Family Relations Interdisciplinary Journal of Applied Family Studies
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Mexican American Adolescents' Family Caregiving: Selection Effects and Longitudinal Associations With Adjustment

One hundred ten Mexican American adolescents (12 – 17 years) who provide infant care for their older sisters were studied to determine the effects of family caregiving responsibilities on adolescents' adjustment. Controlling for prior adjustment and family context factors, providing many hours of caregiving predicted an increase in youths' school absences and disciplinary problems. Frequent conflict surrounding caregiving was associated with increased stress and depression and lower school grades. Older girls appear to select into caregiving and experience the most problematic outcomes. Strong family obligations were not protective against caregiving stress but, rather, further compromised youths' well-being for those who were highly involved in their family's care.

Understanding how family caregiving affects youth is highly significant given that recent estimates are that 1.4 million U.S. children and adolescents provide some type of care to a family member (National Alliance for Caregiving, 2005). The ramifications of family caregiving for adolescents' development are not well understood (East, in press). There is, however, an emerging literature that is beginning to consider how excessive family caretaking responsibilities on the part of youth may affect developmental outcomes (Burton, 2007; Dodson & Dickert, 2004). Indeed, large amounts of adolescents' family caregiving (helping parents, grandparents, or siblings with daily living assistance tasks such as bathing, dressing, and feeding 20 hours or more a week) have been found to be associated with children's stress, depression, and school absences (Pakenham, Bursnall, Chiu, Cannon, & Okochi, 2006; Shifren & Kachorek, 2003). Results of two large studies, one in the United States and one in the United Kingdom, indicated that youth who care for a family member experience significantly more anxiety, antisocial behavior, and feelings of low self-worth than noncaregivers of comparable age and racial background (Dearden & Becker, 2000; National Alliance for Caregiving). Within Great Britain, young caregivers missed school significantly more often than other children and reported feeling stressed and depressed (Aldridge & Becker, 1993). In contrast, other studies have suggested that youths' family care yields developmental benefits, such as maturity, self-reliance, and empathy (Beach, 1997;

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Key Words: family caregiving, family obligations, Mexican-American adolescents, siblings of teenage parents, teenage parents.

Chase-Lansdale, Wakschlag, & Brooks-Gunn, 1995). Adolescents' helpfulness in the home and involvement in general family household tasks have also been found to contribute to positive self-esteem and feelings of interpersonal competence (Beach; Call, 1996; Kuperminc, Jurkovic, & Casey, 2009).

In this study, we examined the relations between Mexican American adolescents' family caregiving and their adjustment. As a form of family care, we examined the caretaking youth provide to their teenage sister's infant. Infant care provided by the siblings of a teenage parent is a common and often necessary response and is typically favored over other strategies because it is convenient, affordable, and best utilizes available family personnel (East, Weisner, & Reyes, 2006; East, Weisner, & Slonim, in press). Sibling-provided infant care is an important issue for Latino families because Latinos currently have the highest teenage birthrate of any racial/ethnic group (Martin et al., 2009), and most parenting Latina teens remain with their family of origin after they give birth (Manlove, Mariner, & Papillo, 2000). Infant care is likely different from other forms of children's family caregiving (i.e., caring for a sick, disabled, or elderly parent or grandparent) in that one is caring for a cuddly, beautiful baby. Infant caretaking can be highly enjoyable, rewarding, and amusing. It can also be quite labor-intensive and emotionally stressful, however (Cowan & Cowan, 2000). Thus, it should be noted that only infant caretaking was examined in this study, which may have different ramifications for adolescents' adjustment than other forms of family care.

Conceptual Influences

In conceptualizing caregiving effects, Pearlin and colleagues outlined a model of the caregiver stress process that involves appraisals, mediators, and manifestations of stress (Pearlin, Mullan, Semple, & Skaff, 1990). Central to the model is a distinction between *primary caregiving stressors*, which encompass the extent or hours of care provided, and *secondary caregiving stressors*, which include the conditions and experiences surrounding caregiving. *Primary stressors* stem directly from the nature and extent of caregiving demanded and are often operationalized as hours or tasks involved in caregiving. Several studies have shown that primary stressors, particularly the hours of time committed to caregiving, are associated with adult caregivers' poorer mental and physical health (Pinquart & Sorensen, 2005a; Vitaliano, Zhang, & Scalan, 2003). *Secondary stressors* are not necessarily related to primary stressors but stem from the caregiver role and take the form of role strain or interpersonal disagreement or conflict surrounding care. Such conflict is often about the way care is provided or that not enough care is provided (Scharlach, Li, & Dalvi, 2006). Research on adult caregivers shows that those who experience high levels of conflict related to their caregiving report feelings of anger, depression, and stress, even after considering the hours of care provided, their age, and gender (Semple, 1992; Strawbridge & Wallhagen, 1991). Other studies of adult caregivers emphasize the importance of disaggregating the magnitude of care from the experiences surrounding caregiving, with each having potentially independent effects on caregivers' psychological and physical health (Koerner & Kenyon, 2007; Sands & Goldberg-Glen, 2000). Very little is known about the conflict that children and adolescents experience when providing care or how it affects their adjustment. For example, the adult caregiving experience may not be comparable to that of adolescents because of developmental distinctions. Indeed, conflict may arise from the struggle between the family's need for cooperation and interdependence and adolescents' developing need for autonomy and independence (Dellmann-Jenkins, Blankemeyer, & Pinkard, 2001). Too, in some cases, adolescent children's less powerful role within the family is exploited and—because of disadvantaged circumstances or because others are unable or unwilling—adolescent children are the ones who perform the large majority of family care (Burton, 2007; Chase, 1999; Dodson & Dickert, 2004). In such cases, when care is coerced or provided begrudgingly or resentfully, conflict is likely to arise that can exacerbate caregiver strain (Scharlach et al., 2006; Strawbridge & Wallhagen). As a first step in articulating caregiving effects for youth, this study examines youths' experiences of caregiving conflict and its impact for adjustment independent of the extent of caregiving provided.

