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Psychosocial Moderators the Effects of Transitioning Into Filial Caregiving on Mental and Physical Health

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Abstract

A life-course theoretical perspective guided this study to examine how effects on mental and physical health (depressive symptoms, hostility, global happiness, self-esteem, personal mastery, psychological wellness, self-rated physical health) of transitioning into filial caregiving for a sole surviving parent are moderated by prior relationship quality, filial obligation, race or ethnicity, education, income, employment status, marital status, and parental status. Results from models estimated using longitudinal data from 1,060 adults aged 25 to 65 years at baseline (National Survey of Families and Households, 1987 to 1994) suggested that life-course and contextual factors do contribute to patterning health risks of caregiving, often in different ways for men and women: For example, low income puts daughter caregivers at greater risk for decline in physical health, combining employment with filial caregiving is more problematic for daughters' mental health, and being an unmarried filial caregiver is more problematic for men. Heterogeneity in the experience of filial care needs further attention in future research.

Keywords

caregiving; parent; mental health; physical health; filial

Assuming the role of caregiver for a frail or disabled parent is becoming an increasingly probable occurrence for both women and men traversing middle adulthood (Brody 1990; Marks 1996; National Alliance for Caregiving and AARP 2004; Stone, Cafferata, and Sangl 1987), and providing care to disabled elderly parents has been linked to considerable strain, burden, psychological distress, and sometimes poorer health (e.g., Brody 1990; George and Gwyther 1986; Horowitz 1985; Hoyert and Seltzer 1992; Pinquart and Sorensen 2003; Schulz, Visintainer, and Williamson 1990; Schulz and Williamson 1991; Stephens and Townsend 1997; Young and Kahana 1989). Overall, most studies suggest that women providing parent care experience more burden and distress than men (Montgomery 1992; Yee and Schulz 2000). A number of additional life-course contextual factors beyond gender that might moderate the effects of filial caregiving have been suggested and to some extent examined, for

example, race or ethnicity, socioeconomic status, relationship quality, attitudes toward filial responsibility, marital status, parenthood status, and employment status. However, a systematic examination of all of these moderators across a national sample of caregivers has not been previously undertaken.

The transition into filial caregiving has been the least frequently studied phase of the caregiving career to date, because it requires a prospective research design. The aim of this study was to contribute to a population and life-course perspective on filial caregiving by using longitudinal U.S. national data to examine how multiple psychosocial life-course contextual factors—gender, relationship quality, filial obligation, race or ethnicity, educational attainment, household income, marital status, employment, and parenthood status—might moderate the effects of transitioning into a filial caregiving role for a sole surviving parent on multiple dimensions of negative and positive psychological well-being and physical health.

Background

A Life-Course Theoretical Perspective on Caregiving

This study was guided by a life-course theoretical perspective on caregiving. The life-course principle of “linked lives” (Elder 1998; Elder, Johnson, and Crosnoe 2003) draws attention to how family members’ developmental trajectories (including mental and physical health trajectories) are consequentially interdependent and “linked” across time, such that transitions for one member of a family (e.g., an elder experiencing a transition to greater disability or frailty) can be expected to have developmental consequences for other members of the family (e.g., an adult child who view undesirable change in a parent’s health and well-being and transitions into taking a greater role in providing care for his or her parent).

The life-course perspective also emphasizes the importance of trajectories in multiple social roles for shaping development, and an important feature of tracking a trajectory in each role is to track life transitions in that role (George 1993; Settersten 2003). A life-course perspective on caregiving, therefore, orients us to conceptualize caregiving as a life-course role that one is likely to enter and exit one or more times during adulthood (Moen, Robison, and Dempster-McClain 1995; Moen, Robison, and Fields 1994; Sutor and Pillemer 1990), thereby constituting the trajectory for an individual’s caregiving career (Aneshensel et al. 1995; Pearlin 1992; Pearlin and Aneshensel 1994).

Another feature of life-course theorizing about role trajectories emphasizes that the experience and developmental consequences of any particular role are likely to be importantly conditioned by the overall role context of that role; that is, developmental consequences of roles are dependent on interdependence and congruency of roles (Settersten 2003). For example, the experience of a transition into the caregiving role is likely to be conditional on whether this role is being taken on in conjunction with or without other major role responsibilities and supports (e.g., a marital role, a parental role, an employee role).

The life-course perspective additionally guides us to consider other important contextual factors in considering the developmental effects of a role or role transition, including prior role history with a role partner (Wheaton 1990), the cultural context and meaning attached to a situation (Bengtson and Allen 1993), and structural opportunities and constraints due to social location (Bengtson and Allen 1993; Settersten 2003).

Therefore, in the case of the transition into a caregiving role for a parent, we might expect that previous relationship quality with the parent (indexing role history), previous attitudes related to filial caregiving (indexing meaning), gender and race or ethnicity (indexing cultural context), as well as education and income (indexing structural and socioeconomic location) might all

potentially moderate the mental and physical health effects of this transition (Bengtson and Allen 1993; Elder 1998; George 1993).

Filial Caregiving and Mental and Physical Health

There is now a sizable multidisciplinary literature that has examined family caregiving and its association with mental and physical morbidity (for reviews, see Biegel, Sales, and Schulz 1991; Chappell 1990; Gallagher-Thompson et al. 1998; Horowitz 1985; Pinquart and Sorensen 2003, 2005a; Schulz et al. 1990, 1995). Most studies have concluded that the filial caregiving role is associated with an increased sense of burden and psychological distress (e.g., Brody 1990; George and Gwyther 1986; Horowitz 1985; Hoyert and Seltzer 1992; Marks et al. 2002; Schulz et al. 1990; Schulz and Williamson 1991; Stephens and Townsend 1997; Young and Kahana 1989). Caregiving has also been associated with poorer health, but the findings on physical morbidity are less consistent (Pinquart and Sorensen 2003; Schulz et al. 1990, 1995).

Most filial caregiving research has gathered information from filial caregivers already engaging in the caregiving role; only a few studies to date have focused specifically on the transition to filial caregiving using a prospective research design. Seltzer and Li (2000) examined data from a representative sample of wives and adult daughters caring for older adults in Wisconsin; they found that entry into filial caregiving was associated with a decline in personal mastery, but not other health outcomes. Lawton et al. (2000) also prospectively examined the transition to caregiving among a relatively small sample of daughters and daughters-in-law and did not find negative effects on mental and physical health.

Strawbridge et al. (1997) used population sample data from 1,885 respondents in the Alameda County Study to examine well-being differences between grandparent, spouse, and adult-child filial caregivers and their noncaregiving peers. They found that in 1994, adult-child caregivers had poorer mental health (but not physical health) than noncaregivers. Moen et al. (1995), taking a life-course role approach, used data from a random sample of 293 wives and mothers from upstate New York who were interviewed in 1956 and 1986 to examine caregiving (of all types) and its association with well-being. Although they did not find an association between occupancy in the caregiver role and well-being among all women in 1986, they did find that among some subgroups, caregiving was associated with poorer well-being, suggesting that moderating factors are important to consider in evaluating caregiving effects.

Marks, Lambert, and Choi (2002), using U.S. national data, found that transitioning into filial caregiving both in household and out of household was associated with negative effects on a number of dimensions of mental health for both women and men; however, out-of-household caregiving was also found to contribute to purpose in life among women. Turner, Killian, and Cain (2004) examined the transition to caregiving for parents using data from 952 women aged 50 to 59 years participating in the 1992 and 2000 Health and Retirement Study. They found that the transition to a caregiving role for a parent increased depressive symptoms. Hirst (2005) also did a prospective investigation of becoming a caregiver, continuing, caregiving, and exiting caregiving (multiple types) using data from 3,000 would-be caregivers, 2,900 former caregivers, and 11,100 noncaregivers participating in the British Household Panel Survey during the 1990s and found that the onset of caregiving for a parent or parent-in-law living in another household among both women and men (examined separately) was associated with higher odds of problematic levels of distress. The onset of care as well as the end of care were found to be the most distressing periods of the caregiving career.

