*Ageing & Society* **38**, 2018, 1603–1623. © Cambridge University Press 2017
doi:10.1017/S0144686X17000216


# Life transitions and leisure activity engagement in later life: findings from the Consumption and Activities Mail Survey (CAMS)

YURA LEE*, JOOHONG MIN† and IRIS CHI*

***ABSTRACT***
This study examined engagement in leisure activities among older adults, specifically focusing on how life transition factors in later life, including retirement and marital status, are associated with leisure activity engagement using a national sample of older American men and women. We conducted multiple regression analyses with a sample of 5,405 individuals (2,318 men; 3,087 women) from the Consumption and Activities Mail Survey, a supplementary sample of the Health and Retirement Study. We analysed activity engagement in each of four domains of leisure activities: mental, physical, social and religious. Retirement status was categorised into three groups: working (referent), completely retired and partly retired. Marital status was categorised into four groups: married (referent), divorced or separated, widowed and never married. We found an overall trend of a positive relationship between retirement and leisure activity engagement, which suggests that retirement provides a chance for older adults to participate in leisure activities after withdrawal from the labour force. The overall trend of a negative relationship between non-married status and leisure activity engagement suggests that the loss or absence of a spouse may serve as a barrier to participate in leisure activities. Nevertheless, variation among retirees and non-married individuals suggests future studies should compare completely and partly retired individuals or those who are widowed, divorced or separated, or never married to elucidate distinguishable leisure activity profiles.

***KEY WORDS***– leisure activities, older adults, retirement, marital status, Consumption and Activities Mail Survey, Health and Retirement Study.

## Introduction

Given the increasing number of older adults and prolonged life expectancy, how to live longer and healthier is becoming a significant public issue

* Edward R. Roybal Institute on Aging and Suzanne Dworak-Peck School of Social Work, University of Southern California, Los Angeles, USA.
† Department of Human Ecology, University of Alberta, Edmonton, Canada.

among older adults. Rowe and Kahn (1997) posited that one of the crucial aspects of successful ageing is active engagement in life, such as having interpersonal relationships and participating in productive activities. Indeed, a recent literature review on social and leisure activities among older adults (Adams, Leibbrandt and Moon 2011) showed a positive relationship between leisure activity engagement and physical and psycho-social well-being. Although types of activities differ across studies, findings have shown that engaging in leisure activities is associated with lower levels of depression (Glass *et al.* 2006; Hong, Hasche and Bowland 2009), fewer functional limitations (Janke, Payne and Van Puymbroeck 2008), higher levels of life satisfaction (Fernández-Ballesteros, Zamarrón and Ruíz 2001) and better quality of life (Silverstein and Parker 2002).

Nonetheless, leisure activity engagement in later life often becomes more complicated when older adults experience significant life transitions such as retirement and loss of a spouse (*e.g.* widowhood, divorce or separation). Two competing theories, activity and disengagement, have often been used in previous studies to explain the relationships between leisure activity engagement and life transitions in later life among older adults (Adams, Leibbrandt and Moon 2011; Janke, Davey and Kleiber 2006; Johnson and Mutchler 2014; Nimrod 2007; Nimrod and Kleiber 2007; Scherger, Nazroo and Higgs 2011; Utz *et al.* 2002). Activity theory posits that older individuals replace their lost roles by engaging in new compensatory activities (Havighurst 1961), whereas disengagement theory posits that they withdraw from society or the environment in which they are involved (Cumming and Henry 1961), thus engaging less in leisure activities. Based on activity theory, retirement or loss of a spouse can offer an opportunity to replace a lost role with an increased level of leisure activity engagement. According to disengagement theory, on the other hand, retirement or loss of a spouse can represent a reduced opportunity to engage in leisure activities coupled with withdrawal from society and previous roles (as an employee or a spouse). However, none of these theoretical approaches is sufficient when it comes to exploring specific categories of retirement and marital status (*e.g.* working, completely or partly retired; married, divorced or separated, widowed, or never married).

In offering an explanation for leisure engagement in relation to marital and employment status, researchers have also considered the time availability perspective (Esteve, Martin and Lopez 1999; Nomaguchi and Bianchi 2004), which posits that time constraints related to holding many work and family responsibilities can be a barrier to engagement in leisure activities. Indeed, lack of time has often been considered one of the major challenges to leisure engagement (Crawford and Godbey 1987; Hawkins *et al.* 1999). Employing the time availability perspective, Nomaguchi and

Bianchi (2004) found that work and family roles were negatively related to physical activities. Specifically, longer working hours and being married (*versus* non-married) were related to less engagement in physical exercise.

Until now, no studies have focused explicitly both on various types of retirement and marital status as major study variables with one sample to examine leisure activity engagement among older adults. Previous studies have simply considered one category such as widowhood (Fitzpatrick *et al.* 2001; Michael *et al.* 2003; Okun *et al.* 2011; Utz *et al.* 2002) or compared retired *versus* non-retired or married *versus* unmarried individuals (Berger *et al.* 2005; Janke, Davey and Kleiber 2006; Nomaguchi and Bianchi 2004). This may have overlooked significant variation among retired and unmarried individuals, considering the fact that heterogeneity exists in this group (Pinquart 2003).

Moreover, findings have been equivocal in previous relevant studies. Some studies found that compared to working individuals, retirees participate more in physical (Evenson *et al.* 2002; Godfrey *et al.* 2014; Lahti *et al.* 2011) and informal social activities (Janke, Davey and Kleiber 2006), whereas others found no change in physical or social activities after retirement (Rosenkoetter, Gams and Engdahl 2001). Similarly for marital status, some studies found that married individuals had higher levels of physical activity participation than their non-married counterparts (Pettee *et al.* 2006), whereas others found the opposite (Nomaguchi and Bianchi 2004).

Likewise in some widowhood studies, widowed individuals were found to engage more in religious (Michael *et al.* 2003) or informal social activities (*e.g.* visiting friends, neighbours or relatives; Utz *et al.* 2002) than their married counterparts, whereas engagement in formal social activities (*e.g.* attending meetings of groups, clubs or organisations) was comparable between the two groups (Utz *et al.* 2002). Other studies found that bereaved older individuals exercised less compared to their non-bereaved counterparts (Okun *et al.* 2011), whereas Fitzpatrick *et al.* (2001) found no significant difference in leisure activity engagement between bereaved and married men (*e.g.* social, solitary, sports or exercise activities).

