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Does Becoming A Volunteer Attenuate Loneliness Among Recently Widowed Older Adults?

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Abstract

Objectives: Loneliness is a significant public health concern, particularly for those who have lost a spouse through widowhood. This study examines whether becoming a volunteer at the time of widowhood is associated with reduction of these risks.

Method: A pooled sample of 5,882 married adults age 51+, drawn from the 2006–2014 waves of the Health and Retirement Study, was used to estimate regression models of the relationship between becoming widowed (relative to staying continuously married) and loneliness, and whether the associated loneliness of having lost a spouse is moderated by starting to volunteer (<2 hr, 2+ hr/week).

Results: Our results show that for those who become widowed, loneliness is significantly higher than those who stay continuously married. However, starting to volunteer 2+ hr per week is related to attenuated loneliness among the widowed such that widows who volunteer at that intensity have levels of loneliness similar to those of continuously married individuals volunteering at the same intensity.

Discussion: This study suggests higher intensity volunteering may be a particularly important pathway for alleviating loneliness among older adults who have recently become widowed. Results are discussed in light of theory, future research, and potential interventions.

Keywords: Health and Retirement Study—Productive engagement—Psychological health

For many older Americans, loneliness is an unfortunate condition that affects everyday life (Queen, Stawski, Ryan, & Smith, 2014). An increasing body of knowledge on this topic suggests that being lonely is no trivial matter. Indeed, loneliness is associated with poorer physical health, more depressive symptoms, and even earlier mortality (Coyle & Dugan, 2012; Luo, Hawkley, Waite, & Cacioppo, 2012). In fact, the mortality risk associated with lack of strong social relationships is similar to smoking, approximately double that of obesity and quadruple that of exposure to air pollution (Holt-Lunstad, Smith, & Layton, 2010). Clearly, the

consequences of loneliness have important implications for health and longevity.

The extent to which older adults are lonely varies by a variety of factors. For instance, older adults who maintain social connections to other individuals in their lives and remain engaged in organizations tend to fair better than those who are socially disconnected from the everyday lives of others (Berkman & Syme, 1994). Although narrowing of social networks is typical in older adulthood and generally associated with better emotional well-being (English & Carstensen, 2014), they become especially crucial when

immediate interpersonal relationships change, such as those who experience the loss of a spouse through widowhood (Antonucci et al., 2001). One way that these at-risk older adults may be able to obtain or maintain social connectedness despite loss of a spouse is to engage in the community by volunteering.

To that end, in this article, we use a sample drawn from the Health and Retirement Study to address the following research questions: *Does becoming a volunteer moderate the effect of becoming a widow on loneliness?* And, *does the "dose" of engagement matter?*

Widowhood and Loneliness

In the United States, nearly one in five people over the age of 50 are lonely. Loneliness is the feeling resulting from a perceived gap between the number and quality of existing social relationships and one's desired social relationships (Cacioppo, Hawkley, & Thisted, 2010), and is particularly problematic for older adults who experience changes in their social environment and in their ability to interact with others in a meaningful way (Smith, 2012; Taube, Jakobsson, Midlöv, & Kristensson, 2016). Becoming a widow, which is a common and difficult transition in later life, can lead to significant loneliness that is difficult to mitigate (van Baarsen, 2002).

According to Socioemotional Selectivity Theory (Carstensen, Isaacowitz, & Charles, 1999) older adults are particularly motivated to maintain and foster emotionally gratifying relationships. Marriage is one of the most important relationships as people age, with cultivation of increasingly positive spousal interactions occurring in later life (Carstensen, Fung, & Charles, 2003). As a result, the loss of a spouse produces a significant gap in one's social support network—a gap that is difficult to overcome—leading to intense and persistent feelings of loneliness following spousal death even when compensatory social support networks are available (van Baarsen, 2002). Two common interventions that have been used to address loneliness include: (a) increased social interaction and (b) provision of social support (Hawkley & Cacioppo, 2010). Losing a spouse to death—and losing the regular interactions that accompany being married—exposes people to feelings of loneliness because of the loss of social, emotional and instrumental support (Berkman & Syme, 1994; Greenfield & Russell, 2011; Lubben & Gironda, 2003; Pinquart, 2003; Shiovitz-Ezra & Ayalon, 2010).