Psychosocial Moderators of the Effects of Filial Caregiving on Well-Being

Life-course history of relationship quality—The life-course quality of a relationship with a care recipient has been suggested to be a potential factor that may moderate the effects of becoming a caregiver on well-being (Pearlin et al. 1990). Kramer (1993) found that better quality prior to spousal caregiving predicted better caregiver well-being outcomes. Lawrence, Tennstedt, and Assmann (1998) predicted that better relationship quality would moderate filial caregivers' depression but did not find evidence to support their hypothesis, although they acknowledged that their small sample of filial caregivers may have influenced their results. In our study, we also expected that reporting a poorer quality relationship with a parent prior to caregiving would increase the negative well-being effects of caregiving, possibly because of a decreased sense of life-course reciprocity for parental benefits received earlier and also because increased time and interaction spent with a parent while caregiving might be more distressing in an already strained relationship.

Filial obligation—The life-course perspective suggests that the meaning attached to role activities will influence developmental effects (Bengtson and Allen 1993). Attitudes regarding filial obligation are one way to index the meaning of caregiving activities for an individual, and such attitudes also have been hypothesized as a moderator of the association between caregiving and well-being. This variable previously has been considered more often in the context of examining cultural differences in the effects of caregiving (Aranda and Knight 1997; Pinquart and Sorensen 2005b; Youn et al. 1999) rather than as a variable to be considered in the U.S. population as a whole. Overall, greater familism is typically expected to moderate the negative appraisal of caregiving and therefore lead to less negative well-being effects. We too hypothesized that lesser affirmation of norms supporting filial responsibility for aging parents would result in less "normalizing" the meaning of caregiving for aging parents, give caregiving activity lower value, and thereby result in greater adverse well-being effects for those who transition into a filial caregiver role with low filial obligation in contrast to high filial obligation.

Race or ethnicity—There is also evidence that familism and a cultural meaning system that places a stronger orientation toward family needs and higher value on caregiving may be greater among racial or ethnic groups in the United States who are not non-Hispanic White (Aranda and Knight 1997; Pinquart and Sorensen 2005b). Therefore, we hypothesized that new filial caregivers who were non-Hispanic White would report more negative well-being than new filial caregivers who were members of other nonmajority racial or ethnic groups (non-White).

Socioeconomic status—The life-course perspective emphasizes how social location and the structural opportunities and constraints associated with social location condition the effects of life-course experiences. The structural constraints of having fewer financial and informational resources to meet additional demands might be expected to lead to greater stress in a new filial caregiver role (Pearlin et al. 1990). Less income might be an aggravating risk factor for caregivers, who might have more income demands due to caregiving (e.g., to help with a parent's medical costs). Less education might be an exacerbating risk factor for caregivers, who might feel less comfortable with negotiating the informational systems of health care and social services that might accompany providing care for a frail or disabled parent. Therefore, we hypothesized that new filial caregivers with less education and new filial caregivers with less household income (two relatively distinct dimensions of socioeconomic status) would experience more problematic well-being effects than new filial caregivers with more education and more household income.

Role context—The life-course perspective suggests that role interdependence is likely to condition the developmental effects of any particular role (Settersten 2003). Therefore, other

role obligations and support might also be expected to moderate the impact of transitioning into a caregiving role for a parent. Additional role commitments to employment, a marital partner, and/or young children in the household might be expected to lead to greater role overload and role strain for a new filial caregiver, resulting in greater declines in well-being for those who have such role commitments than for those who do not. However, research that has examined these issues has yielded inconsistent results.

In some research, combining a marital role with a parent care role has been found to be beneficial for female caregivers' well-being, possibly because the marital partner may provide social support for the caregiver (Brody 1992; Brody et al. 1995). In another population study examining helping parents and other roles, Spitze et al. (1994) found no additional buffering or exacerbating effects on distress associated with combining parent help with marriage; Dautzenberg et al. (1999) found a similar lack of evidence for a spouse role contributing to moderation of caregiver distress examining data from a large population sample in the Netherlands.

Combining child care and elder care was found to be one of the role combinations linked to the greatest health stress among a large sample of employed caregivers (Neal et al. 1993). Again, however, other research has suggested that the "sandwich" situation of combining parent help and child care does not greatly exacerbate problematic effects of providing help to parents (Dautzenberg et al. 1999; Spitze et al. 1994).

Employed caregivers sometimes have been found to experience better mental health than those who are not employed (Brody et al. 1987; Miller 1989; Skaff and Pearlin 1992; men in Spitze et al. 1994); in other research, no difference in distress has been noted for those combining help to parents and employment in contrast to a helping role to parents only women in (Spitze et al. 1994; Stull, Bowman, and Smerglia 1994). Additional research has suggested that employed caregivers experience more work-family conflict and more stress than employed noncaregivers (Marks 1998; Neal et al. 1993).

We hypothesized that not having a formal marital role and the social support a marital role partner generally might be expected to feel obligated to provide (i.e., being unmarried) would be associated with an exacerbation of negative effects associated with filial caregiving. We expected more potential for role conflict in combining filial caregiving with employment and in combining filial caregiving with caring for dependent children at home; therefore, we hypothesized that combining caregiving with either of these roles would lead to poorer mental and physical health among those entering the role of filial caregiver.

Gender—Gender is the psychosocial factor most frequently explored as a moderator of caregiving in the literature to date. There is considerable evidence that the social script for a caregiver role is gendered; that is, normative expectations for caregiving are typically different for women in contrast to men (Yee and Schulz 2000). Women more often assume the role of primary caregiver (in contrast to secondary caregiver) than men (Montgomery 1992); women typically engage in more hands-on tasks, especially intimate personal care, than men (Horowitz 1985; Yee and Schulz 2000); women are socialized to view caregiving as a more salient role in their role-identity repertoires than men, thereby making them even more vulnerable to compromised well-being when stresses in this role occur (Chodorow 1978; Gilligan 1982; Jordan et al. 1991; Kessler and McLeod 1984; Miller 1990).

Although there is not total consistency in results across studies, the predominance of evidence suggests that women experience more burden and psychological distress in the caregiving role overall than men (for reviews, see Miller and Cafasso 1992; Montgomery 1992; Stoller 1992; Yee and Schulz 2000). In a recent population study of caregiving, Marks et al. (2002)

found evidence that in-household filial caregiving was more problematic for women's than men's psychological well-being, but out-of-household filial caregiving was more problematic for men's than women's psychological well-being. In short, there is considerable evidence of gender differences in caregiving; therefore, we deemed it appropriate to undertake preliminary analyses of potential gender differences in the transition to caregiving (two-way interactions), gender differences in the effects of our moderating variables of interest on well-being, (two-way interactions), and gender differences in the effects of each of our additional moderating variables of interest (three-way interactions). For three-way interactions (our focus of interest in this study), we hypothesized that moderating effects of vulnerability factors would be more strongly accentuated among women, because of what we expected to be the greater burden and responsibility women would experience in a filial caregiver role.