Several factors may explain these mixed findings, including having a limited or confined category of retirement or marital status and only considering certain types of leisure activities (Evenson *et al.* 2002; Nomaguchi and Bianchi 2004). Thus, it is unclear whether findings will be similar for a wide array of leisure activities in the same sample. Hence, it is necessary to explore more specific classifications of life transition and leisure activity type.

Moreover, gender cannot be overlooked when examining leisure activity engagement among older adults. Many relevant studies have conducted

separate analyses for older men and women to assess the role of gender (Agahi and Parker 2005; Azevedo *et al.* 2007; Mein *et al.* 2005; Sayer 2005). Preferences for and motivation to engage in various types of leisure activities are not often comparable for men and women, due to not only the inherent nature of each gender but also expected gender roles based on societal norms. For example, research has shown that men are more physically active than women (Agahi and Parker 2005; Azevedo *et al.* 2007; Mein *et al.* 2005), whereas women engage more in religious activities (*e.g.* attending religious services, affiliating with a religion).

In sum, the present study investigated engagement in four types of leisure activity (mental, physical, social and religious activities) among older men and women in association with retirement and marital status in the United States of America (USA). We classified retirement status into three groups (working, completely retired and partly retired) and marital status into four groups (married, divorced or separated, widowed and never married). We used one wave (2011) from the Consumption and Activities Mail Survey (CAMS; 2011), a supplementary survey of the Health and Retirement Study (HRS; 2010), which provided a recent profile of older American men and women in relation to retirement and marital status. In comparison, previous relevant studies used non-US national data such as the English Longitudinal Study of Ageing (Scherger, Nazroo and Higgs 2011) or Longitudinal Aging Study Amsterdam (Koeneman *et al.* 2012), or earlier US data such as Survey of Midlife Development in the United States (Choi and Chou 2010).

Two research questions are addressed for this study:

1. Does engagement in four types of leisure activity vary by retirement status among older American men and women?
2. Does engagement in four types of leisure activity vary by marital status among older American men and women?

## Method

### *Data and sampling*

This study used one wave from the CAMS 2011, which is a supplementary component of the HRS 2010. The HRS is an ongoing nationally representative longitudinal study of older adults aged 50 or older in the USA that uses a stratified, multi-stage area probability sample design with over-sampling for African Americans, Hispanics and Floridians. The data include a wide array of information on demographics, income, housing, family structure, employment, and mental and physical health of respondents. The original HRS data collection began in 1992 with follow-up interviews every two years

(Juster and Suzman 1995). This study used RAND HRS data file version N, which is a cleaned version of HRS data with a key variable across waves, including imputations for income, assets and medical expenditures.

The CAMS is a random sub-sample of the HRS collected biennially in the years between core HRS interviews starting in 2001. It includes information about time spent on various activities, household patterns of consumption and prescription drug use (Hurd and Rohwedder 2005). In 2001, a random sub-sample of 5,000 respondents (38.2% of all households interviewed in 2000) received the supplemental questionnaire. Data are now available through 2013 (Hurd and Rohwedder 2007, 2009).

For the current study, we used one wave from HRS 2010 matched with CAMS 2011. This is because CAMS 2011 has the largest sample size of all CAMS waves and features a new sub-sample of the middle baby-boomer cohort from HRS 2010. In 2011, 9,078 participants were randomly selected from the HRS 2010 core survey to receive the CAMS, and 6,531 questionnaires (simple response rate of 71.9%) were returned. Of these 6,531 individuals, 1,031 were excluded from the present study because the respondent (a) had not responded to both the RAND HRS and CAMS 2011 (N = 106); (b) was younger than 50 years old (N = 262); (c) had a proxy complete the interview (N = 179); (d) did not report retirement status (N = 66); (e) responded 'irrelevant' for retirement statistics items (N = 257); or (f) had a cognitive function score of less than 7 out of 27 (N = 161). The cut-off score of 7 is based on the previous literature, wherein individuals who scored below 7 on the same cognition measure were considered to have a severe cognitive impairment (*e.g.* dementia; Crimmins *et al.* 2011). After taking into account the aforementioned exclusion criteria and cases with missing key variables (N = 95), the total sample for the current study was 5,405.

### *Dependent variables*

The CAMS includes a broad array of social, productive, cognitive and physical activities, and the questionnaire was developed based on literature reviews, focus groups, cognitive interviews, expert panel consultation and a formal pretest (Hurd and Rohwedder 2007). Respondents were asked to recall how much time they spent on each of these activities using a paper-and-pencil questionnaire (Hurd and Rohwedder 2007). This kind of mode allows flexible time for respondents to recall information, whereas face-to-face or telephone interviews can limit the amount of time respondents have to retrieve answers (Hurd and Rohwedder 2009).

Eighteen items were used from CAMS data and were categorised into four domains: (a) mental (six items), (b) physical (two items), (c) social (eight

items) and (d) religious (two items). This classification was based on the face validity and classification of previous relevant studies (Adams, Leibbrandt and Moon 2011; Chang, Wray and Lin 2014; Lachman *et al.* 2010; Paillard-Borg *et al.* 2009; Parker 1996). For example, the 'attending concerts, movies, or lectures or visiting museums' item was considered to refer to cultural activities (Paillard-Borg *et al.* 2009) and therefore was included in the social domain in our study. In addition, the 'physically showing affection for others through hugging, kissing' item was considered to refer to social leisure activities because it involves pleasurable activities such as staying intimate with loved ones (Berdychevsky *et al.* 2013). The remaining items (*e.g.* sleeping or napping, personal grooming) were excluded from the present study because they did not fit into any of the four domains nor were considered leisure activities. Detailed items for each domain are presented in Table 1.

Original CAMS questions asked participants how many hours were spent on these activities during the previous week or month; activities considered to be less frequent among older adults were asked in reference to the previous month, such as 'attending religious services'. For the present study (due to the highly skewed nature of these items), we dichotomised each item coded as 0 = no time spent on the specific activity and 1 = any time spent on the activity, regardless of whether the question referred to the previous month or week. Scores for these items were summed for each domain of leisure activities (mental: 0–6; physical: 0–2; social: 0–8; religious: 0–2). Higher scores indicated more engagement in each leisure activity domain.

### *Independent variables*

To assess self-reported retirement status, respondents were asked, 'At this time do you consider yourself to be completely retired, partly retired or not retired at all?' Three groups were identified in this study, coded categorically as non-retired (reference group), completely retired and partly retired. Marital status was assessed through self-report by asking, 'Are you currently married, living with a partner, separated, divorced, widowed or never been married?' Four groups were identified in this study, coded categorically as married (reference group), divorced or separated, widowed and never married.

