can be found in the data. The first model fit index presented the Bollen–Stine p value and is suitable for nonnormal data, but it is sensitive to sample size. A p value $< .05$ indicates a good model fit. The other three model fit indices, the comparative fit index (CFI), the Tucker–Lewis Index (TLI), and the root mean square error of approximation (RMSEA), were not developed specifically for non-normal data, but they are insensitive to sample size. An RMSEA < 0.05 , a CFI and a TLI > 0.95 indicate a good model fit (Blunch, 2008; Marsh, Hau, & Wen, 2004). In the second step, we interpret the regression coefficients.

The direct influence of age on volunteering is negligible. The three different ways of calculating this influence lead to identical model fit indices (see Model 1 in Table 5). This phenomenon suggests that all three ways of calculating the direct influence of age are equally suitable. The regression coefficients (not reported here) reveal that similar results of the three calculations cause the identical model fit. The universal and the fitted ways of calculation show no effect of age whatsoever. Only the gender- and country-specific calculation finds a minimal effect of age. It finds that only Greek men aged between 75 and 79 years volunteer 11 min more and that only Greek men aged between 80 and 84 years volunteer 7 min less per month than everybody else. However,

Table 6. Standardized Regression Coefficients and Standard Errors for the Age Pattern Created By Retirement (Coefficients Identical for Men and Women in All Countries Studied)

	Paid work	Volunteering	Volunteering via paid work
Age			
50-54	0	—	0
55-59	-.08 (0.01)**	—	-.01
60-64	-.30 (0.01)**	—	-.02
65-69	-.44 (0.01)**	—	-.04
70-74	-.44 (0.01)**	—	-.04
75-79	-.40 (0.01)**	—	-.03
80-84	-.33 (0.01)**	—	-.03
Paid work	—	.08 (0.02)**	—

Note: The coefficient of the age group of 50 to 54 years is set to 0 by default because it is the reference category. “—” indicates it was not included in the model.

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

because including this effect does not improve the model fit, we can consider the direct influence of age negligible.

Retirement creates small age-related changes in volunteering time. All three ways of calculating this effect bring good model fits (see Model 2 in Table 5). This situation allows us to choose the calculation we prefer as the basis for our explanations. Because we are interested in a parsimonious explanation, we use the results of the calculation assuming no gender and country differences (see Table 6). The coefficients show an initial decline in volunteering time. Individuals aged between 65 and 74 years volunteer 2.4 min per month less than individuals aged between 50 and 54 years. Expressed per volunteer, the time difference ranges from 5 min (among Greek women) to 14 min (among U.S. American men) per month. Individuals in the age group of 75 to 84 years spend slightly more time on volunteering than individuals in the age group of 65 to 74 years do. The increase is less than 1 min per month and per person and 1 min and 5 min among Greek women and U.S. American men, respectively, per volunteer and per month.

Like retirement, declining health also creates small age-related changes in volunteering time. All three ways of calculating this effect bring a good model fit (see Model 3 in Table 5). We, therefore, use the coefficients from the calculation assuming no gender and country differences again (see Table 7). Those coefficients show a decline in volunteering time. The decline sets in among individuals aged between 65 and 69 years and reaches its maximum among those aged between 75 and 84 years. People in the latter age group volunteer about 1 min per month less than people aged between 50 and 64 years. Expressed per volunteer, the difference is 2 min (among Greek women) to 7 min (among U.S. American men) per month.

Taken together, retirement and declining health lead to small age-related changes in volunteering time. They initially lead to a decline in volunteering time. Individuals aged

Table 7. Standardized Regression Coefficients and Standard Errors for the Age Pattern Created by Declining Health (Coefficients Identical for Men and Women in All Countries Studied)

	Health status	Volunteering	Volunteering via health status
Age			
50-54	0	—	0
55-59	.00 (0.00)*	—	0
60-64	.00 (0.00)*	—	0
65-69	.05 (0.01)*	—	-.01
70-74	.09 (0.01)**	—	-.01
75-79	.18 (0.01)**	—	-.02
80-84	.18 (0.01)**	—	-.02
Health status	—	-.13 (0.01)**	—

Note: The coefficient of the age group of 50 to 54 years is set to 0 by default because it is the reference category. "—" indicates that this effect was not included in the model.

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

between 55 and 59 years volunteer less than 1 min per month than individuals aged between 50 and 54 years. Between the age groups of 55 to 59 years and 60 to 64 years, the decline again is less than 2 min per month. Between the ages of 65 and 84 years, however, the volunteering time remains constant. It is 3 min per person and per month below the volunteering time of the youngest age group in our sample (50 to 54 years). Expressed per volunteer, the difference ranges from 6 min (among Greek women) to 17 min (among U.S. American men) per month.

Discussion

This article studies older volunteers. In doing so, it underlines that older people can be active and contribute to society. This perspective is often promoted under the title "productive ageing" (e.g., Warburton, Paynter, & Petriwskyj, 2007). Moreover, the topic of this article underlines older people's place in studies on volunteering. Older people not only benefit from voluntary action but also have a place among the volunteers themselves. In this article, we answer two research questions

Research Question 1: Does age influence volunteering in later life?

Research Question 2: If so, which age group best represents older volunteers?

The answers to these questions will help voluntary organizations and policy makers to increase the effectiveness of programs that encourage volunteering in later life. They will also help us to better understand the third age, meaning the active and productive part of old age.