It should be noted that caregiving hours and caregiving conflict comprise two of many broad dimensions related to caregiver stress.

Cumulative duration of caregiving, expectations for care, nature of the care provided, availability of supportive resources, functioning of the care recipient, as well as characteristics of the caregiver-care recipient relationship are among a host of key concepts related to caregiver health and well-being (Pinquart & Sorensen, 2005a). Nevertheless, the level of caregiving and caregiving conflict are two of the foremost contributors to caregiver stress among adults (Strawbridge & Wallhagen, 1991), and their examination here provides a useful starting point for determining which aspects of caregiving most impact adolescents' adjustment.

Age and gender effects. In evaluating how youths' caregiving might affect their adjustment, it is important to consider whether problematic outcomes are more likely for girls or boys and for older or younger adolescents. With respect to gender, there have been discussions that women consider caregiving empowering, fulfilling, and an affirmation of their femininity (Cancian & Oliker, 2000; Kroska, 2003). Adolescent girls might derive more benefits—or less harm—from caregiving than adolescent men because of greater gender socialization and traditional gender role norms that prescribe that girls take part in the care of others, norms that are not present for boys (Galambos, 2004). In fact, caretaking, and particularly infant caretaking, is antithetical to stereotypical male behavior, and may cause more distress among men than women. This might be particularly relevant for adolescent boys, for whom the pressure to conform to sex-appropriate activities is quite high (Galambos). The literature is equivocal in identifying gender effects, however. Two studies have noted greater distress among young female caregivers (Dearden & Becker, 2000; East & Jacobson, 2001), whereas young male care providers report more depression and school maladjustment than both female care providers and young male noncaregivers (McMahon & Luthar, 2007; National Alliance for Caregiving, 2005).

Caregiving effects by age and developmental maturity are also unclear. One can imagine that the lesser maturity and coping abilities of younger children would enhance the stress and strain experienced from caring for a young child. Older adolescents (i.e., 16, 17, and 18 year olds), however, likely have more stressful school obligations and competing demands for their time and, thus, may be more compromised by excessive caretaking duties. Previous findings regarding developmental status are inconsistent. McMahon and Luthar (2007) found that older teen caregivers experienced more psychological distress and school maladjustment than younger caregivers. The results reported by the National Alliance for Caregiving (2005), however, indicate that depression and anxiety were highest among the youngest care providers (ages 8 – 11). Notwithstanding the age of the child caregiver, the developmental maturity of the child also needs to be considered when assessing caregiving effects. This study did not have available assessments of youths' developmental maturity, but did examine youth within a fairly wide age range (12 – 17 years of age). This examination provides at least some indication of how caregiving effects might vary for youth within this age group.

Family Obligation Values as a Protective Factor

In the time since Pearlin and colleagues (1990) proposed their model of caregiver stress, numerous researchers have pointed out that race and ethnicity, and specifically strong cultural norms that emphasize filial obligations, play a significant role in the caregiving processes (Aranda & Knight, 1997; Dilworth-Anderson, Williams, & Gibson, 2002; Pinquart & Sorensen, 2005b). Indeed, family obligations are strongly valued in the Latino culture, with an emphasis placed on the individual subjugating his or her own needs in deference to those of the family (Luna et al., 1996). This more *familistic* orientation among Latinos is exemplified in their strong caretaking ideology, with family caregiving considered a natural and fundamental element of family life (Phillips, de Ardon, Komnenich, Killeen, & Rusinak, 2000). Latino youths' contributions to family are also viewed as an expected part of daily living and as a normative and important preparation for adulthood (Fuligni & Pedersen, 2002). Within these recent culturally informed models of caregiving, strongly held values of family obligation are often, but not always, considered a protective factor against caregiver stress (Pinquart & Sorensen, 2005b). For example, several studies have shown that a strong sense of family obligation among Latino caregivers guards against depression and burnout in long-term caregiving situations (Luna et al.; reviewed in Phillips et al.,

2000). Other research, however, shows that Latino caregivers perceive their family obligations as a significant burden, and this contributes to their poor mental health (Saldana, Dassori, & Miller, 1999; reviewed in Aranda & Knight, 1997). The adolescent literature has, thus far, largely discussed the benefits of family obligations, with youths' sense of filial duty found to be related to positive family relationships and strong academic motivation (Fuligni, Tseng, & Lam, 1999; Weisner, 2001). This study explores the value of filial obligations as a moderator in the relationship between youths' caregiving and their adjustment. That is, we examine whether strongly held values of family obligation protect Mexican American youth against poor outcomes in the presence of extensive caregiving and frequent caretaking conflict.

Selection Into Caregiving

An important issue to arise from the child caregiving literature is whether the negative correlates of extensive family care are actually caused by youngsters' caregiving (Burton, 2007). A number of investigators have suggested that apparent differences between youth who do and do not provide care may be attributable to precaregiving differences in adjustment (McMahon & Luthar, 2007; Pakenham et al., 2006). Their argument is that youth who are less academically inclined and have fewer extracurricular interests are chosen as family caregivers. Several scholars of Latino families have also suggested that it is the children who are less invested in school who are selected into caretaking roles at home (Orellana, 2001; Valenzuela, 1999). We subscribe to this thinking given research that shows that Latino adolescents who are doing poorly in school are often those who are more likely to become heavily entrenched in taking care of their family's immediate needs (Suárez-Orozco & Suárez-Orozco, 1995; Vasquez, 1982). Investigators studying children's family caregiving have been unable to test for selection effects because care has typically been provided on an ongoing, long-term basis, and children's adjustment is usually assessed only after the caregiving has begun (National Alliance for Caregiving, 2005). This study uses a prospective longitudinal design that assessed youth functioning prior to their involvement in caretaking. Such an approach allows for the examination of whether specific adolescents, or adolescents who have specific psychosocial characteristics, are selected into caretaking roles.

