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Health of Elderly Mexican American Adults and Family Caregiver Distress

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Abstract

Using newly available data on family caregivers from a large epidemiological study of elderly Mexican-origin adults (Hispanic Established Population for the Epidemiologic Study of the Elderly [HEPESE], 2010/2011), we identify which types of impairment (functional, psychological, and cognitive) in the elderly individual are associated with family caregiver depressive symptoms. Results from ordinary least squares regressions using 626 caregiver–care recipient dyads demonstrate that more severe mobility limitations (Performance-Oriented Mobility Assessment), social disability (instrumental activities of daily living), neuropsychiatric disturbances related to cognitive decline (Neuropsychiatric Inventory), and depressive symptoms in the elderly subject are positively associated with caregiver psychological distress. Perceived social stress partially accounts for these associations. We also identify certain segments of this caregiver population that are especially vulnerable to burden when caring for a family member with high levels of impairment, namely female and low-income caregivers. These vulnerabilities should be the focus of intervention efforts to reduce stress and improve the emotional and psychological well-being of Mexican-origin caregivers.

Keywords

caregiving; family; race/ethnicity; mental health

Introduction

As a greater portion of the population reaches advanced ages, more attention is focusing on the impact of long-term care on family functioning (see Silverstein & Giarrusso, 2010 for a

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review). Given the majority of individuals prefer to age in place and the high cost of formal long-term care services, children and other family members typically assume a large responsibility of caring for their aging loved ones. Caregiving can bring role rewards such as a sense of meaning and purpose and facilitate social connectedness among family members (Allen, Haley, Roff, Schmid, & Bergman, 2006; Roberto & Jarrott, 2008; Tarlow et al., 2004). However, meeting the multiple demands of care work, such as assistance with personal care tasks (bathing, dressing, and eating), household maintenance (cooking and cleaning), medical and nursing tasks, and emotional support can be taxing on caregivers' psychological well-being. Indeed, substantial research indicates adults caring for an aging loved one tend to report more psychological distress than noncaregivers (Vitaliano et al., 2009; see Pinquart & Sörensen, 2003 for an overview).

These issues are especially important to examine among racial and ethnic minority groups, given demographic shifts in the composition of the aging population (Angel & Settersten, 2011). Hispanic adults are one of the fastest growing segments of the aging population. As an illustration, between 2012 and 2030, the elderly Hispanic American population is expected to increase by approximately 155% (U.S. Department of Health and Human Services, 2012). Mexican Americans, in particular, constitute two thirds of the Hispanic population (U.S. Census Bureau, 2011). Members of racial and ethnic minority groups are less likely to utilize formal long-term care services, more likely to suffer disease and disability at younger ages, and, consequently, more likely to receive care from family members than non-Hispanic White adults (Weiss, Gonzalez, Kabeto, & Langa, 2005). Some evidence indicates that Mexican American caregivers report more distress than non-Hispanic White and African American caregivers (Adams, Aranda, Kemp, & Takagi, 2002; Aranda, Villa, Trejo, Ramírez, & Ranney, 2003; Folsom et al., 2007) and that Mexican American caregivers are more distressed than their noncaregiving counterparts (Hahn, Kim, & Chiriboga, 2011; Hernandez & Bigatti, 2010; Herrera et al., 2013). Yet, previous research on Mexican American caregivers tends to focus on small clinical samples, the elderly's use of formal care services, or care provided to children and spouses (e.g., Crist, Woo, & Choi, 2007).

Family support systems have been hypothesized to be relatively strong for Mexican Americans (Angel, Torres-Gil, & Markides, 2012); however, the high rates of disability among this long-living segment of the aging population have the potential to overwhelm support networks. To our knowledge, no other research has identified which types of impairment in an aging family member are implicated in Mexican American caregiver burden. To help address this gap in knowledge, we use data from the Hispanic Established Population for the Epidemiologic Study of the Elderly (HEPESE, 2010/2011) to assess the relationship between health and functioning (physical, mental, and cognitive) of very old Mexican Americans and depressive symptoms reported by their family caregiver.

Literature Review

Caregiving and Mexican American Families

The literature has shown with some certainty that the health of Mexican Americans is favorable especially with respect to mortality, with official life tables estimating a 2.5-year

life expectancy advantage of the Hispanic population compared to the non-Hispanic White population (Arias, 2010), supporting predictions of the Hispanic Paradox literature (see Markides & Eschbach, 2011). In terms of disability, however, research does not lend support for a similar paradox (Hayward, Hummer, Chiu, González-González, & Wong, 2014). It appears that Mexican-origin immigrants are relatively healthy but become more disabled by the time they become old because of poverty, physical labor, and a lifetime of substandard medical care. It also appears that rates of comorbidity, disability, and cognitive impairments in Mexican Americans aged 75 and over have increased in recent years along with increase in the population life expectancy (Beard, Al Ghatif, Samper-Ternent, Gerst, & Markides, 2009; Markides, Angel, & Peek, 2013).

Drawing from more general models of caregiver burden, Aranda and Knight (1997) explicated the Latino caregiving stress model. They proposed that the earlier risk of disease and disability but longer life expectancy for Latinos relative to non-Hispanic Whites means caregiving careers tend to begin at younger ages and last for longer durations. Recent estimates confirm these expectations. Latino caregivers tend to be younger and have less socioeconomic resources than non-Hispanic White caregivers (Hahn et al., 2011; Pinquart & Sörensen, 2005). Diabetes and dementia are two of the most common reasons Latinos provide care for an elderly family member (Evercare and National Alliance on Caregiving, 2008). Latino caregivers, on average, report more demanding and time-intensive caregiving careers than non-Hispanic White or African American caregivers (Evercare and National Alliance on Care-giving, 2008).

Prior studies on Hispanic and Mexican American family caregiving have emphasized the role of cultural values, namely familism (Hahn et al., 2011; Hernandez & Bigatti, 2010; Herrera et al., 2013). It is often argued that Hispanics and, in particular, Mexican Americans place family interest above individual interest (Aranda & Knight, 1997; John, Resendiz, & De Vargas, 1997; Sayegh & Knight, 2011). Caregiving may represent filial duty and be seen as an expected part of the life course, especially for women. Indeed, a large percentage of Latino caregivers in the United States believe their role is an expectation within their upbringing (Evercare and National Alliance on Caregiving, 2008). In addition, frail and disabled older Mexican Americans prefer to live with family members when faced with physical and cognitive impairment (Angel, Angel, McCellan, & Markides, 1996).

