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The Effects of Employment Status and Daily Stressors on Time Spent on Daily Household Chores in Middle-Aged and Older Adults

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Purpose of the study: This study examines how employment status (worker vs. retiree) and life course influences (age, gender, and marital status) are associated with time spent on daily household chores. Second, this study assesses whether the associations between daily stressors and time spent on daily household chores differ as a function of employment status and life course influences. ***Design and methods:*** Men and women aged 55–74 from the National Study of Daily Experiences (N = 268; 133 workers and 135 retirees), a part of the National Survey of Midlife in the United States (MIDUS), completed telephone interviews regarding their daily experiences across 8 consecutive evenings. ***Results:*** Working women spent more than double the amount of time on daily household chores than working men. Unmarried retirees spent the most time on daily household chores in comparison to their counterparts. There was a trend toward significance for the association between home stressors from the previous day and time spent on daily household chores as a function of employment and marital status. ***Implications:*** These findings highlight the importance of gender and marital status in the associations between employment status and time spent on daily household chores and the role that daily stressors, in particular home stressful events, have on daily household chore participation.

The transition from paid work to retirement may represent the opportunity to be relieved of the psychological and physical stressors associated with employment. Retirement has been linked to an improvement in well-being (e.g., increased positive affect, lower levels of stress) and self-reported health behaviors (e.g., more regular exercise; Mein, Martikainen, Hemingway, Stansfeld, & Marmot, 2003; Midanik, Soghikian, Ransom, & Tekawa, 1995). At the same time, retirement may present challenges (Butterworth et al., 2006; Buxton, Singleton, & Melzer, 2005). Importantly, the transition from paid work to retirement may lead to a recalibration of one's time use in daily activities. This paper contributes to the study of retirement and time use by examining how employment status and life course influences are associated with time spent on daily household chores in a sample of midlife and older adults. Furthermore, this study examines the influences of daily stressors in the association between employment status and life course influences (i.e., age, gender) on time spent on daily household chores.

Daily Time Spent on Household Chores

The nature of retirement differs from paid work in terms of expectations, opportunities, and challenges, and thus employment status is expected to influence how individuals spend time in their daily lives. In 2010, employed persons in the United States worked an average of 7.5 hr on the days they worked for pay (United States Bureau of Labor

Statistics, 2011a). In contrast to work, retirement may free up time for individuals to participate in other activities. Retirees, especially those in good health, now may have more time to explore personal and social interests. Research has shown that individuals out of the labor force, as compared to employed individuals, reported spending significantly more time in passive and active leisure activities (Krantz-Kent & Stewart, 2007; Rosenkoetter, Garris, & Engdahl, 2001). A particular area of interest to researchers has been how individuals spend their time on household chores.

Most of the household time use studies have focused on working families with children in the household (e.g., Lee & Waite, 2005; Manke, Seery, Crouter, & McHale, 1994). Although there have been studies that examined the effects of retirement on housework participation (e.g., Solomon, Acock, & Walker, 2004; Szinovacz, 2000), the literature tends to focus on married couples and the influences of gender roles and ideologies (e.g., Solomon et al., 2004; Szinovacz, 2000; Szinovacz & Harpster, 1994); thereby limiting the generalizability of findings. Overlooked in this area of research is how retirement is embedded in layers of temporal and social contexts that shape daily behaviors. By understanding how different temporal and social contexts (e.g., daily stress, age, gender, martial status) shape time spent on daily household chores in a sample of workers and retirees in midlife and old age, we will ultimately be able to better understand family dynamics and processes under a wider context.

Daily Stress

Lacking in the retirement and household time use literature is the influence of daily stress in the associations between retirement and time spent on daily household chores. The change in social role from worker to retiree may be advantageous in that individuals no longer have to experience the challenges associated with the work environment. For others, the shift from work to retirement may be negative. Because changes in one's social role may entail possible transformations in identities, activities, and environment (George, 1993), the shift from worker to retiree may increase or decrease one's vulnerability to stressors and the stress responses in their daily experiences.

Daily stressors are the routine challenges of day-to-day living, such as having arguments with a family member, car breaking down, or experiencing a broken dishwashing machine (Almeida, 2005). Daily stressors occur more frequently and unexpectedly than major life events and can disrupt daily life (Almeida, 2005). These interruptions have immediate negative impacts on psychological and physical functioning (Almeida, Wethington, & Kessler, 2002; Bolger, DeLongis, Kessler, & Schilling, 1989). Consequently, daily stressors can pile up over a series of days, which may result in more detrimental stress reactions (e.g., anxiety, depression; Lazarus, 1999; Zautra, 2003). Because daily stressors are likely to have immediate impacts that disrupt day-to-day living, we expect that daily stressors will deplete time spent on daily household chores. In this study, we examine how daily stressors shape the associations between employment status and daily household chore participation.

