Published in final edited form as:

Work Aging Retire. 2018 January ; 4(1): 108–122. doi:10.1093/workar/wax028.

Work-Hour Trajectories and Depressive Symptoms among Midlife and Older Married Couples

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Abstract

Life course theories highlight the importance of understanding psychological health of aging individuals in context. Work and marriage are influential contexts in later life that are increasingly relevant because both spouses of many households work and individuals are delaying retirement. Although there is extensive literature on predictors of depressive symptoms, incorporating life course histories of work and social contexts has been a critical omission in the aging and health field. This study identifies couples' work trajectories as a function of husband's and wife's weekly work hours and examines the link between couple work-hour trajectory membership and individual depressive symptoms. Data are from 1641 married couples who participated in the 1998-2012 waves (ages 51-89) of the Health and Retirement Study (HRS). Findings revealed six distinct subgroups of work-hour trajectories among couples and that membership in these subgroups was associated with depressive symptoms. Retiring husbands with wives who continued to work and wives who worked minimally throughout the years (regardless of whether their husbands worked or retired) reported more depressive symptoms than other subgroups. These results suggest that work trajectories themselves, beyond current health status, may carry differential psychological health risk. Moreover, several sociodemographic and life course factors in 1998 were significant predictors of trajectory membership. These findings provide insight into midlife factors that may influence work trajectories (and the potential health risk) through to older adulthood. They suggest that a life course examination of work and social contexts is needed for a greater understanding of individual and couple health development.

Depressive symptomology is one of the most prevalent psychological problems in midlife and old age (Fiske, Wetherall, & Gatz, 2009). Although major depression is relatively rare in late life (1.5% with an estimated range of 0.9% to 10%), depressive symptomology below the threshold of major depression among community-dwelling older adults is common (13.5%) with estimates ranging from 4% to 27% (Djernes, 2006; Mojtabai & Olfson, 2004).

Epidemiological, medical, and psychological studies have found that depressive symptoms are significantly related to multiple domains of physical and psychological functioning (Alexopoulos, 2005), including physical disability (Berkman et al., 1986), cognitive decline (Chodosh, Kado, Seeman, & Karlamangla, 2007), Alzheimer's disease (Wilson et al., 2002), functional impairment (Achat, Kawachi, Spiro, DeMolles, & Sparrow, 2000; Ciechanowski, Katon, & Russo, 2000), sleep disturbance (Roberts, Shema, Kaplan, & Strawbridge, 2000), and loneliness (Cacioppo, Hughes, Waite, Hawkley, & Thisted, 2006). As the proportion of older adults in the population grows with the number of older adults projected to exceed the number of children in the next decade (World Health Organization, 2012), identifying factors related to depressive symptoms in later life is increasingly important.

Work and marriage are important and influential contexts increasingly likely to influence health in later life as work life trajectories for individuals and couples change. Many older adults are extending participation in the workforce into their early 70s and the number of households in which both spouses work has increased (Antonucci, Lansford, & Akiyama, 2001; Gendell, 2008; Umberson, Williams, Powers, Liu, & Needham, 2006). There is a greater need to understand how these changing societal work patterns among couples impact their psychological health over time. The current study advances our understanding of the work experiences and health of midlife and older couples in two ways. Theoretically, a life course developmental perspective is applied to the study of couples' work, relationship, and health. This research has been dominated by the demands-resources model (Bakker & Demerouti, 2007), conservation of resources theory (Hobfoll, 1989; Grandey & Cropanzano, 1999), spillover-crossover model (Westman, 2001), role conflict and enhancement theories (Barnett & Hyde, 2001; Greenhaus & Beutell, 1985; Greenhaus & Powell, 2006), as well as other general stress/strain models (e.g., Frone, Yardley, & Markel, 1997). These perspectives tend to result in studies focused on an individual's current contexts and health with less attention paid to changes and transitional effects over time. The life course developmental perspective is unique among these frameworks because it encourages examination of the health and well-being implications of within-couple linkages of each partner's work changes over time. Using this perspective, this study makes two substantive contributions to the literature. First, this study examines the role of work in couples' and individuals' well-being from midlife to beyond the retirement transition. In addition, this study identifies differences in life course work trajectories among couples and the predictors of trajectory membership that may be associated with changes in depressive symptoms beyond their current levels of work and health.

Using data from the Health and Retirement Study (HRS), this study also makes two methodological contributions. First, the focus of the study is to examine life course trajectories of work rather than a single retirement transition, which is achieved by analyzing trajectory data over 14 years. Second, whereas prior studies of work and marital contexts often examined married individuals rather than couples, this study examines work and health data from both husband and wife from the same marriage over time. Together, the study provides a more complete picture of the work changes within and between couples over time, and how those changes on a couple-level are linked to sociodemographic factors and individual psychological health.

Theoretical Background

To examine work trajectories and depressive symptoms among midlife and older married couples, this study draws on the following principles from the life course developmental theory (Alwin, 2012; Elder, 1979; Elder, 1998): 1) life course trajectories, 2) linked lives of couples, 3) aging and health in context, and 4) personal characteristics and resources,.

Life course trajectories

The concept of trajectories is central to the life course perspective because individuals develop and change over time (Alwin, 2012; Elder, 1985; Elder, 2000). Work trajectories are important to consider because there has been a noticeable transformation over the past 15 years of older adults extending work into their late 60s and 70s (Gendell, 2008). Although much has been learned about the risks and challenges for older adults from the sandwich generation and retirement literatures, incorporating life course trajectories is a critical omission in the work and aging field (Shultz & Adams, 2012). Prior longitudinal studies typically examined the average trajectory, which assumes that everyone fits into the same trajectory. However, individuals' work development can vary significantly over time; for example, one individual may stay at the same job over decades, whereas another has multiple jobs over time or is not employed at some points in time. Individuals embedded within different trajectories may have significantly different health outcomes in later life. Therefore, this study examines the heterogeneity in work trajectories because it provides insight into whether trajectories themselves carry different risks and challenges.

When examining work trajectories, retirement is an important transition that can take on many forms (Ekerdt, 2010; Willekens, 1999). Some workers (e.g., pilots, law enforcement, and military service members) are mandatorily required to fully retire at a specific age (Defense Civilian Personnel Management Service, 2006; Lazear, 1979) while others may opt for a gradual retirement (Employee Benefit Research Institute, 2017; Elder & Pavalko, 1993). Bridge employment is a form of partial retirement between full-time work and full-time retirement that can vary significantly (e.g., stable or intermittent, self or other employed; Beehr & Bennett, 2015; Wang, Adams, Beehr, & Shultz, 2008). With more individuals opting for bridge employment (Cahill, Giandrea, & Quinn, 2006), examining work status change may not provide a complete picture of work and retirement. This study overcomes the problems of measurement and definition of retirement by examining self-reported work hours over time, which can show continuity and change of work without the restrictions of employment status or the limitations of exclusively focusing on one retirement transition.

