

FACTORS THAT IMPACT THE DIFFERENTIAL UTILIZATION OF FORMAL
SUPPORT SERVICES BY CUBAN HISPANIC AND NON-CUBAN HISPANIC
CAREGIVERS

A Dissertation

by

DEBRA JEAN ARCHULETA

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

August 2007

Major Subject: Counseling Psychology

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Approved:

Co-Chairs of Committee,	Collie Conoley Michael Duffy
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ABSTRACT

Factors That Impact the Differential Utilization of Formal Support Services by Cuban
Hispanic and Non-Cuban Hispanic Caregivers. (August 2007)

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This study examines the factors that impact the utilization of formal support services by Hispanic informal caregivers caring for a person with Alzheimer Disease and related disorders (ADRD) and utilizes data from the Resources for Enhancing Alzheimer Caregiver's Health (REACH) project. The current study examines potential factors that influence the utilization of formal support services and areas of unmet need for Hispanic caregivers. This study also examines the intra-heterogeneity of Hispanic caregivers. To examine utilization of services by Hispanic caregivers, a model for service utilization was analyzed using structural equation modeling. To examine potential group differences between Cuban and non-Hispanic Cuban caregivers, multigroup structural equation modeling was conducted with a covariance structure of variables of interest.

The results of the study did not support this first hypothesis which examines factors that influence service utilization. Only one of the predictors, level of education, was found to be significantly correlated with service utilization. The results of the study supported the second hypothesis that Cuban Hispanic and non-Cuban Hispanic caregivers were not equivalent across the set of predictor variables examined. A significant finding,

however, was that caregiver psychological distress and the care recipient's health status were significantly correlated to service utilization for the non-Cuban Hispanic caregivers, but not for the Cuban Hispanic caregivers.

Treatment implications for this study are that homogenous interventions may not be able to meet the needs of this diverse population. It will be important for interventions and services developed for Hispanic populations to include education about Alzheimer's disease symptoms, progression of the disease, and services available to meet the caregiver and care recipient needs throughout the duration of the caregiving experience. Based on the results of this study, it is important for treatment providers to assist caregivers to increase awareness of opportunities for service utilization. It is important for the psychologist to be mindful the difficulty of seeking services for all home-based caregivers, particularly lower educated Hispanic caregivers. Service providers should work to understand the worldview and the perspective of caregiving that may vary between the different ethnic groups that fall under the Hispanic umbrella.

DEDICATION

To my mother and brother who supported me, loved me, nudged me along, and always

had faith in me...

To grandma and grandpa for showing the beauty in being an older adult...

To my new husband...

Brian...for being there for me to always lean on and hold me up and for believing in me

and loving me throughout the years...

To all my best friends...

...for being there for me and helping me to stay grounded and remember how

truly important friendship is in life .

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CHAPTER I

INTRODUCTION AND LITERATURE REVIEW

One of the fastest growing sectors of the population in the United States is elderly adults (U.S. Census Bureau, 2001). By the year 2050, individuals age 65 and older are projected to increase to 20% of the total U.S. population, which is an estimated 14 million people, due to improvements in medical care, technology, and nutrition (Administration on Aging, 2006). In addition, the number of adults age 85 and older is expected to triple (Administration on Aging, 2006). During this same period, the White elderly population is expected to double, the African American elderly population will quadruple, and the Hispanic elderly population, the second largest U.S. ethnic minority group, is estimated to increase to 7 times their current numbers (Administration on Aging, 2003; U.S. Census Bureau, 2001). By the year 2028, the Hispanic population is expected to become the largest ethnic minority group of all elderly aged 65 and older (Freeman & Lethbrdge-Cejku, 2006).

A significant cause for impairment in older adulthood is cognitive decline related to a form of dementia. The most prevalent type of dementia that significantly impairs cognitive functioning is Alzheimer's disease (AD). This type of dementia accounts for approximately 50% of all dementia diagnoses (Kennedy, 2003). Alzheimer's disease is a progressive degenerative disorder that afflicts an estimated 4 million people aged

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65 and older (American Health Assistance Foundation, 2004). In the early stages of AD, individuals may not seek treatment and may attribute forgetting valuables or difficulty with learning a new task to normal signs of aging. Without treatment, the mild impairment stage of AD can last from 1-3 years (Doraiswamy, Steffens, Pitchumoni, & Tabrizi, 1998).

Older adults with moderate Alzheimer's disease may require assistance carrying out simple tasks such as preparing food, performing household chores, driving, or assistance with self-care. If left untreated, the progression of the moderate stage of AD can last from 3 to 8 years (Doraiswamy et al., 1998). It is important that, when the AD progresses to the moderate stage, the older adult with Alzheimer's disease has a trusted and familiar caregiver. The last stage of Alzheimer's disease is the most severe and, if untreated, may last from 1-3 years (Doraiswamy et al., 1998). The older adult experiences difficulty recognizing family members, difficulty speaking, personality changes, weight loss, difficulty swallowing, lack of bowel and bladder control and many other self-care deficits (Bonsignore & Heun, 2003). During this stage, the person becomes completely dependent on the caregiver as well as a greater cost for caring for the individual.

At all stages of the disease, individuals have special needs and accommodations that must be made to maintain their quality of life. The estimated national cost for caring for a person with Alzheimer's disease is estimated to be about \$50 billion each year (Cummings, 1998). While the etiology of Alzheimer's disease remains elusive, there

continues to be a strong need for treatment interventions to assist with caregivers providing informal care of individuals with Alzheimer's disease.

Data collected in the 2004 National Health Interview Survey found that 10.4% of Hispanic older adults required help with personal care from other people, while 5.7 % of non-Hispanic Whites and 9.9% of non-Hispanic Blacks had the same need (National Center for Health Statistics, 2006). Family-centered caregiving is prominent in the Hispanic community and with the rising costs in health care, the number of family members caring for their elderly loved one at home is increasing (Aranda & Knight, 1997; Clark & Huttlinger, 1998; Neary & Mahoney, 2005). The value of these informal services offered by family members are estimated at about \$275 billion dollars a year and increasing (Arno, 2002). A survey by the National Alliance for Caregiving (2002) examined the cost of caregiving as a loss of productivity in that they estimated that American businesses lose between \$11 billion and \$29 billion each year due to employee's missing work to care for loved ones age 50 years and older.

Providing long-term care to an elderly loved one or family member strains and stresses the caregiver and can eventually lead to caregiver burnout (Aranda, 2001; Dilworth-Anderson & Gibson, 2002; Ory, Hoffman, Yee, Tennstedt, & Schulz, 1999). Because of the strain, the caregiver often suffers a decline in physical health, as well as psychological well-being, which may be associated with a decreased use of formal support services (Aranda, 2001; Clark, & Huttlinger, 1998).

Review of the Literature

The utilization of formal care services has been primarily research by examining Caucasian dementia caregivers (Brodaty, Thomson, Thompson, & Fine, 2005; McCallion, Toseland, Gerber, & Banks, 2004; Raina et al., 2004). These studies have been beneficial as a starting point for learning about important caregiver behaviors. Raina et al. (2004) found that the increasing disability of the care recipient had a negative impact on the psychological well-being of the caregiver, which was only marginally mediated by the use of formal support services. A study by Brodaty et al. (2005) found that physical disability in a care recipient was significantly associated with formal service use. In addition, this study found that affordability of the services was not a barrier to service use; rather, many caregivers in the study were not using services because they believed they did not need them or did not know what was available (Brodaty, Thomson, Thompson, & Fine, 2005).

A study examining use of an Alzheimer's Association (AA) chapter services found that caregivers with a high school education or less were more likely to want to be referred to an AA chapter when targeted for outreach (McCallion, Toseland, Gerber, & Banks, 2004). This study also found that unmarried caregivers were more likely to want a referral for services (McCallion, Toseland, Gerber, & Banks, 2004). Additionally, McCallion et al. (2004) found that spouse caregivers were less likely to request a referral for services. While the study by McCallion et al. (2004) found that increased community outreach also increased use of AA chapters, they did not find an increase in use of health care services by the caregivers.

Gallagher-Thompson et al. (1996) reported that a significant barrier to services for Hispanic families was lack of sufficient information and knowledge about the nature of Alzheimer's disease. A prominent model of formal service utilization that has used to examine service use with Hispanic caregivers is the behavioral health model developed by Anderson (1986) to predict medical care utilization. This model has been used to explain patterns of health care utilization by examining three sets of factors including predisposing factors, enabling factors, and need factors (Anderson, 1986). Anderson's (1986) model was found useful and culturally relevant when predicting service utilization for Hispanic caregivers (Radina & Barber, 2004). Furthermore, they found service utilization to be predicted by less positive feelings about the role of being a caregiver, smaller size of family networks, and higher levels of acculturation to the mainstream U.S. (Radina & Barber, 2004). The study also found that caregivers who feel more positively about caregiving have large family networks, are less acculturated and are less likely to utilize formal support services (Radina & Barber, 2004).

On average, ethnic minority caregivers use a limited number of formal support services when providing informal care. A study by based on a small sample of Hispanic caregivers (n = 87), found that Hispanic caregivers were more likely to receive assistance in caregiving from formal support services than non-Hispanic Black and White caregivers (Navaie-Waliser, Feldman, Gould, Levine, Kuerbis, & Donelan, 2001). A recent study found that Mexicans and Cubans were less likely than non-Hispanic whites to have an emergency room visit; however Puerto Ricans were more likely to have an emergency room visit (Weinick, Jacobs, Stone, Ortega, & Burstin,

2004). Most research, however, has shown that Hispanic caregivers do have a greater need for formal services such as medical services for the patient or support for caregiver than non-Hispanic White caregivers (Dilworth-Anderson, Williams, & Gibson, 2002; Navaie-Waliser et al., 2001). This gap in the literature regarding what services they do and do not use may be due to the high heterogeneity of the Hispanic population due to high risk populations may be overlooked. This supports the importance of considering the heterogeneity with the Hispanic population when evaluating and implementing service delivery. This study adds to the literature by specifying the factors that influence service utilization by caregivers and care recipients for two different Hispanic ethnic groups. The types of services that will be evaluated include formal support services such as meals delivered to the home, respite care, emergency room visits, nursing visits, and hospital visits.

In the past research, caregivers were often treated as a homogenous group, despite the possible ethnic group differences of worldview that is shaped by their cultural upbringing and life experiences (Katz, 1985; Trevino, 1996). The worldview and cultural heritage for each ethnicity is often reflected in language, food, beliefs and values, in addition to how they care for aging family members (Clark & Huttlinger, 1998). Worldviews affects many aspects of our lives including how we think, define events, make decisions, and behave (Sue & Sue, 2003). A caregivers' worldview may lead to differing experiences of caregiving, in addition to varying beliefs about what services may be necessary in order to relieve the strain of the caregiving as well as what services may benefit the patient if it is experienced as such. For example, one study

found that female Hispanic caregivers reported the caregiving experience as less bothersome and consequentially experienced more benefits from the caregiving experience than their Caucasian counterparts even though they had lower education and income, spent more time caring for their family member, and reported that their care recipient had more behavioral problems (Coon, Rubert, Solano, Mausbach, Kraemer, Arguelles, Haley, Thompson, Gallagher-Thompson, 2004).

Neary and Mahoney (2005) found that Hispanic caregivers often normalize or deny symptoms of dementia and their initial perceptions are that the elderly family member is experiencing changes related to old age. As reported by Gallagher-Thompson et al. (1997), Hispanic beliefs about dementia include that it is a temporary or “craziness” and can be cured by “el cuarandero” (p. 215). Family members may sometimes believe that the person with dementia is pretending in order to get attention from others (Neary & Mahoney, 2005). A diagnosis of dementia or Alzheimer’s in the Hispanic community often carries a social stigma (Gallagher-Thompson, Leary, Ossinalde, Romero, Wald, & Fernandez-Gamarra, 1997; Neary & Mahoney, 2005). Respect is another concept in the Hispanic culture that traditionally keeps family members from talking about the first signs and symptoms so as not to bring shame on the family (Gallagher-Thompson et al., 1997). These cultural belief serve as a barrier to services and often lead to a delay of sometimes 3 to 4 years in diagnosis and treatment of the disease (Neary & Mahoney, 2005). As previously mentioned, Hispanic caregivers do utilize some formal support services, however they may not be received in time to alleviate the stress of disease process on the caregiver and the care recipient.

Limited education has been found to be an additional barrier to service utilization. There are many Hispanic ethnic groups that have less than high school education and this adds to the misconceptions about the symptoms of Alzheimer's disease (Gallagher-Thompson et al., 1997). Neary & Mahoney (2005) found that once family members learned about and understood the impact of Alzheimer's disease on their loved one, they were willing to seek formal services for assistance. The lack of education allows the cultural beliefs to persist over the reality of the symptoms the family member is experiencing (Gallagher-Thompson et al., 1997; Neary & Mahoney, 2005).

Financial stress of obtaining formal support services is also a barrier to service utilization. Caregiving for a family member with Alzheimer's disease can continue over many years. During that time, caregivers have reported high percentages of giving up work, retiring early, and having to take less demanding jobs (Ory, Hoffman, Yee, Tennstedt, & Schulz, 1999). Lower education is often associated with lower income. For the caregiver, the decrease in employment status adds to the lower income as well (Ory et al., 1999). Female Hispanic caregivers have been found to have lower levels of education and income than their Caucasian counterparts (Coon, et al., 2004; Cox & Monk, 1996). There is limited research on the impact of caregiver level of education and the utilization of services. Due to the changes in employment status and income that occur as a result of caregiving, level of education will be examined in this study as an influence on caregiver's utilization of services.

Among the Hispanic culture, the concepts of collectivism and reciprocity are an important part of the caregiver ideology (Gallagher-Thompson, Talamantes, Ramirez, & Valverde, 1996). As a result, there is a cultural unacceptability of nursing homes which leads to a greater use of family caregivers (Gallagher-Thompson et al., 1997; Pinquart & Sorensen, 2005). Gallagher-Thompson et al. (1997) reported that there is a trend toward more intergenerational interaction and exchanges of care, such allowing the caregiver to live in the home or the care recipient to provide child care. Reciprocity is often learned in Hispanic culture from multigenerational families living in one home. As children, adult caregivers may have seen their parents caring for older family members and continue the tradition (Neary & Mahoney, 2005).

Caregivers in ethnic minority families are more likely to be women and often adult children, grandchildren or spouses of the family member with dementia (Harrow et al., 2004; Henderson, 1996; Pinquart & Sorensen, 2005; Sörensen & Pinquart, 2005). In the Latino culture, women are highly valued as caregivers and if the family must go outside the nuclear family for a caregiver, the help of an unrelated female would be sought before seeking help from a related male (Henderson, 1996). Neary & Mahoney (2005) found that Hispanic participants in their study strongly emphasized home-based care and reported that if placement were necessary, they would continue to maintain vigilant oversight of the care of their family member. Coon, et al. (2004) reported that female Hispanic caregivers were more likely to perceive the caregiving experience positively than Caucasian caregivers. In addition, this study stated that the female Hispanic caregivers viewed the caregiving process as helping to strengthen the family

structure and provide continuity (Coon, et al., 2004; Philips, Torres De Ardon, Komnenenich, Killeen, & Rusinak, 2000).

This positive view of caregiving may serve as a coping strategy for caring for a family member with dementia (Coon, et al., 2004). In addition, religiosity and spirituality have been reported by Hispanic caregivers as having increased as a source of coping since becoming caregivers (Henderson, 1996; Mausbach, Coon, Cardenas, & Thompson, 2003; Musgrave, Allen, & Allen, 2002; Navaie-Waliser et al., 2001). When compared to Caucasian caregivers, Female caregivers reported greater endorsement of the importance of religion, higher attendance rates for religious services, and were found to pray more often (Mausbach, Coon, Cardenas, & Thompson, 2003). Henderson (1996) found that in the Cuban and Puerto Rican populations, religion and spirituality is utilized as a supportive resource, but does not outweigh the reliance on family-based assistance.

Valle et al. (2004) found that Hispanic caregivers were less likely to identify a friend or non-family within their social network. Network size has been found to be positively correlated with seeking formal care services (Starrett, Decker, Walters, & Rogers, 1990; Valle, Yamada, & Barrio, 2004). Environmental awareness of services available, disseminated through social supports, been found to be a predictor of formal service use (Starrett, Decker, Walters, & Rogers, 1990). Hispanic caregivers were less likely to seek out professional help on their own (Valle, Yamada, & Barrio, 2004). Among certain Hispanic groups such as Cubans, friends are incorporated into the social networks as well as family (Dilworth-Anderson & Marshall, 1996). However, Mexican Americans rely heavily on assistance from family members, which results in smaller

social networks for and a lack of opportunities for information and referrals for formal care services (Gallagher-Thompson et al., 1997; Valle, Yamada, & Barrio, 2004).

Family caregivers who live in the same dwelling as the care recipient have been reported to have increased levels of depression (Cullen, Grayson, & Jorm, 1997; Waite, Bebbington, Skelton-Robinson, & Orrell, 2004). Jarrot et al. (2005) reported that caregivers who were family members worry and distress about caregiving increased as the care recipient's memory or behavior problems changed. This distress may also occur because the caregiver realizes the care recipient's health and cognitive functioning will only continue to decline and it will do so in a way that is out of the caregiver's control and unpredictable (Ory, Hoffman, Yee, Tennstedt, & Schulz, 1999). Increased levels of distress for Hispanic caregivers were found to be related to decrease use of a social network to seek help by the caregiver, according to a study by Valle et al. (2004). Jarrot et al. (2005) study found that as a caregiver's worry decreased the use of formal support services increased (Jarrot, Zarit, Stephens, Townsend, & Greene, 2005).

Cullen, Grayson & Jorm (1997) found physical disability rather than behavioral disability (e.g., cognitive impairment) of a care recipient a great determinant of morbidity in elderly as well as their caregivers. Several studies have shown that, in addition to the elderly person's difficulty of mood, behavioral, and memory problems associated with Alzheimer's disease, Hispanic elderly have high levels of disease and impairment (Aranda & Knight, 1997; Dilworth-Anderson, Williams, & Gibson, 2002; Yeo, Gallagher-Thompson, & Lieberman, 1996). Hispanic populations are susceptible to long-term chronic diseases such as diabetes, heart disease, cancer, and stroke

(Administration on Aging, 2003). These types of disease lead to impairments in functional abilities such as being able to go outside the home alone or cause difficulty in activities of daily living such as bathing, dressing, or getting around inside the home (National Institute on Disability and Rehabilitation Research, 1999).

When a disease such as diabetes has progressed over several years, a caregiver may be caring for an elderly family member with dementia and possibly vision impairments or amputations (Aranda & Knight, 1997). Pinqart & Sorenson (2005) found that Hispanic caregivers provided care to family members with dementia for longer periods of time than non-Hispanic White caregivers. A study by Faison et al. (1999) found that when activities of care such as bathing and dressing as well as preparing meals and doing housework increased, caregivers reported increased levels of caregiver burden. The study also reported that daughters and other relatives reported significantly more burden than sons (Faison, Faria, & Frank, 1999).

There is an increased likelihood that the caregivers, in particular women who are spouses, experience poor health or increased health problems due to the average caregiver being over age 40 (Aranda & Knight, 1997; Covinsky et al., 2003; Sörensen & Pinqart, 2005). Ory et al. (1999) found that women in their study reported more emotional and physical health strain than men. In addition, there have been several studies that have shown a decrease in preventive behaviors and a negative change in health over time for caregivers of family members with impairment (Cox & Monk, 1990). This study focuses on women as family caregivers because this group has been found to be more likely to have increased health problems, lower education levels and

increased psychological distress while caregiving, all of which add additional stress to the role (Pinquart & Sorenson, 2005).

The influence of factors related to the caregivers' ethnicity in the utilization of services may predict important caregiver behaviors. For this study, there is a special interest in examining the behaviors of Hispanic caregivers in particular because some research suggests that they have the highest overall unmet need compared to White and African American caregivers. This study could benefit caregivers by discovering the factors influencing utilization that may be unique to this ethnic group. If the factors that predict utilization of formal support services by Cuban Hispanic caregivers are different from non-Cuban Hispanic caregivers, then the information gathered through this study can be used to design services that are tailored to meet the needs and diversity of these ethnic groups in order to increase service utilization which would then reduce the potential negative impact on the caregivers' and care recipients' health and well-being.

Statement of Hypotheses

The hypotheses for this study are as follows:

- 1) It is hypothesized that the utilization of formal support services by Hispanic caregivers can be predicted by:
 - a) the severity of the caregiving stressors (i.e. number of hours spent with care recipient and amount of time doing specific activities for care recipients),
 - b) the care recipient's health status (i.e. level of functioning),
 - c) the caregiver's coping strategies (i.e. religiosity and appraisal of caregiving),
 - d) the caregiver's social support (i.e. support from social network),

- e) the caregiver's psychological distress (i.e. depression), and
- f) educational level for the caregiver.

2) It is further hypothesized that the predictors specified in hypothesis one are factors on which Cuban Hispanic caregivers will differ from non-Cuban Hispanic caregivers.

CHAPTER II

METHODOLOGY

The purpose of the current study was to investigate the factors that influence the utilization of formal care support services for Cuban Hispanic and non-Cuban Hispanic caregivers. Additionally, the aim was to determine there are significant differences amongst those factors between the two groups. This chapter will discuss the selection of participants, the demographics of participants, the instruments used, and a description of the procedure for conducting the research.

Participants

Data from the Resources for Enhancing Caregiver Health (REACH) were utilized for this study (Schultz, 2003). This database is publicly (<http://www.edc.gsph.pitt.edu/Reach/>). Family caregivers of individuals with dementia were recruited from memory disorder clinics, primary care clinics, social service agencies, and physicians' offices at two different sites (Wisniewski, Belle, Coon, Marcus, Ory, Burgio, Burns, & Schulz, 2003). Diverse ethnic groups were recruited, including Hispanic/Latino caregivers. Community outreach, which was tailored to the specific racial or ethnic group being recruited, was done for all sites through radio, television, targeted newsletters, public service announcements, or community presentations (Wisniewski et al., 2003).