Objectives and Hypotheses

In sum, aiming to add to a population perspective on filial caregiving and its mental and physical health effects on contemporary men and women, we used longitudinal U.S. national population data to examine multiple potential psychosocial moderators that might be expected to increase adverse well-being effects of transitioning into the role of filial caregiver among adults with sole surviving parents. Guided by a life-course theoretical perspective and the existing literature, we evaluated evidence for the following hypotheses:

Hypothesis 1: Poorer relationship quality with a parent prior to beginning filial caregiving, less supportive attitudes about filial obligation to elderly parents prior to beginning filial caregiving, being non-Hispanic White, having lower education, having a lower household income, being unmarried, having a child under age 19 in the household, and being employed are associated with poorer mental and physical health outcomes among adults who transition into the filial caregiver role.

Hypothesis 2: Being a daughter in contrast to being a son is associated with poorer mental and physical health outcomes among adults who transition into the filial caregiver role when this transition occurs for an individual (a) with a history of poorer prior relationship quality with the care-recipient parent, (b) with lower prior reported filial obligation, (c) who is non-Hispanic White, (d) who has lower education, (e) who has lower income, (f) who is unmarried, (g) who has a child under age 19 in the household, and (h) who is employed.

Method

Data and Sample

This study used data from the first and second waves of the National Survey of Families and Households (NSFH), which includes information from personal interviews conducted in 1987 and 1988 (time 1 [T1]) and from 1992 to 1994 (time 2 [T2]) with a nationally representative sample of 13,007 noninstitutionalized American adults age 19 years and older. This survey included a main sample of 9,637 households, with an additional oversample of African Americans, Mexican Americans, Puerto Ricans, single parents, stepparents, cohabitators, and recently married persons. The response rate at T1 was approximately 74%. The response rate at T2 was approximately 85% of first-wave respondents. This yielded national population coverage at a rate of approximately 63% for data from both waves. Sampling weights correcting for selection probabilities and nonresponse allowed this sample to match the composition of the U.S. population on age, sex, and race (for more design details, see Sweet and Bumpass 1996; Sweet, Bumpass, and Call 1988).

The analytic sample for this study consisted of NSFH primary respondents (a) who were between the ages of 25 and 65 years at T1, (b) who did not report providing in- or out-of-

household caregiving to a family member or friend at T1, (c) who did not report providing caregiving for anyone other than a biological parent out of household at T2 (see below; in-household filial caregivers were all eliminated through the other criteria), (d) who reported only one biological or adoptive parent alive at T1 and T2, and (e) who were respondents again at T2 ($N = 1,060$; 614 women, 446 men). We used these selection criteria to (a) eliminate confounding effects of caregiving to different categories of persons at T1 and/or between T1 and T2, (b) to focus specifically on the life-course period when filial care responsibilities may be experienced most intensely (i.e., when only one parent is surviving) because of the typical hierarchical succession (Cantor 1979) of caregiving responsibilities (i.e., first spouse, then adult child), and (c) to eliminate some of the confounding potential effects on mental and physical well-being of having a parent die between times of measurement.

To further justify our decision to limit our analyses to only adults with sole surviving parents, we estimated supplementary models using a sample in which we used the same criteria except for opening up the sample to include all respondents who had either one or two parents alive at T1 ($n = 3,531$; 2,014 women, 1,517 men) and controlled for a parent dying between T1 and T2 (such deaths occurred for 741 respondents). The findings from this larger sample revealed substantial differences in results, specifically, a loss of numerous significant ($p < .05$) theoretically meaningful effects, even, though the considerable increase in power also added significance to many other coefficients that remained at about the same effect size. Therefore, we judged it appropriate to consider the sample of adult children with sole surviving parents to be significantly distinct enough to analyze these respondents (about 30% of the sample of adults these ages who had one or both parents alive at T1 and met the other criteria) as a separate group so our results would be more clearly generalizable to this specific group of filial caregivers, not to a mixed group of adults who had either one or two parents alive and may have experienced (or not) parental death between waves. Future scholars in this area may also wish to take this distinction into consideration when data permit.

Measures

Outcomes—Mental health is a multidimensional construct, including both negative dimensions and positive dimensions of well-being and self-evaluation (Bryant and Veroff 1982; Ryff 1989). We included measures of two dimensions of negative psychological well-being: depressive symptoms (a more internalizing syndrome) and hostility (a more externalizing syndrome). Depressive symptoms were assessed with a 12-item modified version of the Center for Epidemiologic Studies Depression Scale (Radloff 1977), which asked respondents on how many days in the past week (zero to seven) they felt each symptom (e.g., “sad”; $\alpha = .93$); the logged score of the summed symptom score plus a constant of one was used for this measure to help correct for skew to the right. Hostility was assessed with a 3-item measure new to NSFH2 (e.g., “On how many days during the past week did you feel irritable, or likely to fight or argue?”; $\alpha = .86$). (See Table 1 for correlations and descriptives for all variables used in the analysis.)

Positive affect, a dimension of positive well-being, was assessed with a standard one-item measure of global happiness (“Taking all things together, how would you say things are these days?”; 1 = *very unhappy* to 7 = *very happy*). Two self-evaluation assessments were used: a three-item version of Rosenberg’s (1965) self-esteem index ($\alpha = .66$) and a five-item personal mastery index consisting of four items from the Pearlin’ Mastery Scale (Pearlin et al. 1981), along with a single item of mastery also used at T1 of the NSFH ($\alpha = .66$).

To further assess positive psychological well-being, an 18-item composite index of psychological wellness, composed of six 3-item subscales developed by Ryff (1989; Ryff and Keyes 1995) measuring six theoretically derived dimensions of positive psychological wellness was included: autonomy (e.g., “I judge myself by what I think is important, not by

the values of what others think is important”; 1 = *strongly disagree* to 6 = *strongly agree*), personal growth (e.g., “For me, life has been a continuous process of learning, changing, and growth”), environmental mastery (e.g., “I am quite good at managing the many responsibilities of my daily life”), positive relations with others (e.g., “People would describe me as a giving person, willing to share my time with others”), purpose in life (e.g., “Some people wander aimlessly through life, but I am not one of them”), and self-acceptance (e.g., “When I look at the story of my life, I am pleased how things have turned out”). Overall reliability for this index was .82.

Finally, one standard item measuring self-rated physical health (“Compared with other people your age, how would you describe your health?”; 1 = *very poor* to 5 = *excellent*) was included. This item has been to be a consistent predictor of mortality across numerous studies from a wide range of countries (Idler and Benyamini 1997).

For four outcome measures—depressive symptoms, happiness, self-esteem, and self-rated health—T1 assessments of the measures were available and were controlled in the respective analyses. For the personal mastery scale, responses to one item measuring mastery that was included at T1 of the NSFH were included as a T1 control (the correlation of this one item at T2 with the entire five-item index used as an outcome at T2 was $r = .60$). The hostility index and the psychological wellness index were not included at T1, so T1 depressive symptoms were entered as a control for well-being at T1 in all analyses of these measures to better estimate the likely longitudinal change in well-being over time due to transition into filial caregiving.

Caregiving status—Caregiving for a disabled parent was assessed using reports by respondents at T2 about their caregiving both for persons with whom they resided and persons not living with them. Respondents were asked,

Sometimes because of a physical or mental condition, illness or disability, people require the assistance of friends or relatives. During the last 12 months have you, yourself, *given anyone not living with you at the time* any help or assistance because of their health problem or disability?

If the respondents answered “yes” to this question, they were asked, “Who did you give the most personal care of this kind?” Additionally, respondents were asked, “During the last 12 months have you, yourself, *given anyone living with you at the time* any help or assistance because of their health problem or disability?” Again, if the respondents answered “yes,” they were asked, “Who did you give the most personal care of this kind?” On the basis of these questions, persons reporting giving care to persons other than parents at T2 were excluded from the analysis, and new filial caregivers were contrasted with respondents who did not report providing caregiving to anyone at T2. Overall, we found that 16.2% (weighted percentage) of the sample (19% of women, unweighted $n = 112$; 13.5% of men, unweighted $n = 55$) experienced the transition to filial caregiving between T1 and T2. When we initially examined the respondents who entered the filial caregiver role between T1 and T2, we found that using our selection criteria, we had eliminated all new in-household filial caregivers. Therefore, this was a study only of the transition, into out-of-household care to biological or adoptive sole surviving parents.

