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Authors

Coursolle, Kathryn M.
Sweeney, Megan M.
Raymo, James M.
et al.

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California Center for Population Research
University of California - Los Angeles

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Kathryn M. Coursolle
Megan M. Sweeney
James M. Raymo
Jeong-Hwa Ho

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THE ASSOCIATION BETWEEN RETIREMENT AND EMOTIONAL WELL-BEING: DOES PRIOR WORK-FAMILY CONFLICT MATTER?*

Kathryn M. Coursolle
Megan M. Sweeney
Department of Sociology
California Center for Population Research
University of California, Los Angeles

James M. Raymo
Jeong-Hwa Ho
Department of Sociology
Center for Demography and Ecology
University of Wisconsin - Madison

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Address correspondence to Kathryn M. Coursolle, Department of Sociology, University of California, 264 Haines Hall, 375 Portola Plaza, Los Angeles, CA 90095-1551, e-mail: Kcoursolle@ucla.edu.

Abstract

Objectives. This study investigates whether the association between retirement and emotional well-being depends on prior experience of work-family conflict.

Methods. We use data from the 1993 and 2004 waves of the Wisconsin Longitudinal Study to estimate linear regression models of emotional well-being, including symptoms of depression and positive psychological functioning. We also use fixed effects models to investigate whether key findings persist after controlling for stable but unobserved characteristics of individuals.

Results. Retirement is associated with a relatively greater reduction in depressive symptoms among individuals previously experiencing high levels of work stress interfering with family life. We find suggestive evidence of a similar improvement in well-being with respect to positive psychological functioning after accounting for unobserved characteristics of individuals such as personality or coping style. Among those previously exposed to high levels of family stress spilling into work at midlife, our results suggest that retirement tends to bring greater improvements in emotional well-being among men than women.

Discussion. Retirement may come more as a relief than a stressor for individuals previously experiencing high levels of work demands interfering with family life. However, particularly among women, retirement may not relieve the burdens of family life stressors.

Current demographic trends in the United States highlight the importance of understanding the association between retirement and well-being in later life. The aging baby boom cohorts will rapidly expand the elderly population in coming decades, with one in five Americans projected to be over age 65 by 2030 (U.S. Census Bureau, 2005). This, coupled with growth in average life expectancies, will dramatically increase the number of retirees and time spent in retirement. Yet existing research paints an inconsistent picture of the consequences of retirement for emotional well-being. Much also remains to be learned about how the experience of retirement may vary depending on the broader life context in which this transition occurs. Prior investigations of the emotional consequences of retirement consider both the conditions of pre-retirement employment (e.g. Alpass, Neville, & Flett, 2000) and the family context of retirement (e.g. Kim & Moen, 2002). Although a large body of research documents the importance of the interface between work and family life for the emotional well-being of individuals during early adulthood and midlife (e.g. Allen et al., 2000; Kossek & Ozeki, 1998), relatively little is known about whether and how prior exposure to work-family conflict may alter the subjective experience of retirement.

Using data from the Wisconsin Longitudinal Study, the current research investigates the association between retirement and two dimensions of emotional well-being: symptoms of depression and positive psychological functioning. In particular, we ask whether the association between retirement and emotional well-being is moderated by prior exposure to work-family conflict. We distinguish partial retirement from full retirement, rely on respondents' subjective reports of their own retirement status, and separately consider the potentially moderating influence of work stress interfering with family life (work-to-family conflict) and family stress interfering with work life (family-to-work conflict). Finally, we investigate the robustness of conventional regression results to the existence of unobserved factors such as aspects of personality or coping style that may be correlated with emotional well-being.

THEORY AND PREVIOUS RESEARCH

Theory makes competing predictions regarding the impact of retirement on psychological well-being. A role enhancement perspective suggests that multiple roles should be associated with relatively higher levels of emotional well-being because they provide individuals with more opportunities for power, prestige, resources, and emotional gratification (Moen, Robison, & Demster-McCain, 1995). Thus, retirement from a job which is central to an individual's identity may lead to reduced emotional well-being. Conversely, retirement may relieve strain associated with managing multiple role responsibilities and thus improve emotional well-being (Kim & Moen, 2002). Empirical investigations of the mental health effects of retirement have drawn similarly equivocal conclusions. In their influential Social Readjustment Rating Scale, Holmes and Rahe (1967) characterized retirement as among the ten most stress-producing events an individual can experience in life. Although some studies do detect higher levels of distress among retirees than non-retirees (e.g. Bosse et al., 1987), most find no effects, or only weak effects, of retirement on various indicators of mental health (Alpass, Melville, & Flett, 2000; George et al., 1984; Herzog et al., 1991; Lindeboom et al., 2002; Ross & Drentea, 1998; Warr et al., 2004; but see Reitzes et al., 1996).

Yet the explanatory power of existing research on the association between retirement and emotional well-being is limited in a number of important respects. For example, prior studies frequently rely on cross-sectional designs, on small non-probability samples, or focus on retirement only among men. Many prior studies also treat retirement as a binary state, although individuals often "partially" retire either through reductions in work hours or movement into "bridge" jobs before exiting the labor force altogether. Furthermore, little effort has been made to investigate whether and how unmeasured factors (such as unobserved aspects of personality or coping style)

potentially bias estimates of the effect of retirement on emotional well-being (but see Lindeboom et al., 2002).

There is also substantial reason to believe that the consequences of retirement vary depending on the circumstances surrounding this major life transition (e.g. Kim & Moen, 2001, 2002; Wheaton, 1990). For example, prior work indicates that marital status and characteristics of the pre-retirement job are associated with retirement adjustment (e.g. Alpass, Neville, & Flett, 2000; Calasanti, 1996; George et al., 1984; Mein et al., 2003; Reitzes et al., 1996; Wheaton, 1990). Although the perceived ease or difficulty of balancing work and family demands is associated with well-being in earlier periods of career life (Allen et al., 2000; Kossek & Ozeki, 1998), little is known about whether and how the nature of the work-family interface alters the experience of retirement. This omission is surprising given well-documented interdependencies between work and family life and the reciprocal influence of close family members in shaping the outcomes of important life course transitions (Elder, 1994).