### *Control variables*

Three health-related factors – self-rated health, cognitive function and depressive symptoms – were included in this study as control variables

https://doi.org/10.1017/S0144686X17000216 Published online by Cambridge University Press

TABLE 1. *Sub-domains of leisure activities in the 2011 Consumption and Activities Mail Survey (18 items)*

| Mental (six items) | Physical (two items) | Social (eight items) | Religious (two items) |
|---|---|---|---|
| • Reading newspapers or magazines<br>• Reading books<br>• Listening to music<br>• Singing or playing a musical instrument<br>• Playing cards or games or solving puzzles<br>• Doing arts and craft projects, including kitting, embroidery and painting | • Walking<br>• Participating in sports or other exercise activities | • Visiting in person with friends, neighbours or relatives<br>• Communicating by telephone, letters or email with friends, neighbours or relatives<br>• Helping non-coresiding friends, neighbours or relatives who did not pay for help<br>• Doing volunteer work<br>• Attending meetings of clubs or religious groups<br>• Physically showing affection for others through hugging, kissing, *etc.*<br>• Attending concerts, movies or lectures, or visiting museums<br>• Dining or eating outside the home (not related to business or work) | • Praying or meditating<br>• Attending religious services |

because previous studies have shown that activity involvement is significantly associated with health among older adults (Freysinger and Stanley 1995).

Respondents' self-reported perceived health status was measured by one item with a five-point scale: 'Would you say your health is excellent, very good, good, fair or poor?' Higher scores indicated worse self-rated health.

Three domains of cognitive function were included in the present study: (a) memory, (b) working memory and (c) processing speed. For memory, both immediate and delayed word recall were measured. Working memory was measured by a serial sevens test, whereas processing speed was assessed via a backwards counting test (Fisher *et al.* 2013). The combined score of the three domains was calculated, with a theoretical range of 7 to 27. Higher scores indicated better cognitive function. As previously mentioned, individuals who had a cognitive score less than 7 were considered cognitively impaired and thus excluded from the present study.

Depressive symptoms were measured with a modified eight-item scale based on the Center for Epidemiologic Studies Depression Scale. The measure asked whether respondents felt (a) depressed, (b) that everything was an effort, (c) their sleep was restless, (d) they could not get things going,

(e) lonely, (f) they enjoyed life (reverse coded), (g) sad and (h) happy (reverse coded) much of the time during the previous week. Higher scores indicated more depressive symptoms (theoretical range = 0–8). Several demographic factors were also included in the analysis: age (years); gender (0 = male, 1 = female); race and ethnicity (coded categorically as non-Hispanic White (referent), non-Hispanic Black, Hispanic and other); education (years of formal education); and household income (first (referent) second, third and fourth quartiles).

### *Data analysis*

First, bivariate analyses were conducted to explore characteristics for the total sample. To investigate any significant gender differences regarding these characteristics, *t*-tests for continuous variables and chi-square tests for categorical variables were conducted. Second, we conducted multiple regression analyses for each dependent variable (mental, physical, social and religious activities) to investigate the relationships among retirement status, marital status and leisure activity engagement among older men and women. Each dependent variable was analysed separately for older men and women, controlling for the aforementioned covariates. All analyses were conducted using Stata software (version 13.0). During our main analyses, we found no multicollinearity issues; each analysis had a variance inflation factor less than 3.

## Results

### *Descriptive statistics*

Descriptive statistics for the study sample are presented in Table 2. The majority of our sample (N = 5,405) was non-Hispanic White (71.2%), retired (62.1%; completely retired: 48.4%, partly retired: 13.7%) and married (65.8%). The mean age (range = 50–98) of the participants was 66.2 (standard deviation (SD) = 10.4) and respondents had an average of 13.1 (SD = 2.9) years of education. In terms of health-related factors, the mean score was 2.8 (SD = 1.1) for self-rated health, 1.4 (SD = 1.9) for depressive symptoms and 15.6 (SD = 3.8) for cognitive function. Regarding leisure activity engagement, the average score was 3.1 (SD = 1.3) for mental activities, 1.3 (SD = 0.7) for physical activities, 4.8 (SD = 1.8) for social activities and 1.3 (SD = 0.8) for religious activities.

Significant gender differences were found among all study variables except self-rated health. Specifically, male participants were significantly older and more likely to be non-Hispanic White, have more years of

https://doi.org/10.1017/S0144686X17000216 Published online by Cambridge University Press

TABLE 2. *Description of sample characteristics*

| | Range | Total | Male | Female | Group difference $p$[1] |
|---|---|---|---|---|---|
| N | | 5,405 | 2,318 | 3,087 | |
| | | | *Frequencies (%)* | | |
| Socio-demographics: | | | | | |
| Age[2] | 50–98 | 66.2 (10.4) | 66.6 (10.4) | 65.9 (10.3) | 0.015 |
| Race and ethnicity: | | | | | <0.001 |
| Non-Hispanic White | | 3,848 (71.2) | 1,689 (72.9) | 2,159 (69.9) | |
| Non-Hispanic Black | | 878 (16.2) | 318 (13.7) | 560 (18.1) | |
| Hispanic | | 533 (9.9) | 237 (10.2) | 296 (9.6) | |
| Other | | 146 (2.7) | 74 (3.2) | 72 (2.3) | |
| Education (years)[2] | 0–17 | 13.1 (2.9) | 13.2 (3.0) | 13.0 (2.8) | 0.002 |
| Income (quartile): | | | | | <0.001 |
| First | | 1,222 (22.61) | 387 (16.7) | 835 (27.1) | |
| Second | | 1,367 (25.29) | 550 (23.7) | 817 (26.5) | |
| Third | | 1,392 (25.75) | 659 (28.4) | 733 (23.7) | |
| Fourth | | 1,424 (26.35) | 722 (31.2) | 702 (22.7) | |
| Life transition factors: | | | | | |
| Retirement status: | | | | | 0.022 |
| Not retired | | 2,051 (38.0) | 867 (37.4) | 1,184 (38.4) | |
| Completely retired | | 2,616 (48.4) | 1,100 (47.5) | 1,516 (49.1) | |
| Partly retired | | 738 (13.7) | 351 (15.1) | 387 (12.5) | |
| Marital status: | | | | | <0.001 |
| Married | | 3,554 (65.8) | 1,823 (78.7) | 1,731 (56.1) | |
| Divorced/separated | | 765 (14.2) | 242 (10.4) | 523 (16.9) | |
| Widowed | | 804 (14.9) | 142 (6.1) | 662 (21.4) | |
| Never married | | 282 (5.2) | 111 (4.8) | 171 (5.5) | |
| Health factors:[2] | | | | | |
| Self-rated health | 1–5 | 2.8 (1.1) | 2.7 (1.0) | 2.8 (1.1) | 0.259 |
| Depression | 0–8 | 1.4 (1.9) | 1.1 (1.7) | 1.6 (2.1) | <0.001 |
| Cognitive function | 7–27 | 15.6 (3.8) | 15.2 (3.7) | 16.0 (3.9) | <0.001 |
| Leisure engagement:[2] | | | | | |
| Mental | 0–6 | 3.1 (1.3) | 2.8 (1.2) | 3.3 (1.3) | <0.001 |
| Physical | 0–2 | 1.3 (0.7) | 1.3 (0.6) | 1.2 (0.7) | <0.001 |
| Social | 0–8 | 4.8 (1.8) | 4.6 (1.8) | 4.9 (1.8) | <0.001 |
| Religious | 0–2 | 1.3 (0.8) | 1.2 (0.8) | 1.4 (0.7) | <0.001 |