Linked lives of couples

This study focuses on couples because a key tenet of the life course perspective is that our lives are interconnected (Elder, 1998). For older couples, spouses and partners are often the primary source of support, and the marital relationship becomes more important as individuals age and health declines (Antonucci et al., 2001; Umberson et al., 2006). However, prior longitudinal studies often examined married individuals rather than married couples, which limits our understanding of the linked lives of couples over time (Allen &

Shockley, 2012). This study aims to provide a fuller picture of work and health experiences of older couples by examining work-hour trajectories of both spouses from the same couple over time.

Work trajectories for couples likely vary because the demographics and historical context of working couples have changed over time. Whereas there was a clear gender divide in work and household responsibilities during the 1950s (Casper & Bianchi, 2001; Cherlin, 1992), education and work opportunities, rather than a husband's economic provision, are now more likely to predict whether wives are in the labor force (Moen, 2001a). Moreover, organization and public policies increasingly allow caregivers of children and elderly relatives to continue to work (Blossfeld & Drobic, 2001; Moen, 2001b). Because of gender differences in expectations and opportunities to work, we hypothesized that couples' work-hour trajectories would vary in whether one or both spouses worked with more work-hour variations among wives.

There may also be different work trajectories for couples because the retirement transition for couples can be complex. Couples' retirement can be a joint venture or a prolonged process of change where one spouse retires after the other (Ho & Raymo, 2009; O'Rand & Farkas, 2002). Research has found that the reasons for retiring together or separately varied, including marital satisfaction, finances, health care expenses, caregiving, illness, and retirement of spouse (Johnson, 2004; Moen & Wethington, 1992; Moen & Yu, 2000). As such, we expected to see variations among couples' trajectories in which some couples have spouses jointly decrease work hours, whereas other couples have one spouse continuing to work while the other retires.

Aging and health in context

Work and the marital relationship are important to consider because the life course perspective emphasizes understanding aging and health in context (Alwin, 2012). With a greater understanding of couples' work trajectories, this study aims to provide a better understanding of predictors of depressive symptoms in mid-to-late adulthood. In this study, weekly work hours are used as a quantitative expression of work trajectories for midlife and older couples.

Theoretical frameworks that emphasize structural work contexts, such as work hours, work schedules, and years worked, suggest that psychological stress originates from structural or quantitative aspects of the work environment (Greenhaus & Beutell, 1985; Becker, 1965; Gronau, 1977). Numerous studies have sought to determine optimal work hours and whether long work hours are linked to depressive symptoms concurrently or at follow-up. The majority conclude that excessive hours (e.g., above 60 to 100 hours a week) are linked to more depressive symptoms (Amagasa & Nakayama, 2013; Glass & Fujimoto, 1994; Kim, Park, Lee, & Kim, 2016; Kodz et al., 2003; Sparks et al., 2013; Virtanen et al., 2011). More importantly, increasing work hours from homemaker to part-time or full-time was associated with fewer depressive symptoms for women over 3 years, whereas decreasing work hours from full-time to part-time was associated with more depressive symptoms (Wethington & Kessler, 1989). Research has also found that individuals strongly attached to their work may feel less positive about reducing work or leaving their jobs (Taylor & Shore, 1995; van

Solinge & Henkens, 2005). A strong attachment to work, defined by having a full-time job(s) over many years, was a significant predictor of difficult adjustment to retirement (van Solinge & Henkens, 2005). Based on these findings, we predicted that spouses in different work-hour trajectories would have different levels of depressive symptoms. Unfortunately, these studies on work hours and health, even those including marital status, mainly focused on individuals and not couples. The present study emphasizes examining work-hour trajectories of both husband and wife within the couple because it is increasingly recognized that both an individual's own work as well as that of their spouse can influence the occurrence of depressive symptoms (Westman, 2001).

Studies that focused specifically on the retirement transition have examined husbands and wives from the same couple, but the findings on depressive symptoms have been somewhat inconsistent. For husbands, some studies found that a retired husband with a nonemployed wife (who was not working or has retired) had reduced depressive symptoms, whereas a retired husband with a wife who continued to work had more depressive symptoms (Kim & Moen, 2002; Szinovacz & Davey, 2004; Wang, 2007). For wives, one study reported that a retiring wife with a nonemployed husband (who had already retired) had more depressive symptoms (Szinovacz & Davey, 2004), whereas others did not find this association (Kim & Moen, 2002; Mutchler, Burr, Massagli, & Pienta, 1999). Furthermore, another study found limited spousal influence on retirement adjustment and instead indicated a strong individual effect on retirement adjustment (van Solinge & Henkens, 2005). By examining work-hour trajectories of both husbands and wives, this study aims to elucidate the individual versus partner effect of retirement on psychological health. In addition, some of the previous studies on couples' retirement have used data from the HRS, but only with the first few waves (e.g., 1992-1998 waves used in Szinovacz & Davey, 2004 waves used in Wang, 2007). By using more and later waves of the HRS data from 1998 to 2012, this study provides a more comprehensive understanding of work and health development among a larger sample of midlife and older couples over a longer time period and with broader focus than the retirement transition alone.

Personal characteristics and resources

Finally, the life course perspective also posits that an individual's personal characteristics and resources earlier in life may influence one's life trajectory (Alwin, 2012; Wang & Shultz, 2016). By understanding these characteristics and resources, we may gain understanding of factors that are related to distinct groups of couples based on their work histories. Therefore, this study goes one step further and examines midlife sociodemographic and life course predictors of couple work-hour trajectory membership that could shed light on potential health risk.

Sociodemographic factors, such as younger age and more education, may be associated with greater opportunities in the labor force and better health (Bianchi & Raley, 2005). Household income and wealth are indicators of couples' financial situation and may be related to the ability to retire or reduce work over time (Johnson, 2004). Life course factors, such as the number of children, may be associated with lower labor force participation, particularly for wives who are often the primary caregiver (Smith, Downs, & O'connell,

2001). Race may also be linked to work-hour trajectory membership, as research has shown that there are racial differences in labor force participation (Fullerton, 1999). Black women, for example, were more likely to have worked steadily throughout their adult lives and less likely to retire than White women (Belgrave, 1988; Hayghe, 1983). Given that these sociodemographic and life course factors have been linked to workforce participation, this study explores whether these sociodemographic factors are associated with couple work-hour trajectories, providing insight into the possible predictors of work trajectory membership and thus risk for depressive symptoms later in life.

Current Study

By examining a large sample of husbands and wives over age 50 in the United States using unique longitudinal couple data over 14 years, the first aim of the study is to identify and highlight the heterogeneity of couples' work-hour trajectories in midlife and older adulthood. We outlined the following hypothesis based on the literature:

First, although work hours will decrease for all couples' trajectories as they age, there will be variations in couples' work-hour trajectories, including dual-workers, single-worker couples, and part-time workers, as well as joint reduction and divergent reduction in work hours between spouses. In addition, there will be more variations in work-hour trajectories among wives than husbands.