Work-Family Conflict and Retirement

Work-family conflict arises when the demands of work and family roles interfere with one another and are perceived as being incompatible in some respect (Greenhaus & Beutell, 1985). There are a number of reasons to expect work-family conflict to influence the association between retirement and emotional well-being. For example, work-family conflict is associated with important psychological well-being outcomes such as anxiety, depression, irritability, low self-worth, fatigue, and alcohol use (for a review, see Allen et al., 2000). In addition, work-family conflict is associated with preferences for earlier retirement (Raymo & Sweeney, 2006). Common correlates of work-family conflict originating from employment demands (work-to-family conflict) include non-standard or inflexible work schedules, job stress, lack of autonomy on the job, and time pressure at

work. Correlates of work-family conflict originating from demands of family roles (family-to-work conflict) include long hours spent on housework, childcare, or care-giving, and low marital quality or high marital conflict (see Byron, 2005 for a review). The extent to which a given set of work and family demands are perceived as being incompatible, however, may vary across individuals and is likely related to factors such as personality characteristics and coping styles (MacDermid, 2005), which are often unmeasured in survey data.

We expect retirement to be associated with relatively better emotional outcomes for individuals experiencing high levels of work-to-family conflict because work-based sources of stress should be ameliorated after retirement. Retirement for this group should be perceived as more of a relief than a stressor. However, the implications of family-to-work conflict for post-retirement well-being are more ambiguous. Before retirement such individuals may have immersed themselves in their work as a haven from a stressful home environment (Hochschild, 1997), and the demands associated with housework, care-giving, or marital problems may persist after leaving the labor force. Women may feel disproportionately responsible for home-based demands and are also more likely than men to have friends (and thus social support) at work (Hochschild, 1997). Although retirement should relieve the active struggle to balance work and family life, it may also eliminate an outlet for coping with stress originating within the family or increase exposure to family-based stressors.

METHODS

Sample

The Wisconsin Longitudinal Study (WLS) is a long-term cohort study of 10,317 randomly selected Wisconsin high school graduates from the class of 1957. The graduates were interviewed in 1957, 1975, 1993, and most recently in 2004. Our analysis relies on data from the 1993 and 2004

waves of the study, both of which included a phone interview and a mail questionnaire. In 1993, the response rates were 80% for the phone interview and 70% for the mail questionnaire and in 2004 these rates were 81% and 78%, respectively. The WLS data are particularly well suited for our research purposes because respondents were at prime retirement ages in 2004 (between 64 and 65 years old) and the data include a rich variety of measures of psychological well-being, retirement status, work-family conflict, and relevant control variables assessed at multiple points in time. The longitudinal design of the WLS permits an investigation of the association between retirement transitions and psychological well-being, while controlling for pre-retirement levels of emotional well-being and assessments of work-family conflict. Although the WLS is a highly suitable data source for our analysis, it is important to note that all respondents are high school graduates and most are white and reside in or near the state of Wisconsin. Thus, results may not be generalizable to the entire population of similarly aged Americans.

We impose several restrictions on our analytic sample. First, we limit the sample to those 5,528 respondents who completed both the telephone and mail components of the 1993 and 2004 waves of the WLS. We next limit the sample to those with valid responses for both 1993 and 2004 retirement items (5,281 cases), who had not yet retired as of the 1993 interview (4,642 cases), and who were continuously married between 1993 and 2004 (3,505 cases). Most cases lost due to the latter restriction were not married as of 1993. Of the respondents who were married in 1993, 7% became widowed, and only 3% divorced or separated, by 2004 (authors' tabulations). Finally, we limit the sample to cases with no missing data on any of our independent variables or on the dependent variable for each of our two domains of emotional well-being. Because of differing patterns of missing data on our two dependent variables, this leaves a total of 2,666 individuals for the analysis of depressive symptoms and 2,855 individuals for the analysis of positive psychological functioning.

Measures

Outcomes — As emotional well-being is multifaceted and reflects more than the absence of distress, we rely on two distinct indicators of this concept. Our first measure is the Center for Epidemiologic Studies Depression scale (CES-D) (Radloff, 1977). The CES-D scale is suitable for use with the general population and has high reliability and validity (Radloff, 1977). The CES-D is composed of 20 items asking respondents to report how many days in the past week he or she experienced a particular depressive symptom. In order to achieve a high degree of comparability to other studies, the scale was constructed by grouping the number of times during the past week that a particular symptom was experienced into categories of "0 days," "1-2 days," "3-4 days," and "5-7 days." The responses were then summed over the twenty items and individuals were classified as having missing data on the entire scale if more than four items were missing (Radloff, 1977). Respondents tended to report a greater number of depressive symptoms in 1993 than in 2004, with sample averages of 9.1 and 7.3, in 1993 and 2004, respectively (see Table 1). Because some evidence suggests that men and women tend to express distress differently, with women more likely to experience symptoms of depression and men more likely to experience alcohol problems (Horwitz et al., 1996), we also investigated binge drinking behavior as an alternate indicator of distress in preliminary analyses. As results for binge drinking were largely consistent with findings for depressive symptoms (available upon request), we do not present these results here.

Our second outcome is a modified version of Ryff's (1989) scale of psychological well-being, designed and extensively used to assess positive psychological functioning. The questions composing the scale ask individuals to indicate the extent to which they agree or disagree with statements pertaining to levels of self-acceptance, positive relations with others, autonomy, environmental mastery, purpose in life, and personal growth. Because disagreement exists as to whether the full scale is composed of six substantially independent factors (Ryff & Singer, 2006;

Springer & Hauser, 2006), we combine all items into a global index of positive psychological functioning as suggested by Springer, Hauser, and Freese (2006). Individuals are coded as missing on the entire scale if they have one or more missing responses to any of the composite items. After reverse coding appropriate items, we construct the scale by summing together total scores for the 20 items which appeared on the WLS mail instrument in both 1993 and 2004. A higher score on the scale indicates relatively better positive psychological functioning. The sample mean positive psychological functioning scores were 99.5 and 95.1 in 1993 and 2004, respectively (see Table 1).

Retirement and work-family conflict — Our analysis relies on a key independent variable – whether the respondent was retired as of the 2004 interview. It is important to note, however, that retirement is not a binary process. Many individuals transition into "partial" retirement before leaving the labor force altogether. Scholars argue that partial retirement is conceptually different than a full exit from the labor force (Quinn & Burkhauser, 1994) and individuals who partially retire may be different than individuals who transition to complete retirement (Mutchler et al., 1997). It is further important to keep in mind that two individuals may report different retirement states even when working the same number of hours. For example, an individual may reduce his or her hours of work, leave a main job, or reduce the level of effort put into a job before leaving the labor force altogether (Gustman & Steinmeier, 2000). In this research, we assume that an individual's *perceived* retirement status is most meaningful for understanding emotional adjustment to retirement (see Sweeney and Horwitz (2001) for a similar argument regarding the emotional consequences of spousal infidelity). In light of these issues, our measure of retirement is based on a question that allows respondents to distinguish between subjective perceptions of full and partial retirement: "At this time do you consider yourself partly retired, completely retired, or not retired at all?" There was wide variation in retirement status in 2004, with 25% percent of those employed in 1993 reporting

being not at all retired, 24% being partially retired, and 51% reporting being fully retired (see Table 1).