In the first step, we studied the direct influence of age on the time older people spend volunteering. We found this influence to be negligible. We, therefore, reject the hypotheses about the direct influence of age based on withdrawal of older people from society (Hypothesis 1), a cohort effect (Hypothesis 2), and a selection effect (Hypothesis 3). This finding falls in line with previous studies. Some studies found an influence of age on volunteering (e.g., Choi & Chou, 2010; Hank & Stuck, 2008), others did not (e.g., Tang, 2008). Our findings back up those studies suggesting that age is not a useful indicator for the situation of older people (e.g., Breda & Schoenmaekers, 2006; Laslett, 1996; Tang, 2008). We, therefore, suggest that researchers critically reflect on the meaning of age before including age in their analyses. Future quantitative studies on older volunteers should only include age if strong theoretical reasons speak for such a step.

In the second step, we studied the age pattern in volunteering created by retirement. We found retirement to create small age-related changes in volunteering time. The volunteering time decreases from age 50 to age 74 and then slightly increases again. The biggest time difference was between the age groups of 50 to 54 years and 65 to 74 years among male U.S. American volunteers (14 min per month). This finding contradicts both our hypotheses about the age pattern created by retirement (Hypotheses 4 and 5).

The contradiction between our findings and hypotheses concerning the age pattern created by retirement concerns three points. First, we expected an abrupt change in volunteering but found a gradual one. This finding suggests that the mandatory retirement age creates a weak link between age and paid work. Second, we expected age and country differences in the influence of age, but we found none. This finding suggests that there might be a universal driving force for retirement (see the disengagement theory; Cumming & Henry, 1961). Third, we expected either a decline or an increase in volunteering time, but we found a combination of both. This finding suggests that a selection effect may prevail among very old workers. Among workers in early old age, in contrast, engagements in paid work and in volunteering go hand in hand.

In the third step, we studied the age pattern in volunteering created by declining health. We found declining health to create small age-related changes in volunteering time. Volunteering time decreases between the ages of 65 and 84 years. The biggest time difference was between the age groups of 50 to 64 years and 75 to 84 years among male U.S. American volunteers (7 min per month). This finding contradicts our hypothesis about the age pattern created by declining health (Hypothesis 6). We expected gender and country differences in the age pattern but found none. This finding suggests that biological factors are a more important driver for health decline than are social and cultural factors.

Taken together, the findings of our study disqualify age as an indicator for volunteering in later life. The direct influence of age is negligible and the age patterns created by retirement and declining health are weak. Moreover, no influence of age singles out an age group of particularly active older people. Even when we combine the age patterns created by retirement and declining health, such identification fails. The biggest time difference we found in the combined age pattern was 17 min per month,

which equals 8% of volunteering time. This percentage is clearly too low to speak of an identification of older volunteers based on age.

The inadequateness of age for identifying older volunteers has important implications for voluntary organizations, policy makers, and researchers. Voluntary organizations and policy makers should not rely on age criteria when designing support programs for older volunteers. Personal characteristics such as employment status and health status are much more influential for volunteering. Voluntary organizations and policy makers should, therefore, better define their target group as, for example, healthy older people. Likewise, researchers should refrain from using age criteria when discussing the third age. The third age is defined as the time between retirement and the onset of poor health (Laslett, 1996)—two events that each occur within a broad age range in a given population. Researchers will, therefore, get a much more accurate identification of third agers when using the characteristics “retirement” and “poor health” instead of an age group.

On a side note, our findings also have implications for the concept of the third age. Some researchers argue that third agers are particularly likely to volunteer because they have more spare time (Minkler & Holstein, 2008; Neugarten, 1974). However, our findings show that volunteering decreases with retirement. This finding underlines that spare time is not always used for active pursuits, such as volunteering. We, therefore, suggest that researchers stress the third agers’ potential for activities, without equating this potential to actual activities.

Besides its merits, this study also holds some limitations. The strongest limitation is that we have had to combine data from two different surveys for our analyses. Both surveys are harmonized, which means that the combination did not create major difficulties. Only some questions and answer categories differed slightly, which might have slightly exaggerated the country differences in our analyses. However, the country differences we found in our analyses were minimal. We still obtained a good model fit when neglecting them. We, therefore, assume that the combination of the two data sets did not create major disturbances in our analyses.

Another limitation is that we tested only correlations but not causal explanations. This limitation is particularly relevant when it comes to the correlation between health status and volunteering. This study focused on the effect of health status on volunteering, whereas other studies suggested that there might simultaneously be a reversed effect, where volunteering influences health status (e.g., Choi et al., 2007; Li & Ferraro, 2006). A cross-sectional study, like the one at hand, cannot tell both effects apart. However, the correlations we found are independent of the direction of the effect. In other words, the information health status gives us about volunteering does not change with the causality.

A minor limitation of this study is that we did not test all possible effects of age. We only tested the direct effect of age and the age patterns created by retirement and by declining health. We chose these effects because they are the effects predominantly discussed (e.g., Komp, Van Tilburg, & Broese van Groenou, 2009; Laslett, 1996; Minkler & Holstein, 2008; Neugarten, 1974). However, other effects of age might exist, and they could be stronger than the effects we tested. Future studies could develop

explanations for other effects of age on volunteering and test them empirically. Those studies could, for example, discuss whether marital status, wealth, or attitudes could create an age pattern in volunteering (see Gilleard & Higgs, 2002, 2007). Maybe those studies would be able to identify the gender and country differences that we expected but could not find.

To sum up, age is an unsuitable indicator for volunteering in later life. We found no direct influence of age and only weak age patterns created by retirement and declining health. We, therefore, recommend that voluntary organizations and policy makers do not rely on age criteria when designing programs that encourage volunteering in later life. Instead, they should define their target group according to personal characteristics, for example, as “healthy older people.” Likewise, researchers should refrain from using age groups when referring to third agers, meaning healthy retirees. Although age surely is a convenient indicator for volunteering in later life, it is also an inaccurate one.

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