However, social and demographic changes such as movement away from traditional family arrangements and women entering the workforce are challenging traditional values and normative expectations toward caring for one's own aging family members (Angel et al., 2012). Caregivers tend to be children of the aging adult, who may be facing financial uncertainty from poverty and high unemployment rates as well as financial responsibility for their own children. The high price of formal long-term care services, therefore, may take precedent over or complement cultural and personal preferences for certain caregiving arrangements. Determining the sociodemographic differences in caregiving distress among this segment of the population will highlight areas of vulnerability and may shed light on larger demographic processes that shape caregiving outcomes.

Care Recipient Health and Caregiver Distress

A number of studies have assessed the health and well-being of care-givers (e.g., Beach, Schulz, Yee, & Jackson, 2000; Bookwala & Schultz, 2000; Dilworth-Anderson, Goodwin, & Williams, 2004; Goode, Haley, Roth, & Ford, 1998; Kurtz, Kurtz, Given, & Given, 1995; MacNeil et al., 2010; Rae, 1998; Schulz et al., 1997). Most indicate that providing care for an elderly parent or family member may create an environment that is conducive to stress in the extent to which it requires substantial time, resources, and emotion work. Past research distinguishes among (a) primary stressors or those that are associated with the characteristics of the caregiving experience (e.g., relationship of caregiver to care recipient and socioeconomic resources), (b) secondary stressors or those which influence other role obligations such as work or parenting, and (c) subjective assessments of stress or burden (Aneshensel, Pearlin, Mullan, Zarit, & Whitlatch, 1995; Aranda & Knight, 1997; Goode et al., 1998; Knight & Sayegh, 2010; Pearlin, 1989; Pinquart & Sörensen, 2005; Vedhara, Shanks, Anderson, & Lightman, 2000).

The health and functioning of the elderly family member or care recipient can be seen as a primary stressor that influences caregivers' subjective assessments of stress. To illustrate, as the health and functioning of the care recipient declines, it likely increases caregiver psychological distress through increasing feelings of role overload, lack of control, and lack of adequate resources to cope with the demands of care tasks. Previous research has used this theoretical perspective to describe how problematic behaviors related to cognitive decline in a care recipient create an environment that is conducive to caregiver burden. More recently, Knight and Sayegh (2010) noting the lack of studies on care recipient's physical health status and caregiver burden suggested expanding this model to care recipient's physical functioning and limitations.

Physical impairment or helping with daily life activities such as self-care tasks, household maintenance, and financial planning requires substantial time from the caregiver. However, there is reason to believe that psychological and cognitive impairments may be more distressing for family care-givers. Viewing the loss of mental faculties or increases in sadness or hopelessness in one's family member can be distressing in its own right. It may also result in role overload because it leaves less time for other life domains such as work (Pearlin, Mullan, Semple, & Skaff, 1990). If the care recipient is extremely impaired, caregivers may experience anticipatory grief or bereavement (Garand et al., 2012). Problem behaviors or neuropsychiatric disturbances from cognitive impairment have also been shown to be distressing for caregivers (Clyburn, Stones, Hadjistavropoulos, & Tuokko, 2000; Matsumoto et al., 2007; Pearson, Teri, Wagner, Truax, & Logsdon, 1993; Sörensen & Conwell, 2011). Neuropsychiatric disturbances may require additional monitoring and household modifications on the part of the caregiver. Family members typically live in the similar environments and have similar backgrounds, resources, and supportive social systems, so they have similar risks for health (Goodman & Shippy, 2002; Meyler, Stimpson, & Peek, 2007; Ross, Mirowsky, & Goldstein, 1990). Spending time with a care recipient suffering from depression may result in affective contagion or the emotional states of the caregiver and recipient may begin to reflect one another (Meyler et al., 2007). There may also be cultural differences in the tolerance of certain impairments. For example, Adams,

Aranda, Kemp, and Takagi (2002) suggest that Mexican American family members caring for older adults with dementia are especially distressed due to a sense of fatalism attached to dementia, which leads to avoidant coping styles.

Figure 1 presents our conceptual framework, which is a modified version of theoretical models of caregiving stress. Our model indicates that (a) those caring for an elderly family with greater impairment will report more depressive symptoms. If we find support for (a), then (b) subjective appraisals of stress, perceived social stress should explain or mediate these associations. Additionally, it is important to observe within-group variation in psychological well-being in order to highlight which segments of the Mexican American caregiving population are facing the most burden. Therefore, we expect, in accordance with stratification theories of mental health that (c) female and lower income caregivers will report higher depressive symptom scores than male and higher income caregivers under high levels of care recipient impairment. We also expect that older caregivers who may be dealing with their own health problems will be more vulnerable to distress than younger caregivers. Subsequently, we test our conceptual framework.

Research Design

Data

We use data from the HEPSE, a longitudinal study of elderly Mexican American adults residing in five southwestern states: Texas, New Mexico, Colorado, Arizona, and California (for more information on sampling procedures, see Black, Markides, & Miller, 1998; Markides et al., 1999). Data collection first took place in 1993/1994 ($N = 3,050$) when respondents were 65 years and older. Follow-up interviews were conducted every 2–3 years. At Wave 5, a surviving cohort of 1,167 subjects aged 75 and over was added to the original sample. In 2010/2011 (Wave 7), a total of 1,078 subjects aged 80 and over were reinterviewed. At this time, the elderly subjects were asked to provide the name and contact information of the person they are “closer to” or they “depend on the most for help.” These informants ($n = 925$) were interviewed regarding the health, finances, and general situation of the elderly subjects.

We focus our attention on family caregivers and, therefore, limit the sample to relatives of the elderly subject ($n = 850$). We omit elderly subjects who are highly functional and mostly responsible for their own personal care tasks and household maintenance ($n = 191$), leaving a sample of 626 caregiver and care recipient dyads.