We construct two measures of work-family conflict for the current analysis, one focusing on the extent to which work demands interfere with family life (work-to-family conflict) and the other focusing on the extent to which family demands interfere with work life (family-to-work conflict). These indices are each based on three composite items which are summed together and standardized to a mean of zero and standard deviation of one. Individuals were considered missing for each index if they were missing on one or more of the individual items. The correlation between our two measures of work-family conflict is 0.36. More detailed information on the construction of these variables is provided in Table 1.

Control variables —We next construct a series of measures related to other aspects of the family and work environments. Marital context controls include two binary measures of marital closeness and shared outlook on life between spouses. We also construct a series of other family context variables, including whether the respondent was ever previously divorced or widowed, the duration of the current marriage, spousal employment status, spousal health status, care-giving responsibilities, and whether children were living in the household. Potentially stressful familial conditions might be related to retirement, post-retirement emotional well-being, or work-family conflict. For example, there is evidence that couples attempt to coordinate the timing of their retirement (Henretta et al., 1993), males seem to have lower emotional well-being after retirement when their wives are still employed (Moen et al., 2001), and poor marital quality is positively related to work-family conflict (Frone et al., 1992). Measures of family context are drawn mainly from the 1993 interview (see Table 1). We further control for a variety of 1993 employment characteristics, including whether the respondent generally worked long hours, the respondent's class of worker (government, self-employed, or other), whether the respondent's primary job required intense

concentration, exposed the respondent to dangerous conditions, or required work under time pressure, respondent's general job satisfaction, and availability of pension plans or health insurance through one's employer.

Finally, we construct a series of control variables known to be associated with retirement or post-retirement adjustment. These include gender, wages, assets, physical health, and educational attainment. Higher wages and assets may lead to an ability to retire earlier (Dwyer & Mitchell, 1999) and greater psychological well-being, but also greater income losses after retirement. Poor physical health is generally negatively correlated with mental health and individuals in poor health might be more likely to transition to retirement (e.g. Dwyer & Mitchell, 1999). Higher levels of education tend to be positively associated with emotional well-being (e.g. Herzog et al., 1998), but higher education may prolong labor force participation and working in the government sector may curtail labor force participation (Gower, 1997; Hayward et al., 1989). Detailed variable descriptions and descriptive statistics for our full array of variables are presented in Table 1.

Methods

In the first stage of the analysis we investigate the association between retirement and emotional well-being by estimating a set of linear regression models. Specifically, for each of our two outcome measures, we examine change in emotional well-being by regressing well-being in 2004 on a parallel measure of well-being in 1993 (depressive symptomatology or positive psychological functioning), retirement status, work-family conflict, and our previously described set of control variables. Because our key interest lies in the potentially moderating effect of work-family conflict on the association between retirement and well-being, we also include an interaction between retirement status and conflict. When comparing results across our two outcomes, it is important to keep in mind that a higher score on the Ryff positive psychological functioning index

indicates relatively better emotional well-being, whereas a higher CES-D score indicates relatively more distress and thus relatively lower emotional well-being. Finally, to investigate whether moderating effects of work-family conflict differ by sex, we estimate a set of supplementary models which include the full set of two-way and three-way interactions among variables for sex, work-family conflict, and retirement status.

Individuals with certain types of background or personality characteristics may be more likely to retire early than others, and these same characteristics may also be related to emotional well-being. If such characteristics are unmeasured, our conventional regression estimates may be biased. To address this concern, we estimate a set of fixed effects models in the second stage of the analysis. The underlying logic here is to investigate whether a potentially modifying effect of work-family conflict on the association between retirement and well-being persists after controlling for stable but unobserved characteristics of individuals. Specifically, we use ordinary least squares to regress change in emotional well-being score between 1993 and 2004 on change in retirement status and change in key time-varying control measures, including whether the respondent or his/her spouse experienced a decline in health between 1993 and 2004, whether the spouse's labor force status changed during this period, whether the respondent experienced a change in care-giving responsibilities or child co-residence status, and change in the respondent's reported wealth between the two survey waves (in 1993 dollars). All variables which are fixed over time effectively drop out of the model, such as pre-retirement family and job characteristics and stable unobserved characteristics of individuals. Importantly, fixed effects models allow unbiased estimates of covariate effects even when unobserved time-constant factors are correlated with the explanatory variables of interest. For a more detailed description of fixed effects methods, see Allison (2005).

RESULTS

Stage 1: Linear Regression Models

In the first stage of our research, we use linear and logistic regression to investigate the association between retirement and emotional well-being. For each outcome, we regress well-being (assessed in 2004) on prior well-being (assessed in 1993), retirement status, work-family conflict, an interaction term between work-family conflict and retirement, and our series of control variables. Because our work-family conflict measures are standardized to have a mean of zero, the "main" effects of partial and full retirement reflect estimated effects for individuals who experienced average levels of work-family conflict.

Depressive Symptoms

We begin by considering symptoms of depression, as displayed in the first column of Table 2. Not surprisingly, depressive symptomatology in 1993 is positively associated with depressive symptomatology in 2004, net of retirement status, work-family conflict, and our set of control variables. For individuals experiencing average levels of work-family conflict in 1993, being fully retired rather than not at all retired in 2004 is associated with a significant .8-point reduction in CES-D score, net of other variables in the model. Although partial retirement is also associated with a .4-point reduction in depressive symptoms, this coefficient is not significantly different than zero, net of other variables in the model. The interaction between work-family conflict variables and retirement tests whether the association between retirement and depressive symptoms is modified by prior exposure to work-family conflict at midlife. In short, we see evidence of such an effect with respect to prior levels of work stress interfering with family life (work-to-family conflict), and reject the null hypothesis that the two coefficients associated with the interaction between work-to-family conflict and retirement are jointly equal to zero [$F(2, 2628) = 7.26$, $p<.001$]. For those experiencing

levels of work-to-family conflict one standard deviation above the mean, partial retirement is associated with a 1.6-point reduction in CES-D score, and full retirement is associated with a 1.7-point reduction in CES-D score (versus .4-point and .8 point reductions, respectively, for partial and full retirement among those with average levels of work-to-family conflict). No similar modifying effect is observed with respect to prior levels of family-to-work conflict [$F(2, 2628) = 0.77$, $p = .46$]. These results are displayed graphically in Figure 1.

