

**Time Allocated to Healthy Behaviors
among Retirement-Age American Men and Women**

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ABSTRACT

Understanding patterns of daily life among contemporary retirement-age Americans ages 60 to 75 is of heightened importance as growing numbers of boomers and those in the cohort preceding them move through this life stage. In this paper, we focus on time spent in healthy behaviors—key risk factors for health and well-being—which are even more important because they are potentially modifiable. We take a gendered life course approach considering gender as a primary organizing factor in daily life as well as the structuring effects of work and the potential rolelessness of non-work for older Americans. We use OLS regression to analyze daily time allocations to healthy and unhealthy behavior (sleep, exercise, meal preparation, leisure, and paid work) among retirement-age men and women using the American Time Use Survey (2006-2008). Along with employment status and gender, we consider the effects of health status and day of the week on time patterns.

Time Allocated to Healthy Behaviors among Retirement-Age American Men and Women

Understanding patterns of daily life among contemporary retirement-age Americans ages 60 to 75 is of heightened importance as growing numbers of boomers and those in the cohort preceding them move through this life stage. There is a dearth of knowledge regarding how they spend their time, even as time use is being seen as a key risk factor for health and well-being, one that is even more important because it is potentially modifiable (Berkman and Kawachi 2000; House 2002; Oakes and Kaufman 2006; Krieger 2011). There is evidence (e.g. Giandrea, Cahill, and Quinn 2009) of considerable heterogeneity during this age period in terms of labor force participation and even in defining oneself as "retired." Paid work offers the structure of daily routines, with full-time employment occupying approximately half of waking hours. Less is known about the extent to which less than full-time work or self-employment organizes daily life, since the specific timing and amount of work are less institutionalized for part-time workers and the self-employed. Even less is known about the time patterning of those who are not in the labor market, though some may well find their days organized around caregiving for spouses or other ailing relatives (e.g. Marks 1996). Health itself may be a primary factor driving time-use patterns, affecting both employment status and non-work time allocations. Gender norms are also implicated in whether or not older adults spend time working for pay, caring for others, and, we would assume, engaging in health-related behaviors such as sleeping, leisure, exercise, and meal preparation. This paper draws on a gendered life course theoretical perspective (Moen 2001; Moen and Spencer 2006) to analyze gender-specific patterns of weekday and weekend time allocations for Americans who are navigating the retirement years (ages 60-74), assessing as well the relationship between employment and health status and time spent in various activities in the typical day.

The American Time Use Survey (ATUS) provides a unique opportunity to analyze *daily* patterns of time allocation among retirement-age men and women, comparing and contrasting patterned allocations by gender, employment status, health status, and day of the week (weekend/weekday). The data contain detailed descriptions of daily activities collected on all days of the week; a variety of demographic characteristics; and large sample sizes which permit comparisons of older adults engaged in different levels of employment. These aspects make the data particularly well-suited to a life-course model framing of time use as driven by the master roles of "worker" and "gender" as well as subjective assessments of health. We theorize these as key social organizers of time even in the later years of adulthood as individuals move from career jobs and toward retirement.

A Gendered Life Course Approach

A gendered life course approach focuses on trajectories older Americans in their 60s and early 70s who are in a transitional stage as they eventually exit from full-time paid work and into to the leisure of full-time retirement. But note that this is a transition historically more typical of white, middle-class men than women and other disadvantaged groups who may have had a more limited attachment to the workforce in prior years. Women do not retire from carework or housework, even though they may exit paid work. The life course is being deinstitutionalized, making this transition less "orderly" even for men and this age period more heterogeneous in terms of labor market participation and other engagements (Moen, Flood, and Louis 2011). There has never been a widely-acknowledged "script" defining the activities of retirees beyond the cessation of paid work (Rosow 1974). And today declines in disability, increasingly gradual or else unexpected (through layoffs) work exits, declines in pension security, and the rise in adult care obligations make assumptions about time budgets of this age group problematic. Even as the boomers (b. 1946-1964) are beginning to move through these transitional years, it is increasingly obvious that 1) we know little about how older adults spend their time, and 2) time use is an important policy issue (in terms of social security and pensions, as well as the way health outcomes are both a precursor to and a consequence of time allocations).

Our life course framing suggests two approaches to time allocated to healthy behaviors—*time scarcity* and the *roleless role* (Rosow 1974). One might consider that time spent on paid work and/or caregiving at this or any life stage would limit time spent in active leisure (such as exercising, walking, etc.) as well as in preparing (healthy) meals, getting enough sleep, etc. This is the *time scarcity* hypothesis. Alternatively, the absence of routinized expectations for older non-employed adults may limit their ability or inclination to establish routine patterns for sleeping, active leisure, or preparing meals, and may in fact exacerbate negative health behaviors, such as smoking, drinking excessively, sleeping more than nine hours a night and/or watching long hours of television. This is the "*roleless role*" hypothesis, in conjunction with Rosow's (1974) observation about the absence of any institutionalized obligations and expectations for retirees. Whether different forms of labor force attachment promote or reduce time spent in various health behaviors is an empirical question that we address.