Relationship quality—Prior relationship quality was assessed with a single item asked at T1 regarding the one surviving parent at that time: “How would you describe your relationship with your mother (or father)?” (1 = *very poor* to 7 = *excellent*). Because of the strong skew of this variable to the highest categories (47% rated seven, 23% rated six), we created a dichotomous variable (1 = *low quality*) on the basis of responding in the lowest 30% (rating one through five) of the distribution for this item.

Filial obligation—Filial obligation was assessed with two items at T1: “Children ought to provide financial help to aging parents when their parents are having financial difficulty” and “Children ought to let aging parents live with them when the parents can no longer live by themselves” (recoded) (1 = strongly disagree to 5 = strongly agree for both items). These two items were summed; this index was also skewed toward higher agreement (higher obligation), therefore, scores below the median on this index (ratings of 2 to 4 on a 10-point scale) were recoded into a dichotomous variable for low filial obligation (1 = below the median on the index).

Race or ethnicity, education, and income—Race or ethnicity was coded dichotomously for all analyses: 1 = non-Hispanic White, 0 = non-White (there were too few cases of Mexican American, African American, and other racial or ethnic caregivers to make a finer distinction for this variable in moderator analyses). Educational attainment at T2 was coded dichotomously at the modal level of education (to simplify interpretation) when used in the moderator analyses (low education coded 1 = ≤ 12 years, 0 = > 12 years). Similarly, household income, totaled across all types of earned and unearned income for all household members at T2, was coded dichotomously for the moderator analyses (1 = below median income, 0 = median or above income).

Role-context measures—All role-context measures were coded dichotomously for all analyses. Marital status at T2 was coded 1 = unmarried, 0 = married. Only two men and five women who transitioned into filial caregiving were cohabiting, making it impossible to examine a separate category for them. We included cohabitators with the unmarried because of our expectation that there would be less normative obligation among cohabiting partners to provide support for filial caregiving; supplementary analyses (not shown) coding this variable differently confirmed this expectation. Having a child under age 19 in the household at T2 was coded 1 = has child, 0 = no child. Employment status at T2 was coded 1 = employed full- or part-time, 0 = not employed.

Control variables—Additionally, in all models including controls, main effects for age (coded in years), race or ethnicity, education at T2 (coded in years, except for the moderator analyses focusing on this variable), household income (coded in dollars, except for the moderator analyses focusing on this variable), marital status, parental status, and employment status were controlled, because these factors have been found to be associated with psychological well-being (Mirowsky and Ross 1989; Ross, Mirowsky, and Goldsteen 1990). A dichotomous flag variable for missing on household income at T2 (missing income T2 = 1) was also included in all analyses (including analyses in which income was examined as a moderator) to retain as many cases as possible in the regression analyses (all cases missing on income at T2 were coded –1 on the continuous household income T2 variable and were retained in the analyses). For consistency across models, we also always controlled for main effects of low relationship quality and low filial obligation, which might also be expected to have additive effects on well-being. Finally, we controlled additionally for total hours of caregiving provided during the past year (computed as the total number of weeks reported giving care during the last year times the average number of hours of care provided during weeks providing care; noncaregivers were imputed to provide zero hours of care) to help eliminate any confounding this factor might cause because of its association with either our outcomes or our moderators of interest.

Analytic Sequence

We first estimated multivariate models for women and men together to examine potential gender differences in the moderator effects. Specifically, we regressed each outcome on the transition to new filial care variable along with all controls, as well as each unique moderator

variable, two-way interactions of Gender $\times$ Moderator and Gender $\times$ New Filial Care, and three-way interactions of Gender $\times$ Moderator $\times$ New Filial Care. The results of these analyses, which suggested evidence of a number of gender differences in the effects of moderators (Gender $\times$ Moderator $\times$ New Filial Care) and a number of Gender $\times$ Moderator and Gender $\times$ New Filial Care effects, together with the fact that considerable other evidence has suggested that caregiving tends to be a gendered experience (Yee and Schulz 2000) and that it is most helpful to examine patterns for men and women separately (see, e.g., Hirst 2005), led us to deem it appropriate to estimate subsequent models for women and men separately. We denote the results of our three-way tests of gender differences on Table 2 with letters.

Proceeding with models for women and men separately, we first estimated models that regressed all outcomes on only the variable for the transition to new filial care to examine these bivariate effects (model 1). Next, we estimated models that added all controls (model 2). To examine moderation effects, interaction variables were added for New Filial Care $\times$ Low Relationship Quality (model 3), New Filial Care $\times$ Low Filial Obligation (model 4), New Filial Care $\times$ Non-Hispanic White (model 5), New Filial Care $\times$ Low Income (model 6), New Filial Care $\times$ Low Education (model 7), New Filial Care $\times$ Employed (model 8), New Filial Care $\times$ Child < 19 in Household (model 9), and New Filial Care $\times$ Unmarried (model 10). Each moderator (interaction) was examined individually, given sample size constraints. Each of the models examining moderation also included all control variables and the relevant T1 well-being variable. Multivariate regression models were estimated using SPSS. Because models estimated with weighted data revealed a similar pattern of estimates and we controlled for the major factors used in the weights, we report unweighted results, which have more reliable standard errors (Winship and Radbill 1994). The F statistic for all models reported in Table 2 was significant at $p < .00005$.

Results

The Effects of Transitioning Into Filial Care on Well-Being

The transition to filial care—Table 2 provides results from all models evaluated. For baseline models, we first estimated a model that included only the transition into filial out-of-household care variable first without controls (other than T1 well-being) (model 1), and then with all controls (model 2). Evidence from these models revealed few differences between the model without controls and the model with controls, except in the case of depressive symptoms. Model 1 suggested that overall in bivariate examination, sons (but not daughters) who transitioned into filial caregiving reported greater increases in depressive symptoms than their peers who did not report such care. Model 2, adjusting for numerous additional factors and the intensity of caregiving, however, suggested that for this U.S. sample of daughters and sons aged 25 to 65 years at T1 who were not providing care to anyone at T1, who had only one living parent from T1 to T2, and who did not report providing any other type of new care at T2, there was evidence that among those who experienced transitions into providing filial care for parents during this period, depressive symptoms increased more greatly over time than they did among daughters and sons who did not begin to provide such care (significant effect for women; trend-level effect for men). For other outcomes, no negative global “main” effects of caregiving were in evidence in either model 1 or model 2. Yet significant subgroup differences in caregiver effects might well be masked by an examination of only the additive main effect of caregiving. Therefore, we proceeded to examine potential moderator models, one at a time, for each moderator and each outcome.

Factors Moderating the Effects of the Transition Into Filial Care

Gender and caregiver well-being—Our preliminary models tested for three-way gender interactions with all our moderator variables of interest. In support of our hypothesis that being

a daughter filial caregiver in contrast to a son filial caregiver would further exacerbate negative effects of vulnerability factors, we found that (a) combining filial care with employment added more to a higher depressive symptoms score for women than men, (b) filial care in the context of below-median-level income led to lower levels of personal mastery for women in contrast to men, and (c) filial care in combination with employment led to less psychological wellness for women in contrast to men. Contrary to our gender hypothesis, however, we found that (a) filial care while being unmarried added more to depressive symptoms for sons than daughters, and (b) lower filial obligation in the context of becoming a filial caregiver decreased happiness more for men than women.