We next ask whether sex differences exist in the moderating effect of work-family conflict on the association between retirement and depressive symptoms. As previously described, we add to the models presented in Table 2 the set of two-way interactions of sex with retirement status and work-family conflict, as well as the three-way interaction between sex, retirement status, and work-family conflict (detailed results not shown). An F-test indicates that adding the full set of sex interactions significantly improve the overall fit of our model [$F(8, 2620) = 2.34$, $p = .02$]. As shown in Figure 2, we see a relatively larger emotional benefit associated with retirement among both men and women who previously experienced high levels of work-to-family conflict (defined as one standard deviation above the mean) than among those with average levels of work-family conflict. Results differ somewhat with respect to family-to-work conflict, however. Among men who previously reported high family-to-work conflict, we see relatively lower levels of depressive symptoms among those who retired than among those who had not. The reverse relationship holds for women, however. In other words, among individuals who experienced high levels of family stress spilling over into work at midlife, retirement does not appear to bring the same benefit for women as for men. Supplementary F-tests (not shown) indicate that coefficients for sex interactions involving family-to-work conflict are statistically meaningful [$F(3, 2620) = 4.72$, $p < .01$)] whereas those involving work-to-family conflict are not [$F(3, 2620) = .89$, $p = .44$)].

Positive Psychological Functioning

We next turn to our analysis of positive psychological functioning, with results displayed in the second column of Table 2. We first note a positive association between positive psychological functioning in 1993 and 2004, but do not find a significant association between partial or full retirement and positive functioning among individuals with average levels of work-family conflict. We next consider whether the nature of the association between retirement and positive psychological functioning in 2004 varies depending on prior exposure to work-family conflict. Unlike findings for depressive symptoms, we find no significant interactions between retirement and work-to-family conflict [$F(2, 2817) = 2.59$, $p = .08$] or family-to-work conflict [$F(2, 2817) = 1.55$, $p = .21$] in the case of positive functioning. Finally, F-tests indicate that the additional set of two-way and three-way interactions between sex, retirement status, work-family conflict do not significantly improve the fit of the model in the case of positive psychological functioning [$F(8, 2809) = 1.43$, $p = .18$]. In other words, at this stage of the analysis our key results for positive psychological functioning appear to be largely similar for men and women.

Stage 2: Fixed Effects Models

Results described thus far suggest that the effects of retirement on emotional well-being tend to vary depending on one's prior level of work-to-family conflict – at least with respect to depressive symptomatology. Yet it is possible that these results may be confounded by personality characteristics or other unobserved factors associated with emotional well-being. To examine if our previous findings are robust to bias from such omitted variables, we next estimate a set of fixed effects models. As previously described, these models regress change in emotional well-being between 1993 and 2004 on indicators of whether a respondent partially or fully retired between waves and measures of change in previously described control variables. To allow the effect of

retirement to vary by level of work-family conflict, we include interactions between work-family conflict and retirement. We initially estimate these models for the pooled sample of men and women and then explore models estimated separately by sex.

Depressive Symptoms

We first consider fixed effects model results for depressive symptomatology, as shown in the first panel of Table 3. Results adjusting for unobserved factors which are fixed over time generally confirm key conclusions from the first stage of the analysis. For example, we find that transitioning to full retirement is associated with a significant decrease in CES-D score among individuals previously experiencing average levels of work-family conflict, holding constant key time-varying control measures and background characteristics that remain fixed over time. We also confirm evidence of a moderating effect of work-to-family conflict on the association between retirement and depressive symptomatology [$F(2, 2653) = 22.45$, $p<.001$]. For example, transitioning to full retirement by 2004 is associated with an almost two-point reduction in CES-D score among individuals who previously experienced levels of work-to-family conflict one standard deviation above the mean, compared to a roughly one-point reduction in CES-D score among otherwise similar individuals who experienced average levels of work-to-family conflict. We see only weak evidence of a moderating effect of family-to-work conflict on the association between retirement and emotional well-being in the case of depressive symptomatology [$F(2, 2653) = 2.3$, $p=.10$]. Again, this is largely consistent with our OLS results from the first stage of the analysis.

To further explore potential gender differences in the modifying effects of work-family conflict on the association between retirement and depressive symptoms, we next estimate the previously described fixed effects models separately for men and for women. In short, these results provide suggestive evidence of intriguing differences between men and women. Among men

exposed to average levels of work-family conflict at midlife, we notice a significant reduction in depressive symptomatology associated with both partial and full retirement. As observed for the full sample, the magnitude of this apparent emotional benefit of retirement is greater among men previously experiencing high work-to-family conflict at midlife than among those with relatively less work-stress spilling over into family [$F(2, 1458) = 10.1$, $p<.001$]. But unlike results for the full sample, the findings from these gender-specific models also point to an enhanced emotional benefit of retirement among men previously experiencing high levels of family-to-work conflict [$F(2, 1458) = 6.1$, $p<.01$].

Findings differ somewhat among women. As with men, we find retirement to be associated with a greater decrease in depressive symptoms among women previously exposed to high levels of work-to-family conflict (i.e. one standard deviation above the mean) than among those experiencing average levels of work-to-family conflict [$F(2, 1182) = 12.0$, $p<.001$]. We do not, however, find a similar boost in the emotional benefit associated with retirement among women previously exposed to high family-to-work conflict (versus those previously exposed to average levels of family-to-work conflict) [$F(2, 1182) = .43$, $p=.65$]. Again, as suggested by our conventional regression models, retirement does not appear bring the same reduction in depressive symptoms for women as for men among individuals who experienced high levels of family stress spilling over into work at midlife.

Positive Psychological Functioning

We next consider fixed effects regression results for positive psychological functioning, as shown in the right half of Table 3. Consistent with the previously described OLS models, our fixed effects results suggest no meaningful association between retirement and positive functioning among individuals previously experiencing average levels of work-family conflict. Unlike our previous set of results, however, moderating influences of work-to-family conflict on the association between

retirement and positive well-being emerge after adjusting for unobserved characteristics of individuals which are fixed over time. For example, among individuals experiencing average levels of work-to-family conflict at midlife, our results point to a (statistically insignificant) .28-point increase in positive well-being score associated with transitioning to partial retirement. Yet among individuals with levels of work-to-family conflict one standard deviation above the mean, our results suggest that transitioning to partial retirement is associated with a 1.7-point increase in positive well-being score. Our results indicate that we should reject the null hypothesis that the two coefficients composing the interaction between work-to-family conflict and retirement are jointly equal to zero [$F(2, 2842) = 7.07$, $p < .001$]. The fixed effects results also point to a similar, although somewhat smaller, moderating effect of family-to-work conflict on the association between full retirement and positive functioning after controlling for unobserved background characteristics that are fixed over time [$F(2, 2842) = 5.74$, $p < .01$].