The Gendered Life Course: Work, Care, and Time

Men and women move through the later (as well as earlier) adult years following different temporal rhythms. Men may remain embroiled in the career mystique (Moen and Roehling 2005), with at least some paid work continuing to have primacy in their lives, or the retirement mystique, with retirement as full-time leisure a just reward for all the years devoted to paid work. Work as rewarding or conversely leisure as rewarding depends on older adults' education and occupation. By contrast, women remain the central care-providers even if they work for pay. Thus one might expect men in this age group to be more apt to spend more time working for pay, while same-age women may be spending more time providing care for spouses and other infirm relatives, as well as in doing housework. Since the social organization of paid work is largely institutionalized to certain days of the week and certain hours of the day, employed men may well show less heterogeneity in the way they spend their time on weekdays (aka workdays), than women and non-employed men. Because paid work reduces the time available on workdays to spend in other activities, full-time workers likely spend less time in many non-work activities on weekdays (when most employed individuals work) than those who do not work for pay. Depending on whether it is a workday and how many hours are worked that day, some days of less than full-time work may resemble those of respondents who work fulltime, others may spend their time in more similar ways as those of non-workers, and still other days may be somewhere in between. There is evidence that, rather than filling their days with leisure when decreasing or leaving paid work, some individuals increase time in other productive activities such as volunteering and housework (Gauthier and Smeeding 2003; Krantz-Kent and Stewart 2007; Dosman, Fast, Chapman, and Keating 2006; Fast, Dosman, and Moran 2006; Moen, Flood, and Louis 2011) as well as in television watching (Gauthier and Smeeding 2003).

Gendered expectations continue to shape lives during this age period, with women more apt than men to be engaged in and to do more housework (Krantz-Kent and Stewart 2007; Fast, Dosman, and Moran 2006; Altergott 1988) and to care for children (or grandchildren) or ailing adults (Altergott 1988; Marks 1996). Women's engagement in housework is higher than men's despite higher contributions to household activities by men when they are not working (Dosman et al. 2006; Gauthier and Smeeding 2003) and over time (Fast et al. 2006). In addition, men generally spend more time in leisure than women (Altergott 1988). We propose analogous gender differences in the allocation of time to health behaviors.

In this paper we examine the extent to which the structuring effect of paid work and gender operate to shape time spent in healthy activities or "work" days as well as on non-workdays (typically weekends) by comparing patterns of time use on weekends and weekdays for those with different types of ties to the workforce, including those who are not employed and define themselves as "retired." Weekends will likely be different from weekdays, especially for those who retain some attachment to the workforce. In terms of differences on weekends for workers and non-workers, one might expect relatively few differences to the extent that working individuals have more discretion in how to allocate their time on weekends than they do on weekdays. On the other hand, if work constrains time during the week, we may see workers compensating for time spent working during the week by doing more of the things on weekends that non-workers do on weekdays such as housework

or sleeping (Basner, Fomberstein, Razavi, Banks, William, Rosa, and Dinges 2007), but this may differ by gender and by marital status. Non-workers may also adjust their schedules according to the work week thereby increasing the time they spend in typical weekend activities such as TV watching and cooking. Or we may see relatively stable patterns of time use across weekends and weekdays for non-workers. Whether non-workers differ in their time use by whether or not they consider themselves “retired” is an empirical question we address.

Life Course Covariates

Our gendered life course focus (Moen 2001; Moen & Spencer 2006) emphasizes the importance of the confluence of age and gender in shaping time use. Women come to and move through the retirement years with fewer economic (including pension) resources and more disrupted employment histories than men (Han and Moen 1999). Despite the fact that women and men in this age group are in or moving toward the same status of (non-employed) retirement, research (Pleau 2010) has shown that the gendered life course continues to operate in exacerbating disparities in resources during the retirement years. As such, social class (as measured by education and relative poverty) is an important contextual factor, shaping opportunities, risks, and preferences for employment, retirement and healthy behaviors during this age period (Quinn and Kozy 1996; Belgrave 1988; Choi 1994). Education is often tied to employment, with more educated people maintaining their ties to full-time employment longer (Cahill, Giandrea, and Quinn 2006) and spend more time in paid work (Moen, Flood, and Louis 2011). Those with less education as well as those with few economic resources (relative poverty) are more apt to spend time in passive leisure activities, such as watching television (source).

Health status itself predicts both employment and time spent in healthy (as well as other) activities. Accordingly we include prior self-reports of health status as a key covariate. Obesity, which decreases the health of the population, is associated with more television watching and paid work among Americans 54 and older, but less exercise and meal preparation (Jenkins and Fultz 2008). Poor health shows strong positive associations with both short and long sleep (Patel, Malhotra, Gottlieb, White, and Hu 2006) and television watching. Exercise both promotes and maintains good health, and good health is associated with exercising among Americans in their 60s and 70s (Rosenkoetter, Gams, and Engdahl 2009). Good health should also be positively associated with meal preparation to the extent that preparing healthy meals is more time consuming than preparing less healthy meals such as pre-packaged food or simply buying already prepared food.