This Study

We based this study's hypotheses on Pearlin et al.'s (1990) conceptual model and the research within the adult and child caregiving literatures. We also incorporated the results of numerous studies of adults that have found that caregiving conflict has effects on adjustment that are unique from those associated with the extent of caregiving provided (Pinquart & Sorensen, 2005a; Scharlach et al., 2006). Specifically, we hypothesized that:

> **H1:** Many hours of caregiving and frequent interpersonal conflict surrounding caregiving will adversely affect youths' adjustment.
>
> **H2:** Caregiving conflict will impact youths' adjustment above and beyond effects associated with hours of care.

Adjustment indicators in this study were indices of youths' psychological health, or their stress, depression, and anxiety, as well as indicators of youths' school functioning, such as their grades, absences, school disciplinary problems, and extracurricular involvement. We also examined gender and age effects to determine whether many hours of care and frequent conflict surrounding caregiving are more detrimental for girls or boys or for older or younger adolescents. In addition, on the basis of recent models of caregiver stress that incorporate cultural-ethnic values of family obligation, we hypothesized that:

> **H3:** Strongly held obligations to family would buffer youth against poor outcomes when youth provide extensive caregiving and experience frequent caretaking conflict.

With respect to selection into caregiving, we hypothesized that:

> **H4:** Individuals who are less involved in school and prone to school difficulties prior to their niece's/nephew's birth will provide high levels of caregiving when their niece/nephew is 6 months old.

We recognize, as is consistent with many caregiver stressor models (Aranda & Knight,

1997; Pearlin et al., 1990), that caregiving does not occur within a vacuum but, rather, takes place within a context of unique family histories, dynamics, and characteristics. Although these contextual elements of the caregiving process are important in their own right, where possible, we control for such factors analytically so as to isolate the effects of caretaking on youths' adjustment. Thus, in this study we statistically control for general family stress and family conflict given that youths' caretaking of their infant niece or nephew is assessed soon after her or his birth, which is typically a highly disruptive period (Cowan & Cowan, 2000). Such controls were implemented to isolate (as best we are able) the strain that teenage childbearing brings to the family from the stresses that emanate from the caretaking experience itself.

Method

Data from a large, longitudinal study designed to examine family adaptation to a teenager's childbearing were analyzed. Only Latino families were studied because this group has had the highest teenage birthrate of any racial/ethnic group for the last several years (Martin et al., 2009). Families were eligible for the study if there was a teenage daughter (between 15 and 19 years of age) who was pregnant for the first time and her pregnancy (and subsequent childbearing) was the first to occur within the family. Eighty-five families were studied. Information was gathered from multiple informants within the family, including the pregnant teenager, her younger siblings, and their mother. For these analyses, measures drawn from younger siblings and their mothers were examined. Family members completed a short interview and a self-administered questionnaire at four time points: when the teenager was in her last trimester of pregnancy, at 6 weeks postpartum, at 6 months postpartum, and at 1 year postpartum. Measures of youths' caretaking were drawn at 6 months postpartum, and indices of youths' adjustment were drawn from the prenatal and 1-year postpartum assessments.

Participants

Participants were 110 Mexican American adolescents and their mothers from families in which a teenage daughter was currently pregnant. Youth participants were recruited by first identifying eligible (pregnant) older sisters. Eligible older sisters were recruited from high schools, Women, Infants, and Children (WIC) program centers, and community clinics located throughout southern California. All eligible pregnant teenagers who were identified were invited to participate in the study, and 97% did so.

The younger siblings within families were eligible for this study if they were between 12 and 17 years of age, were biologically related to the older (pregnant) teenager, and had been living with her at the time of her pregnancy, and planned to live with her after her baby was born. All younger siblings of eligible age within a family were invited to participate, of which 95% agreed. Twenty families had two or more siblings participate. About 120 younger siblings were enrolled into the study, and 110 participated at 6 and 12 months postpartum (or 92% of those originally enrolled). Youth were an average age of 13.9 years at study enrollment, 14.3 years at the 6-month assessment, and 14.8 years at 1-year postpartum ($SD = 1.83$). Of the 110 youth studied, 66 were girls (60%), and all were attending school. The majority of adolescents were born in the United States (85%); the others were born in Mexico. Mothers were an average age of 40 years (30 – 57 years) and most were born in Mexico (83%); the others were born in the United States. Most families were economically disadvantaged. The average total annual family income was $18,500 for an average household of six persons, and 63% of families were receiving some form of governmental financial assistance at enrollment. Information regarding family income and financial aid was obtained by youths' mothers.

Procedure

At each assessment, study families were visited in their homes by a female research assistant who was fluent in Spanish. All youth completed a short interview and a self-administered questionnaire (in English). The home visit lasted about 1 hour. All participants were paid $10 at each time of assessment, and all were assured of the confidentiality and anonymity of their responses. The study's procedures were approved by the researchers' university human subjects protection review board.

Measures

The study questionnaire had an approximate third-grade reading level (as ascertained by the Flesch-Kincaid readability method). All study variables were assessed using identical items and response options at all time points.