Finally, we consider sex-specific findings for positive psychological functioning. These results again point to intriguing gender differences in the association between retirement and well-being. Turning first to our results for men, we do not find a significant moderating effect of work-to-family conflict on the association between retirement and well-being [$F(2, 1557) = 1.3$, $p=.27$]. We do, however, find some evidence of a moderating effect of *family-to-work* conflict on this association [$F(2, 1557) = 4.12$, $p<.05$]. Specifically, men previously exposed to high levels of family-to-work conflict tend to experience a greater increase in positive well-being upon retirement than do men exposed to relatively lower levels of family-to-work conflict. Although we do find evidence of a relatively greater improvement in positive psychological functioning following retirement among women previously exposed to high levels of work-to-family conflict than among those exposed to relatively lower levels of such conflict [$F(2, 1272) = 7.27$, $p<.001$], we find only weak evidence of a moderating effect associated with prior exposure to family-to-work conflict [F(2,

1182) = 12.0, p = .07]. Again, among individuals experiencing high levels of family stress spilling over into work at midlife, our results point more strongly to an emotional benefit of retirement among men than among women.

DISCUSSION

This study asks whether the emotional consequences of retirement depend on one's prior exposure to work-family conflict. Although our findings vary across measures of emotional well-being, we do find evidence of such moderating effects. For example, we find that respondents who previously experienced high levels work-to-family conflict tend to show the best post-retirement outcomes with respect to depressive symptoms. From a role strain perspective, these results suggest that retirement may tend to alleviate stress associated with managing incompatibilities between work and family roles. However, our findings also indicate that retirement may not similarly reduce stress originating from within the family, at least for women. From a role enhancement perspective, this suggests that retirement may lead to the loss of a valued role, especially if individuals with high family-to-work conflict were immersing themselves in employment responsibilities or seeking social support at work due to stress at home.

Fixed effects models provide additional support for these findings and suggest that variation in the nature of the retirement – emotional well-being relationship is not attributable to unobserved personality traits or other characteristics that remain stable over time with respect to depressive symptoms. Once we adjust for such unobserved variables, suggestive evidence of a modifying effect of work-family conflict also emerges in the case of positive psychological well-being. These results may reflect important unobserved personality or coping style differences related to positive psychological functioning. For example, research shows that individuals who are good at time

management or are goal-directed perceive lower levels of work-family conflict (Adams & Jex, 1999).

Our results also point to meaningful gender differences in the relationship between retirement and emotional well-being. Among individuals previously experiencing high levels of family stress spilling over into work, retirement does not appear to bring the same emotional benefit for women as for men. Although retirement may relieve work-based stress, family-based stressors may persist after retirement and appear to be especially burdensome for women, who may feel disproportionately responsible for obligations at home. Spending additional time within the household may exacerbate home-based stress, disrupt domestic routines, or reduce social support from work-based friends. Since men may feel less responsible for home-based responsibilities, retirement may be more likely to relieve family-based stressors such as wives who wanted their husbands to spend more time at home or with other family members.

Although our study highlights the importance of work-family conflict for understanding the relationship between retirement and emotional well-being, it also suggests the considerable need for further research. For example, future studies should explore whether gender differences exist in the nature of family-based stressors or in the extent to which retirement decisions are influenced by various types of stressors. It is also important to consider other aspects of the context in which retirement occurs, (e.g. whether retirement was voluntary or involuntary), and whether specific aspects of personality or coping style may jointly contribute to well-being, perceptions of work-family conflict, and/or retirement timing. Finally, a growing body of research considers the ways in which work and family roles may enhance one another. Future work should also explore the association between subjective perceptions of work-family enhancement at midlife and emotional adjustment to retirement.

In conclusion, although much prior work documents a "balancing act" between work and family responsibilities during the early and middle life course, our study points to the continued importance of these issues in later life. We identify important variability in emotional adjustment to retirement based on prior exposure to work-family conflict in a large cohort currently in the midst of the retirement process. In many ways, however, WLS respondents represent only the leading edge of contemporary shifts in the work-family nexus, with employment and family roles that are less gender-segregated than their parents but more so than their adult children. It will be important to understand how the work-family interface may differently influence emotional adjustment to retirement for future retirees, particularly as the large baby boom cohorts retire against a backdrop of unique efforts to combine work and family responsibilities.

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Table 1. Descriptive Statistics and Variable Descriptions: 1993 and 2004 Wisconsin Longitudinal Study

Variable	*M*	*SD*	Description
Psychological well-being			
Depressive symptoms (2004)	7.3	6.8	Score on Center for Epidemiologic Studies Depression (CES-D) scale. Based on self-reported frequency of 20 symptoms of depression (e.g. felt sad, felt lonely, slept restlessly) experienced during the past week. Sample range = 0 (fewest depressive symptoms) to 49 (most depressive symptoms), α = 0.86.
Depressive symptoms (1993)	9.1	7.4	Score on Center for Epidemiologic Studies Depression (CES-D) scale. Based on self-reported frequency of 20 symptoms of depression (e.g. felt sad, felt lonely, slept restlessly) experienced during the past week. Sample range = 0 (fewest depressive symptoms) to 55 (most depressive symptoms), α = 0.86.
Positive psychological functioning (2004)	95.1	12.3	Score on abridged version of Ryff's positive well-being scale. Based on 20 questions assessing self-acceptance, relations with others, autonomy, environmental mastery, purpose in life, and personal growth. Range = 46 (lowest positive well-being) to 120 (highest positive well-being) α = 0.81.
Positive psychological functioning (1993)	99.5	12.3	Score on abridged version of Ryff's positive well-being scale. Based on 20 questions assessing self-acceptance, relations with others, autonomy, environmental mastery, purpose in life, and personal growth. Range = 34 (lowest positive well-being) to 120 (highest positive well-being) α = 0.89.
Retirement status (2004)			
Not at all retired	0.25		Based on responses to the following question: “At this time do you consider yourself partly retired, completely retired, or not retired at all?”
Partially retired	0.24		
Fully retired	0.51		
Work-Family Conflict (1993)			
Work interfering with family	0.01	0.98	Scale constructed by summing responses to three items asking respondents the extent to which they agree or disagree with the following: "My job reduces the amount of time I can spend with my family"; "Problems at work make me irritable at home"; and My job takes so much energy I don't feel up to doing things that need attention at home." Variable standardized with a mean equal to zero and a standard deviation equal to one based on full WLS sample, α = 0.58.
Family interfering with work	-0.02	0.97	Scale constructed by summing responses to three items asking respondents the extent to which they agree or disagree with the following: "Family matters reduce the time I can devote to my job"; Family worries or problems distract me from my work"; and "Family activities stop me from getting the amount of sleep I need to do my job well." Variable standardized with a mean equal to zero and a standard deviation equal to one based on full WLS sample, α = 0.62.
Other family characteristics			
Shares "very similar" life outlook with spouse (1993)	0.56		Based on response to the following question: "In terms of your outlook on life, would you say you and your (husband / wife) share very similar views, somewhat similar views, not very similar views, or not at all similar views?" Coded 1 if the respondent reports "very similar" views; 0 otherwise.
"Very close" to spouse (1993)	0.82		Based on response to the following question: "How close would you say you are to your (husband/wife)? Would you say you are very close, somewhat close, not very close, or not at all close?" Coded 1 if the respondent reports being "very close"; 0 otherwise.
Ever divorced or widowed (2004)	0.16		Coded 1 if the respondent was ever divorced or widowed; 0 otherwise.
Duration of current marriage (2004)	27.4	8.2	Total number of years respondent married to his/her current spouse.