Several trend effects were also in evidence, and a number of two-way gender interactions with moderators also emerged in these analyses (results not shown, but available from the authors). Overall, given the results of these models, and the large body of evidence documenting gender differences in caregiving, as noted above, we estimated our additional moderator models for women and men separately.

Relationship quality and caregiver well-being—Table 2, model 3, includes results from analyses considering whether relationship quality with a parent prior to the onset of caregiving helps moderate the influence of caregiving. We hypothesized that having a life-course history of low-quality relationship (in contrast to high quality) would exacerbate the stress of caregiving and lead to more negative effects for caregivers. We found only partial support for this hypothesis. Women who previously had reported low relationship quality with the sole surviving parents for whom they subsequently became caregivers reported greater declines in self-esteem over time than women who began filial care for parents with whom they had high-quality relationships prior to caregiving. There was also trend-level evidence that daughters entering filial care with lower quality relationships with their parents might have experienced greater declines in self-reported physical health over time. Yet a trend in the case of depressive symptoms, counter to the hypothesis, suggested that lower relationship quality might buffer the negative effect of filial care in the case of depressive symptoms among women.

Men who had lower quality relationships with the parent for whom they became caregivers reported less psychological wellness than men who became caregivers for parents with whom they had reported very high quality relationships prior to caregiving.

Filial obligation and caregiver well-being—The results of the analyses examining whether attitudes reflecting less endorsement of norms of adult-child responsibility to help older parents might lead to greater caregiver decline in well-being when called on to become a caregiver for a parent are reported Table 2, model 4. These results suggest a somewhat different pattern for daughters in contrast to sons. Consistent with our hypothesis, daughters reporting less support for filial obligation reported greater declines in physical health and a trend toward becoming less happy when they became filial caregivers in contrast to daughters reporting greater support for filial obligation norms. Contrary to our hypothesis, however, caregiving sons who reported less support for filial obligation reported significantly higher levels of psychological wellness than caregiving sons who reported more support for filial obligation norms. Sons transitioning into filial care who reported less filial obligation prior to caregiving also evidenced a trend toward reporting greater rates of decline in happiness than sons transitioning into filial care who endorsed high levels of filial obligation.

Race or ethnicity and caregiver well-being—We expected that being non-Hispanic White (in contrast to another race or ethnicity) would exacerbate the negative well-being effects of caregiving for adult-child caregivers because of less cultural familism and therefore a lesser valuing of caregiving activity among non-Hispanic Whites. We found some evidence for this hypothesis. We found that non-Hispanic White caregiving sons reported greater increases in

depressive symptoms and lower levels of personal mastery than non-White caregiving sons did. We also found trend evidence that non-Hispanic White filial caregiver sons might be experiencing greater declines in happiness than non-White caregiving sons. Contrary to our hypothesis, there were no robust racial or ethnic differences in caregiving effects observed among daughters.

Household income and caregiver well-being—We expected the stress of caregiving to be exacerbated by having the stress of a lower income to meet the potentially greater income demands that might accompany caregiving. Supportive of this hypothesis, we found that new filial caregiving daughters with lower incomes reported greater declines in physical health than new filial caregiving daughters with higher incomes and that there was a trend toward less esteem for both women and men providing filial care in the context of lower income. However, contrary to our hypothesis, low-income daughters also reported fewer depressive symptoms, less hostility, and a trend toward more psychological wellness than high-income caregiver daughters. New filial caregiving sons with lower incomes also reported higher levels of personal mastery than new filial caregiving sons with higher incomes.

Education and caregiver well-being—We also expected that lower education would contribute to greater stress for caregiving adult children who might be attempting to meet the demands of caregiving with potentially fewer informational resources and greater challenges in negotiating the complexities of working with the health care system. However, contrary to our hypothesis, we found that caregiving sons with less education reported more happiness than caregiving sons with more education. Additionally, our results indicated that caregiving daughters with high school educations or less might be experiencing lower levels of hostility than caregiving daughters with at least some college education. There was also trend-level evidence that new filial caregiving was less problematic in terms of psychological wellness among caregiving women with low educational attainment in contrast to caregiving women with higher educational attainment.

Employment and caregiver well-being—Because of the additional potential conflicting demands of employment and caregiving, we hypothesized that having an employment role along with acquiring a filial caregiving role would lead to more decline in caregiver well-being than acquiring the filial caregiving role without an employment role. We found a fair degree of support for this hypothesis in the case of women. Employed caregiving daughters reported more hostility, less personal mastery, and less psychological wellness than nonemployed caregiving daughters. However, there were no significant well-being differences between men who combined employment and caregiving and men who did not.

Dependent-child care and caregiver well-being—We also expected that being sandwiched between care for a dependent child at home and having the demands of filial care would lead to more caregiver decline in well-being. Contrary to expectation, the results of our analyses of this moderating factor suggested that caregiving sons with a child under age 19 in the household did not experience the same reduction in psychological wellness due to filial caregiving that caregiving sons without young children did (although the main effect of having a young child in the household did contribute itself to a reduction in reports of psychological wellness; all other factors held equal, caregiving sons with young children at home would be predicted to have $-5.45 + 5.75 - 3.17 = -2.87$ -point reductions in their psychological wellness scores in comparison with sons who did not provide filial care or have young children at home, whereas caregiving sons without young children at home would be predicted to have -5.45 -point reductions in their psychological wellness scores in comparison with sons who did not provide filial care or have a young child at home). There were no differences for caregiving daughters who combined these roles in contrast to only having the caregiving role.

Marriage and caregiver well-being—Finally, we hypothesized that being unmarried would lead to poorer health outcomes among filial caregivers, because of a lack of spousal support for caregiving. The results of these analyses suggested that in support of this hypothesis, son caregivers clearly benefited from having a marital role. Specifically, unmarried filial caregiving sons reported greater increases in depressive symptoms and lower levels of psychological wellness than married filial caregiver sons. There was no evidence, however, that unmarried daughters were at more well-being risk than married daughters when taking on the role of caregiver to aging parents.

Discussion and Conclusions

Guided by a life-course perspective and using longitudinal data from a national sample of American adults spanning middle adulthood, our analyses of several life-course history, cultural meaning, social location, and role context moderating factors suggest a more complex understanding of differences in the effects of transitioning into the role of filial caregiver than has been available previously. This complexity in part consists of a different pattern of results across different dimensions of mental and physical health (making the case for the importance of considering the multidimensionality of mental and physical health). We often also found a somewhat different pattern of results for men and women, suggesting the need to continue to examine the consequences of caregiving separately for women and men.

In support of the life-course perspective's hypothesis that the life-course history of relationship quality in a role might moderate the impact of a transition in a role (Wheaton 1990), our results suggest that lower relationship quality is associated with greater declines in self-esteem among daughters transitioning into filial care. Likewise, poorer prior relationship quality with parents leads to less psychological wellness for sons transitioning into filial care roles. These results are also congruent with what Kramer (1993) found for spousal care.

The life-course perspective emphasizes how socially constructed meanings attached to activities can moderate the developmental impact of those activities (Bengtson and Allen 1993). We found that less sense of filial obligation prior to entering into filial care led to greater declines in health for caregiving daughters, perhaps because of the additional stress of taking on filial care when one's beliefs are not strongly supportive of such filial support. However, in an interesting different pattern by gender, less filial obligation prior to entering into care was found to be associated with higher levels of psychological wellness among caregiving sons, perhaps because of more emotional detachment from the caregiver role among these men. On the other hand, non-White ethnicity, which we expected might be another proxy for greater familism and a higher valuing of caregiving activity, was associated with better caregiving outcomes among sons but not daughters. Specifically, non-White men reported higher levels of personal mastery and less increase in depressive symptoms in the filial care role than non-Hispanic White men. These contrasting results for sons across race or ethnicity and filial obligation suggest there may well be cultural differences beyond differences in filial obligation that are relevant to understanding differences in the caregiving experience across different racial and ethnic cultures in the United States.