*Notes*: 1. $t$-Test for age, education, self-rated health, depressive symptoms, cognitive function, mental, physical, social, religious leisure activities, and $\chi^2$ test for race and ethnicity, household income (quartile), retirement status and marital status. 2. Values represent mean (standard deviation).

education and to be in a higher household income quartile. Moreover, older men were more likely to be married and less likely to be retired than their female counterparts. Regarding health-related factors, older women had higher depressive symptoms, but better cognitive function compared to older men. In terms of leisure activity engagement, older women were more likely to engage in mental, social and religious activities, but less likely to engage in physical activities compared to older men.

*Regression results*

Table 3 shows the results of multiple regression analyses of four domains (mental, physical, social and religious) of leisure activity engagement in relation to retirement and marital statuses. Each domain of leisure activities was regressed, controlling for age, race and ethnicity, education, household income (quartile), self-rated health, depressive symptoms and cognitive function. The reference category for retirement status was working individuals, who were compared with (a) completely retired and (b) partly retired groups. The reference category of marital status was married individuals, who were compared with (a) divorced or separated, (b) widowed and (c) never married groups. Separate analyses were conducted by gender. Adjusted $R^2$ values for each domain of activities were as follows for men and women, respectively: mental (0.0907 and 0.1280), physical (0.0745 and 0.0794), social (0.1311 and 0.1522) and religious (0.0562 and 0.0608).

In terms of retirement status, older men who were completely retired engaged more in mental ($\beta = 0.07$, $p < 0.05$) activities than their working counterparts. Older men who were partly retired engaged more in mental ($\beta = 0.05$, $p < 0.05$), physical ($\beta = 0.05$, $p < 0.05$) and social activities ($\beta = 0.08$, $p < 0.001$) compared to their working counterparts. Among older women, those who were completely retired engaged more in mental ($\beta = 0.07$, $p < 0.01$) and social ($\beta = 0.08$, $p < 0.01$) activities compared to working individuals. Older women who were partly retired engaged more than their employed counterparts in mental ($\beta = 0.06$, $p < 0.01$), social ($\beta = 0.09$, $p < 0.001$) and religious ($\beta = 0.04$, $p < 0.05$) activities.

Regarding marital status, older men who were divorced or separated engaged less in social ($\beta = -0.05$, $p < 0.05$) and religious ($\beta = -0.09$, $p < 0.001$) activities compared to their married counterparts. Second, older men who were widowed engaged less in social activities ($\beta = -0.06$, $p < 0.01$). Lastly, older men who were never married engaged less in social ($\beta = -0.05$, $p < 0.05$) and religious ($\beta = -0.06$, $p < 0.01$) activities compared to their married counterparts.

Among older women, those who were divorced or separated engaged less in mental ($\beta = -0.07$, $p < 0.001$), social ($\beta = -0.05$, $p < 0.05$) and religious ($\beta = -0.05$, $p < 0.01$) activities than married individuals. Second, older women who were widowed showed no significant difference across any domains of leisure activities. Lastly, older women who were never married engaged less in social ($\beta = -0.08$, $p < 0.001$) and religious ($\beta = -0.05$, $p < 0.01$) activities than their married counterparts.

https://doi.org/10.1017/S0144686X17000216 Published online by Cambridge University Press

TABLE 3. *Multiple regression analyses of retirement, marital status and leisure activity engagement*

| | Mental[1] | | Physical[1] | | Social[1] | | Religious[1] | |
|---|---|---|---|---|---|---|---|---|
| | *B* (SE) | β | *B* (SE) | β | *B* (SE) | β | *B* (SE) | β |
| Men (N = 2,318): | | | | | | | | |
| Retirement status: | | | | | | | | |
| Completely retired | 0.18 (0.07)* | 0.07 | 0.05 (0.04) | 0.04 | 0.18 (0.10) | 0.05 | −0.07 (0.05) | −0.04 |
| Partly retired | 0.18 (0.08)* | 0.05 | 0.09 (0.04)* | 0.05 | 0.41 (0.12)*** | 0.08 | 0.06 (0.06) | 0.02 |
| Marital status: | | | | | | | | |
| Divorced or separated | 0.01 (0.08) | 0.003 | 0.02 (0.04) | 0.01 | −0.30 (0.12)* | −0.05 | −0.23 (0.06)*** | −0.09 |
| Widowed | 0.03 (0.11) | 0.006 | 0.001 (0.06) | 0.0005 | −0.45 (0.15)** | −0.06 | −0.10 (0.07) | −0.03 |
| Never married | −0.01 (0.12) | −0.002 | 0.03 (0.06) | 0.009 | −0.39 (0.17)* | −0.05 | −0.23 (0.08)** | −0.06 |
| $R^2$ | 0.0962 | | 0.0801 | | 0.1363 | | 0.0619 | |
| Adjusted $R^2$ | 0.0907 | | 0.0745 | | 0.1311 | | 0.0562 | |
| Women (N = 3,087): | | | | | | | | |
| Retirement status: | | | | | | | | |
| Completely retired | 0.19 (0.07)** | 0.07 | 0.03 (0.03) | 0.02 | 0.27 (0.09)** | 0.08 | 0.03 (0.04) | 0.02 |
| Partly retired | 0.23 (0.08)** | 0.06 | 0.02 (0.04) | 0.01 | 0.47 (0.10)*** | 0.09 | 0.09 (0.04)* | 0.04 |
| Marital status: | | | | | | | | |
| Divorced or separated | −0.25 (0.07)*** | −0.07 | 0.002 (0.03) | 0.001 | −0.23 (0.09)* | −0.05 | −0.10 (0.04)** | −0.05 |
| Widowed | −0.08 (0.07) | −0.02 | 0.06 (0.03) | 0.04 | −0.08 (0.09) | −0.02 | −0.03 (0.04) | −0.01 |
| Never married | −0.19 (0.11) | −0.03 | −0.03 (0.05) | −0.01 | −0.59 (0.14)*** | −0.08 | −0.16 (0.06)** | −0.05 |
| $R^2$ | 0.1319 | | 0.0835 | | 0.1561 | | 0.0650 | |
| Adjusted $R^2$ | 0.1280 | | 0.0794 | | 0.1522 | | 0.0608 | |