Life Course Daily Stress Perspective

The present paper views retirement as a transition within the context of life course development by utilizing a Life Course Daily Stress perspective (LCDS; Almeida & Wong, 2009). According to this perspective, daily stress processes may be precipitated by life transitions. It is during the period of uncertainty that stress tends to be higher, and transitions often involve a transformation of multiple domains of responsibilities. Life transitions may occupy an important role in daily stressor reactivity. Stressor reactivity is the likelihood that an individual will react emotionally or physically to daily stressors (Almeida, 2005). How an individual will react to daily stressors also depends on the individual's resilience or vulnerability. The resources of an individual as well as his/her environments (e.g., age, gender, marital status) can limit or enhance the possibilities and opportunities for coping with daily experiences (Lazarus, 1999). Depending on these resources, reactivity to stressors, therefore, is likely to differ across people and situations (Almeida, 2005). The emotional and physical impacts of minor day-to-day stressors may be magnified in the context of a major life transition such as retirement.

The goals for this paper are twofold. First, we are interested in how employment status (worker vs. retiree) and life course influences (age, gender, and marital status) are associated with time spent on daily household chores (hypotheses are described subsequently). Second, we build upon the stressor reactivity concept to include behavioral reactivity to daily stressors by examining whether

the associations between daily stressors and time spent on daily household chores differ as a function of employment status and life course influences. We predict that time spent on daily household chores will decrease on stressor days as compared to days without stressors, and these associations will differ as a function of employment status and life course influences. To better interpret the directionality of the effects of daily stressors on time spent on daily household chores, we focused on daily stressors from the previous day.

Life Course Factors

Age.—Depending on when a transition occurs, the meaning of the transition varies and affects individuals differently (Wheaton, 1990). The study of retirement and daily experiences must not ignore the consideration of timing, as assessed by age. We predict that younger workers, in comparison to their counterparts, will spend the least amount of time on daily household chores because of occupation of more social roles (Lachman & James, 1997) and greater time restriction due to paid work. Past studies have shown that younger individuals are more emotionally and physically reactive to daily stressors than older individuals (Birditt, Fingerman, & Almeida, 2005; Neupert, Almeida, & Charles, 2007), for younger individuals may have less effective cognitive resources to regulate their emotions and manage their physical reactions. In line with these findings, we predict that younger individuals in our study will be more behaviorally reactive to daily stressors in their time spent on daily household chores than older individuals. We also predict that younger workers, who may be less cognitively mature than older individuals and face greater demands than retirees, will exhibit greater behavioral reactions to daily stressors than their counterparts.

Gender.—Another important life course influence in shaping employment and daily household chore participation is gender. Despite that there are more women in the U.S. labor force than the 1970s (United States Bureau of Labor Statistics, 2011b; Institute for Women's Policy Research, 2009), there continues to be evidence documenting that women perform the majority of household tasks (Bianchi, Milkie, Sayer, & Robinson, 2000; Coltrane, 2000). While men are carrying out household tasks, the tasks tend to be less routine and frequent in nature (e.g., mowing the lawn) than those performed by women (e.g., cooking; Coltrane, 2000). Of the studies that examined the effects of retirement on housework participation (e.g., Solomon et al., 2004), findings generally showed that women continue to carry out the majority of the responsibilities. Based on previous literature, we predict that women, regardless of employment status, will report the greatest amount of time spent on daily household chores. We also hypothesize that retired men, now with more time availability, will report more time performing daily household chores than workingmen. For our stress reactivity hypothesis, we predict that women, especially those working, will exhibit the greatest reactivity than their counterparts because past studies have documented women experience stressors more negatively than men (Almeida & Horn, 2004; Bolger et al., 1989).

Marital Status.—Marital status plays an important role in shaping retirement transition (Kim & Moen, 2002; Wong & Hardy, 2009). Marriage can safeguard and buffer individuals, especially women, from financial insecurity by offering another avenue of access to financial resources (e.g., husband's pension; Pienta, Hayward, & Jenkins, 2000), which can better prepare individuals for retirement and help ease the retirement experiences. The importance of marital transitions on housework performance has been documented in previous studies (e.g., Gupta, 1999). In this study, we predict that unmarried workers will spend the least amount of time on daily household chores because of the absence of a spouse to share the daily household responsibilities as well as the greater time restriction associated with employment. Similarly, we predict unmarried workers will be the most reactive to daily stressors with respect to time spent on daily household chores.

Current Study

The decision to retire or work is a self-sorting process based on push and pull factors, including health problems (Szinovacz & Davey, 2005) and finances (Pienta & Hayward, 2002). Although the data in this study does not allow for the examination of reasons for work or retirement, this study tries to account for differences (e.g., functional limitations, finances) that might exist between workers and retirees. The data in this study was collected during the mid- and late-1990s in the United States. Unlike the years before and after, the mid- and late-1990s was free of recession and

a period of economic growth. Data from this time period can provide insights to the daily retirement experiences when the economic climate of the United States was relatively stable. In summary, the current paper examines how employment status (worker vs. retiree) and life course influences (age, gender, and marital status) are associated with time spent on daily household chores in a sample of midlife and older individuals. This study also assesses whether the associations between daily stressors from the previous day and time spent on daily household chores differ as a function of employment status and life course influences.

Design and Methods

Sample and Procedure

The current study utilized data from the first wave of National Study of Daily Experiences (NSDE), which is the daily diary portion of the National Survey of Midlife in the United States (MIDUS). Respondents in the NSDE randomly were selected from the MIDUS sample of 3,032 men and women age 25–74. The 1,031 NSDE respondents completed telephone interviews about daily time use, stressors, positive events, and physical symptoms over eight consecutive evenings. Data collection spanned from March 1996 to April 1997.