We also draw on the life course concept of linked lives (Elder, Johnson, and Crosnoe 2003; Moen and Hernandez 2009) to consider the ways that social ties shape time use during this age period. Married people spend less time in leisure and more time in housework than those who are widowed, though widowed women spend less time in housework than married women and widowed men spend more time doing housework than married men. But do married people engage in healthy behaviors together, or do they spend more time in passive leisure of watching television. Specifically, we examine how marital status and being a caregiver shape the time spent in healthy or unhealthy activities on a typical day.

In sum, this paper makes four contributions. First, we examine the time Americans ages 60 to 75 allocate to positive and negative health behaviors, considering similarities and differences by gender and health status. Second, we distinguish between time spent on health behaviors of those with five different types of labor market status: those who working for pay—full time, part time, and self employment, those who are not-working and who define themselves as retired (hereafter “retired”), and those who are not working for pay and do not define themselves as retired (the non-working/not retired group, hereafter NW/NR), again controlling for health. The NW/NR group are especially interesting since they do not fit into existing expected categories. Third, we investigate weekday/weekend similarities and differences by detailed employment status to understand whether the structuring effect of paid work carries over to weekends when paid work is less common. Finally, we examine additional social-locational and linked lives factors that might promote understanding of whether and how much time women and men in this age group allocate to different types of

health-related activities.

DATA AND PROCEDURES

We investigate time allocated to healthy (and unhealthy) behaviors by Americans ages 60 to 74. Drawing on data (2006 through 2008) from the American Time Use Survey (ATUS), we describe and model both the time spent in a variety of non-work activities by men and women, comparing differences by employment status and weekends/weekdays. Using ordinary least squares regression, we estimate: 1) how American men and women spend their time working and outside of paid work by gender, employment status, and health status; 2) if and how time allocations vary by day of the week within and across employment statuses, 3) how other life-course factors contribute to heterogeneity in men's and women's time spent in various health-related activities during the retirement-age years.

We document the effects of employment status, as well as gender, health, and day of the week differences, and investigate the effects of other factors on engagement in non-work activities. First, we examine (on the ATUS diary day) the time spent in various non-work activities for American men and women of retirement age, ages 60 to 74, and then estimate multivariate models to understand the factors predicting time use

Data

We use integratedⁱ data from the American Time Use Survey (ATUS) collected annually from 2003 through 2009 (Abraham et al. 2010). The ATUS is a time diary study of a nationally representative sample of Americans. Respondents in the ATUS reported the activities they engaged in over a 24-hour period from 4:00 a.m. of a specified day until 4:00 a.m. of the following day. Activities are coded using a three-tier, six-digit coding scheme that represents over 400 activities. All responses were recorded using Computer Assisted Telephone Interview (CATI) procedures.ⁱⁱ Data are collected all days of the week, with weekends oversampled. Weights correct for the survey design such that aggregating across different days of the week results in a representative picture of average time use among the population.

A module on eating and health, sponsored by the Economic Research Service of the U.S. Department of Agriculture, was fielded from 2006 to 2008. Among various additional eating and drinking questions, the module also included questions on self-reported general health status and relative poverty. Because health is such an important predictor of employment and time use more generally, we restrict our sample to respondents who completed the Eating and Health module since there is no general health measure available for all ATUS respondents in 2003-2005 or 2009-2010. Analyses of demographic characteristics and time use among Eating and Health module respondents ages 60 to 74 and same age respondents in other years reveal no substantial differences.

Dependent Variables

Our dependent variables capture the time spent participating in various health-related activities on the ATUS diary day. We examine time spent sleeping (as well as whether respondents spend less than seven or more than 9 hours sleeping); we consider active leisure (physical activity such as exercising and participating in sports as well as walking or biking as a mode of transportation). We also distinguish between passive TV watching as a form of leisure from all other types of leisure, which includes socializing with others, attending or hosting social events or performances, reading, and listening to the radio. Finally, we investigate differences in time spent preparing meals. Each dependent variable indicates the number of minutes spent on the ATUS diary day in the activity by the ATUS respondent and may range from as little as zero minutes to an entire one-day period (1440 minutes).

Independent Variables

Based on our gendered life course framing, we model women's and men's time use separately, including as independent variables indicators of health, labor market status, social-locational context (age, education, and relative poverty) and "linked lives". Our indicator of health is based on the ATUS respondent's self-reported

health status with five response categories ranging from poor to excellent, recognizing that this is endogenous and yet theorizing self-reported health to be a powerful shaper of both paid work and non-work activities. We code five labor market status categories: full-time work, part-time work, and self employment, as well as not-working and retired (hereafter "retired"), and not working for pay and not self-identified as retired (the non-working/not retired group, hereafter NW/NR). College education is a binary indicator of whether the respondent received a bachelor's degree or higher. Relative poverty is a three category measure indicating whether the respondent's household income was below 130% of the poverty line; 130-185% of the poverty line; or above 185% of the poverty line. Our linked lives measures include binary indicators of whether the respondent is married and whether they spend time caregiving on the ATUS diary day.