We were also guided by the life-course perspective to consider how social location, specifically as indexed by education and income, two dimensions of socioeconomic status, might condition the developmental consequences of filial care. Consistent with our hypothesis, low-income caregiving daughters did report poorer health than high-income caregiving daughters. However, contrary to our hypothesis, each of the dimensions of disadvantaged socioeconomic status we examined—lower educational status and lower household income—was in some instances associated with better well-being for adult children entering into filial care roles than entering into the role with more advantaged social status (controlling always also for race or

ethnicity). Low-income caregiving daughters reported significantly less increase in depression and lower levels of hostility than high-income caregiving daughters; low-income caregiving sons reported higher levels of mastery than high-income caregiving sons. Low-education caregiving sons reported greater increases in happiness than their higher education caregiver counterparts. Overall, these results suggest that the somewhat greater familism that is characteristic of lower socioeconomic status persons in contrast to higher socioeconomic status persons (Rossi and Rossi 1990) may outweigh the resource disadvantages of lower income and lower education in terms of psychological response to entry into a caregiver role for a parent. Yet the concurrent risk for greater decline in self-rated physical health over time found among low-income women in contrast to high-income women entering caregiver roles is an important finding from this study and should be taken seriously by policy makers and social welfare providers considering supports to reduce the health risks of caregivers.

Theoretical guidance from the life-course perspective led us to explore how role context of the caregiver role might moderate the developmental effects of caregiving (Settersten 2003). In terms of the moderating effects of adding other important social roles, our results were mixed and also varied by gender. The pattern we found for combining caregiving with employment suggested more problems with this role combination for women than for men. Employed daughters providing care reported more hostility, less mastery, and less psychological wellness than nonemployed daughters providing care, whereas no differences were found between employed and nonemployed sons who transitioned into a caregiver role. Overall, these results are congruent with other evidence that combining caregiving and employment can lead to increased role conflict and stress (Marks 1998; Neal et al. 1993), at least among women.

Marriage was found to be more beneficial for caregiving sons than daughters. Unmarried caregiving sons reported greater increases in depressive symptoms and less psychological wellness than married caregiving sons. This beneficial result for men of having marital partners for support in filial caregiving has not been reported previously.

By contrast, there were no differences between married and unmarried caregiving daughters, congruent with the findings of Spitze et al. (1994), but not Brody and colleagues (Brody 1992; Brody et al. 1995). It may be that in the most intense forms of caregiving, such as those Brody was examining, having marital partners is more notably helpful for women.

Our finding that combining the role of residential parent for a dependent child along with a caregiving role did not result in any difference in caregiving effects for women is congruent with work examining data from representative samples by Spitze et al. (1994) and Dautzenberg et al. (1999), though not Neal et al. (1999). Caregiving sons with young children at home when compared with caregiving sons without young children at home appeared to enjoy a net benefit from this role combination in terms of psychological wellness. Overall, our results suggest that at least at less intense levels of parent care, combining a filial caregiver role with younger children at home is not a major problem for well-being.

In very many additional instances, we did not find the effects we hypothesized. This may be because each of the moderators we explored is only one small part of a large multidimensional systems experience contributing to the developmental outcomes of caregiving. This line of conjecture is congruent with the complex systems approach of a life-course perspective (Settersten 2003). No one life-course contextual factor appears to be uniquely robust in determining all dimensions of psychological or physical health outcomes associated with caregiving for a parent.

It is worth noting here, too, that our control measure of total hours of care in the past year revealed that the median level of hours of care in the past year for our caregiving sample was about 54 hours, a little over 1 hour a week, although the maximum was 3,744 hours (about 72

hours per week). In short, the intensity of care was strongly skewed toward the lower levels of care in the national sample we studied (so much so that we did not have sufficient cases to credibly examine high- vs. low-intensity care as a moderator). The fact that our sample study overall picks up mainly low-intensity filial caregiving may also be responsible for why we found fewer negative main effects of filial caregiving than have been reported in other smaller scale caregiving studies. This restriction to relatively low-intensity care and only out-of-household filial care is a clear limitation of our study. Yet our “main effect” results do bear similarity to results reported by Spitze et al. (1994), who, using data from a random sample of upstate New York residents in 1988 and 1989, also found that for men but not women, the number of hours of help provided to parents was associated with distress. Similar results were also found in a population sample from the Netherlands (Dautzenberg et al. 1999).

An additional limitation of our study is that we were not able to precisely date the time of transition into caregiving for our “new filial caregivers” at T2. Some of those reporting care during the past 12 months may have begun such care long before the past year and therefore may have already “adjusted” from the initial transition and time of greatest decline in mental and physical health for them. Some may also have provided care earlier in the past 12 months and may have already ended care (though not because of parent death) at the time of reporting (which might have allowed them more enhanced well-being than during the actual period of care).

Although we tried to focus on a group of adult children who we believed would experience the most obligation for parent care when it was needed (i.e., children with only one surviving parent), We did not take into account sibship size, sibling proximity, and proximity to the parent, which are other contextual factors that might moderate the effects of filial care.

It is possible that our longitudinal design, which included controls for well-being at T1, and our use of a noncaregiver contrast group also led to evidence of fewer effects than previous cross-sectional studies have suggested, because for a number of outcomes, we were examining evidence of change over time in well-being, not only differences in groups that might be due to other selection factors. Our controls for multiple demographic factors, such as household income, employment, children in the household, education, filial obligation, prior relationship quality, and age, may also be taking into account some of the variables that in many studies in which they are not controlled can lead to spurious negative associations between filial care and well-being. Seltzer and Li (2000) as well as Lawton et al. (2000) also found fewer negative adult-child caregiver effects on health when using prospective longitudinal designs with explicit noncaregiver control groups.

Another limitation of our study is that with only 112 women and 55 men transitioning into filial caregiving, when examining interactions, we were often examining rather small subgroups with relatively low power to provide evidence of effects. This factor, too, may have led to fewer cases of significance than might occur with even larger samples of women and men caregivers.

In sum, the results of our analysis of filial care and its effects on well-being suggest that the life-course role transition to becoming an out-of-household caregiver for a sole surviving parent, if examined solely as a global main effect, is associated with a greater risk for increase in depressive symptoms for men and women, but it is not otherwise associated with a significant global decline in all dimensions of mental and physical health. However, several important life-course and contextual factors can moderate the influence of transitioning into filial caregiving on mental and physical health and lead to more problematic effects for specific population subgroups. Future research should continue to examine filial caregiving from a population perspective as well as a more in-depth clinical perspective to better understand the

factors that increase the risk for mental and physical health decline among adult children providing personal care for their frail or disabled parents.

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Biographies

Nadine F. Marks is a professor of human development and family studies and an affiliate of the Institute on Aging, the Center for Demography and Ecology, and the Center for Demography of Health and Aging at the University of Wisconsin-Madison. Her research focuses on the influence of various social relational and social status factors on mental and physical health in midlife and older adulthood.

James David Lambert is an associate professor of psychology at Edgewood College. His recent research includes a qualitative examination of the parenting experience, investigation of parent-child relationships and adolescent outcomes, and evaluation of how life-course transitions (e.g., marital dissolution, caregiving) influence adult development and psychological well-being.