Caregiving hours. When the older sister's baby was 6 months old, youth indicated (on a blank provided on the questionnaire) the number of hours per week they cared for or looked after their teenage sister's baby.

Caregiving conflict. To assess interpersonal conflict related to caregiving, youths' responses were averaged across 12 questions that asked how frequently he or she argued with the (parenting) older sister about providing various forms of care (e.g., ''having to feed the baby,'' ''soothe the baby when he/she cries,'' ''occupying baby''). Response options ranged from 1 (*never argued*) to 5 (*argued very often*). The Cronbach's α of the 12 items was .95.

Family obligations. Youths' value of family obligation was assessed by five items drawn from the familial obligations scale by Sabogal, Marin, Otero-Sabogal, and Marin (1987). Exemplar items are: ''I take my family obligations very seriously,'' and ''My family comes first.'' Response options ranged from 1 (*strongly disagree*) to 5 (*strongly agree*), and responses were averaged to form one score reflecting strength of family obligations. The Cronbach's α of the five items was .89.

Family stress. The occurrence of stressful events experienced by youths' families was assessed from reports by youths' mothers on the Family Inventory of Life Events and Changes (FILE; Olson et al., 1984). This 46-item inventory asks whether specific events and changes have occurred within the last 3 months (e.g., a family member lost a job). A total events score was derived by summing the occurrence of stressful events.

Family conflict. Family conflict was assessed by youths' mothers' reports on the conflict scale of the Family Environment Scale (FES; Moos & Moos, 1984). This scale included five items ($\alpha = .90$) of the family's expression of anger (e.g., ''During the past month, how often has your family shouted or yelled at each other?''). Response options ranged from 1 (*never or hardly ever*) to 5 (*often*) and were averaged to form one score.

Youths' adjustment. Youths' level of stress was assessed using six items from the Perceived Stress Scale (e.g., ''How often have you found that you could not cope with all the things you had to do?''; Cohen, Kamarck, & Mermelstein, 1983). Response options ranged from 1 (*never*) to 5 (*often*), and responses were averaged to form one score. Cronbach's αs were .89 at 6 months postpartum and .88 at 1 year postpartum. Five items were used to assess youths' depressive symptomatology (''cried frequently,'' ''felt depressed,'' ''felt sad,'' ''felt happy'' [reversed], ''thought my life had been a failure.''). These items had high internal reliability ($\alpha = .93$ at 6 months postpartum and $\alpha = .88$ at 1 year postpartum), and high interitem correlations (all rs $> .68$). Five items were used to assess youths' anxiety (''worried a lot of the time,'' ''worried about what is going to happen,'' ''worried when I went to bed at night,'' ''worried about something bad happening to me,'' and ''was nervous''). These items had good internal reliability ($\alpha = .88$ at both times of assessment) and the interitem correlations exceeded .61. The response options for the depression and anxiety items ranged from 1 (*never*) to 5 (*often*), and both sets of items were averaged to form two separate scores.

Youths' school involvement was assessed by three questions that asked how involved the youth was in his/her school's clubs and activities, and how connected they felt to their school ($1 =$ *not at all* to $5 =$ *very much*). These items were averaged to form one score reflecting school involvement. School grades were assessed by the question, ''What grades do you usually get in school?'' ($1 =$ *mostly below D* to $8 =$ *mostly As*). The frequency of school absences was assessed by youths' report of the total number of days they were absent from school during the past month ''because of sickness,'' ''because of family matters,'' or ''to help out a family member.'' Disciplinary problems at school were assessed using youths' cumulative responses to five questions that asked how often the youth: had ''ditched'' a class at school, had cut a day of school, got sent to principal's office for getting into trouble, had to go to Saturday school, and got a detention. Response options were: $0 =$ *never*, $1 =$ *one*

time, 2 = 2 *or 3 times*, 3 = 4 − *10 times*, and 4 = *more than 10 times*.

Analytic Plan

To address the first two hypotheses, that many hours of caregiving and frequent caregiving conflict will be associated with adverse adjustment outcomes and that caregiving conflict will affect youths' adjustment above and beyond the effects associated with hours of care, a series of hierarchical regressions were conducted to test the associations between youths' caregiving and their adjustment. Four separate regressions were conducted on each outcome, entering four separate blocks according to the procedures outlined by Cohen, Cohen, West, and Aiken (2003). In Step 1, the background control variables of youths' age, gender, family stress, family conflict, and the outcome variable as assessed at 6 months were entered. In Step 2, the number of hours of caretaking (per week) was added, and in Step 3, the caretaking conflict score was entered. Using this approach, a significant change in the R^2 at Step 2 would indicate that hours of care significantly contribute to youths' functioning beyond the controls, and a significant change in the R^2 at Step 3 would indicate that caregiving conflict has a unique effect on youth's functioning above and beyond the effect associated with hours of care and the controls. In Step 4, we tested for the possibility of age and gender effects by entering the 4 two-way interactions of Caregiving Hours × Age, Caregiving Hours × Gender, Caregiving Conflict × Age, and Caregiving Conflict × Gender. To form the interaction terms, the variables were centered (computed as deviations from their respective means). Significant interactions were explored by using simple slope tests as recommended by Aiken and West (1991).

A similar stepwise approach was used to test the third hypothesis, that strongly held obligations to family would moderate the effects of caretaking on adjustment. For these analyses, the control variables of age, gender, family stress, family conflict, and the 6-month assessment of the adjustment variable were entered in Step 1. In Step 2, we entered the scores for family obligations, hours of caretaking, and caretaking conflict. In Step 3, we entered the interaction terms between family obligations and hours of caregiving, and the interaction between family obligations and caretaking conflict. To form the interaction terms, the variables were centered (computed as deviations from their respective means), and significant interactions were explored by using simple slope tests (Aiken & West, 1991).