(Continued)

Table 1. (Continued)

Spouse's labor force status (1993-2004)			Based on responses to the following questions in 1993 and 2004: "What is the labor force activity of your current spouse?" Valid responses were "currently working" and "not currently working."
Employed in 1993 and 2004	0.39		
NOT employed in 1993 or 2004	0.16		
Employed in 1993 but NOT in 2004	0.45		
Spouse in poor health (1993)	0.08		Coded 1 if respondent reported his/her spouse's health was very poor, poor, or fair health; 0 if good or excellent.
Spousal health declined from 1993 to 2004	0.33		Coded 1 if respondent reported his/her spouse's health was poorer in 2004 than 1993; 0 otherwise.
Respondent provided care in last 12 months (1993)	0.11		Coded 1 if respondent provided a care giving role to a friend or family member; 0 otherwise.
Respondent provided care in last 12 months (2004)	0.05		Coded 1 if respondent provided a care giving role to a friend or family member; 0 otherwise.
Child(ren) were living with the respondent (1993)	0.40		Coded 1 if respondent's child(ren) were living with the respondent in 1993; 0 otherwise.
Child(ren) were living with the respondent (2004)	0.09		Coded 1 if respondent's child(ren) were living with the respondent in 1993; 0 otherwise.
Characteristics of current/last job (1993)			
Worked 50+ hours per week	0.28		Coded 1 if respondent worked 50 or more hours per week at his or her primary job in 1993; 0 otherwise.
Class of worker			
Government worker	0.24		Respondent's class of worker at his or her primary job in 1993.
Self-employed	0.04		
Other	0.72		
Job required intense concentration	0.42		Coded 1 if respondent's primary job always required intense concentration or attention in 1993; 0 otherwise.
Exposed to dangerous conditions at job	0.32		Coded 1 if respondent's primary job required exposure to dangerous conditions in 1993; 0 otherwise.
Job required work under time pressure	0.30		Coded 1 if respondent's primary job always required work under time pressure in 1993; 0 otherwise.
Very satisfied or fairly satisfied with job	0.94		Coded 1 if respondent felt "very satisfied" or "fairly satisfied" with his or her primary job in 1993; 0 if the respondent felt "somewhat dissatisfied" or "very dissatisfied."
Log hourly wage	2.5	0.86	Base log hourly wages in 1993 U.S. dollars. Those reporting $0 were assigned a value of $1.
Employer offered a pension plan	0.71		Coded 1 if the respondent's 1993 employer offered a pension plan; 0 otherwise.
Employer offered health insurance	0.78		Coded 1 if the respondent's 1993 employer offered a health insurance plan; 0 otherwise.
Background characteristics			
Respondent is female	0.45		Coded 1 if the respondent is female; 0 if the respondent is male.
Log total net worth (1993)	11.9	2.3	Respondent's total assets in log 1993 U.S. dollars. Those reporting $0 were given a value of $1.
Poor self-rated physical health (1993)	0.08		Coded 1 if the respondent's self-rated health was "very poor," "poor," or "fair;" 0 if "good" or "excellent."
Physical health declined from 1993 to 2004	0.23		Coded 1 if the respondent's self-rated health was worse in 2004 compared to 1993; 0 if the same or better.
Education (2004)			
High school graduate	0.45		Education categories based on respondent's most recent degree.
Some college	0.19		
College degree or more	0.36		

Note. Descriptive statistics presented for the 2,518 cases with no missing data on the complete set of independent variables and our two outcome measures.

Table 2. Coefficients from Ordinary Least Squares Regression of 2004 Depressive Symptoms and Positive Psychological Well-Being on Retirement Status, Prior Work-Family Conflict, and Control Variables: 1993 and 2004 Wisconsin Longitudinal Study

Dependent Variable	CES-D (2004)		Positive Functioning (2004)	
Independent Variables	Coeff.	(SE)	Coeff.	(SE)
Baseline well-being (1993)†	0.48 ***	(0.02)	0.63 ***	(0.02)
Retirement status (in 2004)				
Not at all retired	----	----	----	----
Partially retired	-0.40	(0.30)	0.65	(0.49)
Fully retired	-0.77 **	(0.28)	0.42	(0.45)
Work-Family Conflict (in 1993)				
Work interfering with family	0.76 **	(0.24)	-0.39	(0.39)
Family interfering with work	0.29	(0.24)	0.05	(0.37)
Partially retired X				
Work interfering with family	-1.19 ***	(0.33)	0.87	(0.53)
Family interfering with work	0.34	(0.33)	-0.78	(0.53)
Fully retired X				
Work interfering with family	-0.91 **	(0.29)	-0.14	(0.46)
Family interfering with work	0.33	(0.29)	-0.02	(0.46)
Other family characteristics				
Feels very close to spouse	-0.53	(0.31)	1.17 *	(0.48)
Very similar outlook in life with spouse	-0.53 *	(0.24)	0.73	(0.38)
Duration of current marriage	-0.01	(0.02)	0.03	(0.04)
Ever divorced or widowed	0.35	(0.49)	0.42	(0.80)
Spouse's labor force status (1993-2004)				
Employed in 2004 and 1993	----	----	----	----
NOT employed in 2004 or 1993	0.56	(0.33)	-0.37	(0.53)
Employed in 1993 and NOT in 2004	0.12	(0.25)	0.37	(0.40)
Spouse in poor health (in 1993)	0.20	(0.41)	-0.46	(0.66)
Spousal health declined from 1993 to 2004	0.22	(0.23)	-0.55	(0.37)
Provided care in last 12 months (1993)	-0.24	(0.34)	0.70	(0.55)
Provided care in last 12 months (2004)	0.69	(0.47)	-0.18	(0.76)
Child(ren) living in household (1993)	-0.55 *	(0.23)	0.37	(0.36)
Child(ren) living in household (2004)	0.37	(0.39)	-0.40	(0.63)
Characteristics of current/last job (in 1993)				
Worked 50+ hours per week	-0.32	(0.27)	1.22 **	(0.43)
Class of worker				
Government worker	0.18	(0.27)	0.54	(0.43)
Self-employed	-0.38	(0.55)	2.98 ***	(0.85)
Job always required intense concentration	-0.16	(0.23)	0.51	(0.37)
Worker exposed to dangerous conditions	0.50 *	(0.24)	-0.03	(0.37)
Always under time pressure at job	-0.15	(0.25)	0.42	(0.39)
Very or fairly satisfied with job	-0.16	(0.44)	-0.23	(0.69)
Log hourly wage	-0.01	(0.15)	0.51 *	(0.24)
Employer offered pension plan	-0.46	(0.32)	-0.54	(0.52)
Health insurance from employer	0.13	(0.35)	0.11	(0.55)
Background characteristics				
Female	0.64 *	(0.26)	1.31 **	(0.42)
Net worth	-0.10 *	(0.05)	0.07	(0.08)
Poor self-rated physical health (in 1993)	1.98 ***	(0.41)	-2.75 ***	(0.62)
Health declined from 1993 to 2004	1.23 ***	(0.25)	-2.07 ***	(0.41)
Educational attainment (vs. high school)				
Some college	-0.26	(0.29)	0.90	(0.47)
College degree or more	-0.31	(0.27)	2.09 ***	(0.43)
Intercept	5.32 ***	(1.08)	26.41 ***	(2.13)
R-Squared	0.37		0.48	
N	2,666		2,855	