Volunteering as a Potential Intervention

A large body of evidence points to a range of health benefits associated with engagement in social and productive activities in later life, particularly volunteering (for reviews see Anderson et al., 2014; Carr, Fried, & Rowe, 2015; Heaven et al., 2013; Jenkinson et al., 2013). Such engagement appears to influence health through psychosocial pathways like positive emotional exchange, associated lifestyle factors (increased physical, cognitive, and social activity), self-esteem and purpose in life, as well as through stress-buffering effects that moderate the influence of stressors on health (Cohen, Gottlieb, & Underwood, 2000; Matz-Costa, Carr, McNamara, & James, 2016).

The social aspect of volunteering may be especially beneficial for protecting against loneliness among older adults. Meaningful social relationships are a key contributor to well-being among older adults. For example, social support plays an important role in offsetting loneliness among widows, such as through engagement with close friends, close relatives, and children (de Vries, Utz, Caserta, & Lund, 2014; Utz, Swenson, Caserta, Lund, & deVries, 2014) and has a particularly strong impact on those caregiving for a dying spouse with extensive disabilities or cognitive deficits (Dassel & Carr, 2016; Hawkley & Cacioppo, 2010). Volunteering facilitates enhanced emotional health through meaningful social interactions (see a description of the social benefit hypothesis provided by Li and Ferraro, 2005 explaining the related decrease in depression). Although institutional engagement like volunteering plays an important role in loneliness (Steffens, Cruwys, Haslam, Jetten, & Haslam, 2016) not all forms of institutional engagement seem to be sufficient to address the unique challenges that loneliness presents in late life. Working and religious attendance among younger adults are associated with lower levels of loneliness (Kuwert, Knaevelsrud, & Pietrzak, 2014; Rote, Hill, & Ellison, 2013). However, these activities are not related to reduced loneliness for older adults, perhaps because they do not consistently allow older people to feel that they are contributing in ways that are valued in a mutually beneficial way (Greenfield & Russell, 2011; Hawkley & Cacioppo, 2010; Kahn, Hessling, & Russell, 2003) rendering these activities less emotionally meaningful.

Additionally, although small amounts or infrequent volunteer engagement may be advantageous for some aspects of health and well-being in later life, volunteering at low levels—for instance, volunteering at a soup kitchen five times a year—may not be sufficient to combat significant loneliness for those at particularly high risk. However, there is some evidence that higher levels of volunteer engagement, such as volunteering regularly for a few hours a week, may lead to more significant mental health benefits (Morrow-Howell, Hinterlong, Rozario, & Tang, 2003).

Other factors have been shown to play a role in shaping loneliness. First, personality may orient certain individuals to be more likely to feel lonely (Hawkley & Cacioppo, 2010), which may also explain why personality is also associated with the decision to volunteer (King, Jackson, Morrow-Howell, & Oltmanns, 2015). Second, loneliness is strongly associated with physical and mental health, with lonely individuals experiencing more symptoms of depression, poorer self-rated health, and poorer cognitive performance (Cacioppo & Hawkley, 2009; Hawkley & Cacioppo, 2010; Shiovitz-Ezra & Ayalon, 2010). Finally, higher socioeconomic status is associated with decreased

risk of loneliness (Hawkley et al., 2008) and increased likelihood of volunteering (Morrow-Howell, 2010).

Although widowhood is associated with higher levels of loneliness (Sha'ked, 2014), it is not yet clear whether the effects of volunteering on loneliness are the same for people who are continually married as they are for those who experience the loss of a spouse. On the one hand, the number of hours one volunteers is associated with decreases in depressive symptoms and increases in self-efficacy among widows (Li, 2007). On the other hand, no research has explored whether higher levels of volunteering offer greater benefit to those at risk for loneliness. This is an important omission to the literature on the health and emotional benefits of volunteering. Unlike those who are never-married—who presumably never experience the social connectedness associated with being married—those who experience the death of a spouse experience the loss of interaction and support to which they have been accustom. Moreover, although divorce is traumatic for many people, the death of a spouse represents a unique form of loss, and has been referred to as "the most stressful of life events" (Carr, House, Wortman, Nesse, & Kessler, 2001). Thus, reintegration into social networks—in this case through volunteering—may be particularly important for people who have experienced the loss of a spouse to death. To that end, we developed the following hypothesis:

> *Among those who become widowed, those who start a new volunteer role will experience less loneliness than those who do not, with more extensive volunteering associated with greater reduction in loneliness.*

Method

Data
The data for this study come from the Health and Retirement Study (HRS). The HRS, a longitudinal study of older Americans, began in 1992 sampling adults born between 1931 and 1941 (individuals initially ages 51 to 61) plus their spouses, oversampling for Hispanics, Blacks, and Florida residents. Follow-up occurred every 2 years, with additional cohorts added in subsequent waves.