Next, we examined the associations between couples' work-hour trajectories and individual depressive symptoms over time. Because few studies have examined work trajectories, we did not make a specific hypothesis on how couple work-hour trajectories would be related to depressive symptoms, but we expected that there would be variations in these associations for different trajectories. Lastly, we explored the associations between important sociodemographic and life course factors with couple work-hour trajectories to provide insight into the determinants of work trajectory membership.

Methods

Participants

Participants were from the Health and Retirement Study (HRS) that began in 1992. The HRS is a nationally representative longitudinal study of Americans aged 51 and over, as well as their spouses (regardless of age) (Sonnega, Faul, Ofstedal, Langa, Phillips, & Weir, 2014). This study used HRS couple data drawn from the fourth to eleventh waves (1998-2012).

Of the 21384 cases in 1998, there were 9410 heterosexual married individuals. The inclusion criteria for this analysis were that both husband and wife were aged 51 and over, both provided their own responses (i.e., not answered by proxy), both spouses indicated they were married, and at least one spouse reported work hours in 1998. Extreme cases of work hours in 1998 of husbands and wives who were working over three standard deviations from the mean were excluded ($n = 16$ couples). Due to the selection criteria, it should be noted that although the full HRS sample is nationally representative of the U.S., the subset of data used in this study was not. The resulting sample had 3282 participants (1641 couples), an average

age of 59.3 years in 1998 ($SD = 5.8$; range = 51-89), and on average 12.8 years of education ($SD = 3.0$; range = 0-17). Ethnicity was 88% Caucasian. Couples were, on average, married for 32.03 years in 1998 ($SD = 11.3$; range = 0.1-68.5).

Unless otherwise indicated, data were retrieved from the RAND HRS Data file which included cross-wave variables from 1998-2012. The RAND HRS data is a longitudinal dataset based on the HRS data, including imputations of wealth and income. It was developed at RAND with funding from the National Institute on Aging and Social Security Administration (<http://www.rand.org/labor/aging/dataproduct/hrs-data.html>).

Attrition

Complete information about the hours worked by the 3282 participants varied across waves with an average of 82% of the original sample continuing in the study (Table 1). The decrease in the number of couples observed over time was due to couples' separation or divorce, widowhood, and refusals. By 2012, 66% of the initial sample of husbands and 74% of wives participated.

Of the 3282 participants in 1998, 3040 (92.6%) participated in 2000, 2950 (89.9%) participated in 2002, and 2839 (86.5%) participated in 2004, 2700 (82.3%) participated in 2006, 2608 (79.5%) participated in 2008, 2459 (74.9%) participated in 2010, and 2303 (70.2%) participated in 2012. To examine longitudinal selectivity of reporting work hours, we tested whether a series of variables assessed in 1998 including age, race, education, household income, wealth, and number of children predicted the number of waves of work hours completed. White husbands ($F(7,1631) = 2.162, p = .035$), younger husbands ($b = -.080, S.E. = .008, p < .001$), younger wives ($b = -.046, S.E. = .008, p < .001$), husbands with more education ($b = .035, S.E. = .016, p = .031$), and wives with more education ($b = .054, S.E. = .017, p = .001$) in 1998 completed more waves of data for work hours. Furthermore, for the analysis examining the associations between couple work-hour trajectories and individual depressive symptoms, participants were included as long as they provided depressive symptom data, regardless of whether their spouse provided data.

Measures

Work hours—In 1998, participants were asked for their work status and were provided multiple response options (i.e., working now, unemployed and looking for work, temporarily laid off, disabled, retired, homemaker, and other). A dichotomous *work status in 1998* variable was created to initially determine which participants to include for the analysis. Participants who indicated they were not formally working and that they were disabled, homemaker, or retired were coded as 0; participants who indicated that they were 'working now' were coded as 1 = working.

If they indicated that they were working, participants were asked "How many hours a week do you normally work (at their main job/at their second job if applicable)" at each wave. A summary *work hours per week* variable was created as a summation of work hours of main and second jobs.

Depressive symptoms—Depressive symptoms were assessed with 8 items from the Center for Epidemiologic Studies Depression Scale (CES-D). Participants responded 1 (*yes*) or 0 (*no*) regarding whether they had experienced the following symptoms in the past month, including whether participants felt depressed, felt that everything was an effort, their sleep was restless, they were happy, felt lonely, felt sad, could not get going, and enjoyed life. Items were summed such that a larger number indicated more depressive symptoms (Steffick, 2000). Cronbach's alphas across the waves ranged from .77 to .82.

Sociodemographic covariates—Age was a continuous variable and recorded at each wave. Gender was coded as 0 (*husband*) and 1 (*wife*). Race was coded as 0 (*Other*) and 1 (*White*). *Education* was reported as the highest grade of school or year of college that husbands and wives completed in 1998 truncated at 17 years. Participants reported on the *number of children* at each data collection, which referred to the number of living children including stepchildren. *Years of marriage* was defined as the number of years the couple was married in 1998. Time was indicated by the year the data were collected (from 1998 to 2012) which was centered such that zero represented the first wave (1998).

Household income and *total wealth* were imputed by RAND. The means of household income and wealth reported by husband and wife were calculated to create couple-level variables (i.e., one household income and one wealth variable representing each couple). Household income and wealth significantly violated the normality assumption and were corrected with log transformations. Since log transformation can only be used for positive values and some couples indicated negative wealth, a positive constant was added before applying the transformation (1 for household income and 1000000 for wealth).

Additional time-varying covariates of self-rated health and widower status—For the analysis predicting depressive symptoms, two additional time-varying covariates were included as they may be associated with depressive symptoms. *Self-rated health* was measured with one item “Would you say your health is excellent, very good, good, fair, or poor?” on a 5-point scale from 1 (*excellent*) to 5 (*poor*). The item was recoded such that a larger number indicated better health. In addition, a marital status variable indicated whether participants were 1 ‘married,’ 2 ‘married, spouse absent,’ 3 ‘partnered,’ 4 ‘separated,’ 5 ‘divorced,’ 6 ‘separated/divorced,’ and 7 ‘widowed.’ All selected participants were married in 1998 and *widower status* was recoded from the marital status variable as 0 (*other*) and 1 (*widowed*) as a time-varying covariate.

Analysis plan

Trajectory modeling—Multilevel Latent Class Growth Models (LCGA) using Mplus Version 7.11 were used to examine whether couples reported different trajectories of work hours over time (e.g., both initially worked and remained full-time, both initially worked full-time and wife reduces to part-time, etc.). LCGA models identify trajectory groups and allow for the assessment of individual differences within each developmental trajectory (Jung & Wickrama, 2008). Both husband and wife's work hours were included in the same model. Mplus uses a robust full-information maximum-likelihood (FIML) estimation for handling missing data.