Measures

The physical and social disability status of the elderly subject was reported by both the elderly subject and the family caregiver. *Activities of daily living* (ADLs) is a count of 7 items the elderly subject had difficulty with or needed help performing, including walking across a small room, bathing, grooming, dressing, eating, getting from a bed to a chair, and using a toilet. *Instrumental ADLs* (IADLs) is a count of 10 items the elderly subject had difficulty with or needed help performing, such as, using the telephone, driving or traveling

alone, shopping for groceries, preparing meals, light housework, taking medicine, handling money, heavy housework, walking up and down stairs, and walking half a mile.

We assessed physical mobility through the Performance-Oriented Mobility Assessment (POMA; Guralnik et al., 1994). Elderly subjects were asked to perform a number of tasks such as standing (semitandem, full tandem, and single leg) for 10 seconds, repeated chair stands, and walking approximately 10 feet across a room to assess balance and gait. We summed the POMA items to create a scale ranging from 0 to 12, with lower scores indicating poorer performance (Tinetti, 1986). Elderly subjects who were unable to complete all items because they were physically ill, bedridden, unable to stand with support, blind, restricted to a wheelchair, or dizzy were assigned a score of "0."

We use the Center for Epidemiologic Studies Depression Scale (CES-D), an index of the severity of 20 items experienced in the past week that ranges from 0 to 60, to assess *depressive symptoms* in the elderly subjects and the family caregivers (Radloff, 1977). For *cognitive functioning*, elderly subjects were asked to partake in the Mini Mental State Examination or MMSE (Folstein, Folstein, & McHugh, 1975). The MMSE is a screening tool for cognitive impairment and measures orientation, recall, attention, and calculation, with higher scores indicating better cognitive functioning. Elderly subjects who were unable to participate in the MMSE due to reports of dementia or Alzheimer's disease were considered impaired and assigned a score of "0." For psychiatric disturbances associated with dementia, we use the Neuropsychiatric Inventory (NPI; Cummings et al., 1994). Caregivers were asked whether they observed symptoms of neuropsychiatric disturbance related to dementia in the elderly subject in the past month.¹ The NPI is a straight count of these symptoms with a potential range of 0–12.

Perceived social stress is assessed through a shortened version of the Perceived Social Stress Scale (PSS; Cohen, Kamarck, & Mermelstein, 1983). Family caregivers were asked to report how often (0 = *never* to 4 = *very often*) they felt (1) they were unable to control the important things in life, (2) difficulties were piling up so high they could not overcome them, (2) confident about their ability to handle personal problems, and (4) things were going their way. The last 2 items were reversed coded and the 4 items were used to create an index that ranges from 0 to 13.

Selected demographic and background factors include the elderly subject's gender (*female* = 1), age (in years), current marital status (1 = *married*, 0 = *unmarried*), nativity status (*born in Mexico* = 1), and years of completed formal education. We also included caregivers' gender (*female* = 1), age (in years), and household income. Household income ranged from US\$0 to US\$5,000 (=1) to \$50,000 and over (=8). We distinguished between caregivers who are responsible for most of the elderly individual's personal care and household tasks (=1) and other secondary and tertiary caregivers (=0). We also control for relationship status distinguishing between children of the elderly subject (=1) and other relatives (=0). For the 6% of the sample missing on years of education and the 10% of the sample missing on income, we used a regression-based imputation procedure (impute) in Stata to retain missing

¹See Appendix A for items included in the Neuropsychiatric Inventory.

values for these two variables (Ambler, Omar, & Royston, 2007). See Appendix B for a correlation matrix of our main study variables.

Results

Descriptive Results

Table 1 presents descriptive statistics of the main study variables. Caregivers, on average, report 4.83 on the depressive symptoms index (CES-D). Both the caregivers and care recipients report an average of two limitations in ADLs in the elderly family member. However, caregivers, on average, report slightly more IADLs in the elderly family member ($M = 6.02$) than the care recipients ($M = 5.89$). Care recipients have a mean score of 4.07 on the POMA and 17.62 on the MMSE, which are indicative of poor lower body mobility and low cognitive functioning, respectively. The mean score on the CES-D for the elderly subjects is 10.43, indicating higher depressive symptom scores among care recipients relative to caregivers. Caregivers have observed around two neuropsychiatric symptoms in the elderly subject in the past month. The mean on the PSS for caregivers is 3.74. The typical caregiver is 56 years old and has a household income between US\$15,000 and US\$30,000 ($M = 4.50$). Most caregivers are female (74%), children of the elderly subject (74%), and about 16% are primarily responsible for both household and personal care of their aging relative. For the elderly subject, the typical respondent is 86 years old and has less than 5 years of formal education. More than half of the elderly subjects were born in the United States (56%), and most are female (65%) and not currently married (69%).

Care Recipient Health and Caregiver Depressive Symptoms

Disability and mobility—Table 2 presents the association between elderly subjects' health and caregiver depressive symptom scores. In terms of disability, the first four columns show that only caregiver-reported IADLs in the elderly subject, which reflect the ability to live independently, are significantly and positively associated with caregiver depressive symptoms ($b = 0.34, p < .001$).² This supports our bivariate findings presented in the correlation matrix in Appendix B. Surprisingly, the severity of need for help with self-care tasks (ADLs) in the elderly subject is not significantly related to caregiver depressive symptoms. Next, in column 5, we observe the role of perceived social stress in the IADL-depressive symptoms association. Perceived social stress is positively and significantly associated with caregiver depressive symptom scores. With its inclusion, the coefficient for IADLs is reduced ($b = 0.17, p < .05$). Sobel–Goodman mediation tests confirm that perceived social stress mediates about half of the total association between caregiver-reported IADLs and caregiver depressive symptoms ($z = 3.71, p < .001$). Results from an objective indicator of physical functioning support the findings for IADL limitations. Better physical mobility and performance (POMA) in the elderly subject is associated with lower caregiver depressive symptoms ($b = -0.16; p < .05$). Formal mediation tests indicate a significant indirect effect of perceived social stress on the relationship between elderly subjects' physical mobility and caregiver depressive symptoms, with perceived social stress partially accounting for this association (24%; $z = -2.32; p < .05$). In the next set of

²Since the data are not representative, sample weights were not used in the analyses.

analyses, we assess the associations between elderly subjects' cognitive and psychological health and caregiver depressive symptoms.