Profiles of Retirement-Age Men and Women

Since labor market status delineates the time available for other activities, we emphasize the incidence and predictive value of respondents' participation in various types of paid work. Table 1 highlights employment status-specific characteristics of retirement-age American men and women ages 60 to 75, distinguishing between non-working and retired (hereafter retired) and non-working and non-retired (hereafter NW/NR) respondents. Note that the ATUS only asks the retirement status of individuals who are not employed; therefore our use of the word "retired" reflects non-employment and a self-definition of being retired.

We first consider similarities and differences between men by age and employment status (Table 1A). Most (44%) of the men ages 60 to 75 are retired and are about 68 years old on average. NW/NR men represent 13% of the sample—these are men who, like those who are retired, are non-working, but they do not see themselves as retired, and are 64.3 years old, on average, about 3.5 years younger than men who call themselves retired. NR/NW men are more likely than retired men to have poor health (32% versus 10%) and are less likely to be college educated. NR/NW men are more similar in age to men who are working, though they are in poorer health and are less educated than men in this age group who are still employed. Of the 43% of men in the sample who are working for pay, 22% are still working full time (average 63.7 years), 9% are working part time (average age 65.8 years), and 12% are self-employed (64.9 years old on average). Over 80% of men who are still employed report having good or better health. Men who are retired are also in relatively good health with only 30% reporting that their health is either fair or poor. NW/NR men, however, are the least healthy. Over half of NW/NR men (53%) report having poor or fair health. Poor health is the modal category among NR/NW men, and is the lowest response categories among all other men. Thus employment status, age, and health are closely interrelated.

Table 1B shows that more women than men in this age group are retired (53% compared to 44%), despite the fact that fewer women than men are in the workforce at any age. It may well be that homemakers whose husbands retire come to define themselves as "retired" as well. Fewer women than men are working full time (18% compared to 22%). As would be expected based on prior research, more women engage in part-time work than men (12% versus 9%). Women are also less likely than men to be self-employed (5% versus 12%). About 13% of women are NW/NR, which is very similar to men. Though there are some differences in employment status by gender, the average ages of men and women by employment status are nearly identical.

The health differences among women follow the same general pattern as we saw for men, with employed women the healthiest and NW/NR women the least healthy. Poor health is extremely uncommon among working women, but categorizes about 22% of NR/NW women. Nearly 90% of working women report that they are in good or better health. About three-quarters of retired women are in good health, though just under half of NW/NR women are in good health.

Education is associated with employment status at the bivariate level. NR/NW men are the least likely to be college educated with only 18% holding a college degree; while about 25% of men who are retired have a college degree. By contrast, over 30% of all working men are college educated, with 47% of self-employed men

having a college education. Approximately one-fifth of women in the sample are college-educated. Like men, women who work full time and are self-employed are relatively more educated than women of other employment statuses, with 30% or more having a college degree. NR/NW women are the least educated, with only 12% holding a college degree. About 20% each of retired and part-time working women have a college education. Educational differences between still working and retired men and women may in part reflect age and hence cohort differences in educational attainment, since the oldest cohort is less educated than the younger groups. Educational differences might also reflect the ability to obtain or retain paid work as well as preferences for paid work.

There are clear associations between employment status and household income levels. Forty percent of NW/NR men have household incomes less than 30% above the poverty line. About 14% of retired men and 11% of part-time working men also have low incomes. Approximately 13% each of retired and NR/NW men have moderate income levels. The vast majority of retired (74%) and employed (>80%) men have relatively high household incomes (>185% of the poverty line). About 45% of NR/NW men have high household incomes. Relative household income and employment status are strongly associated for women, though not to the same extent as for men. NR/NW women are the most likely to have low household incomes (41%), followed by retired women (19%). Full-time working women are the least likely to have low household incomes (6.5%), followed by part-time and self-employed women (14% each have low household incomes). As one would expect, women who work full time are the most likely to have high relative incomes (84%); two-thirds or more of other employed women and retired women also have high household incomes. Again, similar to men, less than half of NR/NW women have high household incomes (43%).

The bivariate descriptive statistics also show differences in marriage and caregiving during this age period for men. Approximately 75% of working and retired men are married; over one-third of NR/NW men are *not* married (35%). Over 80% of full-time working and self-employed men are married; about three-quarters of retired and part-time working men are married; and nearly two-thirds of NR/NW men are married. Caregiving on the ATUS diary is most common among retired men (13%) and part-time working men (12%). Under 10% of full-time working and self-employed men are caregivers, which may in part be driven by their relative youth compared to retired and part-time working men or may reflect the primacy of paid work in their lives.