We first estimated a model with one trajectory group to estimate an average work-hour trajectory for couples. Next, we estimated a series of LCGA models to find the optimal number of trajectory groups. Model adequacy was assessed with the following criteria. First, Bayesian information criterion (BIC) was used to examine goodness of fit where a change in Bayesian information criterion (BIC X2) was greater than 2 (Jones, Nagin, & Roeder, 2001). It was also important to use additional fit indices beyond BIC (Muthén, 2004). The second criterion was that high values of entropy are preferred; however, it was not recommended to emphasize this value because entropy is by definition a function of the number of classes (Kreuter & Muthén, 2007). Third, the Vuong-Lo-Mendell-Rubin (VLMR) test and the bootstrapped parametric likelihood ratio test (BLRT) had to have p -values of less than 0.05, which means that the model with K classes has significantly better than that with $K-1$ classes. Fourth, the average posterior probability (AvePP) that an individual belongs to a trajectory group had to be at least .70. Fifth, the odds of correct classification (OCC) had to be above 5 for each group. Sixth, the probability of group assignment compared to the actual proportion of individuals who fall into a group had to be less than 50% (Nagin, 1999). Finally, each of the groups included at least 5% of the participants (Lavner & Bradbury, 2010).

After determining the number of trajectories, we tested models that included different shaped trajectories (intercept, linear, quadratic) and compared the model fit again. After determining the best shaped trajectories for husbands and wives within each couple trajectory, the final model fixed each trajectory to the best fit of intercept, linear, or quadratic shapes. It is important to note that not all individuals who fit into a trajectory have exactly the same trajectories; trajectory membership was based on having the highest probability of belonging to that particular group.

Predicting depressive symptoms—Next, multilevel growth curve models with separate intercepts for husbands and wives were estimated in IBM SPSS Statistics 22 to examine whether depressive symptoms varied by couples' work-hour trajectories. The major advantage of using growth curve analysis was that both couple-level and individual-level effects can be simultaneously analyzed to determine whether couples' work-hour trajectory membership predicted individual depressive symptoms over time. A two-intercept model allows for interpreting husband and wife effects separately while taking into account the nonindependent couple context.

The models were estimated in the following steps. The first step included time and sociodemographic covariates. Race, education, and years of marriage in 1998 were fixed covariates. Age, household income, wealth, number of children, widower status, and self-rated health were included as time-varying covariates. Continuous predictors were grand-mean centered. The second step included the couple work-hour trajectories. Work-hour trajectories were dummy-coded. Comparisons were made across each of the six trajectories to test whether trajectory membership was associated with depressive symptoms differently among the trajectories. In addition, work-hour trajectory $\times$ time associations were estimated to test whether the effects of trajectory membership predicted depressive symptoms over time.

Sociodemographic and life course variables—Finally, separate logistic regressions were used to assess whether trajectory membership varied by sociodemographic and life course factors in 1998. Six separate trajectory membership variables were created for each of the six couple work-hour trajectories. Participants were assigned a 1 if they belonged to that trajectory and a 0 if they did not belong to that trajectory. Predictors included age, race, education, household income, wealth, years of marriage, and number of children in 1998. Means were created from husband and wife's responses of months of cohabitation and number of children. All continuous predictors were grand-mean centered.

Results

We began by identifying different subgroups (latent classes) of work-hour trajectories among a U.S. sample of married couples aged 51 and over. We then examined whether spouses in these couple-level work-hour trajectories reported significantly different depressive symptoms. Finally, we explored sociodemographic and life course factors that were associated with the likelihood of belonging to these couple work-hour trajectories.

Descriptives

Table 1 provides the mean work hours from 1998 to 2012 for husbands and wives over 14 years. The average work hours among husbands across the years ranged from 42.62 in 1998 to 8.74 in 2012. The average work hours among wives ranged from 22.48 in 1998 to 5.25 in 2012. Paired sample t-tests were conducted to examine gender differences. Wives reported significantly fewer work hours at each year compared to husbands (Table 1).

Average Trajectories of Work Hours over Time

A model with one trajectory for couples was estimated to identify the common trajectory of work hours over time. This single couple-level trajectory was characterized by husbands working full time in 1998 ($M = 40.10$, $SE = .462$, $p < .001$) with a linear decrease over time ($b = -2.43$, $SE = .042$, $p < .001$), and wives working part time in 1998 ($M = 22.37$, $SE = .499$, $p < .001$) with a linear decrease over time ($b = -1.26$, $SE = .039$; $p < .001$). However, examination of fit indices revealed that this likely was not the best model.

Variations in Couples' Trajectories of Work Hours over Time

The number of trajectories was increased to find the best fitting model and to determine whether couples fit into multiple work-hour trajectories (Table 2). After assessing multiple fit indices, the model with six classes had better fit than the models with fewer classes. The model with seven classes was excluded because it included a class with fewer than 5% of the participants. The shapes of the trajectories were then tested (i.e., intercept, linear, quadratic), revealing that the intercept and linear slopes had best fit for husbands' and wives' work-hour trajectories. As shown in Table 3 and Figure 1, the model with six classes revealed that couples varied widely in the number of hours worked in 1998, whether husbands and wives had similar work hours, whether and how husbands' and wives' work hours changed over 14 years, and whether husbands and wives stopped working at the same time.

Consistent with the first hypothesis, work hours decreased for all six subgroups of couples' work-hour trajectories over time. In addition, subgroup membership showed variation in work hours in 1998 with some full-time and part-time dual-workers, some single-worker couples, and some spouses working part-time or not working. There were also variations in whether couples stopped working simultaneously.

The first four subgroups included husbands and wives who both worked in 1998. The first subgroup was labeled *dual full-time to retirement* couples (24.2%). It included husbands and wives who worked full time with similar work hours in 1998 and both spouses decreased work hours significantly over time until both stopped working. This subgroup is marked by the similarity in the decline in work hours between husband and wife and the fact that both husband and wife stopped working at the same time.

The second subgroup, labeled as *dual continuous workers*, included husbands and wives who both worked full-time with discrepant hours in 1998 and decreased work hours over time but continued working (8.2%). Husbands and wives in this subgroup also had similar declines in work hours over time.

The third subgroup, labeled as *dual part-time to retirement* couples, included husbands and wives who both worked part-time with discrepant hours in 1998 and significantly decreased work hours over time until both were not working (11.6%). These husbands and wives had discrepant declines in work hours as they had discrepant hours in 1998 but stopped working around the same time.

The fourth subgroup was labeled as couples with a *retiring husband and continuous working wife* (7.6%) and included husbands and wives who worked full time in 1998. Over time, husbands significantly decreased work hours until they stopped working, whereas wives decreased work hours over time but continued working, indicating a discrepant decline between husbands' and wives' work hours.