Cognitive and psychological health—In column 1 in Table 3, we do not observe a significant association between elderly subjects' cognitive functioning (MMSE scores) and caregiver depressive symptoms. However, we do find elderly subjects' depressive symptoms and caregiver depressive symptoms are significantly and positively associated ($b = 0.13$; $p < .001$). In column 3, we also observe that perceived social stress partially mediates (about 27%) this association ($z = 4.51$; $p < .001$). In addition to cognitive functioning and psychological distress, we are interested in the role of problematic behaviors related to cognitive decline in the elderly subject for caregiver burden and distress. These results are presented in column 4, which shows that for each increase in neuropsychiatric symptoms (NPI) displayed by the elderly adult in the past month, caregiver depressive symptoms increase by 0.67 ($p < .001$). Column 5 addresses the role of perceived social stress. Perceived social stress mediates about 31% of the association between NPI and caregiver depressive symptoms ($z = 6.29$; $p < .001$). Supplemental tests for multicollinearity indicate low variance inflation factors (>2.00) for all variables in the model.

In supplementary analyses (results available upon request), we determined which individual neuropsychiatric symptoms were related to caregiver depressive symptoms when controlling for caregiver and care recipient background characteristics. Results demonstrate that those caring for elderly family members who displayed any of the following symptoms in the past month reported more depressive symptoms than those caring for older family members who did not: (1) paranoia (believes other are stealing from him or her or planning to harm him or her some way); (2) separation anxiety (upset when separated from you); (3) stubborn, impatient, and cranky behavior (stubborn or resistive to help, impatient and cranky); (4) sadness or loss of interest in activities (in low spirits or cries, less interested in usual activities and plans of others); (5) somatic disturbances (awaken you in the night or rises too early in the morning or takes excessive naps); (6) weight or food preference change (has lost or gained weight or had a change in the food he or she likes); (7) excessive happiness; and (8) impulsive behavior (talking to strangers or saying things that hurt people's feelings). The two behaviors in the NPI that were not significantly associated with caregiver depressive symptoms were (1) hallucinations (e.g., acted as if he or she heard voices) and (2) engaging in repetitive activities (e.g., pacing around the house, handling buttons, wrapping string, or doing other things repeatedly).

Moderating role of caregiver background characteristics—Finally, we see whether caregiver background characteristics in terms of age, gender, and income condition the associations between elderly family members' health and caregiver depressive symptoms. For the results presented subsequently, we add interaction terms separately in each model. We find no significant interactions for Caregiver Age $\times$ Elderly Family Members' Health for caregiver depressive symptoms. We do find that caregiver income and gender condition certain associations. For example, for severity of help needed for self-care tasks (ADLs) among elderly subjects, both caregiver and care recipient reported, we find that caregiver depressive symptoms vary according to caregiver income level ($b = 0.12$; $p < .05$). Figure 2

presents this predicted relationship. For presentation purposes, we compare caregivers with high incomes (i.e., above the mean income level for the sample >US\$30,000) and those with low incomes (i.e., at or below the mean income level for the sample US\$30,000). Caregivers with a low household income report more depressive symptoms across a number of ADLs than high-income caregivers. However, the slope is much steeper for high-income caregivers. The predicted associations show that at the highest level of physical disability (ADLs = 7), depressive symptoms for low-income and high-income caregivers are quite similar. We also test to see whether perceived social stress mediates the moderating effects of Caregiver Income $\times$ ADLs. Perceived social stress is added to the model and the interaction coefficient is reduced by about half ($b = 0.07$) and is no longer significant, demonstrating perceived social stress partially accounts for these observed differences.

We find similar results as those presented previously for the interaction between Caregiver Income $\times$ Caregiver-Reported IADLs in the elderly family member ($b = 0.09$; $p < .05$) and Caregiver Income $\times$ Elderly Subjects' self-reported IADLs ($b = 0.11$; $p < .01$). For each, low-income caregivers report more depressive symptoms at low levels of elderly subjects' IADL disability than higher income caregivers; however, the slopes converge at high levels of disability. Caregiver perceived social stress is tested as a mediator in both models. For the Caregiver Income $\times$ Elderly Subjects' self-reported IADLs, the interaction coefficient is partially reduced but remains statistically significant. For the Caregiver Income $\times$ Caregiver-Reported IADLs in the elderly family member, the interaction is reduced by half and no longer statistically significant. We also find a significant interaction between caregiver gender and NPI ($b = 0.52$; $p < .001$). The predicted relationship is presented in Figure 3. For caregivers of relatives who displayed no problematic behaviors related to cognitive decline in the past month, male and female caregivers report similar levels of depressive symptoms. At higher scores on the NPI, however, female caregivers report more depressive symptoms on average than male caregivers. When perceived social stress is added to the model, the coefficient for the interaction term is slightly reduced ($b = 0.44$) and remains marginally significant ($p = .06$).

Discussion

Mexican Americans represent a rapidly growing segment of the aging population. Yet, prior to this wave of the HEPSE, there was a lack of information on the areas of risk and resiliency for Mexican Americans caregivers to very old family members. Our study helped to address prior gaps in knowledge by identifying (a) which types of impairment are most burdensome, (b) whether perceived social stress accounted for the relationship between impairment in a very old family member and caregiver psychological well-being, and (c) intergroup variation in caregiver depressive symptoms. Our aim was to highlight possible areas of intervention to improve the health of Mexican American family caregivers and, consequently, assistance provided to aging family members.

First, we hypothesized that care-recipient physical impairment level would be related to caregiver depressive symptoms; our findings show that these affects vary by type of impairment. The loss of the ability to perform IADLs (drive car, grocery shopping, and meal preparation) or complex tasks needed to live independently often occur prior to losses in

ability to perform ADLs or self-care tasks (dressing, bathing, and walking across the room). The finding that ADLs were not related to caregiver well-being may reflect caregiving strain at different points in the disablement process, with initial loss of independence being especially distressing for family caregivers. In addition, low-income caregivers are especially vulnerable to psychological duress; however, among those caring for a family member with high levels of disability low-income and high-income caregivers looked quite similar in terms of psychological well-being. Given socioeconomic status differences in disability, lower income caregivers may see the loss of functionality as more common place in late life, and, therefore, higher income caregivers may be more likely to report depressive symptoms when caring for a family member with high levels of impairment.