For the purposes of this study, only female caregivers from the Miami site and at the Palo Alto site will be examined. A total of 196 female participants caregivers were

recruited from both sites, which includes 108 non-Cuban Hispanic caregivers and 88 Cuban Hispanic caregivers (Wisniewski et al., 2003).

For a caregiver to be eligible for the study, they were required to be over the age of 21 (Wisniewski et al., 2003). Caregivers also had to be living with and providing care for a relative with Alzheimer's disease and related disorders for a minimum of 4 hours per day for at least the previous six months prior to recruitment (Wisniewski et al., 2003). Other requirements to be eligible to participate in the study were that the caregivers had to have a telephone, planned on remaining in the geographic area for at least 6 months, and were competent in either English or Spanish, as specified by each study site (Wisniewski et al., 2003). If caregivers were participating in any other caregiver intervention study or had an illness that would prevent them from participating for a minimum of 6 months, then they were excluded from participation in the REACH study (Wisniewski et al., 2003).

In addition, for care recipients to be eligible for the study, they had to have a medical diagnosis of probable Alzheimer's Disease or a related dementia (ADRD) or a Mini Mental Status Exam (MMSE; Folstein, Folstein, & McHugh, 1975) score lower than 24 (Wisniewski et al., 2003). The MMSE is a brief measure of cognitive functioning and a score of 24 on this measure indicates moderate to severe cognitive impairment. The care recipient also had to have at least one limitation in basic activities of daily living (ADLs; Katz, Ford, Moskowitz, Jackson, & Jaffe, 1963) or at least two dependencies in their instrumental activities of daily living (IADLs; Lawton & Brody, 1969; Wisniewski et al., 2003).

Instruments

Sociodemographic variables such as age, gender, ethnicity, marital status, education level, religious preference, employment, and years providing care for the care recipient and the caregiver were assessed using a self-report obtained through a semi-structured interview using a set of screening questions that were developed for the REACH project (Wisniewski et al., 2003). The full measures can be reviewed in Appendix A.

Vigilance Scale (Mahoney, Jones, Coon, Mendelsohn, Gitlin, & Ory, 2003). This instrument was specifically developed for the REACH project and was normed on the population utilized in the REACH project. This measure consists of four time related response questions regarding the amount of time the caregiver may leave the care recipient alone the home, alone a room, how many hours the caregivers feel they are on duty, and how many hours they spend doing things for the care recipients. The purpose of this measure is to serve as an estimate of the cost of in time of caregiving. The response times are recorded in hours and minutes. There are four subscales consisting of each time-related question. The current study has a Cronbach's alpha of .15 for the Vigilance scale (Cuban .23 and non-Cuban .08).

Revised Memory and Behavior Problems Checklist (RMBPC) (Roth et al., 2003; Teri et al., 1992). This instrument measured the perceived burden experienced by the caregiver related to problem behaviors, including information about the care recipients' memory and behavioral problems, such as hiding things and wandering, that the care recipient experienced during the week prior to the interview. The measure is self-

administered and consists of 24 items. The caregiver was asked about behaviors or problems the care recipient had experienced in the past week. The responses were no (0), yes (1), unknown (-3), or refused (-4). In addition, the caregivers are also asked to rate the how bothered they were by the behaviors. The respondents were shown a card with the responses were not at all (0), a little (1), moderately (2), very much (3), extremely (4), unknown (-3), and refused (-4). The RMBPC is a valid and reliable instrument that is often used to assess overall level of behavioral problems and identify specific areas of dysfunction in dementia patients (Teri et al., 1992). This measure has been found to be valid for use with Latino populations (Roth et al., 2003). The current study has a Cronbach's alpha of .82 for the RMBPC (Cuban .79 and non-Cuban .84).

Positive Aspects of Caregiving (Tarlow, Wisniewski, Belle, Rubert, Ory, Gallagher-Thompson., 2004). This instrument was developed for the REACH project to obtain information regarding the positive aspects of caring for the care recipient that the caregivers had experienced (Tarlow et al., 2004). This measure consists of 11 items that are phrased as statements about the caregiver's mental health and affective state with regards to the caregiving experience (Tarlow et al., 2004). Based on the recommendations by Tarlow et al. (2004), two of the items, "given more meaning to my life" and "enabled me to learn new skills," were dropped from the scale and the remaining 9 items were used in this study. The measure is composed of two subscales, Self – Affirmation and Outlook on Life, that can be used as separated subscales and are also well correlated to develop a summative score. Higher scores indicate more positive feelings about the caregiving experience. The respondents were asked to rate each

phrase using a scale ranging with the options: 1 (disagrees a lot), 2 (disagrees a little), 3 (Neither agree nor disagree), 4 (agree a little) or 5 (agree a lot). The scale has been tested with large and diverse populations and has been found to be a valid and reliable measure of the positive dimensions of caregiving (Tarlow et al., 2004). The current study has a Cronbach's alpha of .86 for the Positive Aspects of Caring measure (Cuban .85 and non-Cuban .86).

Religiosity Scale (Mausbach, Coon, Cardenas, & Thompson, 2003). This instrument was also developed for the REACH project to measure the positive aspects of caregiving in regards to religious and spiritual beliefs (Mausbach et al., 2003). A global religiosity scale which consisted of three questions comprises the scale. The participants are asked the following questions: (a) How often do you usually attend religious services, meetings, and/or activities, (b) How important is your spirituality or religious faith to you, and (c) How often do you pray or meditate? The response options for attendance and prayer were 1 (never), 2 (once a year), 3 (a few times a year), 4 (at least once a month), 5 (at least once a week), or 6 (nearly every day). For the importance of religion, the respondents could choose four options, 1 (not very important), 2 (somewhat important), 3 (important), 4 or (very important). The current study has a Cronbach's alpha of .57 for the Religiosity scale (Cuban .70 and non-Cuban .37).

Social Support Scale-Modified (Barrera, Sandler, & Ramsey, 1981; Krause, 1995; Krause & Markides, 1990). This instrument was modified for the project to measure the kinds and amount of support the caregiver received from friends, neighbors, or family members as well as social networks, negative interactions, and overall

satisfaction with social support. The original scale was developed for use with older adults and has been modified to be use with caregivers by including items regarding social network (Krause & Markides, 1990; Krause, 1995). The current study has a Cronbach's alpha of .83 for the Social Support scale (Cuban .82 and non-Cuban .83).

Formal Care and Services Scale (Wisniewski et al., 2003). This instrument was developed for the REACH project to measure the variety and frequency of usage of community-based medical and other care services with the month prior to the interview (Wisniewski et al., 2003). This scale consists of 22 dichotomous (yes/no) items used to assess whether or not a caregiver utilized a service either for herself or for the care recipient. The items include services such as having a homemaker, receiving meals, visiting the emergency room, and other services obtained in the home, community, physician, and hospital services. Each item was followed by an additional question of how often the services were received. The current study has a Cronbach's alpha of .54 for the Formal Care and Services scale (Cuban .61 and non-Cuban .47).

Center for Epidemiologic Studies- Depression Scale (CES-D) (Radloff, 1977; Perriera, Deeb-Sossa, Harris, & Bollen, 2005). This instrument is a 20 item self-report measure of depressive symptoms used to measure the psychological distress of the caregiver over the past week (Radloff, 1977). This measure is widely used for the measurement of depression and the identification of individuals who are prone to depression (Perriera et al., 2005). Each item on the CES-D has a potential value ranging from 0 to 3, with 0 = rarely or none of the time, 1 = some of the time, 2 = a lot of the time, and 3 = most or all of the time. The composite score ranges from 0 to 60 with

higher scores over 24 indicating prevalent depressive symptoms. For the purposes of this study, the four subscales (negative affect, positive affect, somatic complaints, and negative interactions) recommended by Perriera et al. (2005) for use with ethnic minority populations were utilized. The current study has a Cronbach's alpha of .79 for the CES-D (Cuban .79 and non-Cuban .79).

Procedures

Family caregivers of individuals with dementia were recruited from memory disorder clinics, primary care clinics, social service agencies, and physicians' offices at two different sites (Wisniewski et al., 2003). Diverse ethnic groups were recruited, including Hispanic/Latino caregivers. Community outreach, which was tailored to the specific racial or ethnic group being recruited, was done for all sites through radio, television, targeted newsletters, public service announcements, or community presentations (Wisniewski et al., 2003).

An initial interview was done at each site participating in the REACH project. The interviews were done by telephone using a common set of screening questions (Gitlin, Burgio, Czaja, Mahoney, Gallagher-Thompson, Burns, Hauck, Belle, Schulz, & Ory, 2003). After a participant was considered eligible for the study, informed consent was obtained and the caregivers were then administered the core battery of assessments to obtain baseline data. Interviewers were trained and established standardized and reliable procedures for interviewing to work on the REACH project (Gitlin et al., 2003). Institutional Review Board approval was obtained for the specific intervention given at each sites and was maintained throughout the study (Gitlin et al., 2003).

All of the assessment instruments were translated into Spanish (Gitlin et al., 2003). The method used to translate the instruments involved translating, then back-translating the instrument by a professional translation team (Gitlin et al., 2003). After each instrument was translated, it was then modified for dialect differences and reviewed by bilingual, bicultural experts for correctness (Gitlin et al., 2003). Each of the instruments was then pilot tested prior to being used (Gitlin et al., 2003).

This study was approved by the Institutional Review Board (IRB) at Texas A&M University on 06/21/05 (Protocol Number 2005-0327).

CHAPTER III

RESULTS

Preliminary Analysis

Descriptive statistics on the demographic data obtained during the research study were conducted. The mean age of the non-Cuban Hispanic caregiver sample was 51.73 years with 4.6% of the sample age 25-29, 28.3% of the sample age 32-38, 30.7% of the sample age 40-49, 29% of the sample age 50-59, 17.8% of the sample age 60-69, and 8.4% age 70-78 (see Table 1). The mean age of the Cuban Hispanic caregiver sample was 64.33 years with 1.1% of the sample age 29, 1.1% of the sample age 39, 6.7% of the sample age 42-46, 22.6% of the sample age 50-59, 32.8% of the sample age 60-69, 29.6% of the sample age 70-79, and 6.8% age 80-85 (see Table 2).

Table 1
Age Characteristics of the Non-Cuban Hispanic Sample

Age	Frequency	Percent	Valid Percent	Cumulative Percent
25	1	.9	.9	.9
27	2	1.9	1.9	2.8
28	1	.9	.9	3.7
29	1	.9	.9	4.6
32	1	.9	.9	5.6
33	1	.9	.9	6.5
34	3	2.8	2.8	9.3
35	2	1.9	1.9	11.1
36	2	1.9	1.9	13.0
37	1	.9	.9	13.9
38	3	2.8	2.8	16.7
40	2	1.9	1.9	18.5
41	2	1.9	1.9	20.4
42	3	2.8	2.8	23.1
43	5	4.6	4.6	27.8
45	5	4.6	4.6	32.4
46	2	1.9	1.9	34.3
47	4	3.7	3.7	38.0

Table 1 continued

Age	Frequency	Percent	Valid Percent	Cumulative Percent
48	4	3.7	3.7	41.7
49	6	5.6	5.6	47.2
50	2	1.9	1.9	49.1
51	2	1.9	1.9	50.9
52	2	1.9	1.9	52.8
53	4	3.7	3.7	56.5
54	4	3.7	3.7	60.2
56	8	7.4	7.4	67.6
57	2	1.9	1.9	69.4
58	2	1.9	1.9	71.3
59	3	2.8	2.8	74.1
60	2	1.9	1.9	75.9
61	2	1.9	1.9	77.8
63	3	2.8	2.8	80.6
64	1	.9	.9	81.5
65	3	2.8	2.8	84.3
66	2	1.9	1.9	86.1
68	3	2.8	2.8	88.9
69	3	2.8	2.8	91.7
70	1	.9	.9	92.6
71	1	.9	.9	93.5
75	2	1.9	1.9	95.4
76	3	2.8	2.8	98.1
78	2	1.9	1.9	100.0
Total	108	100.0	100.0	

Table 2

Age Characteristics of Cuban Hispanic Sample

Age	Frequency	Percent	Valid Percent	Cumulative Percent
29	1	1.1	1.1	1.1
39	1	1.1	1.1	2.3
42	1	1.1	1.1	3.4
44	2	2.3	2.3	5.7
45	1	1.1	1.1	6.8
46	1	1.1	1.1	8.0
50	2	2.3	2.3	10.2
51	2	2.3	2.3	12.5
52	1	1.1	1.1	13.6

Table 2 continued

Age	Frequency	Percent	Valid Percent	Cumulative Percent
53	1	1.1	1.1	14.8
54	1	1.1	1.1	15.9
55	1	1.1	1.1	17.0
56	5	5.7	5.7	22.7
58	3	3.4	3.4	26.1
59	4	4.5	4.5	30.7
60	3	3.4	3.4	34.1
61	3	3.4	3.4	37.5
62	4	4.5	4.5	42.0
63	3	3.4	3.4	45.5
64	3	3.4	3.4	48.9
66	4	4.5	4.5	53.4
67	3	3.4	3.4	56.8
68	3	3.4	3.4	60.2
69	3	3.4	3.4	63.6
70	2	2.3	2.3	65.9
71	3	3.4	3.4	69.3
72	8	9.1	9.1	78.4
73	3	3.4	3.4	81.8
74	2	2.3	2.3	84.1
75	3	3.4	3.4	87.5
76	2	2.3	2.3	89.8
78	2	2.3	2.3	92.0
79	1	1.1	1.1	93.2
80	2	2.3	2.3	95.5
81	1	1.1	1.1	96.6
82	2	2.3	2.3	98.9
85	1	1.1	1.1	100.0
Total	88	100.0	100.0	

The largest number of participants, 44.9%, labeled their ethnicity as Cuban or Cuban American. The second largest group with 39.3%, labeled their ethnicity as Mexican, Mexican American, or Chicano, while 1% were Puerto Rican and .5% were Dominican. A next largest group of participants, with 14.3%, labeled their ethnicity as other which consisted of several different ethnic groups including Bolivian, Central

American, Salvadorean, Chilean, Columbian, Ecuadorian, Guatemalan, Latin American, Nicaraguan, Panamanian, Costa Rican, South American, Peruvian, Spanish and Mexican (see Table 3).

Of the non-Cuban Hispanic participants, 69.4% were married, 13% were never married, and 10.2% were divorced, while 4.6% reported being separated from their spouse and 2.8% were widowed (see Table 4). For the Cuban Hispanic participants, 76.1% reported being married and 11.4% had been divorced and not currently married, while 8% had never been married. In addition, 4.5% of the Cuban Hispanic participants were widowed and not currently married and none of the participants reported being separated from their spouse at the time of the study (see Table 5).

Table 3
Ethnicity of Hispanic Caregivers

	Frequency	Percent	Valid Percent	Cumulative Percent
Cuban or Cuban American	88	44.9	44.9	84.2
Mexican or Mexican American	77	39.3	39.3	39.3
Puerto Rican	2	1.0	1.0	85.2
Dominican	1	.5	.5	85.7
Hispanic other	28	14.3	14.3	100.0
Total	196	100.0	100.0	

Table 4
Marital Status of Non-Cuban Hispanic Caregivers

	Frequency	Percent	Valid Percent	Cumulative Percent
single, never married	14	13.0	13.0	13.0
married, living as married	75	69.4	69.4	82.4

Table 4 continued

	Frequency	Percent	Valid Percent	Cumulative Percent
widowed, not currently married	3	2.8	2.8	85.2
divorced, not currently married	11	10.2	10.2	95.4
separated	5	4.6	4.6	100.0
Total	108	100.0	100.0	

Table 5

Marital Status of Cuban Hispanic Caregivers

	Frequency	Percent	Valid Percent	Cumulative Percent
single, never married	7	8.0	8.0	8.0
married, living as married	67	76.1	76.1	84.1
widowed, not currently married	4	4.5	4.5	88.6
divorced, not currently married	10	11.4	11.4	100.0
separated	0	0	0	0
Total	88	100.0	100.0	

The relationship of the caregivers to the care recipients are listed in Tables 6 and 7. The largest percentage (65.7%) of non-Cuban Hispanic participants reported their relationship as being a daughter of the care recipient, while 21.3% reported being a spouse. The remaining non-Cuban Hispanic caregivers listed their relationship as daughter-in-law (4.6%), sister (2.8%), niece (2.8%), and granddaughter (2.8%). The largest percentage of Cuban Hispanic caregivers (51.1%) reported being a spouse to the care recipient and the next largest group (42%) reported their relationship as being a daughter. The remaining percentage of Cuban Hispanic caregivers reported their relationship to the care recipient as daughter-in-law (2.3%), sister (2.3%), niece (1.1), and sister-in-law (1.1).

Religious preferences were also included for the participants (see Table 8 and Table 9). The largest percentage of non-Cuban Hispanic participants, 67.6%, endorsed having a religious preference of Roman Catholic. The next largest group of participants was 14.8%, which endorsed for other religious preferences including Born Again Christian, Christian, Nazarene, non-Denominational Christian, and Pentecostal. There were 9.3% of the participants that endorsed a preference for other Protestant (Adventist, Christian, Evangelic, and Pentecost), 2.8% for Jehovah's Witness, 1.9% for Orthodox Christian, 1.9% for Baptist, 1.9% for Presbyterian, and .9% refused to answer. The largest percentage of Cuban Hispanic participants, 81.8%, endorsed a religious preference for Roman Catholic. The religious preference of Baptist was endorsed for 4.5% of the participants, 2.3% for Presbyterian as well as 2.3% for Jewish and 2.3% reported no religious preference. Methodist (1.1%), Protestant (1.1%), Orthodox Christian (1.1%), Jehovah's Witness (1.1%), Spiritual, but not religious (1.1%) and other (Plymouth Congregational) (1.1%) were each endorsed by small percentages of the Cuban Hispanic participants.

Table 6

Relationship of Non-Cuban Hispanic Caregivers to Care Recipient

	Frequency	Percent	Valid Percent	Cumulative Percent
Wife	23	21.3	21.3	21.3
Daughter	71	65.7	65.7	87.0
Daughter-in-Law	5	4.6	4.6	91.7
Sister	3	2.8	2.8	94.4
Niece	3	2.8	2.8	97.2
Granddaughter	3	2.8	2.8	100.0
Total	108	100.0	100.0	

Table 7

Relationship of Cuban Hispanic Caregivers to Care Recipient

	Frequency	Percent	Valid Percent	Cumulative Percent
Wife	45	51.1	51.1	51.1
Daughter	37	42.0	42.0	93.2
Daughter-in-Law	2	2.3	2.3	95.5
Sister	2	2.3	2.3	97.7
Niece	1	1.1	1.1	98.9
Sister-in-Law	1	1.1	1.1	100.0
Total	88	100.0	100.0	

Table 8

Religious Preferences of Non-Cuban Hispanic Caregivers

	Frequency	Percent	Valid Percent	Cumulative Percent
refused	1	.9	.9	.9
Baptist	2	1.9	1.9	2.8
Presbyterian	1	.9	.9	3.7
Protestant	10	9.3	9.3	13.0
Roman Catholic	73	67.6	67.6	80.6
Orthodox Christian	2	1.9	1.9	82.4
Jehovah's Witness	3	2.8	2.8	85.2
Other	16	14.8	14.8	100.0
Total	108	100.0	100.0	

Table 9

Religious Preferences of Cuban Hispanic Caregivers

	Frequency	Percent	Valid Percent	Cumulative Percent
Methodist	1	1.1	1.1	1.1
Baptist	4	4.5	4.5	5.7
Presbyterian	2	2.3	2.3	8.0
Other Protestant	1	1.1	1.1	9.1
Roman Catholic	72	81.8	81.8	90.9
Orthodox Christian	1	1.1	1.1	92.0
Jewish	2	2.3	2.3	94.3
Jehovah's Witness	1	1.1	1.1	95.5
Spiritual, but not religious	1	1.1	1.1	96.6
Other	1	1.1	1.1	97.7
None	2	2.3	2.3	100.0
Total	88	100.0	100.0	

The non-Cuban Hispanic participants reported that 60.2% had a high school education or less, while 24.1% had attended vocational training, some college or had an associate degree and 10.2% had a college degree or higher. For the Cuban Hispanic participants, 46.6% reported having a high school education or less, while 22.7% had attended vocational training, some college or had an associate degree. In contrast to the non-Cuban Hispanic participants, 30.8% of the Cuban Hispanic participants had a college degree or higher. Table 10 and Table 11 display the education levels separated by ethnic group.

Table 10
Education Level of Non-Cuban Hispanic Participants

	Frequency	Percent	Valid Percent	Cumulative Percent
no formal education	1	.9	.9	.9
grade 2	2	1.9	1.9	2.8
grade 3	4	3.7	3.7	6.5
grade 4	4	3.7	3.7	10.2
grade 5	3	2.8	2.8	13.0
grade 6	12	11.1	11.1	24.1
grade 7	3	2.8	2.8	26.9
grade 8	6	5.6	5.6	32.4
grade 9	5	4.6	4.6	37.0
grade 10	2	1.9	1.9	38.9
grade 11	5	4.6	4.6	43.5
grade 12/high school/ GED	18	16.7	16.7	60.2
vocational/ training after high school	6	5.6	5.6	65.7
some college/ associate degree	26	24.1	24.1	89.8
college graduate	10	9.3	9.3	99.1
doctoral degree	1	.9	.9	100.0
Total	108	100.0	100.0	

Table 11
Education Level of Cuban Hispanic Participants

	Frequency	Percent	Valid Percent	Cumulative Percent
grade 2	1	1.1	1.1	1.1
grade 3	1	1.1	1.1	2.3
grade 4	1	1.1	1.1	3.4
grade 5	2	2.3	2.3	5.7
grade 6	5	5.7	5.7	11.4
grade 7	3	3.4	3.4	14.8
grade 8	8	9.1	9.1	23.9
grade 9	2	2.3	2.3	26.1
grade 10	3	3.4	3.4	29.5
grade 11	2	2.3	2.3	31.8
grade 12/high school/ GED	13	14.8	14.8	46.6
vocational/ training after high school	5	5.7	5.7	52.3
some college/ associate degree	15	17.0	17.0	69.3
college graduate	13	14.8	14.8	84.1
master's degree	7	8.0	8.0	92.0
doctoral degree	7	8.0	8.0	100.0
Total		88	100.0	100.0

Participants also reported the country in which they received their last year of formal education. The non-Cuban Hispanic participants reported that 28.7% received their last year of education in Mexico, 50% in the United States, and 19.4 % in other countries including Bolivia, Chile, Columbia, Ecuador, El Salvador, Guatemala, Nicaragua, Panama, Peru, Puerto Rico, and Venezuela. Additionally, .9% refused to answer. In contrast to this, 76.1% of the Cuban Hispanic participants received their last year of formal education in Cuba and only 20.1% were in the United States, while 1.1% were in Mexico and 2.3% in Cuba and Puerto Rico. Table 12 and Table 13 display the

statistics for the country in which each participant group received their last year of formal education.