Finally, to test the fourth hypothesis and examine selection effects, youths' hours of caregiving at 6 months postpartum were regressed on indices of their adjustment prior to the birth of their sister's baby. In these analyses, age and gender were included as main effects and in interaction with the adjustment variables.

Results

Descriptive Statistics

Table 1 presents the means, standard deviations, and observed ranges of the study variables (along the bottom of the table). (The prenatal assessment of the adjustment variables used to test selection effects are not shown in Table 1, but had very similar descriptive statistics as the adjustment variables assessed at 1 year postpartum.) One respondent whose hours of caretaking exceeded two standard deviations above the mean was recoded to the next highest value to bring her into the range of the rest of the sample and to avoid distortion caused by outliers (Acock, 2005). Table 1 also shows the intercorrelations among all study variables to indicate how, on a pairwise basis, the variables correlate. Contrasts were calculated on youths' scores of value of family obligation for those born in the United States and those born in Mexico to determine whether youths born in the United States might be more acculturated to western values and possibly hold a diluted sense of family obligation. Results indicated no difference in youths' value of family obligation as a function of their birthplace, $t(1,109) < 1$.

Preliminary Analyses

Preliminary analyses were conducted to confirm the integrity of some of the study's measures and the validity of our construct operationalization. For example, we wished to demonstrate the conceptual distinction between the caregiving conflict items and the youth stress items to counter the possible tautological argument that caregiver conflict or stress predicts youths' overall stress. A post hoc confirmatory factor analysis was computed on the caregiver conflict items and the youth stress items.

Table 1. *Descriptive Statistics and Intercorrelations Among Study Variables*

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
As assessed at 6 months postpartum														
1. Age	—													
2. Gender[a]	−.08	—												
3. Family stress[b]	.08	.16	—											
4. Family conflict[b]	.04	.24*	.38***	—										
5. Caregiving hours/week	.30**	.21*	.11	.18	—									
6. Caregiving conflict	.13	.16	.10	.10	.35***	—								
7. Family obligations	−.17	.06	−.18	−.13	.08	−.19	—							
As assessed at 1 year postpartum														
8. Stress	.13	.19	.25**	.24*	.26**	.24*	−.23*	—						
9. Depression	.09	.23*	.26**	.28**	.27**	.32***	−.31**	.62***	—					
10. Anxiety	.08	.29**	.25**	.24*	.26**	.28**	−.23*	.53***	.49***	—				
11. Grades[c]	−.08	.12	−.12	.02	−.16	.16	.22*	−.13	−.23*	−.06	—			
12. Absences	−.06	.05	.17	−.01	.20*	.17	−.23*	.27**	.25**	.16	−.14	—		
13. Disciplinary problems	.03	−.25**	.17	.05	.27**	.24*	−.20*	.08	.12	.03	−.31**	.42***	—	
14. School involvement	−.24*	−.05	−.02	−.10	−.21*	.15	.17	−.04	−.02	.02	.19	.14	.03	
M	14.3	0.60	5.0	2.1	9.4	1.7	3.9	2.2	2.3	2.3	5.0	4.6	2.8	2.5
SD	1.8	0.5	4.6	0.9	10.6	0.6	0.8	0.9	1.0	1.1	1.9	1.7	3.1	1.4
Observed range	12–17	0, 1	0–25	1–4.8	0–48	1–5	1–5	1–4.5	1–5	1–5	1–8	3–10	0–23	1–5

Note: $N = 110$ youth. High scores indicate a greater propensity of that characteristic.

[a]Coded as 0 = *male*, 1 = *female*. [b]Assessed by mother report. All other variables assessed by youth report. [c]Coded as 1 = *mostly below D* to 8 = *mostly As*.

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

Results indicated two separate factors (2 eigenvalues >1) that explained 70% of the variance. Factor loadings for the caregiving conflict items ranged from .72 to .87 and factor loadings for the stress items ranged from .67 to .76. We also conducted a factor analysis of the five depression items to confirm this construct's operationalization. Results showed a one factor solution that explained over 74% of the variance, with loadings ranging from .75 to .89.

Associations Among Caregiving Hours, Caregiving Conflict, and Youths' Adjustment (Hypotheses 1 and 2)

Results of the hierarchical regressions examining the associations between caretaking hours, caretaking conflict, and youths' adjustment are summarized in Table 2. The top portion of Table 2 shows the amount of variance explained by the variables in each step (the R^2) and the amount of unique variance explained by adding the variables in each step (the change in R^2). Results indicated that the block of variables containing the controls contributed large and significant amounts of the variance for all outcomes except school absences. Most of the variance accounted for at this step was associated with the adjustment variable as measured 6 months previously. When hours of caretaking were added as a predictor, it contributed significant amounts of the variance to youths' anxiety, school absences, school disciplinary problems, and school extracurricular involvement. When caretaking conflict was added as a predictor, it contributed unique variance (above and beyond the controls and caretaking hours) to youths' stress, depression, anxiety, school grades, and school disciplinary problems. The set of interaction terms with age and gender contributed significant amounts of the variance only to youths' grades.

The bottom portion of Table 2 shows the standardized regression coefficients for the full model, or when all variables were entered into the equation. Results indicated that many caretaking hours were related to frequent school absences, school disciplinary problems, and lower school involvement. There was also a significant interaction between age and hours of caretaking for youths' extracurricular involvement and between gender and hours of caretaking for youths' grades. Results of simple slope tests of the interactions indicated that, compared to younger adolescents, older adolescents who provided high levels of caregiving had significantly lower extracurricular involvement. Results of simple slope tests also indicated that girls who provided many hours of caregiving had a larger drop in grades than boys.