For this study, respondents were selected based on several criteria. Respondents must have valid employment status response. Of the 1,031 respondents, 880 met this criterion. Age has been associated with the likelihood to work (i.e., younger individuals are more likely to work; older individuals are more likely to retire); therefore, this study limited the respondents to age 55–74. This age range also reflected the most even distribution of workers and retirees. Of the 880 respondents, 276 met the age criterion. Children in the household may contribute to financial obligations and increase opportunities for time spent on daily household chores and stressor exposure. Eight respondents (all workers) with children under age 18 in the household were excluded. Final sample size for this study was 268. For our sample of 268 respondents, we started with an initial sample of 2,144 days. We dropped days when respondents had missing data for the time-varying predictors/covariates. Our final sample consisted of 268 respondents with 1,994 days.

Presented in Table 1 are the demographic characteristics of the respondents by employment status.

Table 1. Demographic Characteristics by Employment Status

	Workers (n = 133)	Retirees (n = 135)	p Value
Age			
M	60.1	65.9	<.001
SD	4.6	5.3	
Gender (%)			
Men	35.3	53.3	<.01
Women	64.7	46.7	
Race (%)			
White	90.2	91.1	.23
African American	6.0	5.2	
Other	3.0	0.7	
Missing	0.8	3.0	
Marital status (%)			
Unmarried	39.8	32.6	.22
Married	60.2	67.4	
Education (%)			
High school or less	40.6	43.0	.70
Some college or more	59.4	57.0	
Functional limitations			
M	1.7	2.2	<.001
SD	1.9	2.0	
Total household income (logged)			
M	10.6	10.3	<.01
SD	0.7	1.3	

Workers were significantly younger than retirees. Among the workers, there were more women than men, whereas, the sample of retirees was comprised of more men. Although this sample of workers and retirees significantly did not vary by marital status, race or education, they differed by functional limitations and total household income with workers reporting fewer health limits and higher household income (M = 1.65; M = $55,878) than retirees ($M$ = 2.18; M = $46,716).

Measures

Time Spent on Daily Household Chores.—On each study day, respondents reported the amount of time (in hours and minutes) that they spent on household chores during the previous 24 hr. Respondents were instructed not to include time spent on paid work, volunteer work, or taking care of children in their response. On average, respondents spent 2.20 hr (SD = 2.06) on daily household chores.

Employment Status.—Respondents reported their employment status using, "What is your current

employment situation?". Instructed to select all that applied, respondents indicated yes, no, or do not know to the following options: working now, self-employed, unemployed, temporarily laid off, retired, homemaker, full-time student, and part-time student. Do not know responses were eliminated. In an attempt to have a mutually exclusive conceptualization of employment status, conflicting employment status responses (e.g., working now and retired) were excluded. This study comprised of 133 workers and 135 retirees.

Age and Gender.—Age was included as a continuous variable centered at the sample mean ($M = 62.9$; $SD = 5.7$). Gender was coded as women (1) and men (0).

Marital Status.—Respondents reported their marital status using the following options: married, separated, divorced, widowed, or never married. The small percentage of respondents in the nonmarried categories resulted in a contrast between married (1) and unmarried (0).

Daily Stressors.—The Daily Inventory of Stressful Events (DISE; Almeida et al., 2002) was used to assess daily stressors on each study day. The inventory consisted of a series of stem questions for identifying whether seven types of stressful events (arguments or disagreements, avoided arguments and tensions, home, work, network, discrimination, and other) had occurred in the past 24 hr. For each of the seven stressful events, respondents received a score of 1 if a stressor was reported and a score of 0 if no stressor was reported. We excluded work stressors from our analyses because work stressors are incomparable for the two groups. From the six types of stressful events, we created an "any stressor" variable, which represented whether a respondent experienced any of the six stressful events on each study day (1 = *at least one stressor*, 0 = *no stressor*). We focused on daily stressors from the previous day to better interpret the directionality of the effects of daily stressors on time spent on daily household chores.

Control Variables.—To account for potential health influences that may differ between workers and retirees, functional health was included. Respondents reported how much their health limits them when performing the following six activities: lifting or carrying groceries; bathing or dressing oneself; climbing several flights of stairs; bending, kneeling, or stooping; walking several blocks; and walking one block (see Greenfield & Marks, 2009). Respondents who rated that their health limited them to any extent on a given activity were coded 1, and those reported that their health did not limit them were coded 0. The scores across the six items were summed, and the Cronbach's alpha was .84. Initial analysis demonstrated income differences between workers and retirees; therefore, total household income (logged) was included as a control. Differences in time spent on household chores also may differ as a function of day of the week (e.g., Manke et al., 1994). In this study, day of the week was recoded into a contrast between weekday (0) and weekend (1). Approximately, 76.11% of the telephone interviews occurred on a weekday.

Data Analyses Plan

A set of two-level multilevel linear models (SAS Proc Mixed), where days nested within persons, examined the extent to which employment status (worker vs. retiree) predicted time spent on daily household chores. In the first set of multilevel models, we assessed the main effects of employment status and life course influences (age, gender, and marital status) on time spent on daily household chores. We then examined the two-way interaction effect of employment status and life course influences (e.g., employment status and gender) on time spent on daily household chores. In the second set of analyses, we assessed the within-person response between daily stressors and time spent on daily household chores, as a function of employment status and life course influences. For these analyses, we focused on daily stressors from the previous day to predict time spent on daily household chores the following day. All continuous variables at Level 2 (between-person) were grand-mean centered, and control variables were included in all models.