Table 12
Country of Last Year of Formal Education for Non-Cuban Hispanic Participants

	Frequency	Percent	Valid Percent	Cumulative Percent
refused response	1	.9	.9	.9
United States	54	50.0	50.0	50.9
Mexico	31	28.7	28.7	79.6
Other Country	22	20.4	20.4	100.0
Total	108	100.0	100.0	

Table 13
Country of Last Year of Formal Education for Cuban Hispanic Participants

	Frequency	Percent	Valid Percent	Cumulative Percent
United States	18	20.5	20.5	20.5
Cuba	67	76.1	76.1	96.6
Mexico	1	1.1	1.1	97.7
Other Country	2	2.3	2.3	100.0
Total	88	100.0	100.0	

Employment status of the non-Cuban Hispanic and non-Cuban Hispanic participants are displayed in Table 14 and Table 15. The non-Cuban Hispanic participants reported that 30.6% were homemakers, not currently working for pay, 27.8% were employed at a job full-time, for pay, 21.3% were employed at a job part-time, for pay, 12% were currently not employed, retired, and 8.3% were not currently employed, not retired. For the Cuban Hispanic participants, 37.5% were reportedly homemakers, not working for pay, 20.5% were employed part-time, working for pay, 19.3% were employed at a job full-time, for pay, 15.9% were not currently employed,

not retired, and 6.9% were employed at a job part-time, for pay. The total sample consisted of 196 participants with 88 Cuban Hispanic caregivers and 108 non-Cuban Hispanic caregivers, which is an adequate sample size for conducting SEM (Loehlin, 1992).

Table 14
Employment Status of Non-Cuban Hispanic Participants

	Frequency	Percent	Valid Percent	Cumulative Percent
employed at job for pay, full-time	30	27.8	27.8	27.8
employed at job for pay, part-time	23	21.3	21.3	49.1
homemaker, not currently working for pay	33	30.6	30.6	79.6
not currently employed, retired	13	12.0	12.0	91.7
not employed, not retired	9	8.3	8.3	100.0
Total	108	100.0	100.0	

Table 15
Employment Status of Cuban Hispanic Participants

	Frequency	Percent	Valid Percent	Cumulative Percent
employed at job for pay, full-time	17	19.3	19.3	19.3
employed at job for pay, part-time	6	6.8	6.8	26.1
homemaker, not currently working for pay	18	20.5	20.5	46.6
not currently employed, retired	33	37.5	37.5	84.1
not employed, not retired	14	15.9	15.9	100.0
Total	88	100.0	100.0	

Descriptive statistics for the central variables for the Hispanic group are presented in Table 16. The descriptive data indicates a low use of formal care services by the Hispanic group as shown by the fairly low, mean score on the Formal Care and Services measure (form) of 2. Scores on that various scales of the Scales of Care Recipient (CR) Health Status indicate that the care recipients in this study, on average, endorsed a high level of memory problems (crhs) and depressive symptoms (crhs3) as well as slightly elevated levels of disruptive behavior (crhs2). Scores on the Social Support Scale-Modified for the Hispanic group indicated that this group endorsed low levels of received support (socsup2). The groups mean scores also indicated moderately low levels of negative interactions (socup3) and moderately high levels of social networks (socsup) and satisfaction with support (socsup4). Scores on the Caregiver (CG) Psychological Distress scales indicate low endorsement of depressed affect (cgdep), which indicates the caregivers do not often experience feelings of loneliness or of feeling depressed, positive affect (cgdep2), which indicates the caregiver has low levels of experiencing feeling good and hopeful, and somatic complaints (cgdep3), which indicates the caregiver has less experiences of loss of appetite and talking less. In addition, the scores indicated moderately high levels of negative interpersonal relations (cgdep4), which indicates the caregivers may often feel that they are disliked by others or that others were unfriendly.

The mean scores on the Vigilance scale were slightly high on three items including the amount time the caregiver can leave the care recipient home alone (vigil), the amount of time the caregiver can leave the care recipient alone in a room (vigil2),

and the amount of hours the caregiver spends doing things for the care recipient (vigil4). The mean score for the amount of time the caregivers feels she is on duty is high, when compared to the items. These elevated mean scores indicate that the caregivers spend more time in providing direct care to the care recipients. They are less able to leave the care recipients for long periods of time.

Scores on the Religiosity scale indicate moderately high level of endorsement for attending prayer services (relig), how important religion is to the caregiver (relig2), and how often the caregiver prays (relig3). These mean scores indicate that religiosity is highly endorsed by the Hispanic group. Finally, mean scores on the Positive Aspects of Caring scale indicate moderately high levels of self-affirmation (appra), which indicates that caregivers experience feeling useful and needed. Outlook on life (appra2), which indicates the caregivers experience feelings of strengthened relationships and a more positive attitude, was moderately high as well.

Table 16
*Descriptive Statistics of Independent and Dependent Variables
for the Hispanic Group*

Scales	Minimum	Maximum	Mean	Std. Deviation
CR Health Status				
crhs	220.59	320.59	298.7510	18.63809
crhs2	312.55	422.55	371.1180	21.79155
crhs3	368.89	458.89	405.6221	22.99501
CG Social Support				
socsup	211.43	641.43	467.2976	73.94914
socsup2	418.71	738.71	551.2621	65.67693
socsup3	130.38	290.38	202.2138	34.57721
socsup4	105.94	275.94	210.5845	33.76199

Table 16 continued

Scales	Minimum	Maximum	Mean	Std. Deviation
Formal Care and Services form	-5.00	16.00	2.2959	2.74267
CG Psychological Distress cgdep	.00	15.00	5.1786	4.06659
cgdep2	-9.00	12.00	6.7143	3.67946
cgdep3	-1.00	23.00	8.2959	5.95403
cgdep4	.00	6.00	.9898	1.63296
Vigilance vigil	4.500	195.50	98.50000	43.112851
vigil2	9.00	196.00	98.50000	55.999405
vigil3	2.000	127.500	98.50000	45.758480
vigil4	1.000	191.000	98.50000	56.544967
Religiosity relig	1.000	195.500	98.50000	54.306703
relig2	1.000	120.500	98.50000	41.301487
relig3	1.000	113.000	98.50000	34.984355
Positive Aspects of Caring appra	6.000	30.00	23.9286	5.91608
appra2	-1.000	15.00	12.1531	3.65107

Analysis Pertaining to Structural Equation Modeling

The purpose of structural models is to determine potential differences in the pattern of regression structure among latent variables. Multigroup analysis allows the measurement and structural model of two different groups to be compared through a series of tests to determine whether a model is equivalent (invariant) across groups. Using a multigroup structural equation analysis, the two hypotheses of this study are addressed. Initially, to address the first hypothesis, structural equation modeling was used to determine whether caregiver psychological distress, caregiver severity of stressors, care recipients health status, caregiver coping strategies, caregiver social support, and caregiver's level of education influence the utilization of formal care

support services for the Hispanic group. In addition, to address the second hypothesis whether the Cuban Hispanic caregivers and non-Cuban Hispanic caregivers differ in measurement and structural model of the predictor variables was analyzed using multigroup modeling.

The latent construct Caregiver (CG) Psychological Distress has four subscales — Depressed Affect (cgdep), Positive Affect (cgdep2), Somatic Complaints (cgdep3), and Interpersonal Relations (cgdep4). The latent construct Severity of Caregiver Stressors was measured by four subscales — Time Alone in Home (vigil), Time Alone in Room (vigil2), Time on Duty (vigil3), Time Doing Things (vigil4). The latent construct Care Recipient (CR) Health Status was measured by three subscales — Memory Problems (crhs), Disruptive Behaviors (crhs2), and Depressive Symptoms (crhs3). The latent construct Caregiver Coping Strategy was measured by two measures consisting of five subscales — Often Attend Services (relig), Importance of Religion (relig2), Often Pray (relig3), Self-Affirmation (appra), and Outlook on Life (appra2). The latent construct of Caregiver (CG) Social Support was measured by four subscales — Social Network (socsup), Received Support, (socsup2), Negative Interactions (socsup3), and Satisfaction with Support (socsup4). Caregiver education is measured by only one scale and is therefore included in the model as a manifest variable (cgedu). In addition, Service Utilization is measure by one scale and is also listed as a manifest variable (form).

As hypothesized, in the baseline model there are predicted relationships between the six factors of Caregiver Coping Strategy, Caregiver Severity of Stressors, Caregiver Psychological Distress, Care Recipient Health Status, and Caregiver Social Supports and

the manifest variable Service Utilization (form). In addition, there is a predicted direct relationship between Level of Education (cgedu) and Service Utilization (form). There are no other predicted direct relationships hypothesized. Figure 1 displays the baseline theoretical model.

The model was evaluated using AMOS 6.0 (Arbuckle & Wothke, 1999).

Structural equation modeling allows researchers to gain knowledge about how observed variables and latent variables are related to one another (Byrne, 2001). To do this, the assumption of normality is applied to the data. The dataset was examined for violations to the assumptions of multivariate normality a priori (Byrne, 2001). Violations of the assumption of normality may inflate the Chi-square statistic (Byrne, 2001). Missing data were imputed using the NORM program (Schafer, 1997a). As indicated in Table 17, the skewness value for the Often Pray (relig3) subscale of the Religiosity scale is slightly elevated and the kurtosis value for the Formal Care and Services (form) scale and the Often Pray (relig3) subscale of the Religiosity scale are elevated indicating non-normality which may result in an elevated chi-square. Displayed in Table 17 is a more comprehensive assessment of normality characteristics for the combined Cuban Hispanic and non-Cuban Hispanic group which will be referred to as the Hispanic Group.

Table 17
Assessment of Normality for the Hispanic Group

Variable	min	max	skew	c.r.	kurtosis	c.r.
form	-5.000	16.000	.853	4.878	2.320	6.629
cgdep4	.000	6.000	1.660	9.488	1.785	5.102
cgdep3	-1.000	23.000	.499	2.849	-.653	-1.866

Table 17 continued

Variable	min	max	skew	c.r.	kurtosis	c.r.
cgdep2	-9.000	12.000	-.494	-2.822	.356	1.018
cgdep	.000	15.000	.539	3.082	-.583	-1.665
appra2	-1.000	15.000	-1.384	-7.908	1.272	3.634
vigil	4.500	195.500	-.124	-.706	1.081	3.090
vigil2	9.000	196.000	-.010	-.055	-1.155	-3.302
vigil4	1.000	191.000	.004	.025	-1.202	-3.435
vigil3	2.000	127.500	-1.021	-5.834	-.789	-2.255
appra	6.000	30.000	-.901	-5.151	.119	.341
relig3	1.000	113.000	-2.008	-11.476	2.082	5.949
relig2	1.000	120.500	-1.376	-7.866	-.011	-.032
cgedu	.000	17.000	-.688	-3.930	-.554	-1.583
crhs	-3.000	7.000	-.841	-4.809	.648	1.852
socsup	211.430	641.430	-.337	-1.927	-.145	-.413
socsup2	418.711	738.711	.274	1.564	-.404	-1.153
socsup4	105.942	275.942	-.193	-1.105	-.500	-1.429
socsup3	130.377	290.377	.653	3.730	-.147	-.420
relig	1.000	191.500	-.173	-.991	-1.306	-3.733
crhs3	.000	9.000	.294	1.679	-.816	-2.332
crhs2	-2.000	8.000	.430	2.458	-.580	-1.658
Multivariate					6.942	1.495

As goodness of fit measures, chi-square statistic, comparative fit index (CFI), root-mean-square error of approximation (RMSEA) and Tucker-Lewis Index (TLI) were included. A model that fits the data will have a non-significant Chi-Square statistic, CFI and TLI over .95, and a RMSEA less than .06 (Hu & Bentler, 1999). The baseline model tested in this study did not fit the data well, comparative fit index (CFI) = .729, root-mean-square error of approximation (RMSEA) = .076, Tucker-Lewis Index (TLI) = .694 (see Table 18). In addition, the chi-square statistic was significant; χ^2 (df = 205) = 438.616, $p = .000$.

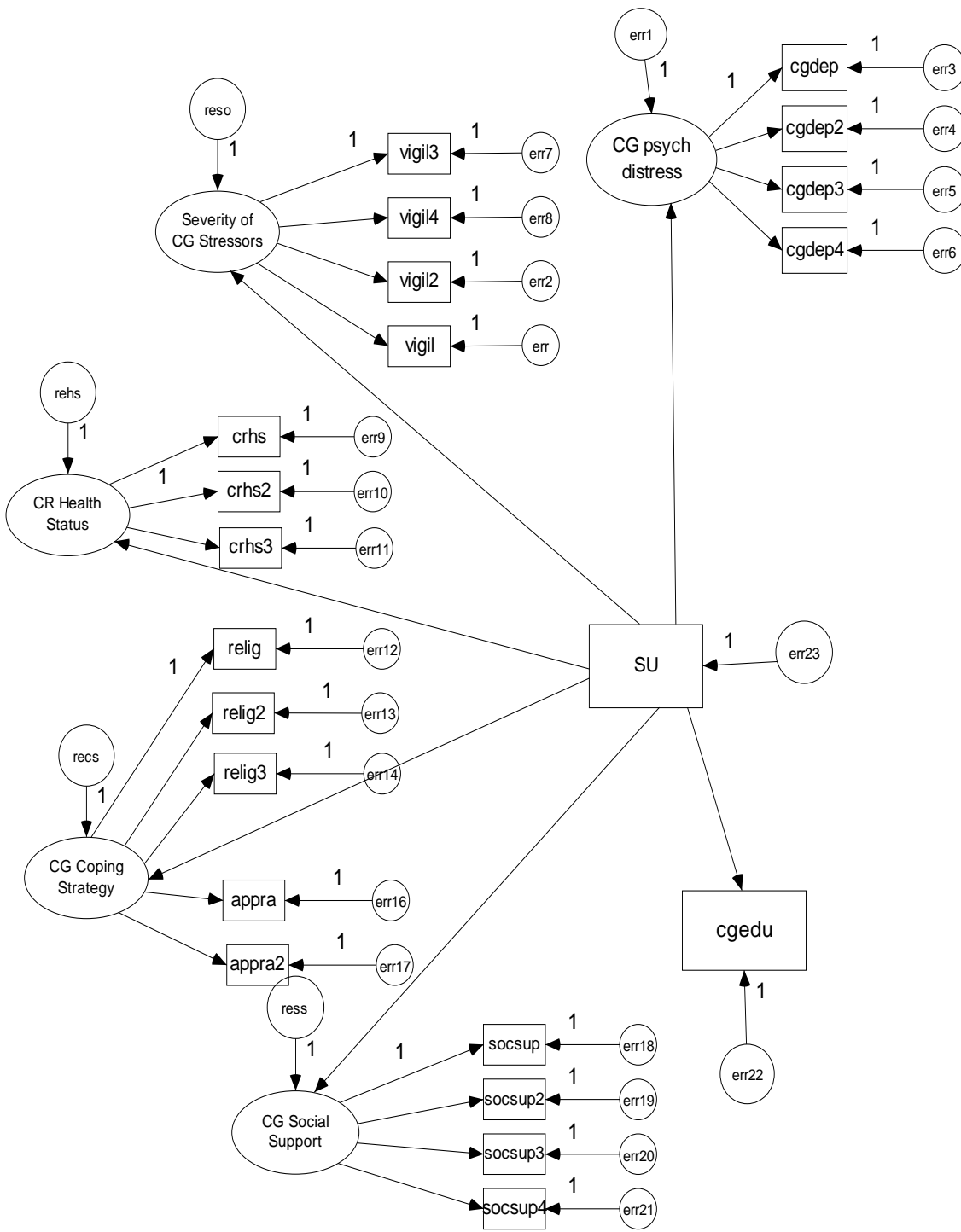


Figure 1: Input Baseline Path Model Hispanic Group

Table 18

Goodness of Fit Measures for Hispanic Baseline Model

Model	TLI rho2	CFI	RMSEA	LO 90	HI 90	PCLOSE
Default model	.694	.729	.076	.067	.086	.000

Modifying indices were used to when evaluating the Hispanic group baseline model to determine possible paths to be added in order to achieve better model fit. After considering whether it made theoretical sense to add certain covariance or regression paths, they were added to the model one at a time and the model was re-estimated each time. The added covariance estimates can be seen in Table 19.

Table 19

Covariance of Estimates for Hispanic Modified Model

			Estimate
err14	<-->	err2	-377.713
err21	<-->	err22	-26.400
err13	<-->	err14	678.788
err20	<-->	err21	-189.497
err20	<-->	err22	29.780
err21	<-->	err10	8.413
err2	<-->	err17	18.837
err22	<-->	err17	-1.078
err11	<-->	err21	-10.239
err11	<-->	err20	9.990
err17	<-->	err10	1.260
err7	<-->	err10	17.385
err20	<-->	err1	42.849
err11	<-->	err5	-1.181
err17	<-->	err4	2.432
err12	<-->	err5	-28.956
err13	<-->	err6	8.263

Table 19 continued

			Estimate
err18	<-->	err6	-20.526
err8	<-->	err17	-29.227

The resulting final modified model had good model fit. The chi-square statistic was not significant; χ^2 (df = 184) = 214.825, $p = .059$; comparative fit index (CFI) = .964, root-mean-square error of approximation (RMSEA) = .029, Tucker-Lewis Index (TLI) = .955 (see Table 20).

Table 20

Goodness of Fit Measures for Hispanic Modified Model

Model	TLI rho2	CFI	RMSEA	LO 90	HI 90	PCLOSE
Default model	.955	.964	.029	.000	.045	.990

In the final modified model for the Hispanic group, the path between caregiver level of education and service utilization (standardized regression weight = .250) was significant at the $p < .05$ level. The paths between caregiver psychological distress and service utilization (regression weight = .143, $p = .115$), caregiver severity of stressors and service utilization (regression weight = -.750, $p = .115$), care recipients health status and service utilization (regression weight = -.053, $p = .271$), caregivers coping strategy and service utilization (regression weight = -.384, $p = .220$), and caregivers social supports and service utilization (regression weight = 1.672, $p = .102$) are not significant. The results do not support the first hypothesis, indicating that the hypothesized theoretical

model is not a good measurement model for predicting influences on service utilization.

Standardized regression weights are shown in Table 21. Unstandardized regression

weights for the final model are shown in Figure 2.