The fifth and sixth subgroups consisted of husbands who worked full-time and wives who worked on average a few hours in 1998. The fifth and most common subgroup was labeled as couples with a *retiring husband and minimally working wife* (37.6%). Husbands worked full time in 1998 and decreased work hours over time, and wives on average worked a few hours in 1998 and decreased over time until both were not working. They had discrepant work hours in 1998, discrepant declines in work hours over time, and stopped working around the same time.

Finally, the sixth subgroup, labeled as couples with a *continuous working husband and minimally working wives* (10.8%). This subgroup included husbands who worked full time in 1998 and decreased work hours over time but continued working, whereas wives on average worked a few hours in 1998 and decreased work hours over time until they were not working. These spouses had discrepant work hours in 1998 but similar declining work hour slopes over time.

Depressive Symptoms Associated with Work-Hour Trajectory Subgroup Membership

Next, we examined whether depressive symptoms varied by couples' work-hour trajectories using multilevel growth curve models in which membership in work-hour trajectory subgroups were the main predictors. Trajectory subgroups were dummy-coded and all possible pairwise comparisons were tested. Controlling for sociodemographic and life course covariates, as well as self-rated health and widower status, the findings revealed significant differences in depressive symptoms as a function of work-hour trajectory subgroup membership.

On average, depressive symptoms were significantly different between husbands in the subgroup with a *retiring husband and continuous working wife* and husbands in four of the five other subgroups (Table 4, Model 1). Specifically, husbands in the *dual full-time to retirement* ($b = -.397, S.E. = .099, p < .001$), *dual continuous workers* ($b = -.445, S.E. = .120, p < .001$), *retiring husband/minimally working wife* ($b = -.292, S.E. = .097, p < .01$), and *continuous working husband/minimally working wife* ($b = -.445, S.E. = .133, p < .001$) subgroups reported significantly fewer depressive symptoms than retiring husbands with a wife who continued to work. The only difference found for husbands in the *dual part-time to retirement* subgroup was that they reported significantly more depressive symptoms than husbands in the *continuous working husband/minimally working wife* subgroup ($b = .223, S.E. = .106, p < .05$) (Table 4, Model 3).

As for wives, depressive symptoms were significantly different between subgroups with wives who were working minimally (regardless of whether their husband continued to work or retired) and wives in the other subgroups. Wives in four subgroups reported a significantly different number of depressive symptoms than wives in the *retiring husband/minimally working wife* subgroup (Table 4, Model 2). Specifically, wives in the *dual full-time to retirement* ($b = -.301, S.E. = .082, p < .001$), *dual continuous workers* ($b = -.449, S.E. = .119, p < .001$), *dual part-time to retirement* ($b = -.262, S.E. = .100, p < .01$), and *retiring husband/continuous working wife* ($b = -.341, S.E. = .122, p < .01$) subgroups reported fewer depressive symptoms than minimally working wives with a retiring husband. In addition, wives in the *dual continuous workers* subgroup also reported fewer depressive symptoms than minimally working wives with a husband who continued to work ($b = -.357, S.E. = .138, p < .01$) (Table 4, Model 3). Finally, all analysis testing trajectory subgroups $\times$ time were not significant (not shown in tables), indicating that the associations between couple work-hour trajectories and individual depressive symptoms did not significantly change over time.

Post-hoc analysis—Although work-hour trajectory subgroup membership was associated with depressive symptoms, there may be other health factors that contribute to depressive symptoms. To determine whether couples' work-hour trajectories remain predictive above and beyond individual health issues, a post-hoc analysis was conducted with three time-varying health variables (in addition to self-rated health) in three separate models: the number of health conditions (summation up to 8 diseases, e.g., diabetes, cancer), whether or not health limitations limit work (yes/no), and a count of 11 functional limitations (six items

of activities of daily living, e.g., bathing, and five items of instrumental activities of daily living, e.g., handling money).

The findings for husbands and wives remained the same when including the number of health conditions, the presence of work limitations due to health, and functional limitations with a few exceptions. Specifically, depressive symptoms among wives in the *dual part-time to retirement* subgroup compared to wives in the *retiring husband/minimally working wife* subgroup were no longer significantly different when taking into account functional limitations only (Table 4, Model 2a). In addition, depressive symptoms among husbands in the *dual part-time to retirement* subgroup compared to husbands in the *continuous working husband/minimally working wife* subgroup were no longer significantly different when taking into account health condition, work limitations due to health, and functional limitations (Table 4, Model 3a shows model with functional limitations only). Overall, physical health may explain differences in depressive symptoms for couples who were in the *dual part-time to retirement* subgroup who also, on average, were older than couples in other subgroups. All other findings remained significant despite controlling for multiple health indicators. Findings also remained significant when current work hours were added to the models (not shown in tables), suggesting that the couple work-hour trajectories themselves matter for depressive symptoms beyond their current work time.

Factors Associated with Couples' Membership in Work-Hour Trajectory Subgroups

Finally, we explored whether couples' work-hour trajectory membership varied by individual and couple-level sociodemographic variables using logistic regression models. Models revealed that age, education, children, years of marriage, household income, and wealth in 1998 varied by trajectory subgroup (Table 5).

Wives who were younger, wives with more education, couples with more children, couples with higher household income, and couples with less wealth in 1998 were more likely to be in the *dual full-time to retirement* subgroup. Husbands and wives who were younger and wives with more education in 1998 were more likely to be in the *dual continuous workers* subgroup. Husbands who were older, wives who were younger, and couples with lower household income in 1998 were more likely to be in the *dual part-time to retirement* subgroup. Wives who were younger, wives with more education, couples who were married for fewer years, and couples with less wealth in 1998 were more likely to be in the *retiring husband/continuous working wife* subgroup. Husbands who were younger, wives who were older, wives with less education, couples who were married longer, and couples with greater wealth in 1998 were more likely to be in the *retiring husband/minimally working wife* subgroup. Husbands who were younger, husbands with more education, wives with less education, and couples with more children in 1998 were more likely to be in the *continuous working husband/minimally working wife* subgroup.

Taken together, the age of both husband and wife and the educational level of wives in 1998 were more prominently associated with couples' work-hour trajectory membership. Wives who were younger and had more education were more likely to be in a subgroup in which wives were working over time. Wives with lower education levels and husbands who were younger were more likely to be in a subgroup in which wives were working minimally.

Discussion

Drawing on the life course developmental perspective, this study is one of the first to examine work-hour trajectories among midlife and older married couples. Our findings identified six husband/wife work trajectories. These trajectories were differentially associated with depressive symptoms, and they revealed gender differences as well as individual versus spousal influence of work and retirement on psychological health.