Regression results also indicated that caretaking conflict was significantly associated with youths' feelings of stress, depression, anxiety, and low school grades. There was a significant Conflict × Gender interaction for school disciplinary problems, such that girls who reported high levels of conflict surrounding their caretaking experienced more disciplinary problems than boys.

Given that main effects were found for both caregiving hours and caregiving conflict, it is important to rule out the possibility that such effects are curvilinear in nature (Cohen et al., 2003). In this case, a curvilinear association would be present if both low and high levels of caretaking are related to youths' poor functioning whereas more moderate levels of caregiving are associated with optimal well-being (indicated by a convex regression line, or an inverted U). To test this, we computed a three-step hierarchical regression for the seven adjustment variables. Step 1 included all the controls shown in Table 2. Step 2 included scores for caregiving hours and caregiving conflict, and Step 3 included the quadratic caregiving hours term and the quadratic caregiving conflict term. Results indicated that there were no significant curvilinear relations between youths' caretaking and their adjustment.

The Influence of Family Obligations (Hypothesis #3)

Results of the hierarchical regressions testing whether a strong value of family obligation buffers youth from poor outcomes in the face of high caretaking hours and frequent caregiving conflict are shown in Table 3. Results indicated several significant interactions (shown in Step 3 in Table 3). All significant interactions were explored using simple slope tests. Recall that a buffering effect would be evident when youths who strongly value their family obligations have favorable adjustment even when their hours of care are high and, separately, when their caretaking conflict is high. Results did not support such a buffering effect.

Table 2. *Summary of Hierarchical Regression Results Predicting Youth Adjustment at 1 Year Postpartum*

	Stress		Depression		Anxiety		Grades		Absences		Disciplinary Problems		Extracurricular Involvement	
Step and Block	R^2	ΔR^2	R^2	ΔR^2	R^2	ΔR^2	R^2	ΔR^2	R^2	ΔR^2	R^2	ΔR^2	R^2	ΔR^2
1. Covariates	.33***	.33***	.38***	.38***	.27***	.27***	.33***	.33***	.11	.11	.33***	.33***	.24***	.24***
2. Hours of caretaking	.33***	.00	.39***	.01	.31***	.04*	.33***	.00	.15*	.04*	.41***	.08**	.28***	.04*
3. Caretaking conflict	.42***	.09**	.45***	.05**	.35***	.04*	.41***	.08**	.17*	.02	.44***	.03*	.28***	.00
4. Interactive terms	.43***	.01	.46***	.02	.37***	.03	.46***	.05*	.17	.00	.46***	.02	.32**	.04
Predictor at 6 months postpartum	β		β		β		β		β		β		β	
Step 1														
Age	.06		.02		.07		−.19		−.01		−.02		−.17	
Gender[a]	.06		.08		.00		.10		−.09		−.17		−.09	
Family stress	.04		.07		.04		−.05		−.05		.13		−.08	
Family conflict	.11		.12		.09		−.02		.20		.05		.04	
Adjustment variable at 6 months	.48***		.54***		.43***		.48***		.24*		.44***		.45***	
Step 2														
Hours of caretaking	.05		.02		.20		.02		.22*		.37*		−.33*	
Step 3														
Caretaking conflict	.38*		.24*		.30*		−.29*		.04		.13		.01	
Step 4														
Hours × Age	−.04		−.06		.06		−.12		.08		.09		−.26*	
Hours × Gender[a]	.06		.13		−.05		−.47*		−.01		−.22		−.07	
Conflict × Age	.01		.01		.16		.02		−.06		−.06		−.23	
Conflict × Gender[a]	−.09		.17		−.23		.02		.08		.36*		.12	
$F(df = 11, 99)$	4.99***		5.82***		3.76***		5.40***		1.33		6.13***		3.10**	

Note: $N = 110$ youth. β = standardized regression coefficient. βs shown are for the full model. Unstandardized regression coefficients and standard errors are available from the authors upon request.

[a]Coded as 0 = *male*, 1 = *female*.

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

Table 3. *Summary of Hierarchical Regression Results Testing a Protective Effect of Strong Family Obligations on Youths' Adjustment at 1 Year Postpartum*

	Stress		Depression		Anxiety		Grades		Absences		Disciplinary Problems		Extracurricular Involvement	
Step and Block	R^2	ΔR^2	R^2	ΔR^2	R^2	ΔR^2	R^2	ΔR^2	R^2	ΔR^2	R^2	ΔR^2	R^2	ΔR^2
1. Covariates	.33***	.33***	.38***	.38***	.27***	.27***	.33***	.33***	.11	.11	.33***	.33***	.24***	.24***
2. Main effects	.33***	.00	.41**	.03	.28**	.01	.39***	.06	.14	.03	.36***	.03	.32***	.08*
3. Interactive effects	.43***	.10**	.51***	.10**	.41***	.13**	.47***	.08*	.41***	.27***	.36***	.00	.45***	.13***
Predictor at 6 months postpartum	β		β		β		β		β		β		β	
Step 1														
Age	.06		.02		.07		−.19		−.01		−.02		−.17	
Gender[a]	.06		.08		.00		.10		−.09		−.17		−.09	
Family stress	.04		.07		.04		−.05		−.05		.13		−.08	
Family conflict	.11		.12		.09		−.02		.20		.05		.04	
Adjustment variable at 6 months	.48***		.54***		.43***		.48***		.24*		.44***		.45***	
Step 2														
Hours of caretaking	.40**		.20		.30*		−.45**		.62***		.07		−.44**	
Caretaking conflict	.04		.02		.05		.18		.07		.14		.11	
Family obligations	−.11		−.15		−.17		.05		−.18		−.05		.26**	
Step 3														
Hours × Obligations	.39*		.42***		.43***		−.35**		.74***		−.02		−.45***	
Conflict × Obligations	.13		.13		.21*		−.05		.02		−.05		−.19*	
$F(df = 10, 100)$	5.51***		7.81***		5.23***		6.28***		5.19***		3.06**		6.11***	

Note: $N = 110$ youth. β = standardized regression coefficient. βs shown are for the full model. Unstandardized regression coefficients and standard errors are available from the authors upon request.