Since 1998 the HRS has been nationally representative of individuals ages 51 and older, with detailed information collected on demographics, housing situation, household and family, economic, employment, and health information. For the purposes of this study, we use data from the 2006–2014 HRS survey waves. We limited our analyses to these waves because the primary outcome variable is available only in the Leave Behind Questionnaire (LBQ) beginning in the 2006 study wave. The LBQ is collected from half the HRS respondents each wave with an alternating sample such that for every two-wave period, the entire HRS sample is surveyed. Our sample is pooled from respondents ages 51 or older who completed the LBQ in 2006, 2008, or 2010 (i.e., baseline) and again two study waves later when this item was

measured again, 4 years later (i.e., Time 2). Because we are interested in the effect of volunteering on loneliness resulting from onset of widowhood, we include only individuals who are married at baseline, and who either remain continuously married or become widowed by Time 2. Our total pooled sample of 5,649 includes 5,057 individuals who remain continuously married, and 592 who become widowed.

Measures

Outcome variable
The outcome variable for this study is a three-item composite measure of loneliness located in the LBQ of the HRS. Although an 11-item loneliness measure is available in the LBQ beginning in 2008, given the limited number of individuals who completed the LBQ questionnaire at two time points and also experienced the loss of a spouse, we used the measure of loneliness available consistently beginning in 2006, allowing us to identify a sufficient sample to address the research questions. This three-item measure has been shown to be a valid assessment of loneliness in the HRS sample (Hughes, Waite, Hawkley, & Cacioppo, 2004). This composite measure is the sum of three indicators, with response options of "1" (often), "2" (some of the time), and "3" (hardly ever or never). These indicators were how often do you feel: (1) you lack companionship; (2) left out; and (3) isolated from others. Each item was reverse coded such that higher numbers indicate greater loneliness. Individuals who did not respond to all three questions were coded missing. The outcome measure is the measure of loneliness measured at Time 2.

Key independent variables
Our first key independent variable was whether or not someone became widowed by Time 2 (relative to remaining continuously married). Our second key independent variable is a measure of change in volunteer engagement behavior between baseline and Time 2. The HRS measures formal volunteer engagement based on a series of questions about volunteer status, and how much time was spent volunteering for an organization during the previous year. Although it is not possible to measure volunteer hours continuously, these questions make it possible to identify changes in engagement according to three time categories: *1–99 hr per year*, *100–199 hr per year*, and *200 or more hr per year*. We identify five volunteer groups based on these questions. First, we identified those who *never volunteered* (i.e., non-volunteers at baseline and at Time 2). Second, we identified individuals who *continuously volunteered* (i.e., were volunteers at both baseline and Time 2). Third, we identified individuals who *stopped volunteering* (i.e., were volunteers at baseline, but not at Time 2). Finally, we identified individuals who started volunteering. Within this group, we identified those who *started volunteering 1–99 hr per year* (i.e., non-volunteers at baseline and reported volunteering 1–99 hr in the last year at Time 2), and those

who *started volunteering 100+ hr* per year (i.e., non-volunteers at baseline, and volunteering 100+ hr at Time 2).

Due to the small number of individuals who started volunteering 200+ hr per year, we were unable to differentiate individuals in that group. Among those who started volunteering, some were likely volunteers prior to the study period. Due to the goals of this study, however, we are not concerned about individuals who have never reported volunteering. Rather, we focus on the potential for those not volunteering at the time of a transition into widowhood to experience benefits from starting a volunteer activity. We conducted sensitivity analyses of our findings using a lagged volunteer variable (i.e., controlling for volunteer status 2 years prior to baseline), with results remaining unchanged. Details of these analyses are available upon request.

Control variables

All control variables included in our models are measured during the baseline wave. We control for several demographic factors, including gender, race, years of education, wealth, and age which have been associated with volunteerism in past studies (Anderson et al., 2014). *Female* was a dichotomously coded indicator of gender. Race/ethnicity was measured with four indicator variables: *Non-Hispanic White* (reference group)*; Black; Hispanic;* and *Other Race. Education* was measured in years (range from 0 to 17 years). *Wealth* was measured as total wealth in dollars, including total housing and nonhousing wealth (excluding pensions) at baseline. *Age* was measured as the age in years of the respondent at baseline (ranging from age 51 to 99).