Women compared to men are slightly less likely to be married, but more likely to be providing care to others. Women's marital status is related to their employment status in expected ways. About half of women who work full time and half those who are NR/NW are married compared with about 60% of retired and part-time working women who are married. Fully 69% of self-employed women are married. Caregiving is more common among women than men, with 17% of women providing care to others on the ATUS diary day compared to only 11% of men. Full-time employed women are the least likely to be providing care for others (12%) and NR/NW women are the most likely (21%) to be doing so. About 17% of retired, part-time working, and self-employed women give care on the typical day.

Health Behavior Time Allocation Profiles

Table 2 reports the rates of engagement in various health behaviors, leisure, and paid work for retirement-age men and women by employment status. First, overall men in the 60-75 age group spend about 532 minutes (nearly 9 hours) sleeping. We find that NW/NR men spend about 25 *more* minutes sleeping than retired men (558 versus 532 minutes) and those who are retired spend more time than full-time working men (474minutes) (Table 2A). Full-time working men sleep just over 8 hours on average, which is the lowest among men by nearly one-half of an hour. Part-time working men sleep about 515 minutes, which is between other working men and non-working men. When we consider amounts of sleep recommended rather than minutes of sleep, we

find that about half of full-time working men sleep the recommended 7 to 9 hours, and about one-quarter sleep more than nine hours, with another quarter sleeping less than seven to nine hours. By contrast, over half of NW/NR men sleep more than 9 hours per night, as do 45% of retired men. Like full-time employed men, about half of part-time and self-employed men sleep 7 to 9 hours per night, though larger percentages (37% and 35% respectively) spend 9 or more hours per night sleeping than full-time working men. These bivariate findings suggest that employment status does in fact organize sleeping time, with those who are not employed sleeping considerably more than those employed full time.

On average, women of retirement age spend 8.5 hours (513 minutes) sleeping per day on average. Retired women sleep just under nine hours per night (524 minutes), which is more than women who work for pay (about 490 minutes each), and about the same as NW/NR women who sleep about nine hours per night (532 minutes). In terms of recommended sleep, half of working women sleep 7 to 9 hours per night, which is similar to what we observed for men, as do nearly half of retired women. Retired women are the least likely to sleep less than seven hours per night (12%). NR/NW women are the most distinct group, with just over one-third sleeping 7 to 9 hours, nearly half sleeping more than 9 hours, and the remaining 20% sleeping less than seven hours per night. Nearly one-fifth of full-time working women also sleep less than seven hours per night. While similar percentages of full-time working and NR/NW women sleep less than seven hours per night, there are likely different mechanisms structuring sleep time for these women—perhaps employment for full-time working women and poor health for NR/NW women. Our multivariate models will examine these associations in greater detail, testing in particular whether self-reported health explains differences in amounts of sleep between retired and NR/NW women.

There is surprisingly little variation in the percentages of men who exercise by employment status (overall 28% exercise at all on the typical day, an average of 24 minutes). The primary difference in exercise by employment status is in the amount of time spent exercising. NW/NR men spend about one half hour, on average, exercising per day, followed by about the same time (almost 30 minutes) by those who are retired and self-employed. Full-time and part-time workers spend the least amount of time exercising, only about 17 minutes per day. This is at least suggestive evidence for the scarcity hypothesis, that some of the time male workers allocate to paid work is allocated by non-workers to health-promoting physical activity.

Exercise time is considerably lower among retirement-age women than men, and we do not observe the same variation by employment status as we do for men. About one quarter of women reported exercising on the ATUS diary day for an average of 12 minutes. Retired women spent 14 minutes exercising, which is nearly half of the time retired men spent exercising. Part-time and self-employed women spent 13 and 11 minutes exercising respectively while full-time working and NR/NW women spent less than 10 minutes each exercising.

Unlike exercise, which is a voluntary activity, everyone must eat several times per day. Preparing healthy meals is more time intensive than eating pre-packaged or fast food. There is little variation, however, in men's participation in or time allocated to meal preparation on the typical day. About 40% of men prepare meals, spending 10 to 20 minutes doing so on the typical day. There are no differences by labor market status in the time men spend in meal preparation, and the same is the case for women. However, as expected based on what we know about women's higher time allocation to household activities at earlier stages of the life course, nearly twice as many women (70%) as men engage in meal preparation on the average day. In addition to more women preparing meals on average, women also spend twice as much time in these activities as men (39 versus 16 minutes).