[a]Coded as 0 = *male*, 1 = *female*.

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

Rather, results indicated that strongly held family obligations were related to higher levels of stress (simple slope $\beta = .32$, $p < .05$), more frequent school absences ($\beta = .32$, $p < .05$) and lower school grades ($\beta = -.27$, $p < .05$) for those who provided *many* hours of care. The slopes for hours of care at high levels of family obligation were positive but nonsignificant for the outcomes of depression ($\beta = .22$) and anxiety ($\beta = .21$) and negative and nonsignificant for school involvement ($\beta = -.19$). The slopes for hours of care at low levels of family obligation were not significantly different from zero (βs $= \pm .15$).

Results of the simple slope test analyzing the interaction between caretaking conflict and family obligations (see the bottom of Table 3) suggested a similar relationship, with strong obligation to family associated with an *increase* in anxiety for those who reported high caregiving conflict (simple slope $\beta = .31$, $p < .05$). Simple slope analysis of the significant interaction associated with youths' extracurricular involvement suggested a slightly different phenomenon. Here, frequent caretaking conflict was strongly associated with youths' high extracurricular involvement for those who reported *low* family obligations ($\beta = .45$, $p < .01$). Caretaking conflict was not linked to youths' school involvement for those who held strong family obligations ($\beta = -.05$, *ns*).

Selection Effects (Hypothesis 4)

Results of regressions testing for selection effects indicated that girls provided more caretaking than boys at 6 months postpartum (a main gender effect: $\beta = .24$, $p < .01$), and that girls who had school disciplinary problems ($\beta = .25$, $p < .01$) and poor school grades ($\beta = -.19$, $p < .05$) prenatally provided more hours of caretaking at 6 months postpartum (a significant Gender $\times$ Prenatal Adjustment effect). Older age was also a significant predictor of caretaking at 6 months postpartum (a main age effect: $\beta = .28$, $p < .01$).

Discussion

Findings of this study indicate that extensive family responsibilities for infant care and frequent interpersonal conflict surrounding caretaking have detrimental effects on youth. Specifically and consistent with Hypothesis 1, many hours of taking care of an adolescent sister's infant was associated with increased school absences, more school disciplinary problems, lower school involvement for older youth, and lower school grades for girls. More frequent conflict surrounding caretaking was also found to be linked to increased stress, depression, anxiety, lower school grades for all youth, and more school disciplinary problems for girls. These latter relations occurred while taking into account general family conflict, family stress, prior functioning, and hours of care and while ruling out a curvilinear association. Thus, as consistent with Hypothesis 2, frequent conflict that surrounds youths' caretaking appears to be distressful to adolescents above and beyond the number of hours of care they provide. Such findings reaffirm the importance of disaggregating the extent of care from the experiences in caregiving, with each component having unique effects on caregiver functioning (Pakenham et al., 2006; Strawbridge & Wallagen, 1991). These findings are also significant given that 30% of youth within the current sample cited arguing ''sometimes,'' ''often,'' or ''always'' with their older sister about having to look after her baby. Thus, irrespective of the hours of caregiving, adolescents' mental health likely suffers from such frequent conflictual experiences.

Caregiving Particularly Problematic for Older Adolescents and Girls

Study findings also indicate that many hours of caregiving and frequent caretaking conflict were particularly problematic for older adolescents and girls. This is consistent with the literature on adult caregivers, such that women care providers report more stress and depression than men (Pinquart & Sorensen, 2005a; Vitaliano et al., 2003), and Latina women experience more caregiving stress and burden than Latino men (Phillips et al., 2000; Saldana et al., 1999). We were concerned that when girls experienced frequent caretaking conflict—a reflection of not wanting to provide care—their problem behaviors at school increased. This relation may signal girls' acting out against family needs that draw them into caretaking roles (Dodson & Dickert, 2004). Adolescent girls may also rebel against being ''adultified,'' that is, forgoing their own developmental needs to take care of family (Chase, 1999). This pattern of *competence at a cost*

has been observed for adolescent girls in other studies as well (East et al., 2006; McMahon & Luthar, 2007). Further work that illuminates the caregiving context would be helpful in evaluating the opportunity costs of youth care providers, such as the willingness of children and adolescents to engage in family care, parents' and others' expectations for care, as well as the supports and intrapersonal resources available to youth care providers.