Work-Hour Trajectories among Midlife and Older Couples

On average, couples showed consistent decreases in work hours over time, and there was significant variability within and between couples. Results indicate that couples fit into six distinct subgroups of work-hour trajectories. These subgroups varied in the average number of hours worked in 1998 and in their patterns of work-hour changes over time. This finding is important because it captured an individual's work development, and how that individual's work changed in tandem with his or her spouse's among midlife and older couples over 14 years.

The different types of work-hour trajectory subgroups included dual-working couples and single-worker couples. Some spouses converged in reducing work hours and others had divergent reductions, which points to the interconnectedness and dynamics of couples as it suggests that couples likely actively discuss and negotiate retirement decisions. For example, some spouses who reduced work hours together may have made the decision to retire together (Ho & Raymo, 2009; Johnson, 2004). There was also more variation among wives' work-hour trajectories than husbands', which reveals the larger historical and cultural context in which working couples and gender roles have changed over the past decades. For example, three trajectories consisted of dual full-time working couples in 1998, and their work histories are consistent with the shift in work and family gender roles as wives' participation in the workplace increased significantly in the 1960s (Casper & Bianchi, 2001). In contrast, two trajectories consisted of wives who minimally worked over the years. These two trajectories made up the largest percentage of the sample, which is consistent with the traditional gender role and societal expectations of a single-worker family in the 1950s to 1960s (Cherlin, 2004).

It is worth noting that one trajectory subgroup – dual part-time to retirement – consisted of both husband and wife who were working part-time in 1998 and stopped working over time. It is a unique subgroup as it showcases that the transition between work and retirement can take different forms, such as bridge employment where retirement does not necessarily mean ceasing work all together (Beehr & Bennett, 2015; Wang et al., 2009). By identifying distinct couple work-hour trajectories, this finding extends our understanding of diverse work trajectories among midlife and older couples, highlights the interdependency and linked lives of spouses, and underscores the likely influence of historical and contextual factors on changes in work and gender roles (Elder, 1998).

Implications of Couples' Work-Hour Trajectory Membership for Depressive Symptoms

Next, we examined the links between couples' work-hour trajectories and depressive symptoms. Results revealed that couples' work-hour trajectory membership was differentially associated with individual depressive symptoms above and beyond several physical health indicators.

In particular, retiring husbands with wives who continued to work reported more depressive symptoms than husbands in all the other trajectories except one. This finding adds to the increasing evidence regarding the risks for poor retirement adjustment for husbands whose wives continue to work (Kim & Moen, 2002; Szinovacz & Davey, 2004; Wang, 2007). One possible explanation is that these husbands experience a loss of social support from the workplace because it becomes more difficult to stay in regular contact with close colleagues after retiring (Cozijnsen, Stevens, & van Tilburg, 2010; Greenhaus & Powell, 2006), which could be compounded by the fact that their wives continue to work, resulting in a lack of social support for the retirement transition at home. Indeed, husbands who retire are likely to fair better in their adjustment to retirement when their wives are not employed at the time of their retirement (Wang, 2007). Beyond corroborating with previous studies, examination of couple work-hour trajectories provides additional valuable information. It is important to note that full retirement for husbands in this trajectory did not occur, on average, until the later years of the 14 years of data collection. It is possible that husbands in this trajectory knew early on that they were going to retire before their wives and that knowledge could be detrimental for their psychological health. As previous research suggested, both a strong quantitative attachment to work (i.e., fulltime jobs over many years) and high retirement anxiety can result in poorer adjustment to retirement (van Solinge & Henkens, 2005). Therefore, being on this trajectory itself may be conducive to poorer psychological health in later life for husbands.

Whereas there was a spousal influence of wives who continued to work on their retiring husbands' psychological health, there was an individual effect of wives' (minimal) employment on their own depressive symptoms. Findings indicated that wives who worked minimally throughout the years had more depressive symptoms, regardless of whether their husbands retired or continued to work, compared to wives who worked. It is possible that experiencing depressive symptoms led them to work minimally from midlife onwards. However, another interpretation is that working is protective for wives' psychological health because the beneficial effects of working applied to all the wives who were working full-time or part-time at some point over the years. Consistent with previous research, this result suggests that working may help wives (and women in general) form multiple roles, interests, and identities that are beneficial for psychological health, for example, through increased self-sufficiency and financial independence (Barnett & Hyde, 2001; Wethington & Kessler, 1989). Together, these findings provide clarity to the inconsistent findings from past research, such that there is a greater individual effect of work and health over time (van Solinge & Henkens, 2005) specifically for wives and a greater spousal effect for husbands.

Midlife Factors Associated with Work-Hour Trajectory Membership

The third goal of the study was to explore midlife sociodemographic and life course factors associated with membership in couples' work-hour trajectories. Age and education of wives played a major role in predicting whether wives worked or not throughout the years. Wives who were younger and more highly educated were in subgroups where they worked full time in 1998, regardless of the number of children. Thus there is likely a cohort difference where younger wives had more access to education and work opportunities, and consequently end up in occupations that allow them to work later into life (e.g., less physically demanding jobs or jobs that allow more flexible work arrangements; Wootton, 1997). Another interpretation is that these wives were younger and thus healthier, which could explain why they continued to work for a longer period of time (Johnson, 2004).

In contrast, wives in the two subgroups who worked minimally over the years were older and had less education. This reflects the societal expectation of these older wives at the time of their marriage that women would concentrate on domestic responsibilities and childrearing with fewer employment opportunities outside the home, and is also consistent with a single-worker model (Bianchi & Raley, 2005; Casper & Bianchi, 2001). Given that membership in a working trajectory may be protective for wives' psychological health, recognizing wives' age, education, and employment opportunities in midlife may be important not only as a predictor of psychological health risk, but also a potential point of intervention to help wives build resilience against developing depressive symptoms. It would be interesting to assess whether future cohorts of working and non-working wives, despite the differences in historical and cultural contexts, are characterized by the same sociodemographic and life course factors and show similar differences in levels of depressive symptoms.

Of note, the age and education of wives were not the only significant predictors of membership in the retiring husband/continuous working wife subgroup (where husbands reported more depressive symptoms than those in other subgroups). These couples were also more likely to have less wealth in 1998. Perhaps there was a greater financial need for the wife to continue working (in addition to being younger and not ready to retire) while the husband retires. As a result, these husbands may have more financial stress along with having to transition into retirement with less social support at home. Together, these findings identify midlife predictors that are different for husbands and wives, which show individual versus couple influences on couples' work trajectory membership and thus potential differences in depressive symptoms from midlife to old age.