In addition to demographics, we also control for baseline health factors. *Self-rated health* is based on a five-point score ranging from "1" (*poor health—reference group*) to "5" (*excellent health*). *Cognitive performance* is based on tests of immediate and delayed recall, with a possible score ranging from 0 to 20. This is a test of episodic memory where individuals are read a list of 10 common words and asked to repeat as many of these words as possible right after being provided the words, and again after the interview continues on other topics 10–15 min later (Ofstedal, Fisher, & Herzog, 2005). The score is the total number of correct answers out of 20. Memory is a well-established metric for cognitive performance, which plays an important role in influencing capacity to engage in executive function tasks, and thus, volunteer engagement. *Depressive symptoms* is measured using a standard Center for Epidemiological Studies Depression measure, with scores ranging from 0 to 8, and higher numbers indicating more depressive symptoms. Although depression and loneliness are both commonly associated with caregiving and widowhood, recent research shows that they are distinct from one another (Hawkley & Cacioppo, 2010).

The health status of a spouse is predictive of the intensity of care provided by the respondent, and plays an important role in shaping the well-being of a spouse in the period following onset of widowhood (Dassel & Carr, 2016; Dassel, Carr, & Vitaliano 2015). Most spouses help care for one another across the duration of a marriage, and it is, therefore, difficult to identify individuals providing care. As a result, we assess the potential impact of a spouse's health at baseline on the surviving spouse by controlling for objective health measures. First, we control for *spousal activities of daily living (ADL) limitations* which is a count of the items in which he or she has difficulty: bathing, eating, dressing, walking across the room, or getting in and out of the bed or a chair. Second, we control for spousal memory disease diagnosis, which is a measure of whether or not a doctor has ever provided a diagnosis of any memory related disease (e.g., dementia, Alzheimer's Disease).

Recent research suggests personality plays an important role in shaping likelihood of seeking out volunteer roles and the benefits derived from them (King et al., 2015). Personality also is related to mental health (Cloninger & Zohar, 2011). For these reasons, we control for personality by including measures for the "Big 5" personality traits. These five characteristics (*neuroticism, extroversion, openness to experience, conscientiousness, and agreeableness*) are based on a series of 31 questions about individual characteristics (e.g., creative, responsible, careful, friendly). Respondents are asked how much they believe that characteristic is like them (coded as: 4 = *a lot*; 3 = *some*, 2 = *a little*, or 1 = *not at all*), based on Lachman and Weaver (1997). Inclusion of agreeableness did not contribute to improved model fit, did not affect variables of interest, and for the sake of parsimony, was excluded from final models. Details are available upon request.

As noted earlier, social interaction and social support are related to decreased symptoms of loneliness (Hawkley & Cacioppo, 2010). Volunteering can be seen as one form of formal social engagement, and is the primary focus of the current article. However, in order to isolate the unique effect of taking on a new volunteer role on alleviating loneliness, we control for other forms of formal and informal social participation at baseline. First, we include three measures related to the number of individuals in respondents' social networks. Specifically, individuals were asked how many friends, children, and other (non-spouse) family members they are close with. We included a continuous measure of the number of individuals respondents identified as close to them in each of these categories. Second, we controlled for *church attendance*, identifying individuals who indicated attending church once a month or more. Finally, we identified individuals who are employed and *work* 1 or more hr per week.

Our sample is drawn from individuals who completed the entire LBQ questionnaire at both baseline and at Time 2 (*N* = 6,217; i.e., 2006 & 2010, 2008 & 2012, or 2010 & 2014). Among these individuals, 150 (2.4%) had missing data on the health of their spouse at baseline, and were excluded from the analyses. Among the remaining (*N* = 6,067), 115 (1.8%) did not complete the cognitive and

mental health questions at baseline, and 19 (0.3%) did not complete the volunteer questions at baseline and at Time 2, and an additional 51 (0.8%) had missing data on education or race. Our total sample includes 5,882 individuals, including 667 who become widowed between baseline and Time 2, and 5,215 individuals who remain continuously married.