Can retirement be equated (as it often is) with leisure? Most men in this age group engage in leisure either in the form of television watching (87%) or other activities (78%) such as reading, socializing, or attending events. But leisure time varies by employment status. Fully 94% of NR/NW men watch television per day, but only 69% engage in some other form of leisure. About the same percentage of those men who define themselves as

“retired” watch television (91%), though retired men are much more likely to engage in non-TV forms of leisure (82%) than NR/NW men. NR/NW men spend nearly six hours per day watching television (352 minutes) and over two hours per day in other forms of leisure (137 minutes) for about the equivalent of an eight hours of leisure. Retired men also spend a lot of time per day watching television (just short of 5 hours) and nearly three hours of other leisure (167 minutes). Men who work full-time spend the least amount of time in leisure activities, watching television only on average 2.5 hours a day, with another 1.5 hours of non-TV leisure. Men working part-time and self-employed men fall between full-time workers and non-workers, spending about 5.5 and 4.5 hours per day respectively in leisure activities; 61% of leisure time is spent watching television for retirement age men with these employment statuses. At the bivariate level, men in these age groups seem to be trading time at work for time spent in leisure, especially television watching.

Whereas watching television as a form of leisure is more common than other forms of leisure for men, women in this age range are similar in terms of TV watching and other forms of leisure across employment status with about 75% engaging in one or the other on a daily basis. Watching television is slightly less common among women who are working full-time for pay or are self-employed compared to those who are not employed and women who work part time. Retired women spend about an hour and a half more watching television than employed women (212 minutes for retired women versus 120 to 160 for employed women) and about 20 minutes less than NW/NR women (230 minutes). In terms of non-television leisure, retired and NW/NR women spend about 175 minutes each. Working women spend less time on non-TV leisure, by an hour (or more for full-time working women).

Some argue that paid work, especially when voluntary, can promote health and well-being. Forty-three percent of men in this age group are engaged in some form of paid work, for an average of 294 minutes per day. By contrast, 23% of women of retirement age engage in paid work on the ATUS diary day, averaging 92 minutes, which is over three hours less per day than men. Full-time working men in this age group spend about six hours, on average, engaged in paid work on the ATUS diary day; self-employed workers spend about four and a half hours working; and part-time workers spent about two and a half hours working. Full-time working women spend about 5.5 hours per day in paid work; women who work part time spend just over three hours; and women who are self-employed spend just under four hours per day in paid work. Fewer than two percent of retired and NR/NW men and women spend time engaging in paid work on the ATUS diary day despite reporting that they were not employed, and the average time is 3 minutes and 6 minutes for retired and NR/NW men respectively and about two minutes each for retired and NR/NW women.

Multivariate Analyses

We next estimate OLS models of time spent participating in health-related activities (sleeping, exercise, TV watching, other leisure, and meal preparation) on the ATUS diary day separately by gender and for weekends and weekdays, examining the effects of health and employment status as well as other social contextual factors. We focus our discussion on the similarities and differences in health behaviors by employment status and the effects of health in promoting or discouraging engagement in such activities. We also examine heterogeneity in weekend and weekday time allocation especially among less than full-time workers and non-workers for whom work plays a lesser role in organizing activities than it does for full-time workers on workdays. Finally, we investigate the extent to which full-time workers are similar or different than other retirement-age individuals in the ways they spend their time on weekends.

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Table 1. Characteristics of Retirement-Age Americans by Employment Status and Gender, 2006-2008

	A. Men (N=2367)					
	All Men	Non-Retired				
		Not Working, Retired	Full Time Work	Part Time Work	Self Employed	Not Working, Disabled or Other
	Mean/%	Mean/%	Mean/%	Mean/%	Mean/%	Mean/%
Full Sample						
Age		43.93	22.23	9.02	11.96	12.86
Mean	65.85	67.67	63.69	65.75	64.85	64.34
5-Year Age Groups						
60-64	44.16	24.26	68.43	48.27	53.99	58.19
65-69	32.08	38.34	21.51	29.98	31.64	30.85
70-74	23.76	37.40	10.07	21.75	14.37	10.96
Social Location						
Health						
Excellent	14.99	11.17	18.34	19.30	24.03	10.81
Very Good	28.51	27.12	35.44	30.40	35.30	13.67
Good	30.10	31.30	30.62	35.45	28.78	22.63
Fair	16.71	20.50	13.60	10.15	8.99	20.90
Poor	9.69	9.92	2.02	4.70	2.90	31.99
Education						
Not a College Graduate	69.64	75.18	62.01	66.20	52.71	82.09
Less than High School	14.90	15.75	12.97	8.68	4.27	29.61
High School	33.17	37.63	27.03	40.38	23.83	32.22
Some College	21.56	21.80	22.01	17.14	24.61	20.26
College Graduate	30.36	24.82	37.99	33.80	47.29	17.91
College Degree	15.40	14.50	17.00	15.56	24.24	7.34
Advanced Degree	14.96	10.32	20.99	18.25	23.06	10.57
Income Level						
Low: <130% Poverty Line	14.29	14.18	3.75	10.67	8.63	40.69
Moderate: 130-185% Poverty Line	10.69	13.14	7.85	7.01	7.26	12.99
High: >185% Poverty Line	74.62	72.44	87.96	81.99	84.11	45.04
Linked Lives						
Married	75.71	75.43	80.48	73.55	81.05	64.99
Not married	24.29	24.57	19.52	26.45	18.95	35.01
Caregiving	10.92	13.19	7.71	11.98	9.25	9.53
Historical Timing						
Survey Year						
2006	31.97	33.20	28.21	41.25	29.36	30.18
2007	33.14	34.65	35.22	24.33	36.65	27.28
2008	34.89	32.15	36.57	34.42	33.99	42.54
Interview Day						
Weekday	71.08	70.65	70.32	69.11	74.22	72.29
Weekend	28.92	29.35	29.68	30.89	25.78	27.71
N of Observations	2367	1054	526	204	257	326

¹Of those who engaged in the activity.