Results

Table 2 presents the descriptive characteristics of the stressful events by employment status. Workers reported experiencing at least one daily stressor on 28% of the study days, which was comparable to the 27% reported by retirees. Although workers and retirees did not differ in their reporting of arguments or disagreements, avoided arguments or tensions, home stressors,

Table 2. Descriptive Characteristics of Stressful Events

Stressor events-previous day[a]	Workers		Retirees		
	M	*SD*	*M*	*SD*	*p* Value
Any stressor	0.28	0.45	0.27	0.45	.59
Arguments or disagreements	0.06	0.24	0.07	0.26	.30
Avoided arguments and tensions	0.12	0.32	0.11	0.31	.66
Home stressors	0.06	0.23	0.06	0.24	.67
Network stressors	0.07	0.25	0.06	0.24	.38
Discrimination events	0.01	0.10	0.00	0.05	<.05
Other stressors	0.05	0.21	0.03	0.18	.24

Note: [a]Percentage of study days that respondents reported for each category of stressor.

network stressors, or other stressors, the two groups differed with respect to discrimination events ($p < .05$). Workers reported experiencing more discriminating events than retirees on greater percentage of the study days.

Prior to conducting our multilevel linear models, we examined the distribution of time spent on daily household chores. In our sample, time spent on daily household chores was positively skewed. On 3.6% of the study days (out of a possible 1,994 days), respondents reported time spent on daily household chores two standard deviations (*SD*) above the sample mean. In the effort to address the positively skewed nature of chore estimates, we utilized two methodological approaches. First, we log-transformed time spent on daily household chores. We also performed sensitivity analyses using robust standard error (*SE*) estimation (empirical option in SAS model statement). Results from our multilevel linear models using log-transformed chore scores as well as robust *SE* estimation did not differ from our findings using the raw chore scores. Thus, the results using raw chore scores are presented.

In the first set of multilevel linear models, the effects of employment status, age, gender, and marital status on time spent on daily household chores were examined. As presented in Table 3 (Model 1), there was a main effect of employment status on time spent on daily household chores with workers spending 27 min less on daily household chores than retirees (estimate = –0.446, *SE* = 0.185, $p \leq .05$). A main effect of gender also was observed with women spending 52 min more on daily household chores than men (estimate = 0.861, *SE* = 0.168, $p \leq .001$).

We then examined the two-way interaction effect of employment status and life course influences on time spent on daily household chores (see Table 3, Model 2). There was a significant employment

Table 3. Multilevel Models of Employment Status Predicting Time Spent on Daily Household Chores

	Model 1	Model 2
Fixed effects		
Intercept	1.796 (0.198)***	2.508 (0.260)***
Person-level predictors		
Employment status (working = 1)	–0.446 (0.185)*	–1.597 (0.359)**
Age	0.006 (0.016)	–0.028 (0.020)
Gender (women = 1)	0.861 (0.168)***	0.290 (0.225)***
Marital status (married = 1)	0.166 (0.178)	–0.344 (0.255)
Week (weekend = 1)	0.067 (0.089)	0.070 (0.089)
Functional limitations	–0.097 (0.041)*	–0.107 (0.040)**
Logged household income	–0.007 (0.085)	–0.009 (0.084)
Age × employment status		0.080 (0.031)*
Gender × employment status		1.094 (0.317)***
Marital × employment status		0.897 (0.332)**
Random effect (variance component)		
Between-person intercept (Level 2)	1.203*** (*df* = 260) X^2 = 324.01***	1.095*** (*df* = 257) X^2 = 283.22***
Within-person (Level 1)	2.867***	2.868***

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

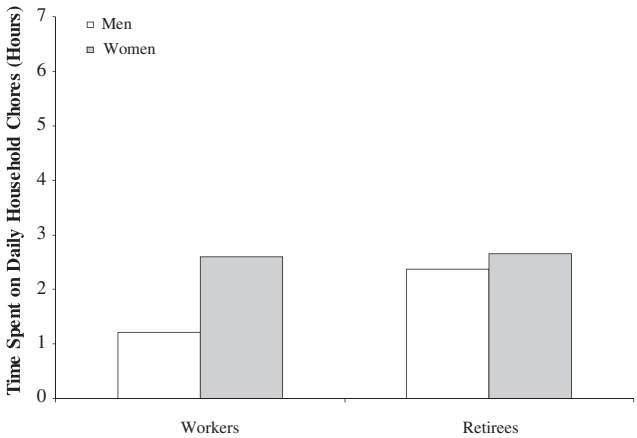

Figure 1. Time spent on daily household chores by employment status and gender.