Table 21

Standardized Regression Weights for Hispanic Modified Model

	Variables	Estimate
distress	<--- form	.143
health	<--- distress	.182
stressors	<--- form	-.750
health	<--- form	-.053
coping	<--- form	-.384
support	<--- form	1.672
socsup2	<--- support	1.660
vigil2	<--- stressors	-.585
vigil3	<--- stressors	1.000
vigil	<--- stressors	.001
crhs	<--- health	.369
crhs2	<--- health	1.000
socsup4	<--- support	.661
socsup	<--- support	1.000
socsup3	<--- support	.239
relig	<--- coping	1.000
relig2	<--- coping	.024
relig3	<--- coping	-.553
appr2	<--- coping	.496
appr	<--- coping	.617
vigil4	<--- stressors	1.370
crhs3	<--- health	.851
cgdep	<--- distress	1.000
cgdep2	<--- distress	-.363
cgdep3	<--- distress	1.484
cgdep4	<--- distress	.247
cgedu	<--- distress	-.279
cgedu	<--- form	.250

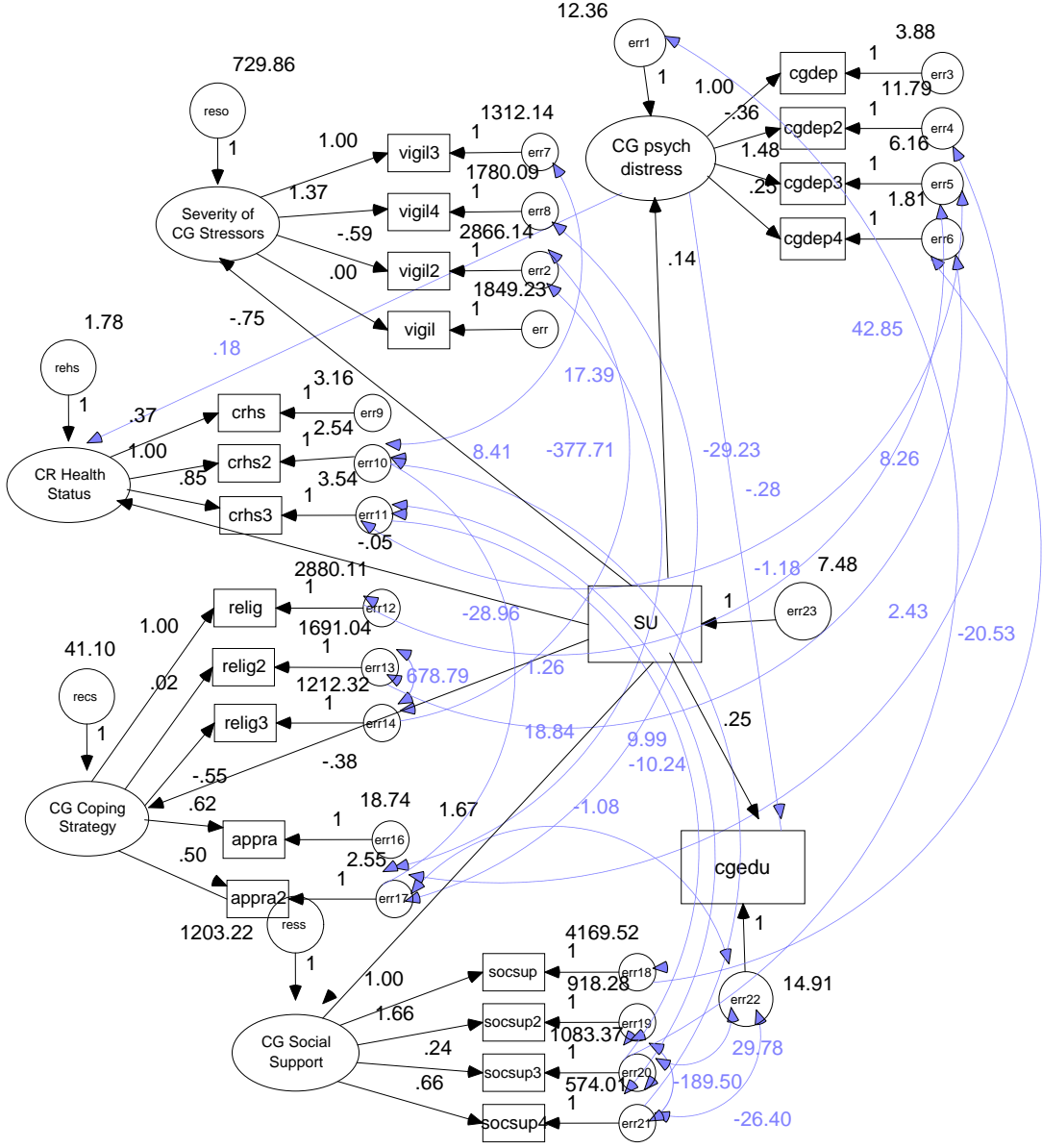


Figure 2: Path Model with Unstandardized Regression Weights and Variances for the Hispanic Modified Model. Note: Dark lines represent original path model; blue lines represent modified model

Analysis Pertaining to Multigroup Modeling

A multigroup model analysis was tested for the non-Cuban Hispanic and Cuban Hispanic participants to address the second hypothesis. Multigroup modeling allows for the testing of the same structure with two groups for measurement of invariance, which means the model is equivalent across groups (Byrne, 2001). The hypothesized baseline model examines the relationships between the endogenous latent variables and the exogenous variables. The confirmatory factor analysis structure is comprised of five endogenous factors: Caregiver Coping Strategy, Caregiver Psychological Distress, Caregiver Social Supports, Care Recipients Health Status, and Caregiver Severity of Stressors, and the manifest variable, Caregiver Level of Education. Each endogenous factor is measure by observed variables, which the reliability of are influenced by random measurement error (see Figure 3).

The latent construct Caregiver (CG) Psychological Distress has four subscales — Depressed Affect (cgdep), Positive Affect (cgdep2), Somatic Complaints (cgdep3), and Interpersonal Relations (cgdep4). The latent construct Severity of Caregiver Stressors was measured by four subscales — Time Alone in Home (vigil), Time Alone in Room (vigil2), Time on Duty (vigil3), Time Doing Things (vigil4). The latent construct Care Recipient (CR) Health Status was measured by three subscales — Memory Problems (crhs), Disruptive Behaviors (crhs2), and Depressive Symptoms (crhs3). The latent construct Caregiver Coping Strategy was measured by two measures consisting of three subscales and one global scale — Often Attend Services (relig), Importance of Religion (relig2), Often Pray (relig3), global score for Positive Aspects of Caregiving (appragl).

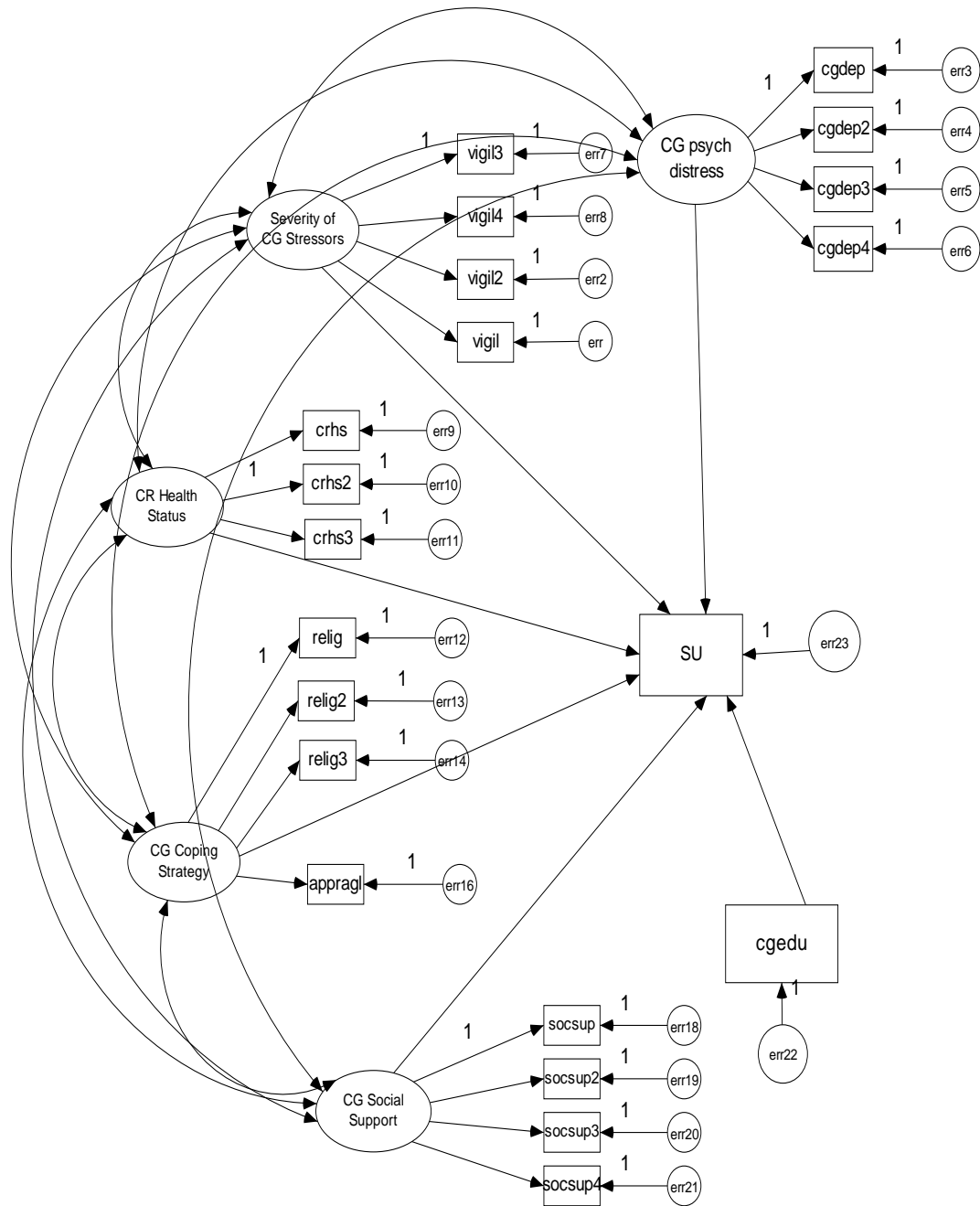


Figure 3: Input Baseline Multigroup Path Model

The latent construct of Caregiver (CG) Social Support was measured by four subscales — Social Network (socsup), Received Support, (socsup2), Negative Interactions (socsup3), and Satisfaction with Support (socsup4). Caregiver education is measured by only one scale and is therefore included in the model as a manifest variable (cgedu). In addition, all items are measured by Service Utilization (form), which is a global score the Formal Care and Services scale.

Initially, the two groups were tested separately to gain an overview of consistencies between the models. This does not test for significant differences in the parameters of the model for each group, but if consistencies between the models are found then multigroup modeling can occur (Byrne, 2000). This multigroup baseline model, when tested with the non-Cuban Hispanic participants, did not fit the data well, comparative fit index (CFI) = .816, root-mean-square error of approximation (RMSEA) = .067, Tucker-Lewis Index (TLI) = .779 (see Table 22). In addition, the chi-square statistic was significant; χ^2 (df=175) = 258.739, p = .000.

Table 22

Goodness of Fit Measures for Non-Cuban Baseline Model

Model	TLI rho2	CFI	RMSEA	LO 90	HI 90	PCLOSE
Default model	.779	.816	.067	.049	.084	.061

Modifying indices were used when re-evaluating the non-Cuban Hispanic participants' baseline model to determine possible paths to be added in order to achieve better model fit. After considering whether it made theoretical sensible to add a certain

covariance or regression paths, they were added to the model one at a time and the model was re-estimated each time. The added covariance estimates can be seen in Table 23.

Table 23
Covariance Estimates for Non-Cuban Modified Model

			Estimate
stressors	<-->	distress	15.755
health	<-->	distress	2.733
coping	<-->	distress	-11.570
support	<-->	distress	8.032
stressors	<-->	health	17.633
stressors	<-->	coping	129.207
support	<-->	stressors	13.676
health	<-->	coping	4.029
support	<-->	health	9.063
support	<-->	coping	44.767
err12	<-->	err2	569.199
err21	<-->	err22	-20.036
err16	<-->	err6	2.059
err14	<-->	err16	-67.029
err11	<-->	err21	-11.374
err8	<-->	err22	-43.174

The resulting final modified model had a good fit with the data. The chi-square statistic was not significant; χ^2 (df=166) = 181.866, $p = .059$; comparative fit index (CFI) = .965, root-mean-square error of approximation (RMSEA) = .030, Tucker-Lewis Index (TLI) = .956 (see Table 24).

Table 24

Goodness of Fit Measures Non-Cuban Modified Model

Model	TLI rho2	CFI	RMSEA	LO 90	HI 90	PCLOSE
Default model	.956	.965	.030	.000	.055	.901

In the final modified multigroup model for the non-Cuban Hispanic participants, parameter estimates between caregiver psychological distress and positive affect (cgdep2) (regression weight = -.476), somatic complaints (cgdep3) (regression weight = 1.150), and interpersonal relations (cgdep4) (regression weight = .269) and the additional paths for negative interactions (socup3) (regression weight = 4.726) and satisfaction with social support (socsup4) (regression weight = -2.522) were significant at the $p < .001$ level. The paths for psychological distress and service utilization (form) (standardized regression weight = .313) and the additional path for social networks (socsup) (regression weight = -4.761) were significant at the $p < .05$ level.

The path for care recipient health status and memory problems (crhs) (regression weight = .578) was significant at the $p = .001$ level and the path for depression (crhs3) (regression weight = 1.055) was significant at the $p < .05$ level. The parameter estimate for care recipient health status and service utilization (form) (regression weight = -.534, $p = .244$) was not significant. The parameter estimates for caregiver severity of stressors and time alone in room (vigil2) (regression weight = -.645), time doing things (vigil4) (regression weight = 1.066) and service utilization (form) (regression weight = -.003) were significant at the $p = .05$ level. The parameter estimate for caregiver severity of stressors and time home alone (vigil) (regression weight = .115) was not significant.

The parameter estimates for caregiver coping strategy and often pray (relig3) (standardized regression weight = 1.166) and importance of religion (relig2) (standardized regression weight = 2.186), were significant at the $p < .05$ level. The paths between caregivers coping strategy and service utilization (form) (regression weight = .019, $p = .486$) and the additional path for positive aspects of caregiving (appragl) (regression weight = .107) were not significant parameter estimates.

The paths for caregiver social supports and received support (socsup2) (regression weight = 1.953) and satisfaction with social support (socsup4) (regression weight = .624) are significant at the $p = .001$ level and for negative interactions (socsup3) (regression weight = .190) at the $p = .05$ level. The parameter estimate for caregiver social supports and service utilization (form) (regression weight = -.003, $p = .816$) is not significant. The parameter estimate for caregiver education and service utilization (form) (regression weight = .073, $p = .287$) is not significant. Standardized regression weights are shown in Table 25. Unstandardized regression weights for the final model are shown in Figure 4.

Table 25
Standardized Regression Weights for Non-Cuban Modified Model

	Variables	Estimate
socsup2	<--- support	1.953
vigil2	<--- stressors	-.645
vigil3	<--- stressors	1.000
vigil	<--- stressors	.115
crhs	<--- health	.578
crhs2	<--- health	1.000
socsup4	<--- support	.624

Table 25 continued

	Variables		Estimate
socsup	<---	support	1.000
socsup3	<---	support	.190
relig	<---	coping	1.000
relig2	<---	coping	2.186
relig3	<---	coping	1.166
appragl	<---	coping	.107
vigil4	<---	stressors	1.066
crhs3	<---	health	1.055
cgdep	<---	distress	1.000
cgdep2	<---	distress	-.476
cgdep3	<---	distress	1.510
cgdep4	<---	distress	.269
form	<---	health	-.534
form	<---	coping	.019
form	<---	stressors	-.003
form	<---	distress	.313
form	<---	support	.023
form	<---	cgedu	.073
socsup4	<---	distress	-2.522
socsup	<---	distress	-4.761
socsup3	<---	distress	4.726

The baseline multigroup model was then tested with the Cuban Hispanic participants. The model not fit the data well, comparative fit index (CFI) = .805, root-mean-square error of approximation (RMSEA) = .805, Tucker-Lewis Index (TLI) = .766 (see Table 26). In addition, the chi-square statistic was significant; χ^2 (df=175) = 237.102, $p = .001$.

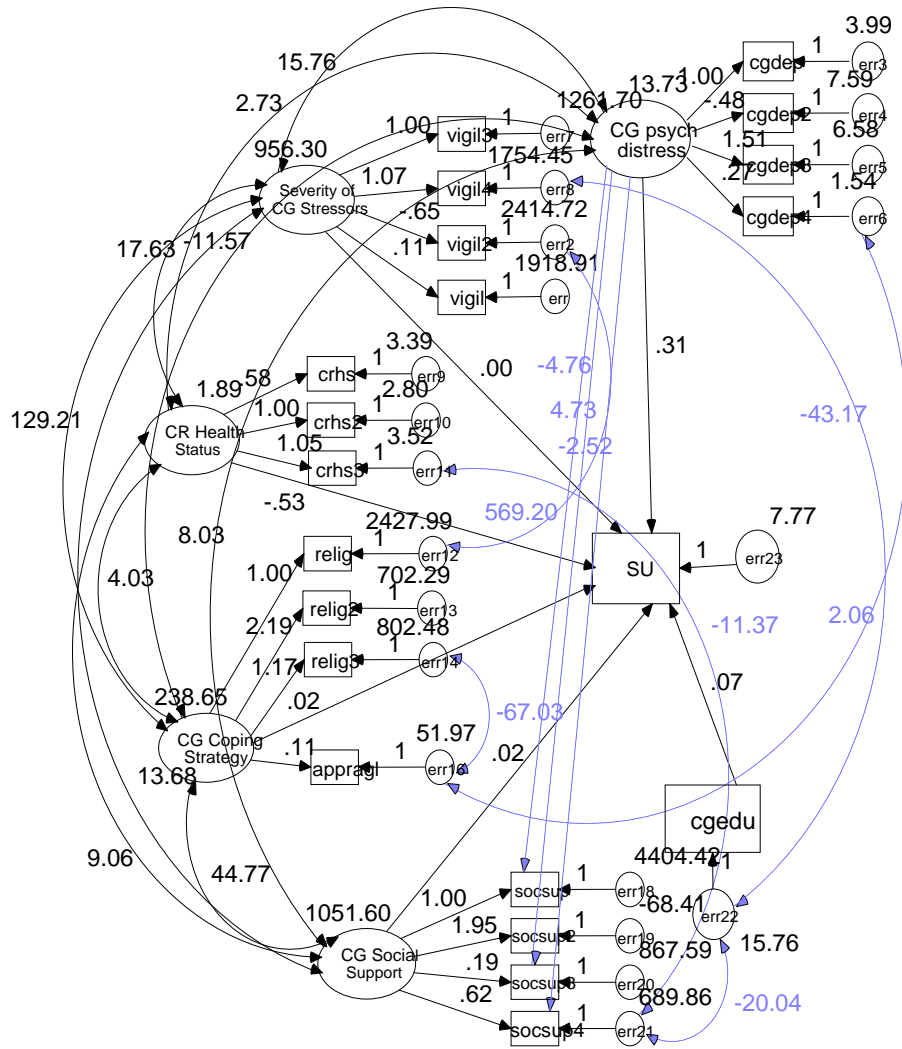


Figure 4: Path Model for Non-Cuban Hispanic Participants with Unstandardized Regression Weights and Variances. Note: Dark lines represent original path model; blue lines represent modified model

Table 26
Goodness of Fit Measures for Cuban Baseline Model

Model	TLI rho2	CFI	RMSEA	LO 90	HI 90	PCLOSE
Default model	.766	.805	.805	.041	.084	.142

Modifying indices were used to when re-evaluating the Cuban Hispanic participants' multigroup baseline model to determine possible paths to be added in order to achieve better model fit. After considering whether it made theoretical sense to add a certain covariance or regression paths, they were added to the model one at a time and the model was re-estimated each time. The added covariance estimates can be seen in Table 27.

Table 27
Covariance Estimates for Cuban Modified Model

			Estimate
stressors	<-->	distress	17.470
health	<-->	distress	14.024
coping	<-->	distress	.276
support	<-->	distress	-3.206
stressors	<-->	health	133.947
stressors	<-->	coping	1.532
support	<-->	stressors	-7.586
health	<-->	coping	-2.314
support	<-->	health	-5.375
support	<-->	coping	4.216
err20	<-->	err19	3.381
err11	<-->	err21	-13.329
err11	<-->	err7	-222.674
err14	<-->	err2	-460.913
err7	<-->	err4	-33.092

The resulting final modified model had a good fit with the data. The chi-square statistic was not significant; χ^2 (df=176) = 179.348, $p = .243$; comparative fit index (CFI) = .961, root-mean-square error of approximation (RMSEA) = .029, Tucker-Lewis Index (TLI) = .951 (see Table 28).

Table 28
Goodness of Fit Measures for Cuban Modified Model

Model	TLI rho2	CFI	RMSEA	LO 90	HI 90	PCLOSE
Default model	.951	.961	.029	.000	.058	.865

In the final modified multigroup model for the Cuban Hispanic participants, parameter estimates between caregiver psychological distress and somatic complaints (cgdep3) (regression weight = 1.449), interpersonal relations (cgdep4) (regression weight = .228), and the additional paths for received support (socsup2) (regression weight = .568) were significant at the $p = .001$ level. Paths for caregiver psychological distress and education level (regression weight = -.304) and for negative interactions (socsup3) (regression weight = -.278) were significant at the $p < .05$ level. Parameter estimates between caregiver psychological distress and positive affect (cgdep2) (regression weight = -.224, $p = .054$) and for service utilization (form) (regression weight = .001, $p = .892$) were not significant parameter estimates.

In the final modified multigroup model for the Cuban Hispanic participants, parameter estimates between caregiver psychological distress and somatic complaints (cgdep3) (regression weight = 1.449), interpersonal relations (cgdep4) (regression

weight = .228), and the additional paths for received support (socsup2) (regression weight = .568) were significant at the $p = .001$ level. Paths for caregiver psychological distress and education level (regression weight = -.304) and for negative interactions (socsup3) (regression weight = -.278) were significant at the $p < .05$ level. Parameter estimates between caregiver psychological distress and positive affect (cgdep2) (regression weight = -.224, $p = .054$) and for service utilization (form) (regression weight = .001, $p = .892$) were not significant parameter estimates.

The path for care recipient health status and memory problems (crhs) (regression weight = .100, $p = .388$), depression (crhs3) (regression weight = .205, $p = .356$), and service utilization (form) (regression weight = -.007, $p = .470$) were not significant parameter estimates. Caregiver severity of stressors parameter estimates for time alone in room (vigil2) (regression weight = -.694) and time doing things (vigil4) (regression weight = 1.525) were significant at the $p = .05$ level. The paths for caregiver severity of stressors and time alone in home (regression weight = -.368, $p = .119$) and service utilization (form) (regression weight = -.002, $p = .896$) were not significant. The parameter estimates for caregiver coping strategy and importance of religion (relig2) (regression weight = 5.905, $p = .415$), often pray (relig3) (standardized regression weight = 3.873, $p = .388$) positive aspects of caregiving (appragl) (standardized regression weight = -.300, $p = .449$), and service utilization (form) (regression weight = -.017, $p = .737$) were all non-significant parameter estimates.

The paths for caregiver social supports and received support (socsup2) (regression weight = 1.238) and satisfaction with social support (socsup4) (regression

weight = .623) are significant at the $p = .001$ level. The parameter estimates for caregiver social supports and negative interactions (socsup3) (regression weight = $-.039$, $p = .633$) and service utilization (form) (regression weight = $.051$, $p = .405$) were not significant. The parameter estimate for caregiver education and service utilization (form) (regression weight = $.178$) was significant at the $p < .05$. Standardized regression weights are shown in Table 29. Unstandardized regression weights for the final model are shown in Figure 5.