Source: Authors' calculations using the 2006-2008 American Time Use Survey (ATUS).

Notes: Means are weighted; sample sizes are not.

Table 1. Characteristics of Retirement-Age Americans by Employment Status and Gender, 2006-2008

	B. Women (N=3209)					
	All Women	Not Working, Retired	Non-Retired			
			Full Time Work	Part Time Work	Self Employed	Not Working, Disabled or Other
	Mean/%	Mean/%	Mean/%	Mean/%	Mean/%	Mean/%
Full Sample		52.60	18.01	11.65	5.21	12.52
Age						
Mean	66.00	67.56	62.94	65.60	65.15	64.60
5-Year Age Groups						
60-64	43.10	26.49	80.22	42.09	52.02	56.67
65-69	32.19	37.65	15.33	39.64	29.25	27.86
70-74	24.71	35.86	4.45	18.27	18.73	15.47
Social Location						
Health						
Excellent	14.83	13.20	18.77	16.09	28.67	9.07
Very Good	30.74	30.09	38.60	38.96	35.78	12.43
Good	30.53	31.10	31.77	31.91	29.26	25.65
Fair	17.02	18.59	9.65	12.21	5.43	30.36
Poor	6.87	7.03	1.22	0.82	0.86	22.49
Education						
Not a College Graduate	78.15	80.46	70.31	77.05	60.76	87.97
Less than High School	14.46	14.56	6.46	11.58	9.58	30.24
High School	39.91	42.96	35.50	41.12	24.09	38.87
Some College	23.78	22.93	28.34	24.35	27.10	18.85
College Graduate	21.85	19.54	29.69	22.95	39.24	12.03
College Degree	13.25	12.66	15.88	13.91	22.15	7.59
Advanced Degree	8.61	6.88	13.81	9.04	17.08	4.44
Income Level						
Low: <130% Poverty Line	18.73	19.05	6.53	14.02	14.22	41.17
Moderate: 130-185% Poverty Line	13.77	14.64	9.26	18.27	8.40	14.63
High: >185% Poverty Line	66.77	65.48	84.18	66.23	77.38	43.25
Linked Lives						
Married	58.69	61.22	53.08	61.04	68.91	49.69
Not married	41.31	38.78	46.92	38.96	31.09	50.31
Caregiving	17.49	18.61	12.31	16.56	17.67	21.01
Historical Timing						
Survey Year						
2006	32.28	31.33	33.65	33.38	32.41	33.24
2007	33.39	33.02	33.22	30.84	39.58	34.95
2008	34.33	35.64	33.13	35.77	28.01	31.81
Interview Day						
Weekday	71.17	69.97	74.00	71.92	74.14	70.21
Weekend	28.83	30.03	26.00	28.08	25.86	29.79
N of Observations	3209	1663	581	362	156	447

¹Of those who engaged in the activity.

Source: Authors' calculations using the 2006-2008 American Time Use Survey (ATUS).

Notes: Means are weighted; sample sizes are not.

Table 2. Means/Percentages of Time Allocations of Retirement-Age Americans by Employment Status and Gender, 2006-2008

	A. Men (N=2367)					
	All Men	Not Working, Retired		Non-Retired		Not Working, Disabled or Other
		Mean/%	Mean/%	Full Time Work	Part Time Work	
Sleeping						
% Yes	100.00	100.00	100.00	100.00	100.00	100.00
Less than 7 hours	15.49	12.01 ^	24.00 ^	16.17	16.40	11.33
7-9 hours	44.28	43.28 ^	49.69 ^	46.45 ^	49.01	32.43
More than 9 hours	40.23	44.71 ^	26.31 ^	37.37	34.59	56.23 ^
Minutes sleeping	517.37	532.50 #	473.99 #	515.91	499.58 #	558.20
(sd)	(125.96)	(118.17)	(119.72)	(128.43)	(105.70)	(152.15)
Exercising (includes walking or biking)						
% Yes	27.66	29.68	23.59 ^	25.19	28.61	28.62
Minutes exercising	24.27	27.64	16.26 #	17.76	24.93	30.55
(sd)	(68.40)	(71.28)	(50.90)	(48.98)	(76.20)	(85.45)
Meal preparation						
% Yes	39.66	42.30	38.68	35.34	35.32	39.43
Minutes meal preparation	15.88	18.61 #	13.93	12.83	12.37	15.37
(sd)	(31.63)	(34.57)	(29.58)	(24.94)	(29.49)	(30.00)
Watching Television						
% Yes	87.28	90.99 ^	79.71 ^	86.07	81.68 ^	93.76 ^
Minutes watching television	244.15	285.61 #	158.34 #	203.74 #	165.14 #	352.66 #
(sd)	(206.94)	(206.12)	(155.01)	(179.09)	(149.21)	(257.43)
Non-TV leisure						
% Yes	77.55	81.79 ^	76.38	79.79	71.97	68.69 ^
Minutes non-TV leisure	136.27	166.80 #	94.92 #	129.08	105.49 #	137.17
(sd)	(152.08)	(166.78)	(119.11)	(145.28)	(123.26)	(156.81)
Paid Work						
% Yes	29.95	0.96 ^	74.89 ^	44.91 ^	71.78 ^	1.89 ^
Minutes paid work	129.47	3.40 #	365.18 #	150.95	270.58 #	6.36 #
(sd)	(228.55)	(44.31)	(267.23)	(203.85)	(254.09)	(54.39)
N of Observations	2367	1054	526	204	257	326