*Notes*: N = 5,405. 1. Dependent variables (number of activities engaged in in each domain of leisure). Due to the small number of items (two items) for physical and religious activities, ordered logistic regression analyses were also conducted and the results were comparable to multiple regression analyses in terms of direction and significance (results available upon request). All analyses controlled for age, race and ethnicity, education, household income (quartile), self-rated health, depressive symptoms and cognitive function. Reference categories were working for retirement status and married for marital status. SE: standard error.

*Significance levels*: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

## Discussion

This study investigated the relationship between leisure activity engagement and different retirement and marital statuses among older American men and women using national US data from the CAMS, a supplementary sample of the HRS. This study contributed to expanding the understanding of leisure activity engagement by specifically considering various groups for both retirement (working, completely retired or partly retired) and marital (married, divorced or separated, widowed or never married) statuses, which can be considered crucial life transitions among older adults in later life.

### *Retirement status*

Our first research question involved how leisure activity engagement varies across different retirement statuses. The overall relationship showed that being retired was positively related to leisure activity engagement. Specifically, participants who were completely or partly retired engaged more in leisure activities compared to working individuals. This finding can be linked to the time availability perspective (Crawford and Godbey 1987; Esteve, Martin and Lopez 1999; Hawkins *et al.* 1999), which posits that retirees have more disposable time than working individuals and thus engage more in leisure activities. Activity theory (Havighurst 1961) can also be supported in the sense that the loss of a work role might prompt retirees to compensate by engaging in more leisure activities.

However, when compared to the working group, partly retired individuals engaged in more domains of leisure activities relative to completely retired persons. Older men who had completely retired engaged more in one domain (mental) of leisure activities than working individuals. On the other hand, older men who had partly retired engaged more in three domains (mental, physical and social) of leisure activities than working individuals. We found a similar trend among older women. Participants who had completely retired engaged more in mental and social activities, whereas those who were partly retired engaged more in mental, social and religious activities compared to working individuals.

Such results can be less explained by the time availability perspective if we assume completely retired individuals to have more disposable time than partially retired individuals. Partly retired individuals in this study can be considered to be transitioning from employment to complete retirement in the form of a part-time job, self-employment or temporary employment (Doeringer 1990). This is often referred to as a *bridge job*, which is defined as 'transitional jobs that bridge the period between the end of career employment and ultimate withdrawal from the labor force' (Ruhm

1990: 483). More recent attention has been drawn to this population because an increasing number of older adults are choosing to stay in bridge jobs instead of full retirement (Shultz 2003). Thus, partly retired individuals might have greater resources and networks as members of the bridged labour force (*e.g.* social activities with co-workers) than completely retired individuals, and therefore engage in more leisure activities. In addition, better health may have enabled them, both physically and mentally, to participate in more domains of leisure activities. Indeed, self-rated health status was significantly better among partly retired individuals when compared to completely retired individuals ($p < 0.001$, results not shown) in our sample. Zhan *et al.* (2009) also found that compared to full retirees, individuals in bridge employment have fewer major diseases and functional limitations.

Moreover, considering the fact that our study examined the number of activities involved instead of time spent engaged in each domain of activities, how individuals increase or decrease their range of activities following life transitions can be another explanation for such results. Indeed, selective optimisation with compensation theory (Baltes and Baltes 1990) posits that as individuals get older, they tend to focus more on certain activities while ceasing or reducing other activities in which they can no longer engage due to limitations in health (Nimrod and Adoni 2006).

In this respect, our finding that partly retired individuals engaged in more leisure domains (*versus* the working group) when compared to completely retired individuals (*versus* the working group) might be explained by the argument that the completely retired group focused on a decreased range of leisure activities, whereas partly retired individuals still remained engaged in a broader number of leisure domains. This speculation will be supported by examining time spent in each domain of activities to capture the overall picture of leisure activity patterns.

### *Marital status*

Our second research question focused on how leisure activity engagement varies across different marital statuses. The overall relationship showed that relative to married status, being divorced or separated, widowed, or never married was negatively related to leisure activity engagement.

First, divorced or separated older men engage less in social and religious activities compared to their married counterparts. Similarly, divorced or separated older women engaged less in mental, social and religious activities than married individuals. Such findings suggest that separation or divorce status may constrain engagement in social or religious activities for both older men and women. For a majority of older adults, social networks are

mainly composed of close ties with family members and friends (Fiori, Smith and Antonucci 2007). But absence of a spouse after divorce or separation may provide a smaller social network for this population when compared to married counterparts, who can still share their spouse's social circle. Reduced social network after divorce or separation may entail decreased engagement in both social and religious activities. Moreover, Exline, Yali and Sanderson (2000) posited that individuals may experience feelings of guilt after divorce that might result in religious strain (*e.g.* difficulty trusting God, feeling abandoned by God). This may in turn, at least for a certain period, discourage engagement in religious activities in this population.

Similar results for both religious and social activities in this study may be due to the close relationship between the two activities (Taylor and Chatters 1988). For example, individuals may form a social relationship with members from their religious organisations (*e.g.* social gathering with church members). Previous studies have shown the positive role of social support on leisure activities (Orsega-Smith *et al.* 2007), and future studies that include social support or social network variables will enable a better understanding of how enriched social networks play a role in leisure activity engagement among older adults.

With regard to gender differences, divorced or separated women engaged less in mental, social and religious domains than their married counterparts, whereas divorced or separated men engaged less only in the social domain. This difference might be explained by the supposition that women are more emotionally disrupted by divorce or separation than their male counterparts. Indeed, Iwasaki and Smale (1998: 47) argued that 'the lack of a partner as a result of divorce or separation makes women feel the loss of a former shared leisure style'. This suggests that women may be more influenced by the absence of a previous leisure partner, which may significantly reduce their engagement in leisure activities. There may be financial reasons as well. Older women may experience more financial strain than older men after divorce or separation (Day and Bahr 1986), considering the fact that men were often the breadwinner in this cohort. Thus, older women may struggle more financially than older men after divorce or separation when it comes to affording multiple leisure activities.