Limitations and Directions for Future Research

There were limitations to the present study of which several were related to the use of secondary data. First, there was attrition due to separation and divorce, as well as death over 14 years. There was also attrition due to ill health. While the present analysis used as much data as was available from both spouses who began their participation in 1998, those who continued to participate in the study may be healthier, be more able to work, and have fewer depressive symptoms. This study also examined one HRS cohort in 1998 and their follow-up data. Future studies can include more recent and future cohorts as their data become

available to examine whether the current trajectory findings are consistent in these new midlife and older cohorts over time. This replication would strengthen the findings and contributions of this study. In addition, because those who have significant health issues would not be able to work, the posthoc analyses controlled for three major physical health indicators when examining the association between couples' work-hour trajectory membership and depressive symptoms. However, it may be fruitful for future research to take into account health indicators that might be more reflective of health and stress in midlife (e.g., sleep problems may be more prevalent than functional limitations).

Additional information concerning the couples' contexts would also assist the interpretation of the findings, including whether or not they provide childcare or eldercare that may take away from work time or increase psychological distress. Relationship quality, relationship satisfaction, and job satisfaction may also help understand couples who jointly or separately retire, or choose to engage in bridge employment. Despite the plethora of available data, conducting secondary data analysis limited the variables available to be studied. For example, relationship quality was not collected consistently over the eight waves of data collection in the HRS. Lastly, this study focused on married couples. Midlife and older couples, especially those who have been divorced, may choose not to marry even when they are in a committed relationship. Future research can broaden the definition of couplehood when examining midlife and older couples as it may be more apt to include spouses and partners.

Despite limitations, this study contributes to the literature in several ways. First, we examined work hours of both husband and wife in the same marriage. Researchers have called for more studies to include the nonindependence of spouses, especially longitudinally, to understand how husbands and wives' employment as well as their family needs change over time (Blossfeld & Drobic, 2001). Second, this couple data were collected every two years over 14 years. Whereas much of the literature on work, aging, and health has been cross-sectional or collected over a few months or years, this longitudinal study over 14 years enriched our understanding of individuals' and couples' work and health development from midlife to old age. Third, the findings highlight the diverse work trajectories among midlife and older married couples, and suggest that couples' work trajectories carry differential risk for individual psychological health beyond health and work status. The findings further shed light on sociodemographic and life course factors at midlife that predict trajectory membership, which may be particularly important for retiring husbands and wives who work minimally. By focusing on the importance of trajectories that develop over time, this study showcases the importance of adopting life course and couples perspectives which can contribute to a greater understanding of individual and couple health development across adulthood.

Acknowledgments

This work was conducted as part of the first author's dissertation at the University of Michigan. Wylie H. Wan is now at the Oregon Institute of Occupational Health Sciences, Oregon Health and Science University. Thank you to Lilia M. Cortina and Jane E. Dutton for invaluable feedback. The data are from the HRS (Health and Retirement Study), which is sponsored by the National Institute on Aging (grant number NIA U01AG009740) and is conducted by the University of Michigan.

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Figure 1.
Couples' estimated work-hour trajectories from 1998-2012.

Table 1
Work Hours among Husbands and Wives from 1998-2012 (n = 1641 couples/3282 participants)

Work Hours	1998		2000		2002		2004	
	n (%)	M (SD)	n (%)	M (SD)	n (%)	M (SD)	n (%)	M (SD)
Husband	1641 (100)	42.62 (16.73)	1512 (92.14)	34.76 (22.27)	1472 (89.70)	27.51 (23.25)	1402 (85.44)	22.35 (23.06)
Wife	1641 (100)	22.48 (19.71)	1528 (93.11)	20.41 (20.18)	1478 (90.07)	17.11 (19.51)	1437 (87.57)	14.56 (18.54)
Paired t-test	32.35 ***		20.07 ***		14.44 ***		11.16 ***	
Work Hours	2006		2008		2010		2012	
	n (%)	M (SD)	n (%)	M (SD)	n (%)	M (SD)	n (%)	M (SD)
Husband	1323 (80.62)	18.53 (22.46)	1259 (76.72)	14.98 (21.06)	1171 (71.36)	11.13 (18.36)	1086 (66.18)	8.76 (16.70)
Wife	1377 (83.91)	11.86 (17.94)	1349 (82.21)	9.87 (16.92)	1288 (78.49)	6.70 (13.75)	1217 (74.16)	5.25 (12.44)
Paired t-test	9.66 ***		7.28 ***		7.28 ***		5.57 ***	

Note: Percentages were calculated by dividing the number of responses in that year over the number of responses in the first year. Paired t-tests examined the mean differences in work hours between husbands and wives within each wave.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

Table 2
Fit Indices for Latent Class Growth Analysis Models for Couples' Work Hour Trajectories (Unconditional)

Fit indices	Couples' Tension Trajectory Models						
	1 Class	2 Classes	3 Classes	4 Classes	5 Classes	6 Classes	7 Classes
AIC	193243.166	188030.462	185780.134	183983.697	182882.620	182357.637	181546.312
BIC	193351.228	188165.538	185942.226	184172.804	183098.743	182600.774	181816.465
SSBIC	193287.691	188086.117	185846.921	184061.615	182971.669	182467.817	181657.624
Entropy	-	.922	.912	.900	.905	.883	.864
VLMR <i>p</i> -value	-	<.001	<.001	.014	.026	.220	.305
BLRT <i>p</i> -value	-	<.001	<.001	<.001	<.001	<.001	<.001
AvePP (Range)	-	.961-.984	.922-.980	.924-.957	.908-.957	.879-.952	.817-.978
OCC (Range)	-	25.177-60.191	29.883-156.694	21.656-142.249	22.191-243.010	19.731-218.131	18.434-1073.336
Prop of Incorrect Class (Range)	-	.000-.001	.003-.042	.009-.047	.018-.062	.013-.064	.007-.079
Number of classes <5%	0	0	0	0	0	0	1

Note. AIC = Akaike information criterion; BIC = Bayesian information criterion; SSBIC = sample size adjusted Bayesian information criterion; VLMR = Vuong-Lo-Mendell-Rubin test; BLRT = bootstrapped parametric likelihood ratio test. Ave PP = the average posterior probability, which is the probability an individual belongs to a trajectory group; OCC = the odds of correct classification; Prop of incorrect class = 1 - probability of group assignment divided by the actual proportion of individuals who fall into a group.

Table 3
Estimated Percentages, Parameter Estimates, and Model Fit for Six Subgroups of Couples' Work-Hour Trajectories

Trajectory group	Prop	Prob	Husband Intercept	Husband Linear	Wife Intercept	Wife Linear	Ave PP	OCC	Prop of incorrect classification (abs)
1) Dual full-time to retirement ($n = 397$)	.24	.23	44.90	-3.20	42.79	-3.10	.90	29.36	.04
2) Dual continuous workers ($n = 135$)	.08	.08	54.72	-1.26	44.24	-1.40	.95	218.13	.01
3) Dual part-time to retirement ($n = 191$)	.12	.12	12.35	-1.00	20.79	-1.53	.88	52.01	.05
4) Retiring husband/ continuous working wife ($n = 124$)	.08	.08	40.01	-2.98	39.00	-0.44	.94	164.46	.06
5) Retiring husband/ minimally working wife ($n = 617$)	.38	.37	39.04	-3.03	5.10	-0.40	.92	19.73	.02
6) Continuous working husband/ minimally working wife ($n = 177$)	.11	.11	52.51	-1.12	9.16	-0.64	.93	101.48	.04
			AIC = 182357.64	BIC = 182600.77			SSBIC = 182457.82		

Note. Prop = the actual proportion of individuals who fall into each group; Prob = the probability of group assignment or the estimated percentages; Ave PP = the average posterior probability, which is the probability an individual belongs to a trajectory group; OCC = the odds of correct classification; Prop of incorrect classification = 1 - probability of group assignment divided by the actual proportion of individuals who fall into a group; AIC = Akaike information criterion; BIC = Bayesian information criterion; SSBIC = sample size adjusted Bayesian information criterion.