Analysis Plan

To test our research question and hypothesis, Ordinary Least Squares (OLS) regression was used to assess the impact of starting volunteering at a level of 1–99 hr per year or 100+ hr per year (relative to not starting volunteering or no volunteering) on loneliness at Time 2 for those who are continuously married versus those who become widowed. Each person had one observation per variable in the final data file and, thus, multilevel modeling was not necessary (To adjust for the potential interdependencies in the data due to continuously married individuals living in the same household, we conducted our analyses clustered by household, which showed very similar results. Results are available upon request.).

First, we entered the widowhood variable into the model while controlling for the raw loneliness score at baseline as well as demographic, health, and personality factors at baseline. Next, we added the volunteer engagement behavior variables to the model while controlling for other forms of social engagement (baseline; Utz, Carr, Nesse, & Wortman, 2002). Finally, we added interaction terms between widowhood and volunteer behavior to examine whether starting volunteering at a level of 1–99 hr per year or 100+ hr per year moderates the relationship between widowhood and change in loneliness. Moderation effects were further examined by calculating marginal effects, holding all other factors at the mean.

Results

Descriptive Information and Bivariate Analysis

Table 1 provides the descriptive data for the sample, which shows that the average loneliness score of the sample at Time 2 is 4.1 (*SD* = 1.5). About 48% of the sample were non-volunteers, 12.1% stopped volunteering, and nearly one-third (32.2%) volunteered at both baseline and Time 2. Almost 8% of the sample were non-volunteers at baseline but started volunteering at Time 2: 6.3% of the sample started volunteering at an intensity of less than 100 hr per year, and about 1.5% started volunteering at an intensity of 100 hr per year.

We performed bivariate analyses (*t* tests and chi-square tests) to identify significant differences in characteristics of those who became widowed relative to those who remained married. Results indicate that the average loneliness score varies by marital status. Those who became widowed had a significantly greater loneliness at baseline and at Time 2 relative to those who were married (*p* < .001). With respect to volunteering, engagement varies by marital status such that those who became widowed were more likely to start volunteering than those who stayed married, particularly at the highest intensity level (*p* < .001). Those who became widows were also less likely to be continuous volunteers (*p* < .001) and more likely to be non-volunteers (*p* < .05).

In this sample, those who went on to become widowed were, at baseline: more likely to be women (*p* < .001), Black (*p* < .05) and not Hispanic (*p* < .001) or another race (*p* < .005), have less education (*p* < .001), older (*p* < .001), have poorer self-rated health (*p* < .05), lower cognitive performance (*p* < .001); and more depressive symptoms (*p* < .001). They are also more likely to have a more disabled spouse (*p* < .001), who is more likely to have been diagnosed with a memory disorder (*p* < .001). They have a higher neuroticism score, and are less likely to be working (*p* < .001) than their continuously married counterparts.

OLS Regression and Moderation Analysis

Table 2 shows the results from OLS regression models predicting loneliness score at Time 2. In Model 1, we examine the direct association between change in marital status and change in loneliness, adjusting for loneliness at baseline, demographic factors, health and personality. Results indicate that widowhood is related to significantly higher loneliness at Time 2 (β = 0.505, *p* < .001). In Model 2, we assess the direct relation between change in volunteer behavior and loneliness, adjusting for other forms of social engagement and all factors from Model 1. Results show that volunteer behavior was not significantly related to loneliness score at Time 2. Further, when controlling for volunteer engagement, the direct effect of marital status on loneliness did not change.

Finally, in Model 3, we examine the effect of new engagement in volunteering at two intensity levels on loneliness by assessing the interaction effect between volunteer behaviors and onset of widowhood. Results show a significant interaction between widowhood and starting volunteering at 100+ hr per year. Specifically, the associated benefits of volunteering 100+ hr per year on loneliness is dependent on whether an individual became widowed (*p* < .05). A post-estimation Wald significance test further confirms that the moderation of volunteer behavior and becoming widowed is significant (*p* < .001). To more carefully examine these relationships, we calculate the marginal effects (i.e., predicted probabilities) for loneliness at Time 2 (holding all other factors at the mean) in relation to volunteer intensity for those who became widows versus those who stayed married. Figure 1 shows that starting volunteering is related to reduced loneliness among those who became widows, but only at the highest intensity level (i.e., volunteering 100+ hr per year). Specifically, relative to those who were continuously married, those who became widowed had a statistically higher predicted loneliness