Heyjung Jun is an assistant professor of child and family studies at Yonsei University. Her recent publications have focused on the effects of productive roles on mental and physical health among older adults, the death of parents and adult psychological and physical well-being, and family life education for the middle aged.

Jieun Song is a research associate at the Institute on Aging at the University of Wisconsin-Madison. Her research examines how the work and family interface, intergenerational relationships, and retirement transitions are linked to health in midlife and later adulthood.

Table 1

es for Analytic Variables

	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
	.60	.10	-.09	.06	.00	.02	.05	.08	.03	.06	.08	.17	.15	.17	.02	.06	.07	.01	.00	.06	.02	.01	.03
	.15	.00	.22	.12	.19	.15	.01	.02	.11	-.03	.02	.14	.04	.11	.01	.09	.16	.03	.06	.01	.04	.04	.08
	.14	.06	-.12	.05	-.40	.46	.13	.07	.03	.07	.01	.16	.09	.10	.01	.04	.23	.16	.11	.17	-.12	.04	.10
	—	.02	.04	.03	.01	.03	.09	.03	.07	-.09	.08	.09	.16	.09	.00	.09	.01	.01	.00	.01	-.05	.00	.01
	.13	—	.22	.15	.18	.03	.01	.02	.11	.00	.08	.10	.07	.06	.13	.10	.02	.01	.06	.10	.11	.20	.13
	.07	.21	—	.69	.35	.17	.05	.03	.09	.00	.09	.20	.15	.12	.19	.17	.07	.05	.24	.04	.28	.21	.28
	.12	.17	.71	—	-.28	.25	.03	.03	.04	.01	.03	.07	.10	.08	.16	.13	.03	.13	.18	.01	-.20	.13	.15
	.07	.30	.44	.38	—	.73	.16	.08	.05	-.03	.10	.22	.20	.09	.17	.12	.20	.20	.19	.08	.25	.16	.23
	.06	.29	.41	.39	-.65	—	.13	.03	.07	.03	.08	.16	.18	.07	.14	.13	.18	.18	.19	.13	-.24	.14	.21
	.05	.13	.05	.01	-.13	.12	—	.06	.01	.05	.01	.05	.06	.02	.06	.01	.05	.08	.02	.07	.02	.05	.14
	.08	.02	.07	.10	.02	.04	.07	—	.13	-.03	.05	.03	.08	.01	.03	.04	.06	.03	.02	.02	-.01	.02	.02
	.07	.01	.07	.09	-.08	.10	.01	.19	—	.03	.02	.07	.00	.02	.00	.14	.04	.10	.03	.03	-.03	.08	.05
	.02	.08	.02	.01	-.05	.05	.07	.01	.12	—	.40	.02	.05	.01	.01	.03	.04	.03	.02	.06	.04	.02	.03
	.07	.03	.06	.06	-.02	.01	.03	.01	.12	.55	—	.00	.02	.04	.04	.01	.07	.02	.03	.06	.00	.00	.00
	.04	.05	.02	.04	-.03	.07	.08	.10	.01	.09	.11	—	.41	.58	.39	.20	.49	.19	.03	.14	-.50	.36	.23
	.05	.01	.04	.02	-.04	.03	.03	.11	.08	.02	.02	.43	—	.28	.24	.22	.26	.44	.24	.22	-.24	.23	.29
	.06	.04	.02	.05	-.07	.07	.10	.07	.01	-.02	.02	.54	.24	—	.30	.13	.38	.12	.38	.05	-.39	.22	.10
	.03	.12	.22	.10	.14	.11	.06	.12	.07	-.06	.02	.30	.15	.28	—	.37	.29	.23	.51	.15	.60	.40	.26
	.03	.06	.22	.14	.14	.05	.03	.05	.20	.03	.05	.09	.19	.11	.34	.21	.22	.31	.36	.31	.26	.27	
	.03	.09	-.07	.01	.06	.08	.08	.20	.03	-.07	.04	.45	.18	.27	.39	.16	—	.22	.40	.16	.36	.26	.14
	.13	.00	-.05	.07	-.06	.03	.01	.24	.14	-.02	.01	.27	.48	.17	.21	.29	.23	—	.17	.23	.19	.17	.23
	.02	.13	.23	.20	.13	.14	.02	.04	.06	.07	.05	.35	.20	.27	.49	.23	.41	.15	—	.20	.65	.36	.27
	.06	.04	-.04	.02	.00	.01	.09	.07	.14	.09	.07	.16	.21	.19	.18	.34	.19	.22	.21	—	.20	.14	.15
	.00	.12	.17	.16	.10	.11	.07	.13	.04	-.04	.04	.41	.23	.29	.55	.25	.45	.17	.62	.18	—	.35	.25
	.05	.13	.16	.09	.14	.12	.07	.07	.01	-.09	.03	.25	.18	.18	.36	.23	.27	.22	.34	.10	.30	—	.51
	.06	.20	.27	.09	.16	.12	.05	.07	.06	-.01	.02	.19	.22	.11	.31	.28	.16	.24	.27	.13	.32	.44	—
	.49	.69	12.69	0.55	\$41,748	0.55	0.02	0.30	0.50	43.09	0.18	2.28	2.21	1.15	4.02	4.12	5.21	5.30	3.56	3.41	84.49	3.94	4.07

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	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
0.50	0.46	2.73	0.50	0.50	\$36,542	0.50	0.14	0.46	0.50	226.36	0.39	1.18	1.18	1.46	0.69	0.62	1.45	1.50	0.70	1.04	11.65	0.87	0.81
0.45	0.85	13.38	0.44	0.44	\$52,714	0.44	0.01	0.30	0.54	12.08	0.12	1.85	1.90	0.85	4.17	4.14	5.43	5.49	3.69	3.57	84.78	4.02	4.17
0.50	0.36	2.97	0.50	0.50	\$41,863	0.50	0.11	0.46	0.50	58.89	0.33	1.09	1.17	1.17	0.59	0.54	1.24	1.24	0.65	0.95	11.64	0.76	0.80

87 to 1994.

omen, 446 men). Women's correlations are above the diagonal, and men's correlations are below the diagonal. T1 = time 1; T2 = time 2.

Table 2
Unstandardized Regression Coefficients for the Effects of Filial Care Status and Moderators of Filial Care on Well-Being by Gender