Such gender differences were most noteworthy when comparing widowed individuals with married counterparts in our study. Widowers engaged less in social activities compared to their married counterparts, but not widows. In the previous studies, widowers have been found to receive less emotional support from their adult children after widowhood compared to widows (Kaufman and Uhlenberg 1998). This may indicate insufficient social support from close ties among widowers, thus reduced

engagement in social activities. On the other hand, widows were more likely to engage in physical activities than married individuals. This is similar to a recent systematic review (Engberg *et al.* 2012), which found that as the duration of their widowhood increased, older women increased their engagement in physical activities.

Nonetheless, our study did not account for the duration of widowhood, so how this result may change after controlling for widowhood duration remains to be answered in future studies. In a similar respect, the lack of a significant relationship between widowhood status and religious activity engagement in our study may also be related to not including duration as a covariate. Brown *et al.* (2004) found that increased engagement in religious activities (*e.g.* religious beliefs and behaviours) among widowed individuals only lasted for a short term, which suggests that longer-term widowhood effects should also be explored.

Lastly, older men and women who never married engaged less in social and religious activities. This is very similar to the aforementioned findings related to divorced or separated and widowed individuals when compared to their married counterparts. Often, individuals who never married do not seem to face as much stress and change (Goldman, Korenman and Weinstein 1995) as those who experienced divorce, separation or widowhood, which are obvious transitions from the presence to absence of a spouse (either by choice or not). However, our study suggests that not having a spouse can also generate a cumulative disadvantage among single older adults, which may eventually result in a less active lifestyle than married groups. To our knowledge, no study has specifically focused on leisure activity engagement among individuals who never married, making it difficult to interpret our results. Considering the increasing number of single older adults, studies focused on never-married individuals are needed.

In terms of control variables, individuals with higher education, in higher household income quartiles, with better self-rated health, with higher cognitive function and with lower levels of depressive symptoms showed more engagement in each domain of leisure activities overall (results not shown but available upon request).

### *Limitations*

There are several limitations of this study. First, due to the nature of cross-sectional analysis, causality cannot be established between retirement or marital status and leisure activity engagement among older American men and women. The purpose of the current study was to first explore leisure activity profiles among older Americans with the largest sample

available, so we limited our sample to one wave from the available data. However, to determine whether retirement or marital status increased or decreased the level of engagement in leisure activities over time, future studies using several waves of both HRS and CAMS data will be necessary to address this limitation. Second, other covariates such as occupation type or duration of retirement or widowhood may provide more insight into study results. Types of occupation in earlier life might be related to more engagement in certain domains of leisure activities in later life. In addition, assessing the duration of retirement or widowhood might elucidate how these life transitions affect leisure activity engagement in the long term. Also, retirement status was a self-reported measure in the present study, which may be a weakness as stated by Gustman and Steinmeier (2000: 59) regarding the definition of retirement: 'People have different internal standards for what divides nonretirement from partial retirement, so that two people may report different retirement states when filing the same job'. Moreover, a valid scale for categorisation of leisure activities is needed to compare results across relevant studies in this field. The current classification was based on the previous literature, but an improved measure with greater consensus will be requisite in future studies to replicate results (*e.g.* distinguishing between leisure-time and free-time activities). Finally, the present study only focused on the number of leisure activities in which older adults engaged during the prior month or week in each domain, but not the actual time spent on these activities. Thus, it was not possible to interpret the results in terms of frequency or duration of activity engagement. Future studies examining both number and time spent on these leisure domains (*e.g.* comparing individuals who engage in fewer leisure activities but for more time *versus* those who engage in more leisure activities for less time) might better explain leisure patterns in this population that experienced significant life transitions in later life.

## *Implications and conclusion*

This study contributed to a better understanding of leisure activity engagement related to retirement and marital status among older American men and women. Our results validate that wide variation exists among retirees and non-married individuals compared to their employed and married counterparts. Nonetheless, the overall trend of a positive relationship between retirement and leisure activity engagement shows that retirement provides a chance for older adults to participate in different types of activities after withdrawal from the labour force. This study supported both activity theory and the time availability perspective. Although these theories focus on the wellbeing of older adults rather than engagement in leisure

activities *per se*, we consider leisure activity engagement to be a bridge to healthy and successful ageing. However, more types of leisure activity engagement among partly retired individuals than completely retired individuals (relative to working participants) suggest that there is a further explanation beyond these two theoretical frameworks. Maintaining a social network via a bridge job may provide a greater opportunity for social activity engagement. Moreover, partial retirement can also provide greater financial resources, with some amount of income still available, that enable engagement in some leisure activities compared to complete retirement. In this respect, how social ties and economic resources affect leisure activity engagement should be explored in future studies to advance these theories.

On the other hand, the overall trend of a negative relationship between non-married status (*e.g.* divorced or separated, widowed, never married) and leisure activity engagement suggests that the loss or absence of a spouse may become a barrier to an active lifestyle, which partially supports disengagement theory. Nonetheless, significant variation existed in the non-married group beyond this general trend. This implies that challenges and barriers to leisure activity engagement may vary in this group, indicating the need for more comparative studies with this population. Instead of simply comparing this group with married individuals, further comparisons between divorced or separated and widowed individuals or between widowed and never-married individuals will lead to better understanding of leisure activity profiles among non-married older adults. Taking into account that adult children, friends and relatives can become significant sources of social support for non-married individuals in later life, how to combine close social networks and coping strategies after significant life transitions (*e.g.* divorce, widowhood) with existing activity-related theories should be contemplated. Future studies are needed to explore the mechanism between these life transitions and leisure activity engagement to identify protective or risk factors for an active lifestyle in later life. Such study findings will inform strategies to encourage more leisure activity engagement, which will ultimately yield better health outcomes and improved well-being in this population.

## References

Adams, K. B., Leibbrandt, S. and Moon, H. 2011. A critical review of the literature on social and leisure activity and wellbeing in later life. *Ageing & Society*, **31**, 4, 683–712.

Agahi, N. and Parker, M. G. 2005. Are today's older people more active than their predecessors? Participation in leisure-time activities in Sweden in 1992 and 2002. *Ageing & Society*, **25**, 6, 925–41.

Azevedo, M. R., Araújo, C. L. P., Reichert, F. F., Siqueira, F. V., da Silva, M. C. and Hallal, P. C. 2007. Gender differences in leisure-time physical activity. *International Journal of Public Health*, **52**, 1, 8–15.