Table 1. Descriptive Characteristics of Samples

Variable	All (N = 5,882) Mean[a] (SD)	Became widowed (N = 667) Mean[a] (SD)	Continuously married (N = 5,215) Mean[a] (SD)
Loneliness score (wave *t*+2)	4.142 (1.474)	4.954 (1.666)***	4.038 (1.415)
Loneliness score (wave *t*)	4.055 (1.418)	4.231 (1.484)***	4.033 (1.408)
Became widowed	0.113		
Volunteer behavior			
Started Vol 1–99 hr/year	0.063	0.084***	0.060
Started Vol 100+ hr/year	0.015	0.033*	0.013
Continuous volunteer	0.322	0.232***	0.334
Stopped volunteering	0.121	0.133	0.119
Never volunteered	0.479	0.517*	0.474
Female	0.532	0.735***	0.506
Race/ethnicity			
White	0.839	0.841***	0.839
Black	0.071	0.090***	0.068
Hispanic	0.069	0.055***	0.071
Other race	0.021	0.013*	0.022
Years of education	13.134 (2.845)	12.648 (2.808)***	13.197 (2.844)
Household wealth (in $100,000s)	5.253 (10.013)	5.211 (15.563)	5.259 (9.063)
Age	67.912 (8.410)	71.510 (8.507)***	67.452 (8.286)
Self-rated health	2.634 (1.003)	2.706 (1.018)*	2.625 (1.001)
Cognitive score	10.278 (3.083)	9.802 (3.090)***	10.339 (3.077)
Depressive symptoms	0.975 (1.604)	1.282 (1.799)***	0.935 (1.573)
Spouse ADL limitations	0.238 (1.604)	0.867 (1.508)***	0.157 (1.573)
Spouse memory disease diag	0.028	0.111***	0.017
Neuroticism	1.958 (0.574)	2.005 (0.571)*	1.952 (0.574)
Extroversion	3.218 (0.548)	3.252 (0.527)	3.213 (0.550)
Openness to experience	2.954 (0.537)	2.927 (0.549)	2.957 (0.535)
Conscientiousness	3.364 (0.430)	3.372 (0.549)	3.363 (0.428)
Number of close friends	4.251 (4.980)	3.961 (4.389)	4.288 (5.049)
Number of close relatives	3.460 (5.126)	3.387 (4.205)	3.469 (5.232)
Number of close children	2.463 (2.601)	2.625 (2.630)	2.442 (2.596)
Attends church monthly	0.572	0.588	0.570
Works	0.374	0.238***	0.391

Notes: ADL = activities of daily living.

[a]Means are provided for continuous variables, proportions for dichotomous variables.

Significant differences between widowed and continuously married individuals is noted in the following way: *$p < .05$. ***$p < .001$. Significance is determined using chi-square tests for dichotomous variables, and *t* tests for continuous variables.

score if they never volunteered (4.88 compared to 4.07), stopped volunteering (4.87 compared to 4.09), were continuously volunteers (4.81 compared to 4.01), or started volunteering, but only 1–99 hr per year (4.81 compared to 4.06). Volunteering 100+ hr per year moderates the effect of widowhood on loneliness, and these volunteers had a similar predicted loneliness score (4.34 compared to 4.15) to those who were continuously married. What this means is that more intense levels of loneliness persist for new widows relative to continuously married individuals, but loneliness is lower when widows start volunteering approximately 2 hr per week, on average, or more. New widows who start volunteering at that threshold experience similar levels of loneliness as continuously married individuals.

Discussion

Becoming a widow is one of the most difficult transitions that people face in later life. Widowhood is associated with significant increases in loneliness, leaving widows at risk for additional health consequences, including depression, physical health decline, and increased mortality risk. In this article, we examined the relation between starting volunteering and loneliness among older adults who became widowed over a 4-year period relative to those who remained continuously married. We discovered that volunteering moderates the negative effects of loneliness for those who become widowed, but only in relation to engagement in 2 or more hr per week, on average.