Predictor	Depressive Symptoms		Hostility		Global Happiness		Self-Esteem		Personal Mastery		Psychological Wellness		Self-Rated Physical Health	
	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men
Model 1 (no controls)														
No filial care T1 to T2 (omitted)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
T1 to T2 (omitted)														
New filial care	.09 ^a	.36 ^{**a}	-.12	.11	.03	-.13	.06 ^a	-.11 ⁺ _{+a}	.05	.08	1.89 ⁺ _b	-1.56 ^b	.02	-.07
Model 2														
No filial care T1 to T2 (omitted)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
T1 to T2 (omitted)														
New filial care	.21 [*]	.25 ⁺	-.02	.16	.07	-.11	.02 ^a	-.09 ^a	-.01	-.07	.44 ^a	-2.33 ^a	.00	.03
T1 well-being	.38 ^{***}	.37 ^{***}	.31 ^{***}	.23 ^{***}	.16 ^{***}	.20 ^{***}	.40 ^{***}	.32 ^{***}	.13 ^{***}	.13 ^{***}	-2.04 ^{***}	-2.27 ^{***}	.53 ^{***}	.40 ^{***}
Age	-.03 ^{***}	-.01 ⁺	-.03 ^{***}	.00	.01 ⁺	.02 [*]	.00	.00	.00	.00	-.05	-.07	.00	.00
Race or ethnicity (1 = non-Hispanic White)	-.07	.02	-.09	-.05	.32 [*]	-.10	-.11 [*]	-.03	-.01	.07	-2.04 [*]	-1.10	-.06	-.07
Education (years)	-.04 [*]	.01	-.04 ⁺	.01	-.02	-.03	.03 ^{**}	.03 ^{**}	.05 ^{***}	.05 ^{***}	.93 ^{***}	.62 ^{**}	.02 ⁺	.02 ⁺
Household income	.00 ⁺	.00	.00	.00	.00 [*]	.00	.00 ^{**}	.00 ^{**}	.00 ^{**}	.05 ^{***}	.00 ^{**}	.00	.00	.00
Missing on income	.07	.75 ⁺	-.22	1.30 ^{**}	-.54	-.78	-.24	-.18	.02	.09	2.59	-7.71 ⁺	.14	-.54 ⁺
Marital status (1 = Unmarried)	.15 ⁺	.17 ⁺	.20 ⁺	.07	-.38 ^{**}	-.30 [*]	.08 ⁺	.00	-.01	-.05	-.60	-2.92 [*]	.00	.00
Employment status (1 = employed)	-.15 ⁺	-.10	-.21 [*]	-.13	.14	.44 [*]	.08 ⁺	.07	.03	.16 ⁺	.75	1.35	.23 ^{***}	.11
Child aged <19 years in household	-.21 [*]	-.09	-.16	.10	.16	-.16	.05	.00	-.01	-.02	-1.19	-2.43 [*]	.02	-.15 [*]
Low RQ	-.03	.12	-.14	.15	-.08	-.39	.04	-.14 ^{**}	.07	-.05	.02	-2.61 [*]	-.03	-.07
Low FO	.10	.09	-.02	.15 ⁺	-.03	.00	-.05	.01	.04	.07	.21	.40	-.05	-.04
Total caregiving hours past year	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Model 3 ^d														
Low RQ	.02	.09	-.16	.14	-.03	-.39 ^{**}	.08 ⁺	-.15 ^{**}	.07	-.02	.13	-1.75 ⁺	.01	-.06
New filial care	.29 [*]	.15	-.06	.13	.15	-.11	.09	-.10	-.01	-.01	.60	.23	.06	.07
New Filial Care × Low RQ	-.33 ^{++a}	.28 ^a	.16	.07	-.32	.01	-.26 [*]	.06	-.02	-.20	-.64 ^a	-7.04 ^{*a}	-.24 ⁺	-.12
Model 4 ^d														
Low FO	.05	.10	-.06	.14	.07	-.07	-.04	.00	.01	.06	-.11	-.38	.00	-.06
New filial care	.08	.28	-.11	.12	.32 ⁺	-.51 ⁺	.06	-.17	-.08	-.10	-.34	-6.67 [*]	.14	-.11
New Filial Care × Low FO	.28	-.06	.20	.07	-.53 ^{++b}	-.72 ^{++b}	-.08	.14	.15	.05	1.69	7.02 [*]	-.27 ^{*a}	.21 ^a
Model 5 ^d														

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Predictor	Depressive Symptoms		Hostility		Global Happiness		Self-Esteem		Personal Mastery		Psychological Wellness		Self-Rated Physical Health	
	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men
Non-Hispanic White	-.08	-.06	.00	-.09	.28 ⁺	-.04	-.09 ⁺	-.04	.02	.12 ⁺	-.180 [*]	-.79	-.09	-.05
New filial care	.19	-.24	.32	-.06	-.07	.54	.10	-.20	.10	.24	1.35	-.26	-.14	.21
New Filial Care × Non-Hispanic White	.03	.60 [*]	-.44 ^{†a}	.28 ^a	.20	-.75 ⁺	-.11	.15	-.15	-.39 [*]	-.1.19	-.2.53	.18	-.23
Model 6 ^d														
Low income	.06	.07	-.05	.04	-.35 [*]	-.14	-.08	.00	-.13 [*]	-.10 ⁺	-.3.17 ^{**}	-.22	.04	-.06
New filial care	.37 ^{**}	.23	.27 ⁺	.14	-.09	-.09	.11	-.01	-.02	-.23 [*]	-.98	-.3.45 ⁺	.16 ⁺	.01
New Filial Care × Low income	-.43 [*]	.03	-.66 [*]	.02	.38	-.03	-.18 ⁺	-.25 ⁺	.03 ^b	.51 ^{**b}	3.25 ⁺	3.36	-.35 ^{*a}	.08 ^a
Model 7 ^d														
Low education	.00	.09	.27 [*]	.09	.10	-.18	-.11 [*]	-.03	-.16 ^{**}	-.25 ^{***}	-.3.84 ^{***}	-.3.27 ^{**}	-.05	-.06
New filial care	.27 ⁺	.37 [*]	.21	.26	.04	.37 ⁺	-.01	-.05	.05	-.10	-.93	-.2.34	.05	.08
New Filial Care × Low Education	-.16	-.33	-.49 [*]	-.25	.05	.73 [*]	.08	-.06	-.09	.13	3.48 ⁺	.35	-.09	-.13
Model 8 ^d														
Employed	-.21 [*]	-.05	-.37 ^{**}	-.11	.20	.35 ⁺	.09 ⁺	.04	.11 ⁺	.14 ⁺	2.21 [*]	.60	.24 ^{**}	.09
New filial care	.01	.58 ⁺	-.53 [*]	.31	.28	-.59	.06	-.25	.26 [*]	-.18	5.31 ^{***}	-.8.04 ⁺	.04	-.08
New Filial Care × Employed	.30 ^b	-.37 ^b	.76 ^{**a}	-.16 ^a	-.31	.56	-.06	.18	-.40 ^{**a}	.12 ^a	-.7.71 ^{**c}	6.06 ^c	-.05	.13
Model 9 ^d														
Child aged <19 years in household	-.18 ⁺	-.06	-.13	.09	.21	-.14	.02	.02	-.01	-.01	-.1.29	-.3.17 [*]	.02	-.14 ⁺
New filial care	.27 [*]	.34 ⁺	.05	.13	.20	.02	-.05	-.02	.00	.00	.16	-.5.45 [*]	.01	.09
New Filial Care × Child in Household	-.14	-.17	-.14	.06	-.30	-.25	.15	-.12	-.03	-.13	.65	5.75 [*]	-.02	-.12
Model 10 ^d														
Unmarried	.17 ⁺	.11	.22 ⁺	.08	-.40 ^{**}	-.30 ⁺	.11 [*]	.02	-.02	-.06	-.29	-.2.05 ⁺	.02	-.01
New filial care	.24 ⁺	.14	.05	.18	.03	-.11	.08	-.06	-.03	-.08	1.09	-.92	.05	.00
New Filial Care × Unmarried	-.08 ^b	.60 ^{ab}	-.17	-.13	.10	-.03	-.14	-.21	.05	.07	-.1.67 ^a	-.8.14 ^{*a}	-.12	.17

Source: National Survey of Families and Households, 1987 to 1994.

Note: T1 = time 1; T2 = time 2; RQ=relationship quality; FO=filial obligation.

^aThree-way interaction including gender was significant in combined gender models, $p \leq .10$ (one-tailed test).^bThree-way interaction including gender was significant in combined gender models, $p \leq .05$ (one-tailed test).^cThree-way interaction including gender was significant in combined gender models, $p \leq .01$ (one-tailed test).^dModels 3 to 10 also controlled for age, race or ethnicity, education, household income, missing on income, marital status, employment status, having a child under age 19 in the household, low relationship quality, low filial obligation, and total caregiving hours. Analyses used unweighted data ($N = 1,060$).⁺ $p \leq .10$

*
 $p \leq .05$
**
 $p \leq .01$

 $p \leq .001$ (one-tailed test).