While cognitive functioning was not associated with caregiver depressive symptoms, our results support prior research indicating problematic behaviors related to cognitive decline undermine caregivers' positive well-being (Clyburn et al., 2000; Matsumoto et al., 2007; Pearson et al., 1993; Sörensen & Conwell, 2011). We also demonstrate that female Mexican American family caregivers are more susceptible to depressive symptoms when faced with caregiver problematic behavior than their male counterparts. This reinforces qualitative research on Mexican American caregivers who found female caregivers, often wives of the care recipient, felt trapped and overburdened by the care recipient's display of problematic behavior due to the aggressive nature of the outbursts (Apesoa-Varano, Barker, & Hinton, 2012). Children, often male family members of the care recipient, we called upon in order to help manage the aggressive behavior.

Perceived social stress partially accounted for these differences, indicating that lessening the feelings of burden and overload in the caregiver is an important area of intervention for protecting caregivers from distress. Other potential explanations include (a) the intensity of the caregiving situation or the substantial time, resources, and home modifications required for caring for a family member with severe impairments; (b) the quality of the relationship between caregiver and care recipient; and (c) shared risks and resources. High psychological distress or the display of problematic behaviors may be especially devastating for caregivers due to anticipatory bereavement (Adams et al., 2002). There may also be unique cultural attitudes regarding impairment.

Cognitive impairment or needing help with ADLs may be characterized as part of normative aging processes among the Mexican Americans (Levkoff, Levy, & Weitzman, 1999) and there may not be a fatalist cultural orientation toward dementia among Mexican American caregivers. Hinton, Chambers, and Velásquez (2009) found that a large portion of their Latino caregiver sample attributed problematic behaviors to other causes than Alzheimer's disease or dementia. They argued that attributing problematic behaviors to other causes such as personality may create more tension between the caregiver and care recipient since the older person is seen to have full control over their behaviors. More research on attributions of problematic behaviors would lend more insight to under what conditions the problematic behaviors are most distressing and burdensome for Mexican-origin caregivers.

Processes within families may help caregivers cope with problematic and stubborn behavior in the elderly family members. Apesoa-Varano, Barker, and Hinton (2012) conducted

intensive fieldwork with Mexican American caregivers to older family members with cognitive impairments. They found that caregivers who were able to modify their homes and redistribute emotional work and caregiver responsibilities to other family members reduced their feelings of burden and isolation. Another effective strategy was for other family members to provide counseling to the primary caregiver. We believe that these strategies will also reduce the burden of those providing care for elderly family members with physical impairment and high levels of depressive symptoms.

While these newly available data will help to answer many questions regarding Mexican American family caregiving situations, the data have some limitations. First, this sample is unique due to the very old age of the care recipients and, therefore, is not representative of the entire Mexican American caregiver population. Caregiver burden likely varies according to the age of the care recipient and certain areas of risk may be more salient for caregiver well-being when caring for a parent or family member in late midlife or early late life. Second, we lack information on caregivers' support networks. Social support can buffer the effects of certain stressors on psychological well-being (Pearlin, 1990; Vedhara et al., 2000). Understanding how care tasks are shared, how caregivers call upon friends and family for emotional support, and the quality of support provided to caregivers are important areas for future research.

Conclusion

Caring for an elderly family member is distressing in the extent to which the care recipient is physically, cognitively, and psychologically impaired. Improving access to counseling services will help family caregivers cope with caregiving overload and burden, precursors to caregiver psychological distress. Gallagher-Thompson and Coon (2007) suggest developing and implementing multicomponent approaches for caregiver psychological treatment including individual counseling, support groups, and education on behavior, depression, and anger management. The evidence we presented here indicates that efforts that focus on reducing subjective feeling of overload and burden, take into account physical and mental health care, and assess the needs of caregivers by gender and socioeconomic standing may reduce caregiver burden and psychological distress and improve health outcomes for Mexican American family caregivers.

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Appendix A

Items in Neuropsychiatric Inventory (NPI)

1. Believes that others are stealing from him or her or planning to harm him or her.

2. Acts as if he or she hears voices.
3. Is stubborn and resistive to help from others.
4. Acts as if he or she is in low spirits or cries.
5. Becomes upset when separated from you or have other signs of nervousness such as shortness of breath, sighing, unable to relax, or feeling excessively tense.
6. Appears to feel too good to act excessively happy.
7. Seems less interested in his or her usual activities and activities and plan of others.
8. Seems to act impulsively such as talk to strangers or say things that may hurt people's feelings.
9. Impatient and cranky or have difficulty coping with delays or waiting for planned activities.
10. Engages in repetitive activities, such as pacing around the house, handling buttons, wrapping strip, or doing other things repeatedly.
11. Awakens you during the night, rise too early in the morning, or take excessive naps during the day.
12. Lost or gained weight or had a change in the food he or she likes.

Appendix B

Table B1

Correlation Matrix of Focal Study Variables.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
(1) CG depressive symptoms	1.00												
(2) ADLs	.02	1.00											
(3) IADLs	-.01	.67***	1.00										
(4) CG-reported ADLs	.02	.87***	.63***	1.00									
(5) CG-reported IADLs	.13**	.47***	.69***	.49***	1.00								
(6) POMA	-.08*	-.65***	-.67***	-.64***	-.52***	1.00							
(7) MMSE	-.04	-.49***	-.57***	-.48***	-.30***	.46***	1.00						
(8) CR depressive symptoms	.18***	.16***	.22***	.14***	.32***	-.20***	-.04	1.00					
(9) NPI	.25***	.24***	.25***	.28***	.15***	-.27***	-.37***	.31***	1.00				
(10) Perceived social stress	.46***	.03	.05	.03	.16***	-.04	-.03	.12**	.18***	1.00			
(11) CG age	.05	.04	-.04	.03	-.06	-.02	.01	-.12**	.03	-.07	1.00		
(12) CG income	-.22***	-.04	-.04	-.01	-.02	.05	.03	-.07	-.07	-.16***	-.02	1.00	
(13) CG female	.04	-.02	-.03	.05	.04	.03	.07	-.03	.01	.02	.06	-.02	1.00

Note. ADL = activities of daily living; IADLs = instrumental activities of daily living; CG = caregiver; CR = care recipient; MMSE = Mini Mental State Examination; NPI = Neuropsychiatric Inventory.