Source: Authors' calculations using the 2006-2008 American Time Use Survey (ATUS).

Notes: Means are weighted; sample sizes are not. Standard deviations in parentheses.

^=gender-specific participation rate for employment status is different from participation rate for other employment statuses (p<.05)

#=gender-specific participation in minutes for employment status is different from minutes of participation for other employment statuses (p<.05)

Table 2. Means/Percentages of Time Allocations of Retirement-Age Americans by Employment Status and Gender, 2006-2008

	B. Women (N=3209)				
	All Women	Not Working, Retired	Full Time Work	Part Time Work	Non-Retired Self Employed Not Working, Disabled or Other
	Mean/%	Mean/%	Mean/%	Mean/%	Mean/%
Sleeping					
% Yes	99.98	100.00	99.96	100.00	99.87
Less than 7 hours	15.05	11.96	20.60	15.74	19.06
7-9 hours	45.45	43.41	50.47	54.74	35.13
More than 9 hours	39.50	44.63	28.93	29.52	45.80
Minutes sleeping	513.30	523.76	489.97	491.66	531.51
(sd)	(120.46)	(111.25)	(113.01)	(102.94)	(172.14)
Exercising (includes walking or biking)					
% Yes	23.09	24.70	19.28	22.81	19.82
Minutes exercising	11.88	14.19	7.05	12.92	8.52
(sd)	(35.08)	(39.95)	(21.18)	(36.12)	(29.81)
Meal preparation					
% Yes	68.97	69.33	63.81	73.06	76.08
Minutes meal preparation	39.18	40.54	27.73	39.91	52.25
(sd)	(55.38)	(54.27)	(44.69)	(58.20)	(68.31)
Watching Television					
% Yes	83.46	86.62	76.98	82.41	84.47
Minutes watching television	187.67	212.59	122.23	160.33	230.32
(sd)	(174.60)	(181.38)	(124.56)	(138.13)	(210.27)
Non-TV leisure					
% Yes	81.72	84.40	75.07	81.11	81.08
Minutes non-TV leisure	150.99	174.31	93.51	116.05	178.45
(sd)	(155.33)	(165.94)	(113.15)	(118.37)	(173.10)
Paid Work					
% Yes	23.44	1.10	70.16	57.03	1.15
Minutes paid work	92.44	1.93	319.91	187.94	2.52
(sd)	(188.17)	(28.17)	(242.00)	(204.72)	(28.84)
N of Observations	3209	1663	581	362	447

Source: Authors' calculations using the 2006-2008 American Time Use Survey (ATUS).

Notes: Means are weighted; sample sizes are not. Standard deviations in parentheses.

^=gender-specific participation rate for employment status is different from participation rate for other employment statuses (p<.05)

#=gender-specific participation in minutes for employment status is different from minutes of participation for other employment statuses (p<.05)

ⁱ Data were downloaded from <http://www.atusdata.org>.

ⁱⁱ ATUS sample members are invited to complete the survey following exit from the Current Population Survey (CPS). The CPS is a household survey of the civilian, noninstitutionalized population. One individual aged 15 or older per former CPS participating household was randomly selected to participate in the ATUS during the two to five months following their exit from the CPS. ATUS response rates were over 50% for each of the five years (Bureau of Labor Statistics and U.S. Census Bureau 2010). Fatigue is the most common reason for ATUS nonresponse, which is a result of using CPS as the sampling frame (O'Neill and Sincavage 2004). Research on nonresponse bias in the ATUS finds little evidence for busyness as a source of nonresponse, though individuals weakly integrated into their communities are less likely to respond to the survey (Abraham, Maitland, and Bianchi 2006) and volunteers are more likely to respond to the survey (Abraham, Helms, and Presser 2009), which may result in an overestimate of engagement in volunteering, although the characteristics of volunteers should not be affected.