The Influence of Family Obligation Values

Contrary to our expectations of the buffering role of family obligations (Hypothesis 3) and to more recent culturally informed models of caregiving (Pinquart & Sorensen, 2005b), strong obligations to family did not buffer youth against the negative effects of caregiving, but were, in fact, associated with greater feelings of stress, lower school grades, and more frequent absences for those who provided high levels of care. Strong family obligations accompanied by frequent conflict in one's caretaking role were also associated with high anxiety for youth. These findings call into question the protective role of strong family obligations for Mexican-origin adolescents, particularly those in families with special kin care needs. Stated another way, those who provided high levels of care and held *weak* values of family obligation (i.e., they had more of an individualistic orientation) actually faired better than youth who held strong family obligation values. It may be that a strong sense of family duty represents an additional strain for adolescents and that youth who struggle to meet their sense of obligation to family do so at personal and academic costs. It is also possible that a strong obligation to family manifests itself in other forms of family assistance (household work, elder care), and this, combined with high infant caretaking, may be detrimental to youths' functioning. Results also indicated that weakly held family obligations accompanied by frequent caretaking conflict were associated with significantly *higher* subsequent involvement in school extracurricular activities. This finding appears to reflect the struggle of low family-committed youth who ultimately become involved in their own extracurricular pursuits. Certainly, there are likely to be cases wherein family caregiving commitments clash with youths' extracurricular activities, particularly as adolescents mature and begin separating from family, forging their own identity and trying on possible selves (Call, 1996). From the current findings, it appears that the latter is achieved amidst much conflict with the parenting older sister. It is not clear whether this scenario will ultimately be beneficial for the youth. Overall, though, study findings did not support a buffering role of strongly held family obligations (at least not for Mexican American youth who reside in the United States). These results contrast with those of Fuligni and colleagues (1999) that point to the benefits of strong family obligations for adolescents' educational aspirations. It is possible that strong obligations to family are positively linked with youths' educational *aspirations,* as opposed to more behaviorally based indicators of school *functioning* (i.e., absences, grades) as examined in this study. Further research is needed, though, to clarify the role of family obligations for youths' lives and development. For example, acculturation processes and immigration-related stresses may affect both youths' sense of family obligation and their involvement in family caregiving (Orellana, 2001; Valenzuela, 1999). Intergenerational differences in the value of family duty may also lead adolescents to become more involved with family caregiving and experience its effects differently (Fuligni et al., 1999; Kuperminc et al., 2009).

Selection Effects

Findings from this study also indicated that older adolescent girls appear to be selected into family caretaking roles, and that girls who were experiencing school difficulties prior to their niece or nephew's birth provide more care postnatally. Whether girls with these characteristics are more likely to be asked to provide care—possibly selected by family members to undertake this caregiving role—or whether they take it upon themselves to provide care, perhaps choosing this role given their less optimal functioning in other areas, is an issue for further research. It is likely, though, that high involvement in family caregiving further compromises girls' academic success, with such youth at risk of school dropout, which, ironically, increases their availability for family care (Fine & Zane, 1991). Overall, the pattern that emerges from the current findings is that extensive family caregiving compromises those who are already academically challenged and is a catalyst for further school disengagement.

Limitations

This study utilized self-reports of time spent in caregiving, which may be an over- or underestimation of their actual level of care (Dodson & Dickert, 2004). Observational assessments, random time sampling (e.g., Larson, 1989), or the use of other informants (mothers' and/or older sisters' reports of youths' caretaking) would have helped verify self-reports. One needs to be cautious about interpreting the number of caretaking hours youth listed and the possible correlates of such estimates.

In addition, study participants were exclusively Mexican Americans from primarily low-income families. Thus, study results reflect the caregiving dynamics only within this particular socioeconomic and racial/ethnic group. Latino youth are more likely to hold strong obligations to family and to participate more frequently in family care than adolescents of other racial/ethnic backgrounds (Freeberg & Stein, 1996), and there is evidence that family caregiving has more burdensome effects within low-income situations (McMahon & Luthar, 2007). Thus, the current findings may not be generalizable to youth of other racial/ethnic or socioeconomic backgrounds. This study also did not consider other family kinkeeping duties (such as time spent caring for younger siblings or older relatives) or other family work tasks. We also did not have information about youths' employment status, such as whether or how much they worked outside the home. The amount of niece/nephew care as well as youths' psychological well-being and school functioning may be related to these and other time demands. In addition, many factors related to the ease or difficulty in caregiving (e.g., the infant's temperament) were not considered and may have contributed to the relations found.

Programmatic Implications

From a programmatic standpoint, current findings can inform those who work with child and adolescent care providers about the potentially disruptive effects of extensive family caregiving. Informing teachers or a school counselor about the youth's unique family situation might provide greater understanding as to why a youth is consistently absent or appears to struggle to keep up with his or her school work. Constructive support and assistance in the school setting might go a long way toward helping youth care providers, as opposed to penalizing them for their home and family responsibilities (Burton, 2007). In addition, family professionals may need to address patterns of family conflict that revolve around youths' caretaking. Taking a preventative and proactive approach by helping family members anticipate care responsibilities and map out a reasonable and developmentally appropriate plan might help thwart subsequent conflict and tension (Koerner & Kenyon, 2007). Jurkovic and colleagues (2004) also suggested a number of prevention and intervention strategies for recently immigrated families that incorporate parent education surrounding children's family responsibilities and the possibility of overburdening. They recommended that an equitable distribution of caregiving among all family members and acknowledging children's contributions can help mitigate problematic outcomes that might arise from excessive family care. Additional strategies aimed at the school and community levels are also suggested. All intervention efforts, though, need to be sensitive to deeply held cultural values for family care and assistance (Wilkinson-Lee, Russell, Lee, & Latina/o Teen Pregnancy Prevention Workshop, 2006). That is, programs aimed at youth caregivers may be most beneficial if they appreciate the cultural value of family care and youths' need to be responsive to family demands. Strategies that balance promoting the health and well-being of adolescent care providers, while being sensitive to cultural values and to the realities and needs such families face, are likely to be most effective.

NOTE

Support for this research was provided by grants R01-HD043221 from the National Institute of Child Health and Human Development and APR-006013 from the Office of Population Affairs. We thank Beatriz Contreras, Renee Contreras, Emily Horn, and Barbara Reyes for interviewing the study participants.

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