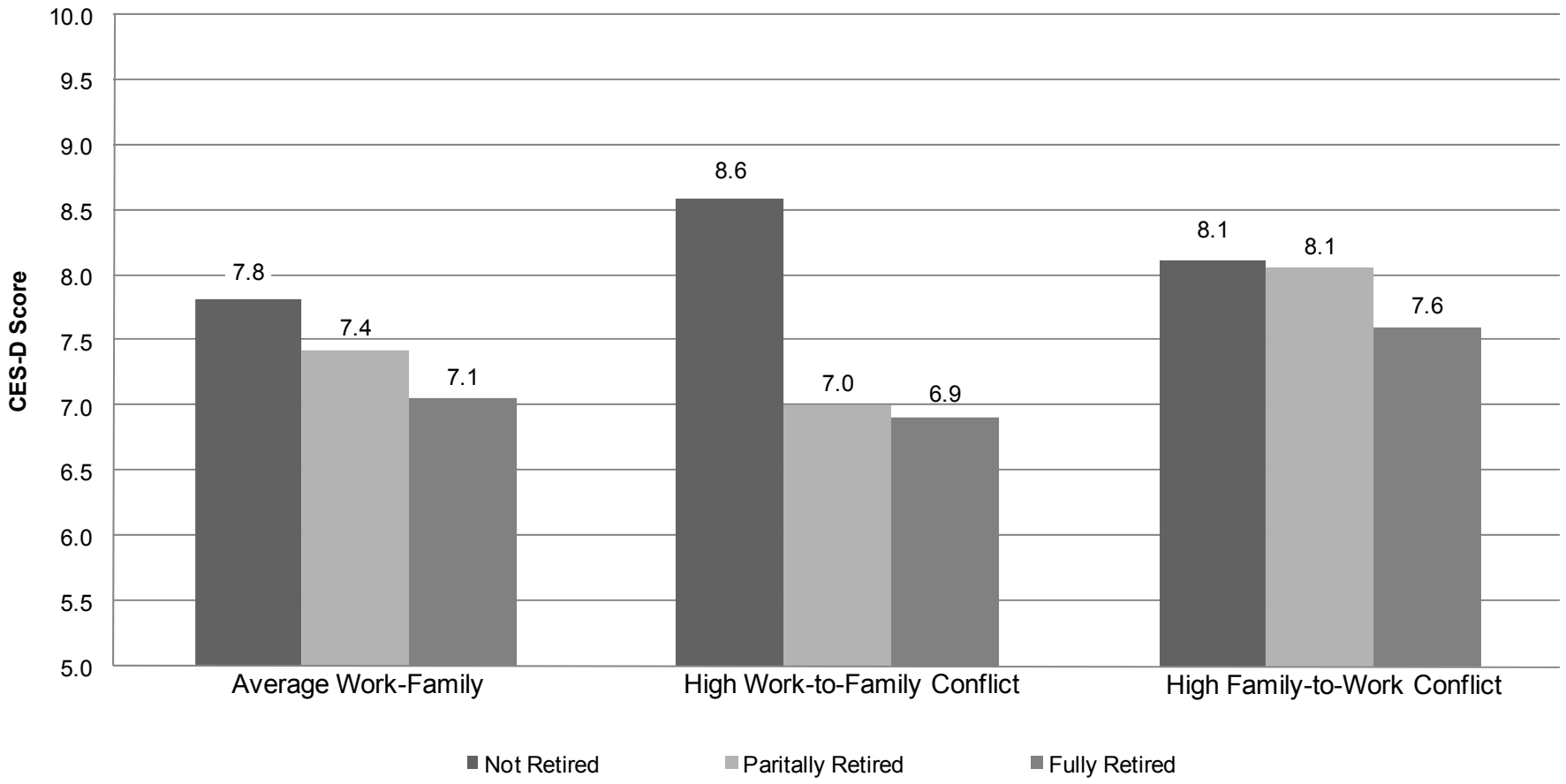
†Refers to parallel well-being measure (CES-D score or positive psycholgical functioing) assessed in 1993.
* p<.05, ** p<.01, *** p< .001 (two-tailed tests).

Table 3. Coefficients From Fixed Effects Regression Models of Depressive Symptoms and Positive Well-Being, by Sex: 1993 and 2004 Wisconsin Longitudinal Study