Table 29
Standardized Regression Weights for Cuban Modified Model

Variables			Estimate
cgedu	<---	distress	-.304
socsup2	<---	support	1.238
vigil2	<---	stressors	-.694
vigil3	<---	stressors	1.000
vigil	<---	stressors	-.368
crhs2	<---	health	1.000
socsup4	<---	support	.623
socsup	<---	support	1.000
socsup3	<---	support	-.039
relig	<---	coping	1.000
relig2	<---	coping	5.905
relig3	<---	coping	3.873
appragl	<---	coping	-.300
vigil4	<---	stressors	1.525
crhs3	<---	health	.205
cgdep	<---	distress	1.000
cgdep2	<---	distress	-.224
cgdep3	<---	distress	1.449
cgdep4	<---	distress	.228
form	<---	coping	-.017
form	<---	stressors	-.002

Table 29 continued

Variables			Estimate
form	<---	distress	.011
form	<---	support	.051
form	<---	cgedu	.178
crhs	<---	health	.110
form	<---	health	-.007
socsup2	<---	distress	.568
socsup3	<---	distress	.278

The next step in testing for equivalencies across groups is to test the different sets of parameters in a logically ordered and increasingly restrictive manner (Byrne, 2001). Overall, the modified fit of both the models was χ^2 (df=167) = 179.348 for the Cuban Hispanic participants and χ^2 (df=166) = 181.866 for the non-Cuban Hispanic participants. After obtaining the information regarding the two models with goodness of fit indexes that fit the data well separately, the models were run simultaneously to obtain a summed chi-square statistic. This chi-square statistic is equal to the summation of the chi-square statistic of the two models run separately, χ^2 (df=333) is 361.214. This serves as a baseline model for testing invariance and reflects the extent to which the structure fits the data without any cross-group constraints (Byrne, 2001).

Since only one model can be run at a time, the Cuban Hispanic model was chosen as the baseline model due to its smaller sample size. The models were then specified so that additional cross-loadings and additional error variances from the Cuban Hispanic model were assigned a regression weight of zero for the non-Cuban Hispanic Model. The model is then re-run with structural paths constrained equal.

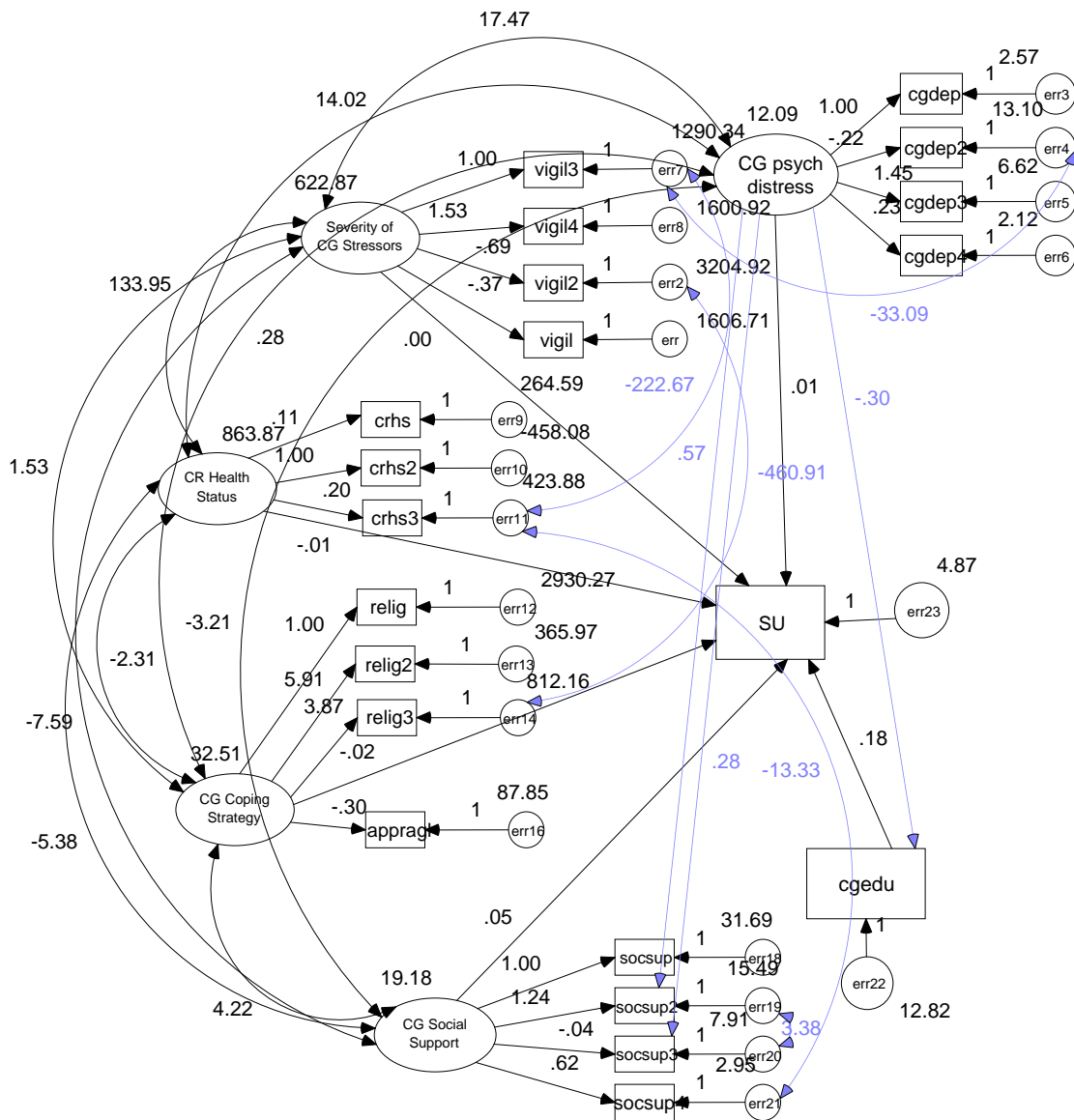


Figure 5: Path Model for Cuban Hispanic Participants with Unstandardized Regression Weights and Variances. Note: Dark lines represent original path model; blue lines represent modified model

As previously mentioned, testing for invariance with multigroup modeling involves a series of tests of the parameter estimates, error variances, and covariance for the measurement and the structural model. The first is to run the model with factor variances, error variances and loadings equally constrained across the groups, Model 1. This test was performed using the model in Figure 6. The resulting chi-square statistic is the key statistic because it is used to determine if the proposed model is equivalent across groups. For the fully constrained model, the χ^2 (df=371) is 489.006, $p = .006$. The χ^2 difference between the fully constrained model and the baseline model (χ^2 (df=333) = 361.214) is 127.792 with a difference in degrees of freedom of 38. It is statistically significant therefore; the next step of the process is to locate the nonequivalent parameters in the model.

The next logical step in the process is to test the pattern of factor loadings, which are referred to as Model 2. This is considered testing for invariance in the measurement model. This involves constraining only one factor and its loading at a time while allowing the remaining parameters, error variances, and covariances to be freely estimated. The factor loadings were tested and found the measurement model to be non-invariant. The next step, in Model 3, is to test for invariance in structural model. The parameter estimate for caregiver level of education (cgedu) and service utilization (form) was constrained while all other parameters, variances, and covariances remained unconstrained. The resulting χ^2 (df=335) is 389.529, $p = .021$. The χ^2 difference between the parameter constrained model and the baseline model (χ^2 (df=333) = 361.214) is 28.315 with a difference in degrees of freedom of 2. This chi-square statistic

is statistically significant. Next, the error variances for error 21 and error 11 were constrained and the remaining paths, variances, and covariances were unconstrained. The resulting χ^2 (df=335) is 388.473, $p = .023$. The χ^2 difference between the parameter constrained model and the baseline model (χ^2 (df=333) = 361.214) is 27.259 with a difference in degrees of freedom of 2. This chi-square statistic is statistically significant, therefore, this parameter is considered to be non-invariant across the groups. The remaining tests involve a series of tests for invariance of the covariances. Each covariance is systematically constrained and tested, then compared to the baseline model.

The results of the tests for the covariances showed that they were non-invariant. The steps for the tests of invariance and the resulting chi-square statistics are displayed in Table 30. The final results of the tests for invariance are that the parameters, variances, and covariances in the measurement and structural model are determined to be not equal across the groups. These findings support the second hypothesis in that there are differences across in groups in the parameters, variances, and covariances in the model tested.

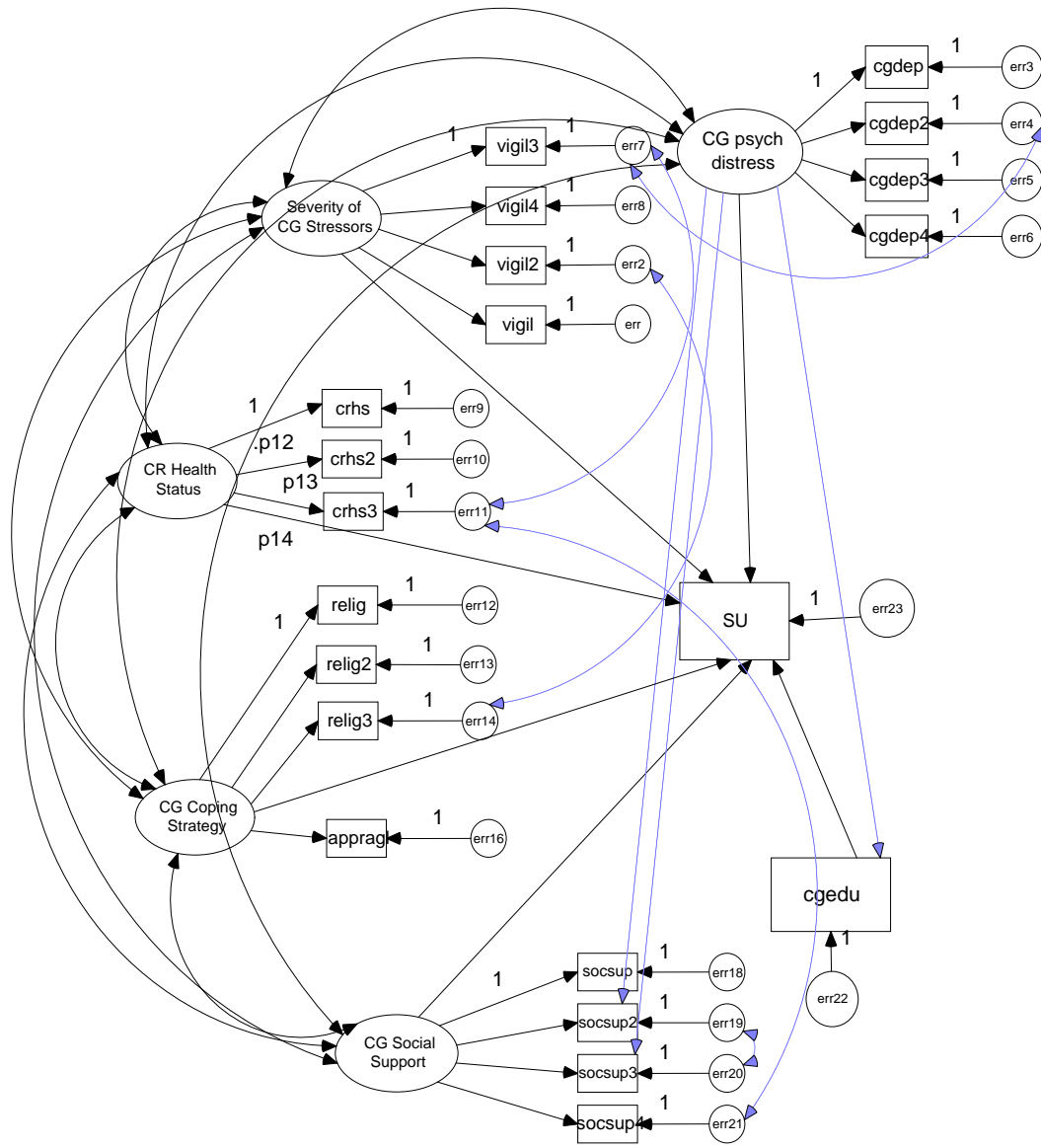


Figure 6: Testing for Invariance with Parameters of CR Health Status Constrained

Table 30

Goodness of Fit Statistics for Test of Invariance Across Cuban and Non-Cuban Hispanic Participants: Summary

Model Description	χ^2	df	$\Delta\chi^2$	Δdf	Statistical Significance
1. Combined baseline models (Cuban and non-Cuban Hispanics)	361.214	333	—	—	—
2. Factor loadings, variances, and covariances constrained equal	489.006	471	127.7792	138	.002
3. Model 2 with all factor loadings constrained equal	454.491	357	93.277	24	.000
4. Model 2 with parameters of CG psychological distress constrained	430.390	340	69.176	7	.000
5. Model 2 with parameter of item 2 on CG psychological distress constrained	391.465	335	30.251	2	.018
6. Model 2 with parameter of item 3 on CG psychological distress constrained	388.384	335	27.17	2	.023
7. Model 2 with parameter of item 4 on CG psychological distress constrained	388.851	335	27.637	2	.023
8. Model 2 with parameter of item 5 on CG psychological distress constrained	393.966	335	32.752	2	.015
9. Model 2 with parameter of item 27 on CG psychological distress constrained	403.793	335	42.579	2	.006

Table 30 continued

Model Description	χ^2	df	$\Delta\chi^2$	Δdf	Statistical Significance
10. Model 2 with parameter of item 28 on CG psychological distress constrained	398.418	335	37.204	2	.010
11. Model 2 with parameters of CG severity of stressors constrained.	468.788	338	107.574	5	.023
12. Model 2 with parameter item 7 of CG severity of stressors constrained.	388.545	335	27.331	2	.023
13. Model 2 with parameter of item 8 on CG severity of stressors constrained.	388.364	335	27.15	2	.023
14. Model 2 with parameter of item 9 on CG severity of stressors constrained.	388.320	335	27.106	2	.022
15. Model 2 with parameter of item 10 on CG severity of stressors constrained.	391.067	335	29.853	2	.019
16. Model 2 with parameters of CR health status constrained.	389.239	336	28.025	3	.024
17. Model 2 with parameter of item 12 of CR health status constrained.	338.320	334	22.894	1	.022
18. Model 2 with parameter of item 13 of CR health status constrained.	388.323	335	27.109	2	.024

Table 30 continued

Model Description	χ^2	df	$\Delta\chi^2$	Δdf	Statistical Significance
19. Model 2 with parameter of item 14 of CR health status constrained.	1017.714	344	656.50	10	.000
20. Model 2 with parameters of CG coping strategy	392.202	338	30.988	5	.022
21. Model 2 with parameter of item 16 of CG coping strategy constrained.	388.419	335	27.205	2	.023
22. Model 2 with parameter of item 17 of CG coping strategy constrained.	389.849	335	28.635	2	.021
23. Model 2 with parameter of item 18 of CG coping strategy constrained.	391.101	336	29.887	3	.020
24. Model 2 with parameter of item 19 of CG coping strategy constrained.	390.583	335	29.369	2	.019
25. Model 2 with parameters of CG social supports	392.702	338	31.488	5	.021
27. Model 2 with parameter of item 20 of CG social supports	388.487	335	27.273	2	.023
28. Model 2 with parameter of item 22 of CG social supports	390.912	335	29.698	2	.019

Table 30 continued

Model Description	χ^2	df	$\Delta\chi^2$	Δdf	Statistical Significance
29. Model 2 with parameter of item 23 of CG social supports	389.393	335	28.179	2	.022
30. Model 2 with parameter of item 24 of CG social supports	388.323	335	27.109	2	.024
31. Model 3 with parameter from cgedu to form constrained	389.529	335	28.315	2	.021
32. Model 3 with variance error for item 21 and item 11 constrained	388.473	335	27.259	2	.023
33. Model 3 with all covariances constrained	394.473	344	33.259	10	.032
34. Model 3 with covariances between CG social supports and CG psychological distress constrained	394.599	335	33.385	2	.014
35. Model 3 with covariances between CG social supports and CG psychological distress constrained	388.321	335	27.107	2	.024
36. Model 3 with covariances between CR health status and CG psychological distress constrained	388.358	335	27.144	2	.024

Table 30 continued

Model Description	χ^2	df	$\Delta\chi^2$	Δdf	Statistical Significance
37. Model 3 with covariances between CR health status and CG severity of stressors constrained	389.473	335	28.259	2	.023
38. Model 3 with covariances between CG coping strategy and CG psychological distress constrained	388.603	335	27.389	2	.021
39. Model 3 with covariances between CG coping strategy and CR health status constrained	388.320	335	27.106	2	.023
40. Model 3 with covariances between CG social supports and CR health status constrained.	394.379	335	33.165	2	.022
41. Model 3 with covariances between CG coping strategy and CG social support constrained	452.227	357	91.013	24	.000
42. Model 3 with covariances between CG social support and CG severity of stressors constrained	388.384	335	27.17	2	.023
43. Model 3 with covariances between CG social support and CG coping strategy constrained	388.473	335	27.259	2	.023

CHAPTER IV

CONCLUSIONS AND DISCUSSION

This chapter will focus on the results of the analysis of each of the three hypotheses of this study. Generalizability and limitations of this research will be addressed, as will treatment implications and suggestions for future research.

Restatement of Hypothesis One

The first hypothesis stated that the utilization of formal support services by Hispanic caregivers can be predicted by the severity of the caregiving stressors, the care recipient's health status, caregiver coping strategies, caregiver social support, caregiver psychological distress, and educational level for the caregiver. The results of this study did not support this hypothesis. The model was determined to not be a good measurement model for predicting utilization of services. Additionally, only one of the six factors, level of education, was found to be positively correlated with formal service use. This factor has been reviewed in the literature; however, it has not been empirically supported in the research (Gallagher-Thompson et al., 1997; Radina & Barber, 2004; Starrett, Decker, Walters, & Rogers, 1990). This finding adds to the current literature on service utilization for Hispanic caregivers. The level of education for caregivers was found to be positively correlated with formal service use.

The greater the level of the education the caregiver reported the more formal support services they utilized. There are several reasons this result occurred with the Hispanic caregivers. One may be that the more education a caregiver has, the more knowledgeable she may be about the progression of the disease and the impact it will

have the elderly family members cognitive and physical functioning. In addition, the caregiver's level of education may often be overlooked because it may not accurately reflect the socioeconomic status of the caregiver. Many caregivers are homemakers because they have had to leave their employment to care for their family member. These caregivers may be more cognizant of the effect long-term caregiving may have on their own mental and physical health; therefore, may be more proactive in seeking formal support services to alleviate the stress of daily caregiving such as ordering meals, seeking transportation, or regularly attending medical appointments. Finally, the higher education caregivers may have larger social networks and more possibilities of getting assistance with seeking services. The lower educated Hispanic caregivers may have less access to services or be unwilling to accept services due to limited understanding of the disease and its impact on the care recipient and caregiver's health long-term.

The baseline model developed for the Hispanic caregivers for predicting factors that influence service utilization did not fit the data well. Although the modified model had adequate fit for the data, there were a significant number of variables with large error variances (e.g., relig, socsup, socsup2). These large error variances and covariances seemed to be necessary for achieving goodness of fit for the models. This suggests that the model is not a good measurement model, due to the large additional correlations among the independent components, and that another model would better fit the data. It is outside the scope of this study to determine what model for predicting service utilization would better fit the data.

Restatement of Hypothesis Two

The second hypothesis of this study stated that the predictors specified in hypothesis one are factors on which Cuban Hispanic caregivers will differ from non-Cuban Hispanic caregivers. Results support this hypothesis that the Cuban Hispanic and non-Cuban Hispanic caregivers were not equivalent across the set of variables in the model designed based on the first hypothesis. Separate analyses were initially tested for each ethnic based on the structural model. Comparing the differences in the results of these models is not an accurate test of determining invariance between the groups (Byrne, 2001).

There are several factors regarding the sociodemographic data of the caregivers that may account for the non-invariance between the Cuban Hispanic caregivers and the non-Cuban Hispanic caregivers. The non-Cuban Hispanic caregivers were found to be younger, less likely to be married, and less educated. These findings similar to results found in previous ethnic minority caregiver research (Calderon-Rosado, Morrill, Chang, & Tennstedt, 2002; Gallagher-Thompson et al., 2003; Navaie-Waliser et al., 2001; Neary & Mahoney, 2005). The Cuban Hispanic caregivers were more likely to be married, have increased religious beliefs and spirituality, be more educated, and have completed their last year of education outside of the United States. While there is limited literature regarding the Cuban Hispanic population and service use, the current research does not support the findings of the study by Henderson (1996), which found that beliefs in the church and religion were of only minor importance in this population.

Another factor on which both groups differed was that the majority of non-Cuban Hispanic caregivers were daughters of the care recipient, while the majority of the Cuban Hispanic caregivers were spouses. These findings are similar to those found in other research studies of Hispanic caregivers that found that caregivers were more likely to be a spouse or a daughter (Aranda & Knight, 1997; Covinsky et al., 2003; Sörensen & Pinquart, 2005).

An equally important conclusion was found when the results of the multigroup model were fit to the original models. With the non-Cuban Hispanic caregivers, the factors of psychological distress and care recipient's health were significant predictors of service utilization. These same factors were not significant for the Cuban Hispanic caregivers. Therefore, the greater psychological distress and the more impairment the elderly family member is experiencing for non-Cuban Hispanic caregivers leads to a decrease in the amount of formal support services utilized. This may not be an issue for the Cuban Hispanic caregivers because they may understand the disease

It is interesting to note that of the Cuban Hispanic participants a significantly larger percentage had obtained a college education or higher when compared to the non-Cuban Hispanic participants. As previously mentioned, a significant proportion of the Cuban Hispanic caregivers had an education level of college or higher. This is contrary to much of the literature which reports that Hispanic caregivers have lower education levels than Caucasian and African American caregivers (Coon, et al., 2004; Cox & Monk, 1990; Gallagher-Thompson, Talamantes, Ramirez, & Valverde, 1996; Neary & Mahoney, 2005). As a result, it is determined that education level may be a

confounding factor in service utilization. The level of education the caregiver has obtained may influence the interpretation of their elder's health and level of need as well as how they understand the disease and its impact on both the caregiver and care recipient.

The results found in this study may be influenced by several factors including sociodemographic differences in the groups, site differences, and the confounding factor of level of education. Nonetheless, there are important findings resulting from this study that should be accounted for in the development of services for the ethnic minority caregivers.