Table 2. OLS Regression Models Predicting Change in Loneliness (*N* = 5,882)

	Model 1		Model 2		Model 3	
	Coeff.	*SE*	Coeff.	*SE*	Coeff.	*SE*
Loneliness score (wave *t*)	0.465	*0.013****	0.462	*0.013****	0.462	*0.013****
Became widowed[a]	0.789	*0.053****	0.785	*0.053****	0.809	*0.055****
Volunteer behavior[b]						
1–99 hr/year			−0.010	*0.067*	−0.007	*0.073*
100+ hr/year			−0.067	*0.129*	0.078	*0.147*
Continuous volunteer			−0.055	*0.042*	−0.053	*0.043*
Stopped volunteering			0.018	*0.052*	0.022	*0.055*
Number of close friends			−0.007	*0.004*	−0.007	*0.004*
Number of close relatives			−0.001	*0.003*	−0.001	*0.003*
Number of close children			−0.005	*0.007*	−0.005	*0.007*
Attends church monthly			0.060	*0.036*	0.059	*0.036*
Works			0.008	*0.037*	0.009	*0.037*
Start Vol 1–99 hr × Became widowed					−0.022	*0.182*
Start Vol 100+ hr × Became widowed					−0.608	*0.299**
Continuous volunteer × Became widowed					−0.013	*0.122*
Stopped volunteering × Became widowed					−0.027	*0.153*
Female[c]	0.133	*0.034****	0.130	*0.034****	0.130	*0.034****
Race[d]						
White						
Black	−0.035	*0.063*	−0.043	*0.064*	−0.041	*0.064*
Hispanic	−0.211	*0.109*	−0.217	*0.109**	−0.214	*0.109**
Other race	−0.269	*0.067****	−0.277	*0.067****	−0.277	*0.067****
Years of education	0.009	*0.007*	0.010	*0.007*	0.010	*0.007*
Household wealth	0.000	*0.000**	0.000	*0.000**	0.000	*0.000**
Age	0.001	*0.002*	0.001	*0.002*	0.001	*0.002*
Self-rated health	0.078	*0.018****	0.078	*0.018****	0.077	*0.018****
Cognitive score	−0.009	*0.006*	−0.008	*0.006*	−0.008	*0.006*
Depressive symptoms	0.056	*0.012****	0.056	*0.012****	0.055	*0.012****
Spouse ADL limitations	−0.034	*0.022*	−0.033	*0.022*	−0.032	*0.022*
Spouse memory disease diagnosed	−0.051	*0.099*	−0.053	*0.100*	−0.040	*0.100*
Neuroticism	0.207	*0.032****	0.206	*0.032****	0.207	*0.032****
Extroversion	−0.186	*0.036****	−0.178	*0.036****	−0.178	*0.036****
Openness to experience	0.154	*0.037****	0.163	*0.038****	0.165	*0.038****
Conscientiousness	−0.114	*0.042***	−0.120	*0.042***	−0.121	*0.042***
Constant	1.932	*0.268****	1.911	*0.278****	1.903	*0.278****
Log likelihood (model)	−9397.838		−9392.248		−9390.174	

Notes: ADL = activities of daily living. Italic values indicate the standard errors (SE).
Reference groups include: [a]Continuously married individuals; [b]Never volunteerd; [c]Male; [d]Non-Hispanic White.
*p < .05. **p < .01. ***p < .001.

Although our research cannot explain the mechanisms by which volunteering is beneficial, there are several plausible reasons why volunteering on a regular basis might have the potential to significantly alleviate loneliness in new widows. Previous research shows that loneliness can be addressed through increases in social interaction and increases in social support (Hawkley & Cacioppo, 2010). Although volunteering comes in many forms, some likely requiring more social interaction than others, volunteering almost always involves social engagement with others. Individuals who have recently lost their primary form of social support (i.e., their spouse) have the most to benefit from new sources of social engagement. Additionally, beyond the social aspect of volunteering, it may be that engaging at a significant intensity in work that has a social purpose—as volunteer work often does—bolsters the kinds of personal resources (e.g., health behaviors, self-esteem, purpose in life, sense of control) that are needed to manage the grief and loss associated with widowhood (Matz-Costa et al., 2016). Starting to volunteer on a regular basis may help in establishing an integrated sense of self that compensates for the loss of this salient life role (i.e., identity as married) and social resource and protects against a sense of loneliness (Hobfoll & Wells, 1998).
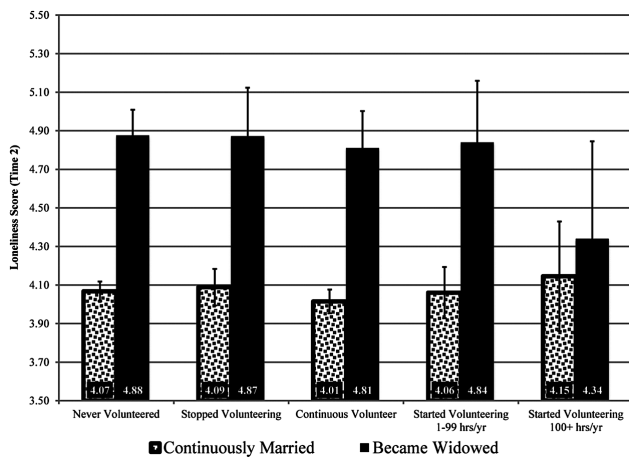
Figure 1. Predicted loneliness score by volunteer group and marital status. Note: Error bars are the 95% confidence intervals.