	Depressive Symptoms						Positive Functioning					
	Total		Men		Women		Total		Men		Women	
Independent Variables	Coeff.	(SE)	Coeff.	(SE)	Coeff.	(SE)	Coeff.	(SE)	Coeff.	(SE)	Coeff.	(SE)
Retirement												
(Not at all retired)	------	------	------	------	------	------	------	------	------	------	------	------
Partially retired	-0.61	(0.35)	-0.86 *	(0.43)	-0.39	(0.60)	0.28	(0.53)	0.68	(0.70)	-0.27	(0.83)
Fully retired	-0.97 **	(0.31)	-1.53 ***	(0.39)	-0.16	(0.51)	0.40	(0.47)	0.25	(0.64)	0.64	(0.71)
Partially retired X												
Work interfering with family	-1.17 ***	(0.27)	-0.80 *	(0.34)	-1.60 ***	(0.44)	1.42 ***	(0.41)	0.90	(0.56)	1.92 **	(0.62)
Family interfering with work	-0.28	(0.28)	-0.81 *	(0.35)	0.42	(0.46)	0.13	(0.42)	-0.33	(0.56)	0.82	(0.64)
Fully retired X												
Work interfering with family	-0.98 ***	(0.19)	-0.95 ***	(0.25)	-0.98 ***	(0.30)	0.42	(0.28)	-0.01	(0.40)	0.89 *	(0.40)
Family interfering with work	-0.37	(0.19)	-0.67 **	(0.26)	-0.04	(0.30)	0.98 ***	(0.29)	1.16 ***	(0.41)	0.79	(0.41)
Net worth	-0.05	(0.04)	-0.12 *	(0.06)	0.01	(0.07)	0.17 **	(0.06)	0.24 *	(0.09)	0.11	(0.09)
Spouse became retired	-0.07	(0.26)	0.27	(0.33)	-0.59	(0.43)	0.48	(0.39)	0.11	(0.54)	0.80	(0.59)
Spousal health declined	0.44	(0.27)	0.40	(0.34)	0.52	(0.43)	-0.97 *	(0.40)	-1.16 *	(0.55)	-0.77	(0.59)
Respondent health declined	1.67 ***	(0.29)	1.34 ***	(0.38)	2.03 ***	(0.47)	-2.52 ***	(0.44)	-2.89 ***	(0.61)	-2.17 ***	(0.65)
Provided care	0.73 *	(0.34)	0.08	(0.50)	1.06 *	(0.47)	-0.27	(0.50)	-0.36	(0.79)	-0.20	(0.65)
Children living in household	0.63 *	(0.25)	0.66 *	(0.31)	0.65	(0.43)	-0.62	(0.38)	-0.48	(0.49)	-0.83	(0.59)
Intercept	-1.37 ***	(0.29)	-1.03 **	(0.36)	-1.73 ***	(0.48)	-4.39 ***	(0.44)	-4.13 ***	(0.60)	-4.72 ***	(0.67)
N	2,666		1,471		1,195		2,855		1,570		1,285	
R-Squared	0.05		0.06		0.05		0.03		0.03		0.04	

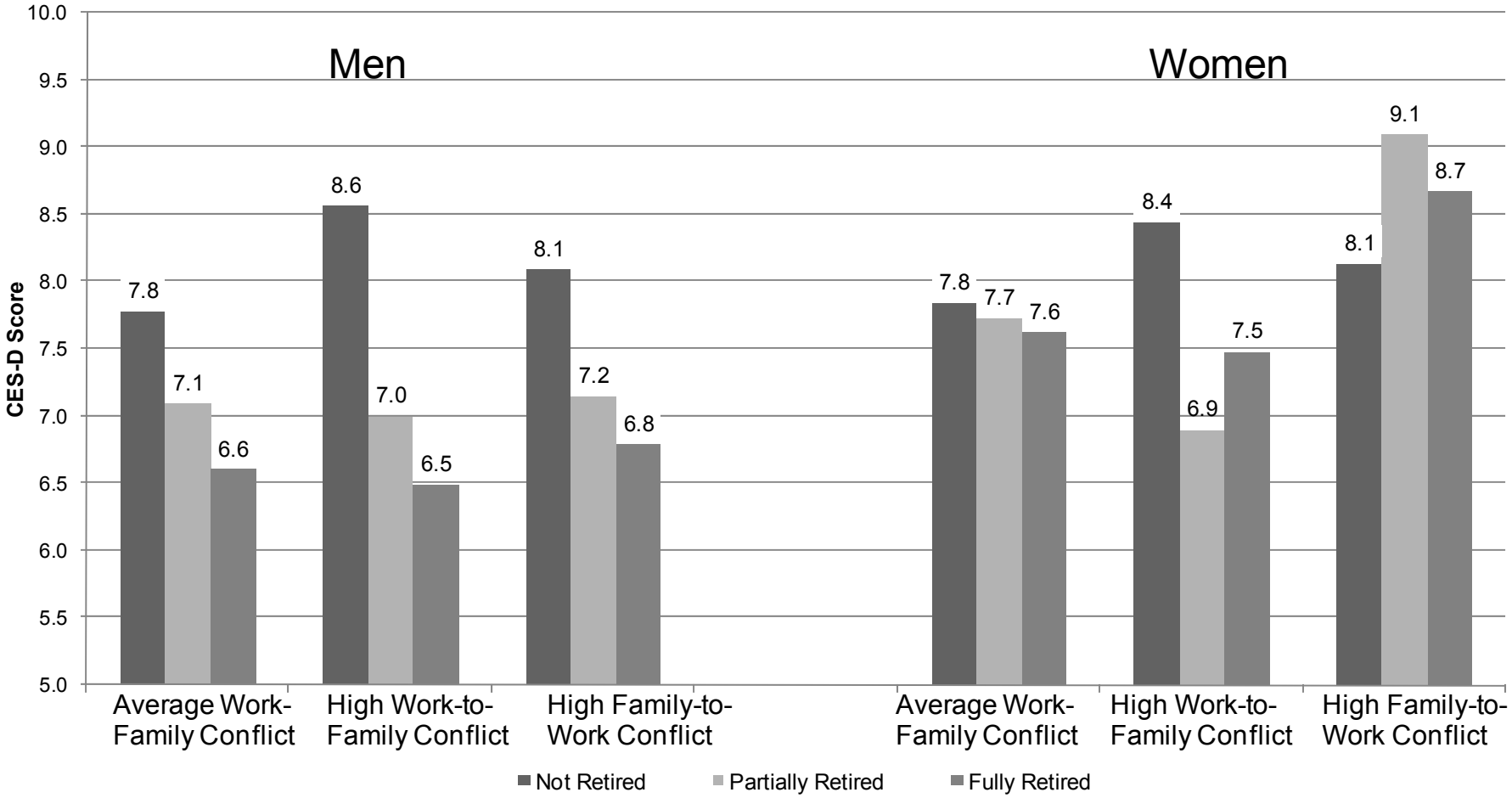
* p<.05, ** p<.01, *** p< .001 (two-tailed tests).

Figure 1. Predicted Depressive Symptomology (CES-D Score) by Retirement Status and Work-Family Conflict



Note. "High" conflict is defined as work-to-family (or family-to-work) conflict one standard deviation above the mean. Predicted values computed for individuals with mean values on all variables not otherwise specified.

Figure 2. Predicted Depressive Symptomatology (CES-D Score) by Sex, Retirement Status, and Work-Family Conflict



Note. See Figure 1. Predicted values based on a single model which includes the full set of interactions among variables for sex, retirement status, and work-family conflict.