Baltes, P. B. and Baltes, M. M. 1990. Psychological perspectives on successful aging: the model of selective optimization with compensation. In Baltes, P. B. and Baltes, M. M. (eds), *Successful Aging: Perspectives from the Behavioural Sciences*. Cambridge University Press, Cambridge, 1–34.

Berdychevsky, L., Nimrod, G., Kleiber, D. A. and Gibson, H. J. 2013. Sex as leisure in the shadow of depression. *Journal of Leisure Research*, **45**, 1, 47–73.

Berger, U., Der, G., Mutrie, N. and Hannah, M. K. 2005. The impact of retirement on physical activity. *Ageing & Society*, **25**, 2, 181–95.

Brown, S. L., Nesse, R. M., House, J. S. and Utz, R. L. 2004. Religion and emotional compensation: results from a prospective study of widowhood. *Personality and Social Psychology Bulletin*, **30**, 9, 1165–74.

Chang, P.-J., Wray, L. and Lin, Y. 2014. Social relationships, leisure activity, and health in older adults. *Health Psychology*, **33**, 6, 516–23.

Choi, N. G. and Chou, R. J.-A. 2010. Time and money volunteering among older adults: the relationship between past and current volunteering and correlates of change and stability. *Ageing & Society*, **30**, 4, 559–81.

Crawford, D. W. and Godbey, G. 1987. Reconceptualizing barriers to family leisure. *Leisure Sciences*, **9**, 2, 119–27.

Crimmins, E. M., Kim, J. K., Langa, K. M. and Weir, D. R. 2011. Assessment of cognition using surveys and neuropsychological assessment: the Health and Retirement Study and the Aging, Demographics, and Memory Study. *Journals of Gerontology: Psychological Sciences and Social Sciences*, **66B**, supplement 1, i162–71.

Cumming, E. and Henry, W. 1961. *Growing Old: The Process of Disengagement*. Basic Books, New York.

Day, R. D. and Bahr, S. J. 1986. Income changes following divorce and remarriage. *Journal of Divorce*, **9**, 3, 75–88.

Doeringer, P. B. 1990. Economic security, labor market flexibility, and bridges to retirement. In Doeringer, P. B. (ed.), *Bridges to Retirement: Older Workers in a Changing Labor Market*. ILR Press, Ithaca, New York, 3–22.

Engberg, E., Alen, M., Kukkonen-Harjula, K., Peltonen, J. E., Tikkanen, H. O. and Pekkarinen, H. 2012. Life events and change in leisure time physical activity. *Sports Medicine*, **42**, 5, 433–47.

Esteve, R., Martin, J. S. and Lopez, A. E. 1999. Grasping the meaning of leisure: developing a self-report measurement tool. *Leisure Studies*, **18**, 2, 79–91.

Evenson, K. R., Rosamond, W. D., Cai, J., Diez-Roux, A. V. and Brancati, F. L. 2002. Influence of retirement on leisure-time physical activity: the Atherosclerosis Risk in Communities Study. *American Journal of Epidemiology*, **155**, 8, 692–9.

Exline, J. J., Yali, A. M. and Sanderson, W. C. 2000. Guilt, discord, and alienation: the role of religious strain in depression and suicidality. *Journal of Clinical Psychology*, **56**, 12, 1481–96.

Fernández-Ballesteros, R., Zamarrón, M. D. and Ruíz, M. A. 2001. The contribution of socio-demographic and psychosocial factors to life satisfaction. *Ageing & Society*, **21**, 1, 25–43.

Fiori, K. L., Smith, J. and Antonucci, T. C. 2007. Social network types among older adults: a multidimensional approach. *Journals of Gerontology: Psychological Sciences and Social Sciences*, **62B**, 6, P322–30.

Fisher, G. G., Hassan, H., Rodgers, W. L. and Weir, D. R. 2013. *Health and Retirement Study Imputation of Cognitive Functioning Measures: 1992–2010*. University of

Michigan, Institute for Social Research, Survey Research Center, Ann Arbor, Michigan.
Fitzpatrick, T. R., Spiro, A., Kressin, N. R., Greene, E. and Bossé, R. 2001. Leisure activities, stress, and health among bereaved and non-bereaved elderly men: the Normative Aging Study. *OMEGA*, **43**, 3, 217–45.
Freysinger, V. J. and Stanley, D. 1995. The impact of age, health, and sex on the frequency of older adults' leisure activity participation: a longitudinal study. *Activities, Adaptation & Aging*, **19**, 3, 31–42.
Glass, T. A., De Leon, C. F. M., Bassuk, S. S. and Berkman, L. F. 2006. Social engagement and depressive symptoms in late life: longitudinal findings. *Journal of Aging and Health*, **18**, 4, 604–28.
Godfrey, A., Lord, S., Galna, B., Mathers, J. C., Burn, D. J. and Rochester, L. 2014. The association between retirement and age on physical activity in older adults. *Age and Ageing*, **43**, 3, 386–93.
Goldman, N., Korenman, S. and Weinstein, R. 1995. Marital status and health among the elderly. *Social Science & Medicine*, **40**, 12, 1717–30.
Gustman, A. L. and Steinmeier, T. L. 2000. Retirement outcomes in the health and retirement study. NBER Working Paper 7588, National Bureau of Economic Research, Cambridge.
Havighurst, R. J. 1961. Successful aging. *Gerontologist*, **1**, 1, 8–13.
Hawkins, B. A., Peng, J., Hsieh, C.-M. and Eklund, S. J. 1999. Leisure constraints: a replication and extension of construct development. *Leisure Sciences*, **21**, 3, 179–92.
Hong, S.-I., Hasche, L. and Bowland, S. 2009. Structural relationships between social activities and longitudinal trajectories of depression among older adults. *Gerontologist*, **49**, 1, 1–11.
Hurd, M. D. and Rohwedder, S. 2005. *Changes in Consumption and Activities at Retirement*. University of Michigan, Ann Arbor, Michigan.
Hurd, M. and Rohwedder, S. 2007. *Time-use in the Older Population: Variation by Socioeconomic Status and Health*. RAND, Santa Monica, California.
Hurd, M. and Rohwedder, S. 2009. Methodological innovations in collecting spending data: the HRS Consumption and Activities Mail Survey. *Fiscal Studies*, **30**, 3/4, 435–59.
Iwasaki, Y. and Smale, B. J. A. 1998. Longitudinal analyses of the relationships among life transitions, chronic health problems, leisure, and psychological well-being. *Leisure Sciences*, **20**, 1, 25–52.
Janke, M., Davey, A. and Kleiber, D. 2006. Modeling change in older adults' leisure activities. *Leisure Sciences*, **28**, 3, 285–303.
Janke, M. C., Payne, L. L. and Van Puymbroeck, M. 2008. The role of informal and formal leisure activities in the disablement process. *International Journal of Aging & Human Development*, **67**, 3, 231–57.
Johnson, K. J. and Mutchler, J. E. 2014. The emergence of a positive gerontology: from disengagement to social involvement. *Gerontologist*, **54**, 1, 93–100.
Juster, F. T. and Suzman, R. 1995. An overview of the Health and Retirement Study. *Journal of Human Resources*, **30**, supplement, S7–56.
Kaufman, G. and Uhlenberg, P. 1998. Effects of life course transitions on the quality of relationships between adult children and their parents. *Journal of Marriage and the Family*, **60**, 4, 924–38.
Koeneman, M. A., Chinapaw, M. J. M., Verheijden, M. W., van Tilburg, T. G., Visser, M., Deeg, D. J. H. and Hopman-Rock, M. 2012. Do major life events influence physical activity among older adults: the Longitudinal Aging Study Amsterdam. *International Journal of Behavioral Nutrition and Physical Activity*, **9**, 147.