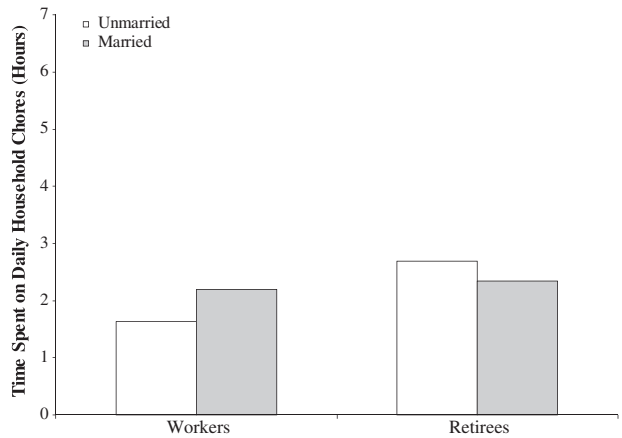

Figure 2. Time spent on daily household chores by employment and marital status.

status and age interaction effect (estimate = 0.080, *SE* = 0.031, $p \leq .05$) with younger (one *SD* below the mean) workers reported performing the least amount of time on daily household chores (1 hr 37 min) and younger retirees reported spending the most amount of time (2 hr 46 min).

Results showed a significant interaction effect of employment status and gender (estimate = 1.094, *SE* = 0.317, $p \leq .001$; see Figure 1) on time spent on daily household chores. Working men spent the least amount of time on daily household chores as compared to working women and retirees, regardless of gender. Working men spent approximately 1 hr 13 min on daily household chores whereas working women spent about 2 hr 37 min. In comparison to workers, the difference in time spent on daily household chores between retired men (2 hr 22 min) and women (2 hr 40 min) was smaller.

There also was an interaction effect of employment and marital status on time spent on daily household chores (estimate = 0.897, *SE* = 0.332, $p \leq .01$; see Figure 2). Unmarried workers reported fewer hours spent on daily household chores (1 hr 38 min) than married workers (2 hr 11 min). Among the retirees, marital status had less of an influence on time spent on daily household chores. Unmarried retirees reported approximately 2 hr 41 min on daily household chores; whereas married retirees reported 2 hr 20 min.

In the second set of analyses, we examined whether the associations between daily stressors from the previous day and time spent on daily household chores differed as a function of employment status and life course influences. In these models, the dichotomous daily stressor effect reflected the extent to which one's time spent on daily household chores changed as a function of whether individuals reported experiencing any daily stressors the previous day. Any daily stressors from the previous day, employment status, age, gender, marital status, and their interactions, were entered as predictors of time spent on daily household chores (see Table 4, Model 1). There was a trend toward significance (estimate = 0.847, *SE* = 0.443, $p = .07$) for the association between any daily stressors from the previous day and time spent on daily household chores as a function of employment and marital status. Contrary to prediction, results showed that time spent on daily household chores increased on days when one reported experiencing at least one daily stressor as compared to days when no stressors were reported. Findings also revealed that unmarried workers exhibited the least reactivity and unmarried retirees exhibited the greatest reactivity to daily stressors with respect to time spent on daily household chores. In this set of analyses, daily stressor was an index of any of the seven types of stressful events (e.g., arguments or disagreements, avoided arguments and tensions, home-related, discrimination) experienced on a study day. In line with the work of Clark-Plaskie, & Lachman (1999), who found that the salience of stressor domains may vary across adulthood, we were interested in whether a specific stressor domain (e.g., arguments or disagreements, home) may better explain the observed association. We carried out a similar set of analyses as previously for each type of stressful event. Results showed a trend toward significance (estimate = 1.592, *SE* = 0.853, $p = .06$) for home stressor from the previous day and time spent on daily household chores as a function of employment and marital status (see Table 4, Model 2). We observed that, for all groups, time spent on daily household

Table 4. Multilevel Models of Employment Status and Stressor (Previous Day) Predicting Time Spent on Daily Household Chores

	Any stressor-previous day (Model 1)	Home stressor-previous day (Model 2)
Fixed effects		
Intercept	2.364 (0.280)****	2.416 (0.263)****
Person-level predictors		
Employment status (working = 1)	–1.483 (0.383)****	–1.614 (0.362)****
Age	–0.026 (0.022)	–0.027 (0.021)
Gender (women = 1)	0.387 (0.242)	0.344 (0.227)
Marital status (married = 1)	–0.299 (0.272)	–0.381 (0.257)
Week (weekend = 1)	0.185 (0.090)**	0.182 (0.090)**
Functional limitations	–0.102 (0.040)**	–0.102 (0.040)**
Logged household income	–0.019 (0.088)	–0.021 (0.088)
Age × employment status	0.064 (0.034)*	0.072 (0.031)**
Gender × employment status	0.903 (0.340)***	1.037 (0.319)***
Marital × employment status	0.765 (0.356)**	0.930 (0.335)***
Day-level predictors		
Daily stressor-previous day	–0.787 (0.501)	1.082 (0.650)
Cross-level interaction effects		
Age × employment status × stressor	0.031 (0.041)	0.026 (0.091)
Gender × employment status × stressor	0.724 (0.444)	1.755 (1.904)
Marital × employment status × stressor	0.847 (0.443)*	1.592 (0.853)*
Random effects (variance component)		
Between-person intercept (Level 2)	1.044**** (*df* = 257) X^2 = 230.05****	1.028*** (*df* = 257) X^2 = 225.22****
Within-person (Level 1)	2.566****	2.574****

Note: *$p \leq .10$. **$p \leq .05$. ***$p \leq .01$. ****$p \leq .001$.

chores increased following days when individuals reported at least one home stressor as compared to days when no home stressors were reported. Results showed that unmarried workers exhibited the least reactivity to home stressors in time spent on daily household chores; whereas, unmarried retirees were the most reactive to home stressors. Examination of the other types of stressful events did not result in any trend or significant findings.