Biography

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References

- Adams B, Aranda MP, Kemp B, Takagi K. Ethnic and gender differences in distress among Anglo American, African American, Japanese American, and Mexican American spousal caregivers of persons with dementia. *Journal of Clinical Geropsychology*. 2002; 8:279–301.
- Allen, RS.; Haley, WE.; Roff, LL.; Schmid, B.; Bergman, EJ. Responding to the needs of caregivers near the end of life: Enhancing benefits and minimizing burdens.. In: Werth, JL.; Blevins, D., editors. *Psychosocial issues near the end of life: A resource for professional care providers*. American Psychological Association; Washington, DC: 2006. p. 183-201.
- Ambler G, Omar RZ, Royston P. A comparison of imputation techniques for handling missing predictor values in a risk model with a binary outcome. *Statistical Methods in Medical Research*. 2007; 16:277–298. [PubMed: 17621472]
- Aneshensel, CS.; Pearlin, LI.; Mullan, JT.; Zarit, SH.; Whitlatch, CJ. *Profiles in caregiving: The unexpected career*. Academic Press; San Diego, CA: 1995.
- Angel JL, Angel RJ, McCellan JL, Markides KS. Nativity, declining health, and living arrangements among elderly Mexican Americans: Implications for long-term care. *The Gerontologist*. 1996; 36:464–473. [PubMed: 8771974]
- Angel, JL.; Settersten, RA, Jr.. Sociology of aging in the decade ahead.. In: Angel, JL.; Settersten, RA., editors. *Handbook of sociology of aging*. Springer; New York, NY: 2011. p. 661-672.
- Angel, JL.; Torres-Gil, F.; Markides, K. *Aging, health and longevity in the Mexican-origin population*. Springer; New York, NY: 2012.
- Apesoa-Varano, EC.; Barker, JC.; Hinton, L. Mexican-American families and dementia: An exploration of “work” in response to dementia-related aggressive behavior.. In: Angel, JL.; Torres-Gil, F.; Markides, K., editors. *Aging, health, and longevity in the Mexican-origin population*. Springer; New York, NY: 2012. p. 277-291.
- Aranda MP, Knight BG. The influence of ethnicity and culture on the caregiver stress and coping process: A sociocultural review and analysis. *The Gerontologist*. 1997; 37:342–354. [PubMed: 9203758]
- Aranda MP, Villa VM, Trejo L, Ramírez R, Ranney M. El Portal Latino Alzheimer's project: Model program for Latino caregivers of people with Alzheimer's disease. *Social Work*. 2003; 48:259–271. [PubMed: 12718421]
- Arias, E. United State life tables by Hispanic origin. 2010. Retrieved from http://www.cdc.gov/nchs/data/series/sr_02/sr02_152.pdf
- Beach SR, Schulz R, Yee JL, Jackson S. Negative and positive health effects of caring for a disabled spouse: Longitudinal findings from the care-giver health effects study. *Psychology and Aging*. 2000; 15:259–271. [PubMed: 10879581]
- Beard H, Al Ghatif M, Samper-Ternent R, Gerst K, Markides KS. Trends in diabetes prevalence and diabetes-related complications in older Mexican Americans from 1993/1994-2004/2005. *Diabetes Care*. 2009; 32:2212–2217. [PubMed: 19755626]

- Black SA, Markides KS, Miller TQ. Correlates of depressive symptomatology among older community-dwelling Mexican Americans: The Hispanic EPESE. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*. 1998; 53:S198–S208.
- Bookwala J, Schulz R. A comparison of primary stressors, secondary stressors, and depressive symptoms between elderly caregiving husbands and wives: The caregiver health effects study. *Psychology and Aging*. 2000; 15:607. [PubMed: 11144320]
- Clyburn LD, Stones MJ, Hadjistavropoulos T, Tuokko H. Predicting caregiver burden and depression in Alzheimer's disease. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*. 2000; 55:S2–S13.
- Cohen S, Kamarck T, Mermelstein R. A global measure of perceived stress. *Journal of Health and Social Behavior*. 1983; 24:385–396. [PubMed: 6668417]
- Crist JD, Woo SH, Choi M. A comparison of the use of home care services by Mexican American elders. *Journal of Transcultural Nursing*. 2007; 18:339–348. [PubMed: 17911574]
- Cummings JL, Mega M, Gray K, Rosenberg-Thompson S, Carusi DA, Gornbein J. The neuropsychiatric inventory comprehensive assessment of psychopathology in dementia. *Neurology*. 1994; 44:2308–2308. [PubMed: 7991117]
- Dilworth-Anderson P, Goodwin PY, Williams SW. Can culture help explain the physical health effects of caregiving over time among African American caregivers? *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*. 2004; 59:S138–S145.
- Evercare and National Alliance on Caregiving. Evercare study of Hispanic family caregiving in the U.S. 2008. Retrieved from http://www.caregiving.org/data/Hispanic_Caregiver_Study_web_ENG_FINAL_11_04_08.pdf
- Folsom DP, Gilmer T, Barrio C, Moore DJ, Bucardo J, Lindamer LA, Jeste DV. A longitudinal study of the use of mental health services by persons with serious mental illness: Do Spanish-speaking Latinos differ from English-speaking Latinos and Caucasians? *American Journal of Psychiatry*. 2007; 164:1173–1180. [PubMed: 17671279]
- Folstein MF, Folstein SE, McHugh PR. "Mini mental state" A method for grading the cognitive state of patients for the clinician. *Journal of Psychiatric Research*. 1975; 12:189–198. [PubMed: 1202204]
- Gallagher-Thompson D, Coon DW. Evidence-based psychological treatments for distress in family caregivers of older adults. *Psychology and Aging*. 2007; 22:37–51. [PubMed: 17385981]
- Garand L, Lingler JH, Deardorf KE, DeKosky ST, Schulz R, Reynolds CF III, Dew MA. Anticipatory grief in new family caregivers of persons with mild cognitive impairment and dementia. *Alzheimer Disease & Associated Disorders*. 2012; 26:159–165. [PubMed: 21946013]
- Goode KT, Haley WE, Roth DL, Ford GR. Predicting longitudinal changes in caregiver physical and mental health: A stress process model. *Health Psychology*. 1998; 17:190–198. [PubMed: 9548710]
- Goodman CR, Shippy RA. Is it contagious? Affect similarity among spouses. *Aging & Mental Health*. 2002; 6:266–274. [PubMed: 12217095]
- Guralnik JM, Simonsick EM, Ferrucci L, Glynn RJ, Berkman LF, Blazer DG, Wallace RB. A short physical performance battery assessing lower extremity function: Association with self-reported disability and prediction of mortality and nursing home admission. *Journal of Gerontology*. 1994; 49:M85–M94. [PubMed: 8126356]
- Hahn EA, Kim G, Chiriboga DA. Acculturation and depressive symptoms among Mexican American elders new to the caregiving role: Results from the Hispanic-EPESE. *Journal of Aging and Health*. 2011; 23:417–432. [PubMed: 20852013]
- Hayward MD, Hummer RA, Chiu C, González-González C, Wong R. Does the Hispanic paradox in the U.S. Adult mortality extend to disability? *Population Research and Policy Review*. 2014; 33:81–96. [PubMed: 25821283]
- Hernandez AM, Bigatti SM. Depression among older Mexican American caregivers. *Cultural Diversity and Ethnic Minority Psychology*. 2010; 16:50–58. [PubMed: 20099964]
- Herrera AP, Mendez-Luck CA, Crist JD, Smith ML, Warre R, Ory MG, Markides K. Psychosocial and cognitive health differences by caregiver status among older Mexican Americans. *Community Mental Health Journal*. 2013; 49:61–72. [PubMed: 22311331]