Lachman, M. E., Agrigoroaei, S., Murphy, C. and Tun, P. A. 2010. Frequent cognitive activity compensates for education differences in episodic memory. *American Journal of Geriatric Psychiatry*, **18**, 1, 4–10.

Lahti, J., Laaksonen, M., Lahelma, E. and Rahkonen, O. 2011. Changes in leisure-time physical activity after transition to retirement: a follow-up study. *International Journal of Behavioral Nutrition and Physical Activity*, **8**, 36. doi

Mein, G. K., Shipley, M. J., Hillsdon, M., Ellison, G. T. and Marmot, M. G. 2005. Work, retirement and physical activity: cross-sectional analyses from the Whitehall II study. *The European Journal of Public Health*, **15**, 3, 317–322.

Michael, S. T., Crowther, M. R., Schmid, B. and Allen, R. S. 2003. Widowhood and spirituality: coping responses to bereavement. *Journal of Women & Aging*, **15**, 2/3, 145–65.

Nimrod, G. 2007. Retirees' leisure: activities, benefits, and their contribution to life satisfaction. *Leisure Studies*, **26**, 1, 65–80.

Nimrod, G. and Adoni, H. 2006. Leisure-styles and life satisfaction among recent retirees in Israel. *Ageing & Society*, **26**, 4, 607–30.

Nimrod, G. and Kleiber, D. A. 2007. Reconsidering change and continuity in later life: toward an innovation theory of successful aging. *International Journal of Aging and Human Development*, **65**, 1, 1–22.

Nomaguchi, K. M. and Bianchi, S. M. 2004. Exercise time: gender differences in the effects of marriage, parenthood, and employment. *Journal of Marriage and Family*, **66**, 23, 413–30.

Okun, M. L., Reynolds, C. F., III, Buysse, D. J., Monk, T. H., Mazumdar, S., Begley, A. and Hall, M. 2011. Sleep variability, health-related practices, and inflammatory markers in a community dwelling sample of older adults. *Psychosomatic Medicine*, **73**, 2, 142–50.

Orsega-Smith, E. M., Payne, L. L., Mowen, A. J., Ho, C.-H. and Godbey, G. C. 2007. The role of social support and self-efficacy in shaping the leisure time physical activity of older adults. *Journal of Leisure Research*, **39**, 4, 705–27.

Paillard-Borg, S., Wang, H.-X., Winblad, B. and Fratiglioni, L. 2009. Pattern of participation in leisure activities among older people in relation to their health conditions and contextual factors: a survey in a Swedish urban area. *Ageing & Society*, **29**, 5, 803–21.

Parker, M. D. 1996. The relationship between time spent by older adults in leisure activities and life satisfaction. *Physical and Occupational Therapy in Geriatrics*, **14**, 1, 61–71.

Pettee, K. K., Brach, J. S., Kriska, A. M., Boudreau, R., Richardson, C. R., Colbert, L. H., Satterfield, S., Visser, M., Harris, T. B., Ayonayon, H. N. and Newman, A. B. 2006. Influence of marital status on physical activity levels among older adults. *Medicine & Science in Sports & Exercise*, **38**, 3, 541–6.

Pinquart, M. 2003. Loneliness in married, widowed, divorced, and never-married older adults. *Journal of Social and Personal Relationships*, **20**, 1, 31–53.

Rosenkoetter, M. M., Gams, J. M. and Engdahl, R. A. 2001. Postretirement use of time: implications for preretirement planning and postretirement management. *Activities, Adaptation & Aging*, **25**, 3/4, 1–18.

Rowe, J. W. and Kahn, R. L. 1997. Successful aging. *Gerontologist*, **37**, 4, 433–40.

Ruhm, C. J. 1990. Bridge jobs and partial retirement. *Journal of Labor Economics*, **8**, 4, 482–501.

Sayer, L. C. 2005. Gender, time and inequality: trends in women's and men's paid work, unpaid work and free time. *Social Forces*, **84**, 1, 285–303.

Scherger, S., Nazroo, J. and Higgs, P. 2011. Leisure activities and retirement: do structures of inequality change in old age? *Ageing & Society*, **31**, 1, 146–72.

Shultz, K. S. 2003. Bridge employment: work after retirement. In Adams, G. A. and Beehr, T. A. (eds), *Retirement: Reasons, Processes, and Results*. Springer, New York, 214–41.
Silverstein, M. and Parker, M. G. 2002. Leisure activities and quality of life among the oldest old in Sweden. *Research on Aging*, **24**, 5, 528–47.
Taylor, R. J. and Chatters, L. M. 1988. Church members as a source of informal social support. *Review of Religious Research*, **30**, 2, 193–203.
Utz, R. L., Carr, D., Nesse, R. and Wortman, C. B. 2002. The effect of widowhood on older adults' social participation: an evaluation of activity, disengagement, and continuity theories. *Gerontologist*, **42**, 4, 522–33.
Zhan, Y., Wang, M., Liu, S. and Shultz, K. S. 2009. Bridge employment and retirees' health: a longitudinal investigation. *Journal of Occupational Health Psychology*, **14**, 4, 374–89.

*Accepted 25 January 2017; first published online 6 March 2017*

*Address for correspondence*:
Yura Lee,
Suzanne Dworak-Peck School of Social Work,
University of Southern California,
1150 South Olive Street, Suite 1400,
Los Angeles,
CA 90015, USA

E-mail: yuralee@usc.edu