Table 4
Multilevel Growth Curve Analysis Predicting Depressive Symptoms with Post-hoc Analysis

	Model 1		Model 1a		Model 2		Model 2a		Model 3		Model 3a	
	<i>b</i>	<i>S.E.</i>	<i>b</i>	<i>S.E.</i>	<i>b</i>	<i>S.E.</i>	<i>b</i>	<i>S.E.</i>	<i>b</i>	<i>S.E.</i>	<i>b</i>	<i>S.E.</i>
Intercept	H 1.525***	.113	1.445***	.111	1.233***	.082	1.246***	.080	1.080***	.104	1.088***	.102
	W 1.387***	.150	1.322***	.143	1.728***	.107	1.568***	.103	1.636***	.136	1.517***	.131
Time	H -.025***	.005	-.024***	.005	-.025***	.005	-.024***	.005	-.025***	.005	-.024***	.005
	W -.026***	.007	-.022***	.007	-.026***	.007	-.022***	.007	-.026***	.007	-.022***	.007
Dual full-time to retirement	H -.397***	.099	-.285***	.096	-.105	.064	-.086	.063	.048	.087	.072	.085
	W .040	.122	.031	.117	-.301***	.082	-.214**	.079	-.209	.109	-.164	.104
Dual continuous workers	H -.445***	.120	-.362***	.116	-.153	.095	-.163	.092	-.001	.110	-.005	.107
	W -.108	.128	-.089	.141	-.449***	.119	-.335**	.114	-.357**	.138	-.284*	.132
Dual part-time to retirement	H -.222	.117	-.168	.114	.071	.083	.030	.083	.223*	.106	.188	.104
	W .079	.142	.092	.136	-.262**	.100	-.154	.096	-.170	.127	-.103	.122
Retiring husband/continuous working wife	H --	--	--	--	.292**	.097	.199*	.094	.445***	.113	.357**	.110
	W --	--	--	--	--	-.341**	.122	-.245*	.117	-.249	.141	-.195
Retiring husband/minimally working wife	H -.292**	.097	-.199*	.094	--	--	--	--	.153	.083	.158	.082
	W .341**	.133	.122	.245*	.117	--	--	--	--	.092	.104	.050
Continuous working husband/ minimally working wife	H -.445***	.133	-.357***	.110	-.153	.083	-.158	.082	--	--	--	--
	W .249	.141	.195	.134	-.092	.104	-.050	.099	--	--	--	--
Functional limitations	H --	--	.285***	.018	--	--	.285***	.018	--	--	.285***	.018
	W --	--	.265***	.016	--	--	.265***	.016	--	--	.265***	.016

Note:

* $p < 0.05$,

** $p < 0.01$.

*** $p < .001$.

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Model 1 reference group is the retiring husband/continuous working wife trajectory subgroup. Model 2 reference group is the retiring husband/minimally working wife trajectory subgroup. Model 3 reference group is the continuous working husband/minimally working wife trajectory subgroup. Models controlled for age, race, education, household income, wealth, number of children, length of marriage, widower status, and self-rated health (-2 Log Likelihood = 74093.440, Change in -2 Log Likelihood from covariates only model = 19.325*). Models 1a, 2a, and 3a refer to posthoc analysis controlling for functional limitations.

Table 5
Separate Multivariate Logistic Regressions Predicting Couples' Work-Hour Trajectory Subgroup Membership

1998 Variables	Dual full-time to retirement (n = 397)		Dual continuous workers (n = 135)		Dual part-time to retirement (n = 191)		Retiring husband/continuous working wife (n = 124)		Retiring husband/minimally working wife (n = 617)		Continuous working husband/ minimally working wife (n = 177)	
	M (SD)	O.R.	M (SD)	O.R.	M (SD)	O.R.	M (SD)	O.R.	M (SD)	O.R.	M (SD)	O.R.
Age	H 58.71 (4.56)	.987	57.36 (4.73)	.913**	65.06 (6.48)	1.158***	58.33 (4.12)	1.034	61.84 (6.16)	.969*	58.97 (5.17)	.906***
	W 55.98 (3.71)	.914***	55.14 (3.95)	.930*	60.94 (5.91)	.956*	54.82 (3.34)	.848***	60.02 (6.25)	1.119***	57.45 (5.01)	1.046
Education	H 13.19 (2.76)	.973	13.75 (3.07)	.995	12.17 (3.15)	.961	13.28 (2.71)	.983	12.56 (3.33)	1.019	13.30 (3.44)	1.076*
	W 13.12 (2.62)	1.094**	13.76 (2.21)	1.132*	12.24 (2.92)	1.017	13.40 (2.58)	1.116*	12.08 (2.96)	.894***	12.52 (3.33)	.927*
White	H 87.15%	.901	86.67%	.643	89.53%	2.159	84.68%	.616	88.94%	1.133	89.27%	.821
	W 87.66%	1.119	87.41%	1.148	88.48%	.643	86.29%	1.427	88.65%	.911	89.83%	1.314
Children	3.42 (2.00)	1.085*	2.99 (1.61)	.976	3.51 (2.06)	1.006	2.98 (1.68)	.894	3.31 (2.01)	.953	3.59 (2.23)	1.111*
	29.65 (10.78)	1.000	28.90 (9.66)	.999	35.21 (12.29)	1.005	27.12 (10.79)	.976*	34.44 (10.98)	1.011	31.28 (10.78)	1.008
Household income	82400 (58140)	2.432***	127200 (347200)	1.287	61700 (60700)	.525**	77500 (54900)	1.154	75700 (86500)	.783	91300 (79100)	1.419
Wealth	285500 (467900)	.056***	568300 (1205000)	3.358	827600 (6263400)	1.814	228500 (277700)	.022**	483700 (1006100)	2.622*	436700 (702200)	1.724
χ^2	129.501***		161.246***		83.958***		38.234***		90.665***		131.792***	
Nagelkerke R^2	.114		.128		.117		.047		.131		.151	

Note.

* $p < 0.05$,

** $p < 0.01$.

*** $p < .001$.

O.R. = Odds Ratio.