- Hinton L, Chambers D, Velásquez A. Making sense of behavioral disturbances in persons with dementia: Latino family caregiver attributions of neuropsychiatric inventory domains. *Alzheimer Disease and Associated Disorders*. 2009; 23:401–405. [PubMed: 19568150]
- John R, Resendiz R, De Vargas LW. Beyond familism?: Familism as explicit motive for eldercare among Mexican American caregivers. *Journal of Cross-Cultural Gerontology*. 1997; 12:145–162. [PubMed: 14617933]
- Knight BG, Sayegh P. Cultural values and caregiving: The updated sociocultural stress and coping model. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*. 2010; 65:5–13.
- Kurtz ME, Kurtz JC, Given CW, Given B. Relationship of caregiver reactions and depression to cancer patients' symptoms, functional states and depression—A longitudinal view. *Social Science & Medicine*. 1995; 40:837–846. [PubMed: 7747219]
- Levkoff S, Levy B, Weitzman PF. The role of religion and ethnicity in the help seeking of family caregivers of elders with Alzheimer's disease and related disorders. *Journal of Cross-Cultural Gerontology*. 1999; 14:335–356. [PubMed: 14618013]
- MacNeil G, Kosberg JI, Durkin DW, Dooley WK, DeCoster J, Williamson GM. Caregiver mental health and potentially harmful caregiving behavior: The central role of caregiver anger. *The Gerontologist*. 2010; 50:76–86. [PubMed: 19574537]
- Markides, KS.; Angel, RJ.; Peek, MK. Aging, health, and families in the Hispanic population: Evolution of a paradigm.. In: Silverstein, M.; Giarruso, R., editors. *Kinship and cohort in an aging society: From generation to generation*. John Hopkins University Press; Baltimore, MD: 2013. p. 314-334.
- Markides, KS.; Eschbach, K. Hispanic paradox in adult mortality in the United States.. In: Rogers, R.; Crimmins, EM., editors. *International handbook of adult mortality*. Springer; New York, NY: 2011. p. 225-238.
- Markides, KS.; Stroup-Benham, CA.; Black, SA.; Satish, S.; Perkowski, LC.; Ostir, G. The health of Mexican American elderly: Selected findings from the Hispanic EPESE.. In: Wykle, ML.; Ford, A., editors. *Serving minority elders in the 21st century*. Springer; New York, NY: 1999. p. 72-90.
- Matsumoto N, Ikeda M, Fukuhara R, Shinagawa S, Ishikawa T, Mori T, Hirono N. Caregiver burden associated with behavioral and psychological symptoms of dementia in elderly people in the local community. *Dementia and Geriatric Cognitive Disorders*. 2007; 23:219–224. [PubMed: 17299264]
- Meyler D, Stimpson JP, Peek MK. Health concordance within couples: A systematic review. *Social Science & Medicine*. 2007; 64:2297–2310. [PubMed: 17374552]
- Pearlin LI. The sociological study of stress. *Journal of Health and Social Behavior*. 1989; 30:241–256. [PubMed: 2674272]
- Pearlin LI, Mullan JT, Semple SJ, Skaff MM. Caregiving and the stress process: An overview of concepts and their measures. *The Gerontologist*. 1990; 30:583–594. [PubMed: 2276631]
- Pearson JL, Teri L, Wagner A, Truax P, Logsdon RG. The relationship of problem behaviors in dementia patients to the depression and burden of caregiving spouses. *American Journal of Alzheimer's Disease and Other Dementias*. 1993; 8:15–22.
- Pinquart M, Sörensen S. Differences between caregivers and noncare-givers in psychological health and physical health: A meta-analysis. *Psychology and Aging*. 2003; 18:250–267. [PubMed: 12825775]
- Pinquart M, Sörensen S. Ethnic differences in stressors, resources, and psychological outcomes of family caregiving: A meta-analysis. *The Gerontologist*. 2005; 45:90–106.
- Radloff LS. The CES-D scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement*. 1977; 1:385–401.
- Rae HM. Managing feelings caregiving as emotion work. *Research on Aging*. 1998; 20:137–160.
- Roberto KA, Jarrott SE. Family caregivers of older adults: A life span perspective. *Family Relations*. 2008; 57:100–111.
- Ross CE, Mirowsky J, Goldsteen K. The impact of the family on health: The decade in review. *Journal of Marriage and the Family*. 1990; 52:1059–1078.