Treatment Implications

Though this study was unable to develop a model for predicting service utilization, the findings of non-invariance between the groups has important implications for treatment. Homogenous interventions may not be able to meet the needs of this diverse population. It will be important for interventions and services developed for Hispanic populations to include education about Alzheimer's disease symptoms, progression of the disease, and services available to meet the caregiver and care recipient needs throughout the duration of the caregiving experience. The positive correlation found in this study between level of education and use of formal support services, as well as previous literature in this area, emphasizes that increasing a caregivers knowledge about the disease and working to enhance the caregiver's perceptions in order decrease the social stigma learned from the culture need to be accounted for in

treatment services (Coon, et al., 2004; Cox & Monk, 1990; Gallagher-Thompson, et al. 1996; Neary & Mahoney, 2005).

Though many Hispanic caregivers may feel a filial obligation and positive feelings of being a caregiver, treatment services should include information about caregiver burnout and the benefits of supplementing their caregiving with formal support services. Based on the results of this study, it is important for treatment providers to assist caregivers to increase awareness of opportunities for service utilization. It is also important to understand that ideology, values, and beliefs that are supported and found to be important for the Hispanic culture should be utilized with caution when working with a particular ethnic group such as Mexican American or Cuban. Service providers should work to understand the worldview and the perspective of caregiving that may vary between the different ethnic groups that fall under the Hispanic umbrella.

For Counseling Psychologists working with families and caregivers, it will be important to be knowledgeable about resources available and the progression of the disease; however, this should merely be a starting point in treatment. It will be important to understand the different roles the caregiver may have such as wife, mother, sister, and employee. These roles add additional stress to the caregiving experience. In addition, working with the caregiver to understand the impact and experience of caring for an elder family member with Alzheimer's disease and related disorders should also be emphasized. Often the caregiver has experienced a close interpersonal relationship with their care recipient and the progression of the disease will be a difficult transition for the caregiver to witness over time. Another factor that will be important to process in the

therapeutic environment is the difficulty experienced by the caregiver to simply attend services for him or herself. It is important for the psychologist to be mindful the difficulty of seeking services for all home-based caregivers, particularly lower educated Hispanic caregivers.

Limitations of the Study

The generalizability of the study is limited due to several factors related to the original study. The caregivers that participated in the REACH study were volunteers who were interested and able to be involved in an intervention treatment. Therefore, this group may not be representative of caregivers that may be experiencing a greater need yet do not have the time or assistance to participate in a longitudinal research project. There may also have been selective biases due to the project sampling large numbers of caregivers of color. While the small sample size ($n = 88$) of the Cuban American population was homogeneous, the non-Cuban Hispanic caregivers was a more heterogeneous group made of primarily Mexican Americans as well as Puerto Ricans, Dominicans, and several other Latin ethnicities. Another limitation is that the level of acculturation of the Hispanic caregivers was not examined during this study. The heterogeneity of one of the groups and the lack of an acculturation may have contributed to some of the differences between the groups.

An additional limitation is that the participants are from site differences related to the recruitment of primarily Cuban Hispanic participants Miami, Florida and primarily Mexican American as well as other ethnic group participants from Palo Alto, California. Though the sites had similar recruitment procedures and inclusion/exclusion criteria, the

differences for the ethnic minority caregivers and care recipients existed in several areas. The main differences in the two primary ethnic groups of Cuban and Mexican participants are immigration patterns, sociodemographic status, and area resources, in addition to the varying physical health the care recipients. An example of differences in immigration are that the Cuban participants often came to the United States fleeing from political oppression, while the Mexican participants come to the United States searching from a life of poverty in search of a better life. Issues concerning sociodemographic status include the differences mentioned discussed including education level, age, and marital status. The factor involving area resources pertains to the number of resources that may be available in the area as well as how accessible they are the caregivers and care recipients. Another aspect of this factor is how acceptable the particular services are to these particular ethnic groups. A Cuban or Mexican caregiver may not attend a group therapy service due to unwillingness to share personal family matters with a group of strangers.

A final limitation was that several measures in the study were developed specifically for use with the REACH project and are still in the process of gaining psychometric evidence to support their use with diverse populations. Further research regarding these measures is highly encouraged in an effort to develop better measures to capture diverse experiences in caregiving. Regarding these measures, some such as the Vigilance scale, were found to have low reliability with these ethnic groups. Though the measures were translated and back translated for use with Spanish speaking participants,

there may still be difficulties with the cultural equivalences of the constructs and how they are perceived in a different language for many of the measures.

Future Research

The model for predictor service utilization hypothesized in this study did not fit the data for this caregiver group. While the modified model was determined to have adequate fit, the larger error variances and additional regression paths and covariances indicates that there may be other factors, not included in the original model, that influence service utilization for this caregiver group. Further research is needed to find a better model that would more accurately predict service utilization patterns for diverse groups of Hispanic caregivers of family members with Alzheimer's disease and related disorders in order to enhance the caregiving experience and the quality of life for the care recipient.

A next step in the research process with this data would be to look at education level as a confounding variable for care recipient's health status and caregiver psychological distress with regard to service utilization to determine which factor is most influential for Mexican American caregivers. Another option would be to generate a propensity score on which to match different ethnic groups on all the variables except service utilization.

In addition, the result that the groups were found to be non-equivalent across the set of variables examined in the study indicates a possible need for focus group and qualitative research, as well as quantitative research, as a basis for learning about the unique variances that exist within the Hispanic population. Further examination of the

pathways in which ethnicity, race and culture influence the caregiving experience and types of formal supports services that would benefit the Hispanic caregivers and care recipients.

Finally, there is an additional need to examine the impact of level of education on utilization of services and knowledge of Alzheimer's disease and related disorders. Determining the importance of these factors and their impact on the caregiving experience may help with tailoring services for this ethnic minority groups. With the population of Hispanics predicted to be the largest ethnic minority group of elderly over the age of 65 by the year 2028, the importance of learning about and understanding the culture, values, and beliefs of this ethnic minority group will only continue to grow in importance in order to develop adequate services to meet the diverse needs of this population.

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APPENDIX A
INSTRUMENTATION

SCREENING QUESTIONNAIRE

INTRODUCTION

See site specific script.

CAREGIVER

1. *Sex of the caregiver.*

Male 1 ()

Female 2 ()

2. **Do you take care of any other adult in addition to (CR)?**

No 0 ()

Yes 1 ()

Unknown -3 ()

Refused -4 ()

2.1 **Does he/she have memory problems?**

No 0 ()

Yes 1 ()

Unknown -3 ()

Refused -4 ()

2.2 **Does he/she live with you?**

No 0 ()

Yes 1 ()

Unknown -3 ()

Refused -4 ()

2.3 **Which person requires more time?**

CR 1 ()

Other 2 ()

3. **What is the sex of (CR)?**

Male 1 ()

Female 2 ()

4. **What is your date of birth? //**

month day year

5. **What is the date of birth for (CR)?: //**

month day year

6. Are you related to (CR)?

<i>No</i>	0 ()
<i>Yes</i>	1 ()
<i>Unknown</i>	-3 ()
<i>Refused</i>	-4 ()

6.1 What is your relationship to (CR)?

<i>Husband</i>	1 ()
<i>Wife</i>	2 ()
<i>Son</i>	3 ()
<i>Daughter</i>	4 ()
<i>Son-in-Law</i>	5 ()
<i>Daughter-in-Law</i>	6 ()
<i>Brother</i>	7 ()
<i>Sister</i>	8 ()
<i>Nephew</i>	9 ()
<i>Niece</i>	10 ()
<i>Grandson</i>	11 ()
<i>Granddaughter</i>	12 ()
<i>Stepson</i>	13 ()
<i>Stepdaughter</i>	14 ()
<i>Other</i>	15 ()

6.1.1 Specify: _____

<i>Unknown</i>	-3 ()
<i>Refused</i>	-4 ()

7. Does (CR) live with you? We consider living together as sharing cooking facilities.

<i>No</i>	0 ()
<i>Yes</i>	1 ()
<i>Unknown</i>	-3 ()
<i>Refused</i>	-4 ()

8. Have you been told by a doctor or have you noticed that (CR) has a memory problem?

<i>No</i>	0 ()
<i>Yes</i>	1 ()
<i>Unknown</i>	-3 ()
<i>Refused</i>	-4 ()

9. How many years have you taken care of (CR)? years
Exclude if less than 6 months.

10. So you've been a caregiver since (year)

No 0 ()
 Yes 1 ()
 Unknown -3 ()
 Refused -4 ()

11. Is (CR) on a waiting list for a nursing home or other live-in institution?

No 0 ()
 Yes 1 ()
 Unknown -3 ()
 Refused -4 ()

11.1 When are you planning to actually place (CR) into the institution?

If on a waiting list as a form of "insurance" planning and not planning to imminently place, caregiver is eligible. If the plan is to place (CR) within six months or when there is a bed available, the caregiver is excluded.

12. Is the caregiver excluded due to imminent placement into nursing home or other live-in institution?

No 0 ()
 Yes 1 ()

13. On a typical day, how many hours do you spend directly caring for or supervising (CR)?

hours

Exclude if less than 4 hours.

14. Are you currently in a study to help you take care of (CR)?

No 0 ()
 Yes 1 ()
 Unknown -3 ()
 Refused -4 ()

15.1 Is this a study to assist you with your physical or mental health?

No 0 ()
 Yes 1 ()
 Unknown -3 ()
 Refused -4 ()

16. Can you be reached at this phone number if I needed to contact you?

No 0 ()
 Yes 1 ()

Unknown -3 ()
Refused -4 ()

16.1 Is there a phone number where I can reach you?

No 0 ()
Yes 1 ()
Unknown -3 ()
Refused -4 ()

17. Are you planning to move away from the area where you live in the next year and a half?

No 0 ()
Yes 1 ()
Unknown -3 ()
Refused -4 ()

I am going to ask you about your health. These are questions that I ask everyone.

18. How is your physical health?

Poor 1 ()
Fair 2 ()
Good 3 ()
Very Good 4 ()
Excellent 5 ()
Unknown -3 ()
Refused -4 ()

21. Have you been in the hospital overnight more than three times in the past year?

No 0 ()
Yes 1 ()
Unknown -3 ()
Refused -4 ()

22. Do you currently have any type of cancer?

No 0 ()
Yes 1 ()
Unknown -3 ()
Refused -4 ()

22.1 Are you receiving chemotherapy, other than tamoxifen, or radiation therapy for your cancer?

<i>No</i>	0 ()
<i>Yes</i>	1 ()
<i>Unknown</i>	-3 ()
<i>Refused</i>	-4 ()

CARE RECIPIENT

The next set of questions are about (CR). I would like to know, if you were not able to help him/her, would (CR) need assistance with any of the following tasks?

IADL Tasks

23. Using the telephone?

<i>No</i>	0 ()
<i>Yes</i>	1 ()
<i>Unknown</i>	-3 ()
<i>Refused</i>	-4 ()

24. Shopping?

<i>No</i>	0 ()
<i>Yes</i>	1 ()
<i>Unknown</i>	-3 ()
<i>Refused</i>	-4 ()

25. Food preparation?

<i>No</i>	0 ()
<i>Yes</i>	1 ()
<i>Unknown</i>	-3 ()
<i>Refused</i>	-4 ()

26. Housekeeping?

<i>No</i>	0 ()
<i>Yes</i>	1 ()
<i>Unknown</i>	-3 ()
<i>Refused</i>	-4 ()

28. Doing laundry?

<i>No</i>	0 ()
<i>Yes</i>	1 ()
<i>Unknown</i>	-3 ()
<i>Refused</i>	-4 ()

29. Traveling independently by car or bus?

No 0 ()
 Yes 1 ()
 Unknown -3 ()
 Refused -4 ()

30. Paying bills or handling money?

No 0 ()
 Yes 1 ()
 Unknown -3 ()
 Refused -4 ()

The next set of questions are also about (CR). These questions are more personal, and some people feel a bit uncomfortable answering them. We ask these questions so that we can tell whether we are the right program for you. If you do not feel like answering a question, it is okay, but we ask that you try to answer them all.

I would like to know if you were not able to help him/her, would (CR) need assistance with any of the following tasks?

*ADL Tasks***31. Does (CR) need any kind of help with getting in and out of a bed or chair?**

No 0 ()
 Yes 1 ()
 Unknown -3 ()
 Refused -4 ()

32. Does (CR) need any kind of help when brushing teeth, combing or brushing hair, washing hands, washing face or (either) applying make-up (or) shaving?

No 0 ()
 Yes 1 ()
 Unknown -3 ()
 Refused -4 ()

33. Does (CR) need any kind of help when washing, rinsing or drying his/her body?

No 0 ()
 Yes 1 ()
 Unknown -3 ()
 Refused -4 ()

34. Does he/she need any kind of help when dressing above the waist?

No 0 ()
 Yes 1 ()
 Unknown -3 ()
 Refused -4 ()

35. Does he/she need any kind of help when dressing from the waist down?

No 0 ()
 Yes 1 ()
 Unknown -3 ()
 Refused -4 ()

36. Does (CR) need any kind of help with feeding himself/herself?

No 0 ()
 Yes 1 ()
 Unknown -3 ()
 Refused -4 ()

37. Does he/she need any kind of help with toileting such as getting to the toilet or adjusting clothes before and after toilet use or cleansing?

No 0 ()
 Yes 1 ()
 Unknown -3 ()
 Refused -4 ()

38. Does he/she have any bladder or bowel accidents, for example wetting himself/herself?

No 0 ()
 Yes 1 ()
 Unknown -3 ()
 Refused -4 ()

39. Does care recipient require assistance with at least two IADLs or at least one ADL?

No 0 ()
 Yes 1 ()

40. Has (CR) been in the hospital overnight more than three times in the past year?

No 0 ()
 Yes 1 ()
 Unknown -3 ()
 Refused -4 ()

41. Has a doctor told you that (CR) is very sick, other than his/her memory problems?

No 0 ()
 Yes 1 ()
 Unknown -3 ()
 Refused -4 ()

42. Does (CR) currently have any type of cancer?

No 0 ()
 Yes 1 ()
 Unknown -3 ()
 Refused -4 ()

43.1 Is (CR) receiving chemotherapy, other than tamoxifen, or radiation therapy for their cancer?

No 0 ()
 Yes 1 ()
 Unknown -3 ()
 Refused -4 ()

44. Have you ever been told that (CR) had a severe mental illness before the age of 45? (*Probe: for example, schizophrenia, hallucinations, paranoia, or nervous breakdowns.*)

No 0 ()
 Yes 1 ()
 Unknown -3 ()
 Refused -4 ()

45. Have you ever been told that (CR) has memory problems because of a past head injury?

No 0 ()
 Yes 1 ()
 Unknown -3 ()
 Refused -4 ()

43.1 Specify: _____

If no other exclusion criteria are met, participant should be classified as a "maybe" and referred to PI. If no other exclusion criteria are met, participant should be classified as a "maybe" and referred to PI.

46. Is (CR) blind or deaf?

No 0 ()
 Yes 1 ()
 Unknown -3 ()

Refused -4 ()

47. Does (CR) spend at least 22 hours a day in a bed or chair?

No 0 ()

Yes 1 ()

Unknown -3 ()

Refused -4 ()

47.1 Has this occurred for at least 4 of the past 7 days?

No 0 ()

Yes 1 ()

Unknown -3 ()

Refused -4 ()

48. Has an MMSE Score been collected within the past 4 months?

No 0 ()

Yes 1 ()

48.1 Date MMSE Administered: / /
month day year

48.2 What is the source of the MMSE Score?

Reach Interview 0 ()

Other 1 ()

48.3 Record the MMSE Score: ___ ___

If MMSE = 0 and the Participant is bedbound, the Participant is not eligible.

49. Were all site-specific criteria for inclusion met?

No 0 ()

Yes 1 ()

Unknown -3 ()

Refused -4 ()

50. Were any site-specific criteria for exclusion met?

No 0 ()

Yes 1 ()

Unknown -3 ()

Refused -4 ()

Exclude respondent if there is a check by an underlined response or meets other exclusion criteria.

51. *Is the caregiver eligible to participate in the study?*

No 0 ()

Yes 1 ()

Maybe 2 ()

If no: I really appreciate you taking time to answer my questions. At this time, it does not appear that this program would best benefit you. With your permission, however, we would like to retain your name in our files should there be a program in the future that might be better suited to your needs.

52. ***I really appreciate you taking time to answer my questions. At this time, it appears that this program might be right for you. Do you have any questions? Are you willing to participate in the study?***

No 0 ()

52.1 ***Could you please tell me why not?***

Yes 1 ()

Insert site specific text describing the next step.

53. ***I really appreciate you taking time to answer my questions. At this time, I would like to evaluate the information you have given me, and call you back to let you know if you qualify for the program. Is this okay?***

No 0 ()

53.1 ***Could you please tell me why not?***

Yes 1 ()

54. *End time (military time): ____ ____ : ____ ____
hours minutes*

55. *Was the SPMSQ administered?*

No 0 ()

55.1 *Why not?* _____

Yes 1 ()

55.2 *Score:* ____ ____

55.3 *Record all other relevant information that was used for resolution of maybe status.*

Based on decision in question 56.4, the respondent should be contacted and informed of their eligibility.

55.4 *Is the caregiver eligible to participate in the study?*

No 0 ()

Yes 1 ()

If no, I really appreciate you taking time to answer my questions earlier about the REACH project. At this time, it does not appear that this program would best benefit you. With your permission, however, we would like to retain your name in our files should there be a program in the future that might be better suited to your needs.

55.4.1 **I really appreciate you taking time to answer my questions earlier about the REACH project. At this time, it appears that this program might be right for you.**

(Insert Site Specific text.) Do you have any questions?

Are you willing to participate in the study?

No 0 ()

55.4.1.1 **Could you please tell me why not?**

Yes 1 ()

Screening Quality Form

56. *Did the respondent have frequent difficulty comprehending the questions in the interview (e.g., respondent had difficulty hearing, concentrating, respondent required frequent repetition of questions)?*

No 0 ()

Yes 1 ()

If yes, please explain

57. *Do you feel that the respondent gave inaccurate or misleading information to any of the questions?*

No 0 ()

Yes 1 ()

If yes, please explain

58. *Did the respondent give unusual or irrelevant answers to questions (e.g., used wrong response options, made comments that had nothing to do with the interview question, incoherent statements)?*

No 0 ()

Yes 1 ()

If yes, please explain

59. Did the respondent have frequent difficulty recalling information (e.g., recent events, prior questions, basic information about himself/herself such as age or address)?

No 0 ()

Yes 1 ()

If yes, please explain

Current Year = 1996		Current Year = 1997	
Years caregiving	Year started caregiving	Years caregiving	Year started caregiving
0.00	1996	0.00	1996
1	1995	1	1995
2	1994	2	1994
3	1993	3	1993
4	1992	4	1992
5	1991	5	1991
6	1990	6	1990
7	1989	7	1989
8	1988	8	1988
9	1987	9	1987
10	1986	10	1986
Current Year = 1998		Current Year = 1999	
Years caregiving	Year started caregiving	Years caregiving	Year started caregiving
0.00	1998	0.00	1999
1	1997	1	1998
2	1996	2	1997
3	1995	3	1996
4	1994	4	1995
5	1993	5	1994
6	1992	6	1993
7	1991	7	1992
8	1990	8	1991
9	1989	9	1990
10	1988	10	1989

Care Recipient Sociodemographic Information (RS) Questionnaire

1. *During which visit is this interview taking place?*

- 1 () *baseline*
 2 () *6 month follow-up visit*
 3 () *12 month follow-up visit*
 4 () *18 month follow-up visit*
 5 () *Other*

1.1 *Specify* _____

2. *Date of interview:* ___ ___ / ___ ___ / ___ ___
month day year

3. *What language was used for most of the interview?*

- Spanish* 1 ()
English 2 ()

I would like to start by asking you some background information about (CR).

4. **What is (CR)'s marital status?**

- Never married** 0 ()
Married or living as married 1 ()
Widowed, not currently married 2 ()
Divorced, not currently married 3 ()
Separated 4 ()
Unknown -3 ()
Refused -4 ()

5. **How many years of formal education did (CR) complete?**

- No formal education* 0 ()
Grade 1 1 ()
Grade 2 2 ()
Grade 3 3 ()
Grade 4 4 ()
Grade 5 5 ()
Grade 6 6 ()
Grade 7 7 ()
Grade 8 8 ()
Grade 9 9 ()
Grade 10 10 ()
Grade 11 11 ()

<i>Grade 12/ High school diploma/ GED (General Education Diploma)</i>	12 ()
<i>Vocational/ training school after high school</i>	13 ()
<i>Some college/ associate degree</i>	14 ()
<i>College graduate (4 or 5 year program)</i>	15 ()
<i>Master's degree (or other post-graduate training)</i>	16 ()
<i>Doctoral degree (PhD, MD, EdD., DVM., DDS., JD, etc.)</i>	17 ()
<i>Unknown</i>	-3 ()
<i>Refused</i>	-4 ()

6. In which country did (CR) reside during his/her last year of formal education?

<i>United States</i>	1 ()
<i>Canada</i>	2 ()
<i>Cuba</i>	3 ()
<i>Mexico</i>	4 ()
<i>Other</i>	5 ()

6.1 Specify: _____

<i>Unknown</i>	-3 ()
<i>Refused</i>	-4 ()

7. How would (CR) describe his/her primary racial or ethnic group?

<i>White, Caucasian</i>	1 ()
<i>Black, African-American</i>	2 ()
<i>Native American, Eskimo, Aleut</i>	3 ()
<i>Asian or Pacific Islander</i>	4 ()
<i>Hispanic, Latino</i>	5 ()

7.1 Would (CR) describe himself/herself as

Mexican, Mexican American, Chicano	1 ()
Cuban or Cuban American	2 ()
Puerto Rican	3 ()
Dominican	4 ()
<i>Other</i>	5 ()

7.1.1 Specify: _____

<i>No primary group</i>	6 ()
-------------------------	-------

7.2 Specify: _____

<i>Other</i>	7 ()
--------------	-------

7.3 Specify: _____

Unknown -3 ()

Refused -4 ()

8. In which country was (CR) born?

United States 1 ()

Canada 2 ()

Cuba 3 ()

Mexico 4 ()

Other 5 ()

8.1 Specify: _____

Unknown -3 ()

Refused -4 ()

9. How many years has (CR) lived in the United States? __ __ Years

10. Other than problems with memory or confusion, how would you rate the physical health of (CR)?

Poor 1 ()

Fair 2 ()

Good 3 ()

Very good 4 ()

Excellent 5 ()

Unknown -3 ()

Refused -4 ()

CAREGIVER SOCIODEMOGRAPHIC INFORMATION (GS) QUESTIONNAIRE

1. *During which visit is this interview taking place?*

- 1 () *Baseline*
- 2 () *6 month follow-up visit*
- 3 () *12 month follow-up visit*
- 4 () *18 month follow-up visit*
- 5 () *Other*

1.1 *Specify* _____

2. *Date of interview:* ___ ___ / ___ ___ / ___ ___
month day year

Now I would like to obtain some general information about you.