Discussion

The overall goal of this study was to examine the effects of employment status and life course influences (age, gender, and marital status) on time spent on daily household chores. This study extended prior retirement and housework literature by examining the influences of daily stress in the associations between retirement and time spent on daily household chores.

Findings from this study highlight the influence of age in the association between employment status and household chore participation. Especially for younger workers, employment had a greater influence on time spent on daily household chores as compared to other groups. As hypothesized, our sample of younger workers reported the least amount of time spent on daily household chores. We also found that younger retirees reported performing the greatest amount of daily household chores of all groups. These findings resonate with the time availability theory (Blood & Wolfe, 1960) such that younger workers may face greater time demands; and therefore, must reduce their investment in daily household chores. In contrast, younger retirees, now with greater time flexibility and availability due to retirement, may contribute more to daily household chores. For older workers and retirees, whose time spent on daily household chores was more similar; employment had less of an impact.

Results from this study reinforce the importance of gender on household chore participation. In line with past research that demonstrated women perform more of the housework than men (Bianchi et al., 2000; Coltrane, 2000; Hochschild, 1989; Lachance-Grzela & Bouchard, 2010), findings from this study showed that working women spent more than double the amount of time on daily household chores than working men. Notably, retirement does not offer women a reprieve from daily household chores because both working and

retired women reported spending a similar amount of time. Similar to past studies (e.g., Solomon et al., 2004) our findings revealed that retired men pick up more daily household responsibilities, perhaps due to greater time availability of no longer having to work. Although the retired women in our study still performed more of the daily household chores, retired men were not far behind. These findings suggest that gender disparity in time spent on household chores may lessen in retirement.

In this study, social embeddedness, as assessed by marital status, was found to be an important factor in shaping household chore participation. Especially for unmarried workers, the combination of not having a partner to share the division of labor and paid work may explain the least amount of time allocated toward daily household chores. Retirement, however, appears to offer unmarried individuals more opportunities for daily chore participation. In contrast, employment status seems to have less of an influence on daily household chore participation for married individuals because both married workers and retirees reported a similar amount of time. It could be that the day-to-day household responsibilities of married individuals are more well established and less changeable even in the face of a retirement transition.

In the second part of this paper, we built upon the stressor reactivity concept to include behavioral reactivity to daily stressors by assessing whether the associations between daily stressors and time spent on daily household chores differed as a function of employment status and life course influences. Contrary to expectation, workers and retirees' time spent on daily household chores increased the day after experiencing a stressful event. This finding highlights the impacts and disruptions that daily stressors have on one's life (Almeida, 2005; Bolger et al., 1989) and illustrates how daily stressors can pile up and result in behavioral reactions even the day after experiencing the stressful events (Lazarus, 1999; Zautra, 2003).

Our stressor reactivity findings also indicate that the salience of stressor domains may operate differently depending on individuals' resources (Clark-Plaskie & Lachman, 1999). In our study, we found that of the seven domains of stressful events (e.g., arguments or disagreements, network stressors), only home stressful events were associated with daily household chore participation at a trend level. These findings highlight the differential effects that different types of stressors have on daily experiences. For these analyses, we also predicted that unmarried workers will be the most reactive to daily stressors in household chore participation; however, our prediction was not supported. Instead, unmarried workers were the least reactive. It could be that when faced with stressful events at home, unmarried workers, who may not have someone to share the daily home responsibilities and whose time is more restricted by employment, may be more likely to let next day's household responsibilities slide than other individuals. However, caution must be taken when interpreting the findings given that the results were at a trend level.

Collectively, these findings highlight the importance of life course influences in understanding the opportunities and vulnerabilities that middle-aged and older workers and retirees face in their daily lives. These findings further illustrate that life transitions (e.g., retirement), and daily stressors are embedded in layers of temporal and social contexts that shape individual's behaviors. Our findings also highlight the opportunity for future studies to examine how life course influences, daily stress, and daily household chore participation may shape, or are shaped by, family dynamics and processes at different parts of the life course (e.g., employment, retirement). Through the better understanding of family dynamics and processes in middle and old age, we will be able to devise and advocate for effective strategies and programs that will help individuals and families to better balance daily household responsibilities as well as to enhance meaningful use of time. Our findings also point to the need to examine individuals' coping strategies in the face of stressful events. It also would be important in subsequent studies to assess how protective factors (e.g., social support, psychological well being) may influence individual's behavioral reactivity to daily stressors.

Limitations and Strengths

One study limitation is that we did not have information on reasons for employment. Although we tried to account for potential push and pull factors that may differ between the workers and retirees, we cannot completely rule out the factors that may have contributed to the current employment situation. This study utilized a self-definition of employment status, which is limited by the lack of objective criteria in identifying whether one is

working or retired. However, perceptions often influence behaviors (e.g., Ferguson & Bargh, 2004), and a self-assessment of employment status may provide better insight to how individuals think or behave. Future studies should consider whether different conceptualization of retirement results in similar findings. Spousal characteristics (e.g., employment, gender attitudes) have been linked to household performance (Szinovacz, 2000); however, the current study did not utilize spousal data due to sample size and missing data issues. This study focused on both married and unmarried respondents to better understand and represent the daily experiences of midlife and older workers and retirees. Generalizability of the findings must take into account that participants in this study predominately were white. Given the role of race and ethnicity in patterning employment trajectories (Cummings & Jackson, 2008), we will have the opportunity in subsequent studies to better understand the daily lives of African Americans, for there was an oversample of African Americans at Wave 2 of MIDUS.