However, it is important to note that not all older adults—particularly widows—have the same access or resources to volunteer. In general, older adults are more likely to volunteer if they are highly educated, have higher incomes, work part time, are married, and have a spouse who also volunteers (Bureau of Labor Statistics, U.S. Department of Labor, 2013; Rotolo & Wilson, 2006). Widowhood is often associated with significant grief and depressive symptoms, including loss of interest in activity (Bonanno, 2004); a substantial loss of income and often times poverty (poverty rates among elderly female widows is 3–4 times higher than rates among elderly married women (McGarry & Schoeni, 2005) and increased household responsibilities, all of which are significant barriers to starting a new volunteer role (McBride, 2007). Future research should explore disparities in economic and health resources as well as other structural barriers (e.g., lack of knowledge about volunteer opportunities, lack of skills, time constraints) among widows that may restrict access to and availability of meaningful volunteer roles.

Findings from this study need to be understood in light of its limitations. First, we had to limit our sample to those who completed both the HRS core and the LBQ questionnaires during both time points in which loneliness was measured. As a result, the final sample size for this analysis is smaller than what could be obtained if using the HRS core survey data alone. This decreased the potential power of our analyses. Second, we are unable to draw conclusions regarding the directionality of these effects because, despite our longitudinal design, it was not possible to control for all other potential factors that may differentiate continuously married individuals from those who became widowed. Thus, it is possible that the moderation effect of starting volunteering is due to widows who are lonelier choosing to volunteer to off-set these feelings rather than the act of volunteering contributing to decreased loneliness.

Lastly, we were unable to take into account one's history of volunteer engagement prior to baseline in this study. It is possible that some non-volunteers had previously engaged in volunteer activities prior to widowhood, lost this role due to their caregiving responsibilities, and returned following onset of widowhood. This explanation is in line with Utz and colleagues (2002) who point out that "older adults, particularly those experiencing a devastating or stressful loss such as widowhood, tend to rely on the convoy of lifelong social relations from whom they derive support, self-definition, and a sense of stability and continuity" and that widowed persons, "in both their intentions and their behaviors, prefer to maintain the relationships and activities that have been most meaningful and rewarding throughout the life course" (p. 532). Although the goals of this study focus on whether starting a new volunteering role relates to lower levels of loneliness following widowhood regardless of previous volunteer history, future research might examine transitions into and out of volunteer work, its co-occurrence with caregiving and its effect on loneliness to determine if these effects vary based on history of volunteer engagement.

Despite these limitations, the results from this study provide encouraging support for the potential of volunteer engagement as an intervention for alleviating loneliness among widows. There are few volunteer programs designed to target the widows, and interventions designed to facilitate starting a new volunteer role at this critical life juncture could play an important role in delaying onset of subsequent health consequences associated with spousal loss. In addition, given the numerous benefits associated with engaging in volunteering in general, and with 2 hr or more per week in particular (Windsor, Anstey, & Rodgers, 2008), individuals who start a new volunteer role and continue to remain engaged over an extended period may experience health and well-being benefits that facilitate more successful aging.

In conclusion, loneliness is a significant public health concern for individuals who become widowed. Formal volunteering, however, may offer a means by which to cultivate personal resources at the transition into widowhood. The findings of the current study suggest that interventions that encourage volunteering, particularly higher intensity volunteering, among those who become widowed may be effective in helping to mitigate loneliness.

contributed to the introduction and discussion sections, and assisted with formatting and references. Y. Z. Shavit contributed to the introduction section, and consulted on development of measures.

Conflict of Interest

None of the authors associated with publication have a conflict of interest in relation to this research project.

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