- Sayegh P, Knight BG. The effects of familism and cultural justification on the mental and physical health of family caregivers. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*. 2011; 66:3–14.
- Sörensen S, Conwell Y. Issues in dementia caregiving: Effects on mental and physical health, intervention strategies, and research needs. *American Journal of Geriatric Psychiatry*. 2011; 19:491–496. [PubMed: 21502853]
- Schulz R, Newsom J, Mittelman M, Burton L, Hirsch C, Jackson S. Health effects of caregiving: The caregiver health effects study: An ancillary study of the cardiovascular health study. *Annals of Behavioral Medicine*. 1997; 19:110–116. [PubMed: 9603685]
- Silverstein M, Giarrusso R. Aging and family life: A decade review. *Journal of Marriage and Family*. 2010; 72:1039–1058. [PubMed: 22930600]
- Tarlow BJ, Wisniewski SR, Belle SH, Rubert M, Ory MG, Gallagher-Thompson D. Positive aspects of caregiving contributions of the REACH project to the development of new measures for Alzheimer's caregiving. *Research on Aging*. 2004; 26:429–453.
- Tinetti ME. Performance-oriented assessment of mobility problems in elderly patients. *Journal of the American Geriatrics Society*. 1986; 34:119–126. [PubMed: 3944402]
- Census Bureau, US. The Hispanic population: 2010. 2011. Retrieved from <http://www.census.gov/prod/cen2010/briefs/c2010br-04.pdf>
- U.S. Department of Health and Human Services. A profile of older Americans. 2012. Retrieved from http://www.aoa.gov/Aging_Statistics/Profile/2012/4.aspx
- Vedhara K, Shanks N, Anderson S, Lightman S. The role of stressors and psychosocial variables in the stress process: A study of chronic caregiver stress. *Psychosomatic Medicine*. 2000; 62:374–385. [PubMed: 10845351]
- Vitaliano PP, Zhang J, Young HM, Caswell LW, Scanlan JM, Echeverria D. Depressed mood mediates decline in cognitive processing speed in caregivers. *The Gerontologist*. 2009; 49:12–22. [PubMed: 19363000]
- Weiss CO, Gonzalez HM, Kabeto MU, Langa KM. Differences in amount of informal care received by non-Hispanic White's and Latinos in a nationally representative sample of older Americans. *Journal of the American Geriatrics Society*. 2005; 53:146–151. [PubMed: 15667392]

Figure 1.
Conceptual framework of care recipient health predicting caregiver psychological distress.

Figure 2. Predicted association between ADLs and caregiver depressive symptoms by caregiver income. ADLs = activities of daily living.

Figure 3. Predicted association between NPI score and caregiver depressive symptoms by caregiver gender. NPI = Neuropsychiatric Inventory.

Table 1

Descriptive Statistics of Main Study Variables.

	Mean/Proportion (SD)	Range	α
Caregiver depressive symptoms	4.82 (6.97)	1.00–46.00	.90
Elderly adult health status			
Self-reported ADLs	2.30 (2.46)	0.00–7.00	.89
IADLs	5.89 (3.35)	0.00–10.00	.90
CG-reported ADLs	2.26 (2.43)	0.00–7.00	.90
IADLs	6.02 (3.30)	0.00–10.00	.88
POMA	4.07 (4.00)	0.00–12.00	.52
MMSE	17.62 (10.04)	0.00–30.00	.94
Depressive symptoms	11.29 (9.41)	0.00–45.00	.89
NPI	2.39 (2.45)	0.00–12.00	.76
Caregiver perceived social stress	3.74 (2.58)	0.00–13.00	.65
Caregiver background			
Age	55.87 (12.10)	18.00–89.00	
Income	4.50 (2.02)	1.00–8.00	
Female	0.74	0.00–1.00	
Relationship between CG and CR			
Child	0.74	0.00–1.00	
Focal caregiver	0.16	0.00–1.00	
Elderly adult background			
Age	86.28 (4.24)	80.00–102.00	
Education	4.52 (3.82)	0.00–17.00	
Mexican born	0.55	0.00–1.00	
Female	0.79	0.00–1.00	
Married	0.31	0.00–1.00	

Note. MMSE = Mini Mental State Examination; CG = caregiver; CR = care recipient; ADLs = activities of daily living; IADLs = instrumental activities of daily living; POMA = Performance-Oriented Mobility Assessment; NPI = Neuropsychiatric Inventory; HEPESI = Hispanic Established Population for the Epidemiologic Study of the Elderly. HEPESI 2010/2011 ($n = 626$).

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Note. CG = caregiver; CR = care recipient; ADLs = activities of daily living; LADLs = instrumental activities of daily living; POMA = Performance-Oriented Mobility Assessment; HEPESE = Hispanic Established Population for the Epidemiologic Study of the Elderly; HEPESE 2010/2011 ($n = 626$). Standard errors in parentheses.

***
 $p < .001$.

Table 3

OLS Regressions of Caregiver Depressive Symptoms on Care Recipient Cognitive and Psychological Health.

MMSE	-.04 (.03)				
Depressive symptoms		.13*** (.03)	.10*** (.03)		
NPI			.67*** (.11)	.46*** (.10)	
Perceived social stress				1.11*** (.10)	
CG background					
Age	.03 (.02)	.04 (.02)	.02 (.02)	.04 (.02)	
Income	-.87*** (.14)	-.84*** (.14)	-.60*** (.13)	-.82*** (.14)	-.59*** (.13)
Female	.73 (.63)	.77 (.62)	.63 (.56)	.55 (.61)	.48 (.56)
Child	.95 (.64)	1.00 (.63)	.89 (.56)	.82 (.62)	.78 (.56)
Focal caregiver	-1.06 (.76)	-1.17 (.75)	-1.17 (.67)	-.56 (.74)	-.74 (.67)
CR background					
Age	-.08 (.07)	-.04 (.07)	-.04 (.06)	-.08 (.07)	-.07 (.06)
Education	.20* (.08)	.21* (.08)	.19*** (.07)	.21* (.08)	.19*** (.07)
Mexican born	.72 (.58)	.64 (.58)	.44 (.52)	1.03 (.57)	.72 (.52)
Female	-.16 (.62)	-.46 (.62)	-.15 (.56)	-.25 (.61)	.01 (.55)
Married	-1.73** (.67)	-1.52* (.66)	-1.54** (.59)	-1.65* (.65)	-1.64*** (.59)
Constant	13.70* (6.20)	7.48 (5.95)	1.17 (5.37)	11.10 (5.81)	4.11 (5.29)
R ²	.08	.11	.28	.13	.28

Note. MMSE = Mini Mental State Examination; NPI = Neuropsychiatric Inventory; CG = caregiver; CR = care recipient; HEPSE = Hispanic Established Population for the Epidemiologic Study of the Elderly; HEPSE 2010/2011 ($n = 626$). Standard errors in parentheses.

* $p < .05$.

** $p < .01$.

*** $p < .001$.