3. What is your marital status?

- | | |
|--|--------|
| Never married | 0 () |
| Married or living as married | 1 () |
| Widowed, not currently married | 2 () |
| Divorced, not currently married | 3 () |
| Separated | 4 () |
| <i>Unknown</i> | -3 () |
| <i>Refused</i> | -4 () |

3.1 What is the primary occupation your spouse has had most of his/her working life? Since many people have more than one job at a given time, we would like to know about the job that is/was your spouse's primary source of income.

4. How many years of formal education did you complete?

<i>No formal education</i>	0 ()
<i>Grade 1</i>	1 ()
<i>Grade 2</i>	2 ()
<i>Grade 3</i>	3 ()
<i>Grade 4</i>	4 ()
<i>Grade 5</i>	5 ()
<i>Grade 6</i>	6 ()
<i>Grade 7</i>	7 ()
<i>Grade 8</i>	8 ()
<i>Grade 9</i>	9 ()
<i>Grade 10</i>	10 ()
<i>Grade 11</i>	11 ()
<i>Grade 12/ High school diploma/ GED (General Education Diploma)</i>	12 ()
<i>Vocational/ training school after high school</i>	13 ()
<i>Some college/ associate degree</i>	14 ()
<i>College graduate (4 or 5 year program)</i>	15 ()
<i>Master's degree (or other post-graduate training)</i>	16 ()
<i>Doctoral degree (PhD, MD, EdD., D.V.M., DDS., JD, etc.)</i>	17 ()
<i>Unknown</i>	-3 ()
<i>Refused</i>	-4 ()

5. What country did you reside in during the last year of formal education?

<i>United States</i>	1 ()
<i>Canada</i>	2 ()
<i>Cuba</i>	3 ()
<i>Mexico</i>	4 ()
<i>Other</i>	5 ()

5.1 Specify _____

<i>Unknown</i>	-3 ()
<i>Refused</i>	-4 ()

6. How would you describe your primary racial or ethnic group?

<i>White, Caucasian</i>	1 ()
<i>Black, African-American</i>	2 ()
<i>Native American, Eskimo, Aleut</i>	3 ()
<i>Asian or Pacific Islander</i>	4 ()
<i>Hispanic, Latino</i>	5 ()

6.1 Would you describe yourself as

Mexican, Mexican American, Chicano	1 ()
Cuban or Cuban American	2 ()
Puerto Rican	3 ()
Dominican	4 ()
<i>Other</i>	5 ()
<i>Unknown</i>	-3 ()
<i>Refused</i>	-4 ()

6.1.1 Specify: _____

No primary group 6 ()
6.2 Specify: _____

7. In which country were you born?

<i>United States</i>	1 ()
<i>Canada</i>	2 ()
<i>Cuba</i>	3 ()
<i>Mexico</i>	4 ()
<i>Other</i>	5 ()

7.1 Specify: _____

<i>Unknown</i>	-3 ()
<i>Refused</i>	-4 ()

8. How many years have you lived in the United States? ___ ___ Years

9. What is the primary occupation you have had most of your working life? Since many people have more than one job at a given time, we would like to know about the job that is/was your primary source of income.

10. What is your current employment status?

Employed at a job for pay, full-time	1 ()
Employed at a job for pay, part time	2 ()
Homemaker, not currently working for pay	3 ()
Not currently employed, retired	4 ()
Not currently employed, not retired	5 ()
<i>Unknown</i>	-3 ()
<i>Refused</i>	-4 ()

10.1 Are you employed outside of the home?

No 0 () *Yes* 1 () *Unknown* -3 () *Refused* -4 ()

10.2 How many hours per week do you work at your paid job?

— — — : — — —
hours minutes

10.3 Have you had to reduce the number of hours that you work in an average week in order to provide care to (CR)?

No 0 () Yes 1 () Unknown -3 () Refused -4 ()

10.4 Did you stop working because of (CR)'s need for care?

No 0 () Yes 1 () Unknown -3 () Refused -4 ()

10.4.1 Why?

You anticipated having to care for (CR) 1 ()
To provide additional care for (CR) 2 ()
Other 3 ()

10.4.1.1 Specify:

Next, I would like to ask you about your household income. Some people may not be comfortable answering this question, but I want to assure you that your responses will be kept strictly confidential. This information is very important to the project because it helps us understand how caregiving affects people with different incomes.

11. Which category on this card [give respondent card] best describes your yearly household income before taxes? Do not give me the dollar amount, just give me the category. Include all income received from employment, social security, support from children or other family, welfare, Aid to Families with Dependent Children (AFDC), bank interest, retirement accounts, rental property, investments, etc.

Less than \$5000	0 ()
\$5000 - \$9,999	1 ()
\$10,000 - \$14,999	2 ()
\$15,000 - \$19,999	3 ()
\$20,000 - \$29,999	4 ()
\$30,000 - \$39,999	5 ()
\$40,000 - \$49,999	6 ()
\$50,000 - \$59,999	7 ()
\$60,000 - \$69,999	8 ()
\$70,000 or more	9 ()
Unknown	-3 ()
Refused	-4 ()

12. **How hard is it for you to pay for the very basics like food, housing, medical care, and heating? Would you say it is:**

Not difficult at all	1 ()
Not very difficult	2 ()
Somewhat difficult	3 ()
Very difficult	4 ()
<i>Unknown</i>	-3 ()
<i>Refused</i>	-4 ()

13. **How many people are living with you in your home excluding yourself?**

___ ___ *persons*

14. **How long have you lived with (CR)?** ___ ___ *years*

15. **Did you and (CR) start living together so that you could take care of him/her?**

No 0 () *Yes* 1 () *Unknown* -3 () *Refused* -4 ()

Vigilance (VG) Questionnaire

1. *During which visit is this interview taking place?*

- 1 () *baseline*
- 2 () *6 month follow-up visit*
- 3 () *12 month follow-up visit*
- 4 () *18 month follow-up visit*
- 5 () *Other*

1.1 *Specify* _____

2. *Date of interview* ___ ___ / ___ ___ / ___ ___
month day year

The last set of questions were about the kinds of assistance (CR) requires with daily activities. What I want to ask you now concerns the time you spend supervising, or just "being around" for (CR).

3. **In the case of a family emergency, are you able to leave (CR) home alone, that is with no one else there?**

No 0 () Yes 1 () Unknown -3 () Refused -4 ()

3.1 **How long can you leave (CR) home alone?** ___ ___ : ___ ___
hours : minutes

4. **Can (CR) be left alone in a room as long as someone is in the house?**

No 0 () Yes 1 () Unknown -3 () Refused -4 ()

4.1 **How long can you leave (CR) alone in a room?** ___ ___ : ___ ___
hours : minutes

5. **Some people have told us that they feel their caregiving is a time-consuming job. They say that even when they aren't actually doing something special for or with their relative, they feel "on duty" or the need to "be there" for him/her. About how many hours a day do you feel the need to "be there" or "on duty" to care for (CR)?**

___ ___ *hours*

6. **About how many hours a day do you estimate that you are actually doing things for (CR)?**

___ ___ *hours*

Positive Aspects of Caregiving (PC)

1. *During which visit is this interview taking place?*

- 1 () *Baseline*
 2 () *6 month follow-up visit*
 3 () *12 month follow-up visit*
 4 () *18 month follow-up visit*
 5 () *Other*

1.1 *Specify* _____

2. *Date of interview:* ___ ___ / ___ ___ / ___ ___
month day year

Some caregivers say that, in spite of all the difficulties involved in giving care to a family member with memory or health problems, good things have come out of their caregiving experience too. I'm going to go over a few of the good things reported by some caregivers. I would like you to tell me how much you agree or disagree with these statements. Please refer to the responses listed on this card. [Give card to respondent.]

Providing help to (CR) has.....	Disagree a lot	Disagree a little	Neither agree nor disagree	Agree a little	Agree a lot	Unknown	Refused
	1 ()	2 ()	3 ()	4 ()	5 ()	-3 ()	-4 ()
3.1 made me feel more useful.	1 ()	2 ()	3 ()	4 ()	5 ()	-3 ()	-4 ()

Providing help to (CR) has.....	Disagree a lot	Disagree a little	Neither agree nor disagree	Agree a little	Agree a lot	Unknown	Refused
3.2 made me feel good about myself.	1 ()	2 ()	3 ()	4 ()	5 ()	-3 ()	-4 ()
3.3 made me feel needed.	1 ()	2 ()	3 ()	4 ()	5 ()	-3 ()	-4 ()
3.4 made me feel appreciated.	1 ()	2 ()	3 ()	4 ()	5 ()	-3 ()	-4 ()

Providing help to (CR) has.....		Disagree a lot	Disagree a little	Neither agree nor disagree	Agree a little	Agree a lot	Unknown	Refused
3.5	made me feel important.	1 ()	2 ()	3 ()	4 ()	5 ()	-3 ()	-4 ()
3.6	made me feel strong and confident.	1 ()	2 ()	3 ()	4 ()	5 ()	-3 ()	-4 ()
3.7	given more meaning to my life.	1 ()	2 ()	3 ()	4 ()	5 ()	-3 ()	-4 ()
3.8	enabled me to learn new skills.	1 ()	2 ()	3 ()	4 ()	5 ()	-3 ()	-4 ()
3.9	enabled me to appreciate life more.	1 ()	2 ()	3 ()	4 ()	5 ()	-3 ()	-4 ()

Providing help to (CR) has.....		Disagree a lot	Disagree a little	Neither agree nor disagree	Agree a little	Agree a lot	Unknown	Refused
3.10	enabled me to develop a more positive attitude toward life.	1 ()	2 ()	3 ()	4 ()	5 ()	-3 ()	-4 ()
3.11	strengthened my relationships with others.	1 ()	2 ()	3 ()	4 ()	5 ()	-3 ()	-4 ()

Religiosity (RG) Questionnaire

1. *During which visit is this interview taking place?*

- 1 () *baseline*
- 2 () *6 month follow-up visit*
- 3 () *12 month follow-up visit*
- 4 () *18 month follow-up visit*
- 5 () *Other*

1.1 *Specify* _____

2. *Date of interview:* ___ ___ / ___ ___ / ___ ___
month day year

Now I would like to ask you a few questions about your religious preference and spiritual beliefs.

3. **What is your current religious preference?**

- Lutheran* 1 ()
- Methodist* 2 ()
- Baptist* 3 ()
- Episcopal* 4 ()
- Presbyterian* 5 ()
- Other Protestant* 6 ()

3.1 *Specify* _____

- Roman Catholic* 7 ()
- Orthodox Christian* 8 ()
(e.g. Greek, Russian, Eastern)
- Jewish* 9 ()

3.2 **Would you consider yourself?**

- Orthodox** 1 ()
- Conservative** 2 ()
- Reform** 3 ()
- Other* 4 ()
- Unknown* -3 ()
- Refused* -4 ()

3.2.1 *Specify* _____

- Islamic* 10 ()
- Buddhist* 11 ()

<i>Confucian</i>	12 ()
<i>Shintoist</i>	13 ()
<i>Hindu</i>	14 ()
<i>Jehovah's Witness</i>	15 ()
<i>Spiritual, not religious</i>	16 ()
<i>Other</i>	17 ()

3.3 Specify: _____

<i>None</i>	18 ()
<i>Unknown</i>	-3 ()
<i>Refused</i>	-4 ()

4. How often do you usually attend religious services, meetings and/or activities?

Never	1 ()
Once a year	2 ()
A few times a year	3 ()
At least once a month	4 ()
At least once a week	5 ()
Nearly every day	6 ()
<i>Unknown</i>	-3 ()
<i>Refused</i>	-4 ()

4.1 To what extent has participation in religious services, meetings and/or activities been a source of help and comfort to you in providing care to (CR)?

Not at all	1 ()
Some	2 ()
Quite a bit	3 ()
A great deal	4 ()
<i>Unknown</i>	-3 ()
<i>Refused</i>	-4 ()

5. How important is your spirituality or religious faith to you?

Not important	1 ()
Somewhat important	2 ()
Important	3 ()
Very Important	4 ()
<i>Unknown</i>	-3 ()
<i>Refused</i>	-4 ()

6. How often do you pray or meditate?

Never	1 ()
Once a year	2 ()
A few times a year	3 ()
At least once a month	4 ()
At least once a week	5 ()
Nearly every day	6 ()
<i>Unknown</i>	-3 ()
<i>Refused</i>	-4 ()

6.1 To what extent has prayer or meditation been a source of help and comfort to you in providing care to (CR)?

Not at all	1 ()
Some	2 ()
Quite a bit	3 ()
A great deal	4 ()
<i>Unknown</i>	-3 ()
<i>Refused</i>	-4 ()

Social Support (SS) Questionnaire

1. *During which visit is this interview taking place?*

- 1 () *Baseline*
- 2 () *6 month follow-up visit*
- 3 () *12 month follow-up visit*
- 4 () *18 month follow-up visit*
- 5 () *Other*

1.1 *Specify* _____

2. *Date of interview:* ___ ___ / ___ ___ / ___ ___
month day year

Social Networks

Now I would like to ask you some questions about your friends and family.

4.0 Overall, how satisfied have you been in the last month with the help you have received from friends, neighbors, or family members?

Not at all	A little	Moderately	Very	<i>Unknown</i>	<i>Refused</i>
1 ()	2 ()	3 ()	5 ()	-3 ()	-4 ()

4.1 How many relatives other than (CR) do you see or hear from at least once a month?

None	0 ()
One	1 ()
Two	2 ()
Three or four	3 ()
Five to eight	4 ()
Nine or more	5 ()
<i>Unknown</i>	-3 ()
<i>Refused</i>	-4 ()

4.2 Think about the relative other than (CR) with whom you have the most contact. How often do you see or hear from that person?

Less than monthly	0 ()
Monthly	1 ()
A few times a month	2 ()
Weekly	3 ()
A few times a week	4 ()
Daily	5 ()
<i>Unknown</i>	-3 ()
<i>Refused</i>	-4 ()

4.3 How many relatives other than (CR) do you feel close to? That is, how many do you feel at ease with, can talk to about private matters, or can call on for help?

None	0 ()
One	1 ()
Two	2 ()
Three or four	3 ()
Five to eight	4 ()
Nine or more	5 ()
<i>Unknown</i>	-3 ()
<i>Refused</i>	-4 ()

4.4 How many friends do you feel close to? That is, how many friends (not including relatives) do you feel at ease with, can talk to about private matters, or can call on for help?

None	0 ()
One	1 ()
Two	2 ()
Three or four	3 ()
Five to eight	4 ()
Nine or more	5 ()
<i>Unknown</i>	-3 ()
<i>Refused</i>	-4 ()

4.5 How many of these friends do you see or hear from at least once a month? (not including relatives)

None	0 ()
One	1 ()
Two	2 ()
Three or four	3 ()
Five to eight	4 ()
Nine or more	5 ()
<i>Unknown</i>	-3 ()

Refused -4 ()

4.6 Think about the friend (not including relatives) with whom you have the most contact. How often do you see or hear from that person?

Less than monthly 0 ()
Monthly 1 ()
A few times a month 2 ()
Weekly 3 ()
A few times a week 4 ()
Daily 5 ()
Unknown -3 ()
Refused -4 ()

4.7 When you have an important decision to make, do you have someone other than (CR) you can talk to about it?

Never 0 ()
Seldom 1 ()
Sometimes 2 ()
Often 3 ()
Very often 4 ()
Always 5 ()
Unknown -3 ()
Refused -4 ()

4.8 When other people you know have an important decision to make, do they talk to you about it?

Never 0 ()
Seldom 1 ()
Sometimes 2 ()
Often 3 ()
Very often 4 ()
Always 5 ()
Unknown -3 ()
Refused -4 ()

Received Support and Satisfaction

5.1 In the past month, how often has someone, such as a friend, neighbor, or family member other than (CR), provided transportation for you?

Never 0 ()
Once in awhile 1 ()
Fairly often 2 ()
Very often 3 ()

Unknown -3 ()
Refused -4 ()

5.2 In the past month, how often has someone, such as a friend, neighbor, or family member other than (CR), pitched in to help you do something that needed to get done, like household chores or yardwork?

Never 0 ()
Once in awhile 1 ()
Fairly often 2 ()
Very often 3 ()
Unknown -3 ()
Refused -4 ()

5.3 In the past month, how often has someone helped you with shopping?

Never 0 ()
Once in awhile 1 ()
Fairly often 2 ()
Very often 3 ()
Unknown -3 ()
Refused -4 ()

5.4 Overall, how satisfied have you been in the last month with the help you have received with transportation, housework and yardwork, and shopping?

Not at all 0 ()
A little 1 ()
Moderately 2 ()
Very 3 ()
Unknown -3 ()
Refused -4 ()

5.5 In the past month, how often was someone right there with you (physically) in a stressful situation?

Never 0 ()
Once in awhile 1 ()
Fairly often 2 ()
Very often 3 ()
Unknown -3 ()
Refused -4 ()

5.6 In the past month, how often has someone provided comfort to you?

Never 0 ()
Once in awhile 1 ()
Fairly often 2 ()

Very often	3 ()
<i>Unknown</i>	-3 ()
<i>Refused</i>	-4 ()

5.7 In the past month, how often has someone listened to you talk about your private feelings?

Never	0 ()
Once in awhile	1 ()
Fairly often	2 ()
Very often	3 ()
<i>Unknown</i>	-3 ()
<i>Refused</i>	-4 ()

5.8 In the past month how often has someone expressed interest and concern in your well-being?

Never	0 ()
Once in awhile	1 ()
Fairly often	2 ()
Very often	3 ()
<i>Unknown</i>	-3 ()
<i>Refused</i>	-4 ()

5.9 In the past month, how satisfied have you been with the support received during difficult times, comforting from others, how others have listened, and interest and concern from others?

Not at all	0 ()
A little	1 ()
Moderately	2 ()
Very	3 ()
<i>Unknown</i>	-3 ()
<i>Refused</i>	-4 ()

5.10 In the past month, how often has someone suggested some action you should take in dealing with a problem you were having?

Never	0 ()
Once in awhile	1 ()
Fairly often	2 ()
Very often	3 ()
<i>Unknown</i>	-3 ()
<i>Refused</i>	-4 ()

5.11 In the past month, how often has someone made a difficult situation clearer and easier to understand?

Never	0 ()
--------------	-------

Once in awhile	1 ()
Fairly often	2 ()
Very often	3 ()
<i>Unknown</i>	-3 ()
<i>Refused</i>	-4 ()

5.12 In the past month, how often has someone helped you understand why you did not do something well?

Never	0 ()
Once in awhile	1 ()
Fairly often	2 ()
Very often	3 ()
<i>Unknown</i>	-3 ()
<i>Refused</i>	-4 ()

5.13 In the past month, how often has someone told you what they did in a situation that was similar to one you were experiencing?

Never	0 ()
Once in awhile	1 ()
Fairly often	2 ()
Very often	3 ()
<i>Unknown</i>	-3 ()
<i>Refused</i>	-4 ()

5.14 Overall, how satisfied in the last month have you been with the suggestions, clarifications, and sharing of similar experiences you have received from others?

Not at all	0 ()
A little	1 ()
Moderately	2 ()
Very	3 ()
<i>Unknown</i>	-3 ()
<i>Refused</i>	-4 ()

I'd like to ask you a few more questions about your relationship with others. Remember, when the term "others" is used, it includes friends, neighbors, or family members other than (CR).

Negative Interaction

6.1 In the past month, how often have others made too many demands on you?

Never	0 ()
Once in awhile	1 ()
Fairly often	2 ()
Very often	3 ()
<i>Unknown</i>	-3 ()
<i>Refused</i>	-4 ()

6.2 In the past month, how often have others been critical of you?

Never	0 ()
Once in awhile	1 ()
Fairly often	2 ()
Very often	3 ()
<i>Unknown</i>	-3 ()
<i>Refused</i>	-4 ()

6.3 In the past month, how often have others pried into your affairs?

Never	0 ()
Once in awhile	1 ()
Fairly often	2 ()
Very often	3 ()
<i>Unknown</i>	-3 ()
<i>Refused</i>	-4 ()

6.4 In the past month, how often have others taken advantage of you?

Never	0 ()
Once in awhile	1 ()
Fairly often	2 ()
Very often	3 ()
<i>Unknown</i>	-3 ()
<i>Refused</i>	-4 ()

FORMAL CARE AND SERVICES (FC) QUESTIONNAIRE

Now I have some questions about services that you or (CR) may have received in the past month from an agency or from someone paid privately to provide this help. In the past month how often did you make use of/receive this service?

4.1 Do you or (CR) have a homemaker who helps with shopping, cleaning, laundry, preparing meals, etc.?

0 () <i>No</i>	1 () <i>Yes</i>	-3 () <i>Unknown</i>	-4 () <i>Refused</i>
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4.2 Do you or (CR) have a home health aid come to the home to help with personal care (i.e. bathing, feeding, and healthcare tasks)?

0 () <i>No</i>	1 () <i>Yes</i>	-3 () <i>Unknown</i>	-4 () <i>Refused</i>
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4.3 Do you or (CR) have cooked meals delivered to home or go to a center for low cost meals?