This study has several strengths. Rather than asking respondents to recall the number of hours in the past week that they spent doing household tasks (e.g., Gupta, 1999; Szinovacz, 2000), respondents in this study reported the amount of time spent on household chores in the past 24 hr over 8 consecutive days. This methodological approach helps to reduce bias between an experience and the recall of the experience (Bolger, Davis, & Rafaeli, 2003). The use of daily diary methodology enabled us to better capture the temporal order effects of daily stressors on household chore participation the following day. Although the DISE measure allows for the examination of different stressor domains (e.g., arguments, avoided arguments, home related) experienced by the respondents, it does not define the events that constitute each domain of stressors. A limitation to this approach is that the stressful event may differ between and within (across days) individuals. However, this approach is advantageous in capturing the events that the respondents, not the researchers, perceived as stressful. In contrast to other housework studies (Solomon et al., 2004; Szinovacz, 1992), this current study does not define specific activities that constitute household chores. Although this methodology may be less structured, this approach is more informative in capturing the daily responsibilities and tasks carried out by workers and retirees.

Conclusion

In summary, the changing nature of work and retirement in the United States points to the need to examine how employment shapes daily experiences. Importantly, findings from this study highlight the need to pay greater attention to women, especially those working, who are facing greater daily household responsibilities than other individuals. Our study further contributes to the retirement and time use literature by documenting the importance of life course influences as well as stressors on daily experiences.

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References

Almeida, D. M. (2005). Resilience and vulnerability to daily stressors assessed via diary methods. *Current Directions in Psychological Science*, *14*, 64–68. doi:10.1111/j.0963-7214.2005.00336.x

Almeida, D. M., & Horn, M. C. (2004). Is daily life more stressful during middle adulthood?. In O. G. Brim, C. D. Ryff, & R. C. Kessler (Eds.), *How healthy are we? A national study of well-being at midlife* (425–451). Chicago, IL: The University of Chicago Press.

Almeida, D. M., Wethington, E., & Kessler, R. C. (2002). The daily inventory of stressful experiences (DISE): An interview-based approach for measuring daily stressors. *Assessment*, *9*, 41–55. doi:10.1177/1073191102091006

Almeida, D. M., & Wong, J. D. (2009). Life transitions and daily stress processes. In G. H. Elder, Jr., & J. Z. Giele (Eds.), *The craft of life course research* (pp. 141–162). New York: Guilford Press.

Bianchi, S., Milkie, M., Sayer, L., & Robinson, J. (2000). Is anyone doing the housework? Trends in the gender division of household labor. *Social Forces*, *79*, 191–228. doi:10.2307/2675569

Birditt, K., Fingerman, K. L., & Almeida, D. M. (2005). Age differences in exposure and reactions to interpersonal tensions: A daily diary study. *Psychology and Aging*, *20*, 330–340. doi:10.1037/0882-7974.20.2.330

Blood, R. O., & Wolfe, D. M. (1960). *Husbands and wives: The dynamics of married living*. New York: Free Press.

Bolger, N., Davis, A., & Rafaeli, E. (2003). Diary methods: Capturing life as it is lived. *Annual Review of Psychology*, *54*, 579–616. doi:10.1146/annurev.psych.54.101601.145030

Bolger, N., DeLongis, A., Kessler, R. C., & Schilling, E. A. (1989). Effects of daily stress on negative mood. *Journal of Personality and Social Psychology*, *57*, 808–818. doi:10.1037/0022-3514.57.5.808

Butterworth, P., Gill, S. C., Rodgers, B., Anstey, K. J., Villamil, E., & Melzer, D. (2006). Retirement and mental health: Analysis of the Australian national survey of mental health and well-being. *Social Science and Medicine*, *62*, 1179–1191. doi:10.1016/j.socscimed.2005.07.013

Buxton, J. W., Singleton, N., & Melzer, D. (2005). The mental health of early retirees: National interview survey in Britain. *Social Psychiatry and Psychiatric Epidemiology*, *40*, 99–105. doi: 10.1007/s00127-005-0866-5

Clark-Plaskie, M., & Lachman, M. E. (1999). The sense of control in midlife. In S. L. Willis & J. D. Reid (Eds.), *Life in the middle: Psychological and social development in middle age* (pp. 181–208). San Diego, CA: Academic Press.