0 () <i>No</i>	1 () <i>Yes</i>	-3 () <i>Unknown</i>	-4 () <i>Refused</i>
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In the past month how often did you make use of/ receive this service?

4.4 Do you or (CR) have a formal service that provides transportation to places outside the home (i.e. doctors, clinics, shopping)?

0 () <i>No</i>	1 () <i>Yes</i>	-3 () <i>Unknown</i>	-4 () <i>Refused</i>
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4.5 Do you or (CR) have a visiting nurse come to check medications, blood pressure or other medical needs?

0 () <i>No</i>	1 () <i>Yes</i>	-3 () <i>Unknown</i>	-4 () <i>Refused</i>
--------------------	---------------------	--------------------------	--------------------------

4.6 Do you or (CR) attend a senior day care or senior day health program?

0 () <i>No</i>	1 () <i>Yes</i>	-3 () <i>Unknown</i>	-4 () <i>Refused</i>
--------------------	---------------------	--------------------------	--------------------------

4.7 Are you (CG only) attending any support groups on a regular basis?

0 ()	1 ()	-3 ()	-4 ()
<i>No</i>	<i>Yes</i>	<i>Unknown</i>	<i>Refused</i>

In the past month how often did you make use of/receive this service?

4.8 Have you (CG only) had any visits to a physician?

0 ()	1 ()	-3 ()	-4 ()
<i>No</i>	<i>Yes</i>	<i>Unknown</i>	<i>Refused</i>

4.9 Has (CR) had any visits to a physician?

0 ()	1 ()	-3 ()	-4 ()
<i>No</i>	<i>Yes</i>	<i>Unknown</i>	<i>Refused</i>

4.10 Have you (CG only) had any visits to a nurse, physician's assistant, or nonphysician practitioner?

0 ()	1 ()	-3 ()	-4 ()
<i>No</i>	<i>Yes</i>	<i>Unknown</i>	<i>Refused</i>

4.11 Has (CR) had any visits to a nurse, physician's assistant, or nonphysician practitioner?

0 ()	1 ()	-3 ()	-4 ()
<i>No</i>	<i>Yes</i>	<i>Unknown</i>	<i>Refused</i>

In the past month how often did you make use of/ receive this service?

4.12 Do you or (CR) see a counselor, psychiatrist, psychologist, or clergy for help with personal or family problems?

0 ()	1 ()	-3 ()	-4 ()
<i>No</i>	<i>Yes</i>	<i>Unknown</i>	<i>Refused</i>

4.13 Have you (CGonly) had any visits to an emergency room?

0 ()	1 ()	-3 ()	-4 ()
<i>No</i>	<i>Yes</i>	<i>Unknown</i>	<i>Refused</i>

4.14 Has (CR) had any visits to an emergency room?

0 ()	1 ()	-3 ()	-4 ()
<i>No</i>	<i>Yes</i>	<i>Unknown</i>	<i>Refused</i>

4.15 Have you (CG only) had any xrays, blood tests, urine tests, MRIs, or CAT scans?

0 ()	1 ()	-3 ()	-4 ()
<i>No</i>	<i>Yes</i>	<i>Unknown</i>	<i>Refused</i>

4.16 Has (CR) had any x-rays, blood tests, urine tests, MRIs, or CAT scans?

0 ()	1 ()	-3 ()	-4 ()
<i>No</i>	<i>Yes</i>	<i>Unknown</i>	<i>Refused</i>

4.17 Have you (CG only) been a patient in a hospital overnight or admitted as a patient to a hospital and discharged on the same day?

0 ()	1 ()	-3 ()	-4 ()
<i>No</i>	<i>Yes</i>	<i>Unknown</i>	<i>Refused</i>

4.18 Has (CR) been a patient in a hospital overnight or admitted as a patient to a hospital and discharged on the same day?

0 ()	1 ()	-3 ()	-4 ()
<i>No</i>	<i>Yes</i>	<i>Unknown</i>	<i>Refused</i>

4.19 Have you (CG only) been a patient in a nursing home?

0 ()	1 ()	-3 ()	-4 ()
<i>No</i>	<i>Yes</i>	<i>Unknown</i>	<i>Refused</i>

4.20 Has (CR) been a patient in a nursing home?

0 ()	1 ()	-3 ()	-4 ()
<i>No</i>	<i>Yes</i>	<i>Unknown</i>	<i>Refused</i>

CES-D Questionnaire

1. *During which visit is this interview taking place?*

- 1 () *Baseline*
 2 () *6 month follow-up visit*
 3 () *12 month follow-up visit*
 4 () *18 month follow-up visit*
 5 () *Other*

1.1 *Specify* _____

2. *Date of interview:* ___ ___ / ___ ___ / ___ ___
month day year

This section deals with statements people might make about how they feel. Let me give you a card with possible responses. [Give respondent card.] For each of the statements, please indicate how often you felt that way during the past week.

	Rarely or none of the time (< 1 day)	Some or a little of the time (1-2 days)	Occasion- ally or a moderate amount of time (3-4 days)	Most or almost all of the time (5-7 days)	<i>Unknown</i>	<i>Refused</i>
4.1 I was bothered by things that usually don't bother me.	0 ()	1 ()	2 ()	3 ()	-3 ()	-4 ()
4.2 I did not feel like eating; appetite was poor.	0 ()	1 ()	2 ()	3 ()	-3 ()	-4 ()
4.3 I felt that I could not shake off the blues, even with help from my family and friends.	0 ()	1 ()	2 ()	3 ()	-3 ()	-4 ()

	Rarely or none of the time	Some or a little of the time	Occasion- ally or a moderate amount of time	Most or almost all of the time	Unknown	Refused
	(< 1 day)	(1-2 days)	(3-4 days)	(5-7 days)		
4.4 I felt that I was just as good as other people.	0 ()	1 ()	2 ()	3 ()	-3 ()	-4 ()
4.5 I had trouble keeping my mind on what I was doing.	0 ()	1 ()	2 ()	3 ()	-3 ()	-4 ()
4.6 I felt depressed.	0 ()	1 ()	2 ()	3 ()	-3 ()	-4 ()
4.7 I felt that everything I did was an effort.	0 ()	1 ()	2 ()	3 ()	-3 ()	-4 ()
4.8 I felt hopeful about the future.	0 ()	1 ()	2 ()	3 ()	-3 ()	-4 ()
4.9 I thought my life had been a failure.	0 ()	1 ()	2 ()	3 ()	-3 ()	-4 ()
4.10 I felt fearful.	0 ()	1 ()	2 ()	3 ()	-3 ()	-4 ()
4.11 My sleep was restless.	0 ()	1 ()	2 ()	3 ()	-3 ()	-4 ()

4.12 I was happy.	0 ()	1 ()	2 ()	3 ()	-3 ()	-4 ()
	Rarely or none of the time (< 1 day)	Some or a little of the time (1-2 days)	Occasionally or a moderate amount of time (3-4 days)	Most or almost all of the time (5-7 days)	<i>Unknown</i>	<i>Refused</i>
4.13 I talked less than usual.	0 ()	1 ()	2 ()	3 ()	-3 ()	-4 ()
4.15 People were unfriendly.	0 ()	1 ()	2 ()	3 ()	-3 ()	-4 ()
4.16 I enjoyed life.	0 ()	1 ()	2 ()	3 ()	-3 ()	-4 ()
4.17 I had crying spells.	0 ()	1 ()	2 ()	3 ()	-3 ()	-4 ()
4.18 I felt sad.	0 ()	1 ()	2 ()	3 ()	-3 ()	-4 ()
4.19 I felt that people disliked me.	0 ()	1 ()	2 ()	3 ()	-3 ()	-4 ()
4.20 I could not get going.	0 ()	1 ()	2 ()	3 ()	-3 ()	-4 ()

5. CES-D Score ____ ____

6. Is the CES-D score greater than or equal to 28?

No ()

Yes ()

6.1 Has the Principal Investigator or appropriate site personnel been notified?

No ()

Yes ()

Please notify the Principal Investigator or appropriate site personnel.

Revised Memory and Behavior Problems Checklist (MB) Questionnaire

1. *During which visit is this interview taking place?*

- 1 () *baseline*
 2 () *6 month follow-up visit*
 3 () *12 month follow-up visit*
 4 () *18 month follow-up visit*
 5 () *Other*

1.1 *Specify* _____

2. *Date of interview:* ___ ___ / ___ ___ / ___ ___
month day year

Now I'd like to ask you about some of the problems you may have encountered while caring for (CR).

4.0 Within the past week, has (CR) experienced any memory or behavior problems?

<i>No</i>	<i>Yes</i>	<i>Unknown</i>	<i>Refused</i>
0 ()	1 ()	-3 ()	-4 ()

4.0.1 How bothered or upset were you by this? Possible responses are listed on this card.

Not at all	A little	Moderately	Very much	Extremely	Unknown	Refused
0 ()	1 ()	2 ()	3 ()	4 ()	-3 ()	-4 ()

I will read a list of specific problems participants sometimes have. Please indicate if any of these problems have occurred during the past week. If so, how much has this bothered or upset you when it happened.

4.1 Within the past week, has (CR) been asking the same question over and over?

<i>No</i>	<i>Yes</i>	<i>Unknown</i>	<i>Refused</i>
0 ()	1 ()	-3 ()	-4 ()

4.1.1 How bothered or upset were you by this? Possible responses are listed on this card.

Not at all	A little	Moderately	Very much	Extremely	<i>Unknown</i>	<i>Refused</i>
0 ()	1 ()	2 ()	3 ()	4 ()	-3 ()	-4 ()

4.2 Within the past week, has (CR) had trouble remembering recent events (e.g., items in the newspaper or on TV)?

<i>No</i>	<i>Yes</i>	<i>Unknown</i>	<i>Refused</i>
0 ()	1 ()	-3 ()	-4 ()

4.2.1 How bothered or upset were you by this?

Not at all	A little	Moderately	Very much	Extremely	<i>Unknown</i>	<i>Refused</i>
0 ()	1 ()	2 ()	3 ()	4 ()	-3 ()	-4 ()

4.3 Within the past week, has (CR) had trouble remembering significant past events?

<i>No</i>	<i>Yes</i>	<i>Unknown</i>	<i>Refused</i>
0 ()	1 ()	-3 ()	-4 ()

4.3.1 How bothered or upset were you by this?

Not at all	A little	Moderately	Very much	Extremely	<i>Unknown</i>	<i>Refused</i>
0 ()	1 ()	2 ()	3 ()	4 ()	-3 ()	-4 ()

4.4 Within the past week, has (CR) been losing or misplacing things?

<i>No</i>	<i>Yes</i>	<i>Unknown</i>	<i>Refused</i>
0 ()	1 ()	-3 ()	-4 ()

4.4.1 How bothered or upset were you by this?

Not at all	A little	Moderately	Very much	Extremely	<i>Unknown</i>	<i>Refused</i>
0 ()	1 ()	2 ()	3 ()	4 ()	-3 ()	-4 ()

4.5 Within the past week, has (CR) been forgetting what day it is?

<i>No</i>	<i>Yes</i>	<i>Unknown</i>	<i>Refused</i>
0 ()	1 ()	-3 ()	-4 ()

4.5.1 How bothered or upset were you by this?

Not at all	A little	Moderately	Very much	Extremely	<i>Unknown</i>	<i>Refused</i>
0 ()	1 ()	2 ()	3 ()	4 ()	-3 ()	-4 ()

4.6 Within the past week, has (CR) been starting but not finishing things?

<i>No</i>	<i>Yes</i>	<i>Unknown</i>	<i>Refused</i>
0 ()	1 ()	-3 ()	-4 ()

4.6.1 How bothered or upset were you by this?

Not at all	A little	Moderately	Very much	Extremely	<i>Unknown</i>	<i>Refused</i>
0 ()	1 ()	2 ()	3 ()	4 ()	-3 ()	-4 ()

4.7 Within the past week, has (CR) had difficulty concentrating on a task?

<i>No</i>	<i>Yes</i>	<i>Unknown</i>	<i>Refused</i>
0 ()	1 ()	-3 ()	-4 ()

4.7.1 How bothered or upset were you by this?

Not at all	A little	Moderately	Very much	Extremely	<i>Unknown</i>	<i>Refused</i>
0 ()	1 ()	2 ()	3 ()	4 ()	-3 ()	-4 ()

4.8 Within the past week, has (CR) been destroying property?

<i>No</i>	<i>Yes</i>	<i>Unknown</i>	<i>Refused</i>
0 ()	1 ()	-3 ()	-4 ()

4.8.1 How bothered or upset were you by this

Not at all	A little	Moderately	Very much	Extremely	<i>Unknown</i>	<i>Refused</i>
0 ()	1 ()	2 ()	3 ()	4 ()	-3 ()	-4 ()

4.9 Within the past week, has (CR) been doing things that embarrass you?

<i>No</i>	<i>Yes</i>	<i>Unknown</i>	<i>Refused</i>
0 ()	1 ()	-3 ()	-4 ()

4.9.1 How bothered or upset were you by this?

Not at all	A little	Moderately	Very much	Extremely	<i>Unknown</i>	<i>Refused</i>
0 ()	1 ()	2 ()	3 ()	4 ()	-3 ()	-4 ()

4.10 Within the past week, has (CR) been waking you or other family members up at night?

<i>No</i>	<i>Yes</i>	<i>Unknown</i>	<i>Refused</i>
0 ()	1 ()	-3 ()	-4 ()

4.10.1 How bothered or upset were you by this?

Not at all	A little	Moderately	Very much	Extremely	<i>Unknown</i>	<i>Refused</i>
0 ()	1 ()	2 ()	3 ()	4 ()	-3 ()	-4 ()

4.11 Within the past week, has (CR) been talking loudly and rapidly?

<i>No</i>	<i>Yes</i>	<i>Unknown</i>	<i>Refused</i>
0 ()	1 ()	-3 ()	-4 ()

4.11.1 How bothered or upset were you by this?

Not at all	A little	Moderately	Very much	Extremely	<i>Unknown</i>	<i>Refused</i>
0 ()	1 ()	2 ()	3 ()	4 ()	-3 ()	-4 ()

4.12 Within the past week, has (CR) appeared anxious or worried?

<i>No</i>	<i>Yes</i>	<i>Unknown</i>	<i>Refused</i>
0 ()	1 ()	-3 ()	-4 ()

4.12.1 How bothered or upset were you by this?

Not at all	A little	Moderately	Very much	Extremely	<i>Unknown</i>	<i>Refused</i>
0 ()	1 ()	2 ()	3 ()	4 ()	-3 ()	-4 ()

4.13 Within the past week, has (CR) been engaging in behavior that is potentially dangerous to him/herself or others?

<i>No</i>	<i>Yes</i>	<i>Unknown</i>	<i>Refused</i>
0 ()	1 ()	-3 ()	-4 ()

4.13.1 How bothered or upset were you by this?

Not at all	A little	Moderately	Very much	Extremely	<i>Unknown</i>	<i>Refused</i>
0 ()	1 ()	2 ()	3 ()	4 ()	-3 ()	-4 ()

4.14 Within the past week, has (CR) threatened to hurt him/herself?

<i>No</i>	<i>Yes</i>	<i>Unknown</i>	<i>Refused</i>
0 ()	1 ()	-3 ()	-4 ()

4.14.1 How bothered or upset were you by this?

Not at all	A little	Moderately	Very much	Extremely	<i>Unknown</i>	<i>Refused</i>
0 ()	1 ()	2 ()	3 ()	4 ()	-3 ()	-4 ()

4.15 Within the past week, has (CR) threatened to hurt others?

<i>No</i>	<i>Yes</i>	<i>Unknown</i>	<i>Refused</i>
0 ()	1 ()	-3 ()	-4 ()

4.15.1 How bothered or upset were you by this?

Not at all	A little	Moderately	Very much	Extremely	<i>Unknown</i>	<i>Refused</i>
0 ()	1 ()	2 ()	3 ()	4 ()	-3 ()	-4 ()

4.16 Within the past week, has (CR) been aggressive to others verbally?

<i>No</i>	<i>Yes</i>	<i>Unknown</i>	<i>Refused</i>
0 ()	1 ()	-3 ()	-4 ()

4.16.1 How bothered or upset were you by this?

Not at all	A little	Moderately	Very much	Extremely	<i>Unknown</i>	<i>Refused</i>
0 ()	1 ()	2 ()	3 ()	4 ()	-3 ()	-4 ()

4.17 Within the past week, has (CR) appeared sad or depressed?

<i>No</i>	<i>Yes</i>	<i>Unknown</i>	<i>Refused</i>
0 ()	1 ()	-3 ()	-4 ()

4.17.1 How bothered or upset were you by this?

Not at all	A little	Moderately	Very much	Extremely	<i>Unknown</i>	<i>Refused</i>
0 ()	1 ()	2 ()	3 ()	4 ()	-3 ()	-4 ()

4.18 Within the past week, has (CR) been expressing feelings of hopelessness or sadness about the future (Such as, "Nothing worthwhile ever happens", or "I never do anything right")?

<i>No</i>	<i>Yes</i>	<i>Unknown</i>	<i>Refused</i>
0 ()	1 ()	-3 ()	-4 ()

4.18.1 How bothered or upset were you by this?

Not at all	A little	Moderately	Very much	Extremely	<i>Unknown</i>	<i>Refused</i>
0 ()	1 ()	2 ()	3 ()	4 ()	-3 ()	-4 ()

4.19 Within the past week, has (CR) been crying and tearful?

<i>No</i>	<i>Yes</i>	<i>Unknown</i>	<i>Refused</i>
0 ()	1 ()	-3 ()	-4 ()

4.19.1 How bothered or upset were you by this?

Not at all	A little	Moderately	Very much	Extremely	<i>Unknown</i>	<i>Refused</i>
0 ()	1 ()	2 ()	3 ()	4 ()	-3 ()	-4 ()

4.20 Within the past week, has (CR) been commenting about the death of him/herself or others (such as, "Life isn't worth living", or "I'd be better off dead")?

<i>No</i>	<i>Yes</i>	<i>Unknown</i>	<i>Refused</i>
0 ()	1 ()	-3 ()	-4 ()

4.20.1 How bothered or upset were you by this?

Not at all	A little	Moderately	Very much	Extremely	<i>Unknown</i>	<i>Refused</i>
0 ()	1 ()	2 ()	3 ()	4 ()	-3 ()	-4 ()

4.21 Within the past week, has (CR) been talking about feeling lonely?

<i>No</i>	<i>Yes</i>	<i>Unknown</i>	<i>Refused</i>
0 ()	1 ()	-3 ()	-4 ()

4.21.1 How bothered or upset were you by this?

Not at all	A little	Moderately	Very much	Extremely	<i>Unknown</i>	<i>Refused</i>
0 ()	1 ()	2 ()	3 ()	4 ()	-3 ()	-4 ()

4.22 Within the past week, has (CR) made comments about feeling worthless or being a burden to others?

<i>No</i>	<i>Yes</i>	<i>Unknown</i>	<i>Refused</i>
0 ()	1 ()	-3 ()	-4 ()

4.22.1 How bothered or upset were you by this?

Not at all	A little	Moderately	Very much	Extremely	<i>Unknown</i>	<i>Refused</i>
0 ()	1 ()	2 ()	3 ()	4 ()	-3 ()	-4 ()

4.23 Within the past week, has (CR) made comments about feeling like a failure or about not having any worthwhile accomplishments in life?

<i>No</i>	<i>Yes</i>	<i>Unknown</i>	<i>Refused</i>
0 ()	1 ()	-3 ()	-4 ()

4.23.1 How bothered or upset were you by this?

Not at all	A little	Moderately	Very much	Extremely	<i>Unknown</i>	<i>Refused</i>
0 ()	1 ()	2 ()	3 ()	4 ()	-3 ()	-4 ()

4.24 Within the past week, has (CR) been arguing, irritable, and/or complaining?

<i>No</i>	<i>Yes</i>	<i>Unknown</i>	<i>Refused</i>
0 ()	1 ()	-3 ()	-4 ()

4.24.1 How bothered or upset were you by this?

Not at all	A little	Moderately	Very much	Extremely	<i>Unknown</i>	<i>Refused</i>
0 ()	1 ()	2 ()	3 ()	4 ()	-3 ()	-4 ()

5. Within the past week, has (CR) had any other memory or behavior problems that I haven't already mentioned?

<i>No</i>	<i>Yes</i>	<i>Unknown</i>	<i>Refused</i>
0 ()	1 ()	-3 ()	-4 ()

5.1 Specify: _____

5.2 How bothered or upset were you by this?

Not at all	A little	Moderately	Very much	Extremely	<i>Unknown</i>	<i>Refused</i>
0 ()	1 ()	2 ()	3 ()	4 ()	-3 ()	-4 ()

5.3 Any other problems?

<i>No</i>	<i>Yes</i>	<i>Unknown</i>	<i>Refused</i>
0 ()	1 ()	-3 ()	-4 ()

5.3.1 Specify: _____

5.3.2 How bothered or upset were you by this?

Not at all	A little	Moderately	Very much	Extremely	<i>Unknown</i>	<i>Refused</i>
0 ()	1 ()	2 ()	3 ()	4 ()	-3 ()	-4 ()

5.3.3 Any other problems?

<i>No</i>	<i>Yes</i>	<i>Unknown</i>	<i>Refused</i>
0 ()	1 ()	-3 ()	-4 ()

5.3.3.1 *Specify:* _____

5.3.3.2 How bothered or upset were you by this?

Not at all	A little	Moderately	Very much	Extremely	<i>Unknown</i>	<i>Refused</i>
0 ()	1 ()	2 ()	3 ()	4 ()	-3 ()	-4 ()

VITA

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Academic Honors

- 2003 – 2007 **American Psychological Association Minority Fellowship**
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Publications

- Castillo, L.G., Choi-Pearson, C., Conoley, C.W., Archuleta, D.J., VanLandingham, A.M., Pharmourath, M (2006). The importance of university environment: Explaining the relationship between Latino ethnic identity and persistence decisions. *Journal of Counseling Psychology*, 53(2), 267-271.
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