Coltrane, S. (2000). Research on household labor: Modeling and measuring the social embeddedness of routine family work. *Journal of Marriage and Family*, *62*, 1208–1233. doi:10.1111/j.1741-3737.2000.01208.x

Cummings, J. L., & Jackson, P. B. (2008). Race, gender, and SES disparities in self-assessed health, 1974–2004. *Research on Aging*, *30*, 137–167. doi:10.1177/0164027507311835
Ferguson, M. J., & Bargh, J. A. (2004). How social perception can automatically influence behavior. *Trends in Cognitive Sciences*, *8*, 33–39. doi:10.1016/j.tics.2003.11.004
George, L. K. (1993). Sociological perspectives on life transitions. *Annual Review of Sociology*, *19*, 353–373. doi:10.1146/annurev.soc.19.1.353
Greenfield, E. A., & Marks, N. F. (2009). Profiles of physical and psychological violence in childhood as a risk factor for poorer adult health: Evidence from the 1995–2005 National Survey of Midlife in the United States. *Journal of Aging and Health*, *21*, 943–966. doi:10.1177/0898264309343905
Gupta, S. (1999). The effects of transitions in marital status transitions on men's performance of housework. *Journal of Marriage and the Family*, *61*, 700–711. doi:10.2307/353571
Hochschild, A. (1989). *The second shift*. New York: Avon Books.
Institute for Women's Policy Research. (2009). *The gender wage gap by occupation*. IWPR #C350a. Washington, DC: Author.
Kim, J., & Moen, P. (2002). Retirement transitions, gender, and psychological wellbeing: A life course, ecological model. *Journal of Gerontology: Psychological Sciences*, *57*, 212–222.
Krantz-Kent, R., & Stewart, J. (2007, May). How do older Americans spend their time? *Monthly Labor Review*, 8–26.
Lachance-Grzela, M., & Bouchard, G. (2010). Why do women do the lion's share of housework? A decade of research. *Sex Roles*, *63*, 767–780. doi:10.1007/s11199-010-9797-z
Lachman, M. E. & James, J. B. (Eds.) (1997). *Multiple paths of midlife development*. Chicago, IL: University of Chicago Press.
Lazarus, R. S. (1999). *Stress and emotion: A new synthesis*. New York: Springer.
Lee, Y.-S., & Waite, L. (2005). Husbands' and wives' time spent in housework: A comparison of measure. *Journal of Marriage and Family*, *67*, 328–336. doi:10.1111/j.0022 2445.2005.00119.x
Manke, B., Seery, B. L., Crouter, A. C., & McHale, S. M. (1994). The three corners of domestic labor: Mothers', fathers', and children's weekday and weekend housework. *Journal of Marriage and Family*, *56*, 657–668.
Mein, G., Martikainen, P., Hemingway, H., Stansfeld, S., & Marmot, M. (2003). Is retirement good or bad for mental and physical health functioning? Whitehall II longitudinal study of civil servants. *Journal Epidemiology & Community Health*, *57*, 46–49. doi:10.1136/jech.57.1.46
Midanik, L. T., Soghikian, K., Ransom, L. J., & Tekawa, I. S. (1995). The effect of retirement on mental health and health behaviors: The Kaiser Permanente Retirement Study. *Journal of Gerontology: Social Sciences*, *50*, S59–S61. doi:10.1093/geronb/50B.1.S59
Neupert, S. D., Almeida, D. M., & Charles, S. T. (2007). Age differences in reactivity to daily stressors: The role of personal control. *Journal of Gerontology: Psychological Sciences and Social Sciences*, *62*, 216–225.
Pienta, A. M., & Hayward, M. D. (2002). Who expects to continue working after age 62? The retirement plans of couples. *Journal of Gerontology: Social Sciences*, *57*, S199–S208. doi:10.1093/geronb/57.4.S199
Pienta, A. M., Hayward, M. D., & Jenkins, K. R. (2000). Health consequences of marriage for the retirement years. *Journal of Family Issues*, *21*, 559–586. doi:10.1177/ 019251300021005003
Rosenkoetter, M., Garris, J., & Engdahl, R. (2001). Postretirement use of time: Implications for preretirement planning and postretirement management. *Activities, Adaptation & Aging*, *25*, 1–17.
Solomon, C., Acock, A. C., & Walker, A. J. (2004). Gender ideology and investment in housework: Postretirement change. *Journal of Family Issues*, *25*, 1050–1071. doi:10. 1177/0192513X03261323
Szinovacz, M. E. (1992). Is housework good for retirees? *Family Relations*, *41*, 230–238. doi:10. 2307/584838
Szinovacz, M. E. (2000). Changes in housework after retirement: A panel analysis. *Journal of Marriage & the Family*, *62*, 78–92. doi:10.1111/j.1741-3737.2000.00078.x
Szinovacz, M. E., & Davey, A. (2005). Predictors of perceptions of involuntary retirement. *The Gerontologist*, *45*, 36–47. doi:10.1093/geront/45.1.36
Szinovacz, M. E., & Harpster, P. (1994). Couples' employment/retirement status and the division of household tasks. *Journal of Gerontology: Social Sciences*, *49*, S125–S136.
United States Bureau of Labor Statistics. (2011a). *American time use survey summary*. Retrieved from http://www.bls.gov/news.release/atus.nr0.htm
United States Bureau of Labor Statistics. (2011b). Women at work. Retrieved from http://www.bls.gov/spotlight/2011/women/
Wheaton, B. (1990). Life transitions, role histories, and mental health. *American Sociological Review*, *55*, 209–223. doi:10.2307/2095627
Wong, J. D., & Hardy, M. A. (2009). Women's retirement expectations: How stable are they? *Journal of Gerontology: Social Sciences*, *64*, S77–S86. doi:10.1093/geronb/gbn010
Zautra, A. J. (2003). *Emotions, stress, and health*. New York, NY: Oxford University Press.