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Expectations of Nursing Home Use, Psychosocial Characteristics and Race/Ethnicity: The Latino/a Case

Heidi Ross
University of South Florida, hross@mail.usf.edu

Expectations of Nursing Home Use, Psychosocial Characteristics and Race/Ethnicity: The Latino/a Case

by

Heidi E. Ross

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Major Professor: Sara Green, Ph.D.
Elizabeth Aranda, Ph.D.
Elizabeth Vaquera, Ph.D.

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ABSTRACT

This study used data from the 2008 wave of the Health and Retirement Study to examine variations in relationships among selected psychosocial characteristics, race/ethnicity and expectations of nursing home utilization in the United States, with a particular focus on Latino/a subgroups. This study sought to test a modified version of the Andersen and Newman model of health service utilization. Findings revealed that expectations of nursing home utilization remained lower among Latino/as than in the Non-Latino White sub-groups, even when levels of need, enabling, and predisposing factors were controlled for. However, for Mexican Origin respondents (who are often arbitrarily combined with other individuals of various Latino nationalities as one homogenous group) never differed significantly from the White reference group. The inclusion of the selected psychosocial characteristics (attitudes towards one's own aging, personal mastery, religiosity, and perceived family support/ family satisfaction) increased the explanatory power of regression models tested. Having a high sense of personal mastery, as well as having a more positive attitude towards one's own aging, were associated with lower expectations of nursing home use. An important implication of this study is that the Latino/a population in the United States should not be treated as a homogenous, pan-ethnic group, particularly in regards to health service use. Also, psychosocial characteristics are relevant when considering expectations for nursing home use.

CHAPTER I

INTRODUCTION

The purpose of this study is to examine variations in relationships among selected psychosocial characteristics, race/ethnicity and expectations of nursing home utilization in the United States, with a particular focus on Latino/a subgroups. As the United States watches the baby boom generation beginning to enter retirement age, policy makers, families, and researchers have given increased consideration to the necessary long-term accommodations for this group. The 65 and older population in the U.S. is expected to increase from 40.2 million in 2010 to 72.1 million in 2030 (Administration on Aging 2010). With this rapid growth, the number of people expected to require health assistive services is also expected to increase. Indeed, the number of elderly people using long-term care services is projected to more than double- from eight million in 2000 to 19 million in 2050 (U.S. Department of Health and Human Services 2003).

At the same time, the population of the United States is becoming more ethnically diverse. In particular, the Latino/a population 65 years of age or older is projected to grow from 2.8 million in 2010 to 17.5 million in 2050 (U.S. Census Bureau 2012). Given the increasing size of the older Latino/a population, as well as a marked disparity in terms of formal long-term care utilization, it is imperative that we develop a better understanding of Latino/as' uses and perceptions of long-term care in order to work

towards a culturally appropriate delivery of care (Angel and Angel 1996; Angel, et al. 2003; Choi, 2006; Choi, 2011; Ruiz 2002; Torrez 1998; Wagner and Guendelman, 2000; Wells et al. 1989).

To date, little work has been done to investigate the ways in which ethnic subgroups within the umbrella term 'Latino/a' may vary with regards to long-term care plans. This is necessary, as recent reports have documented diverse health needs and disparities among residents from Mexican, Puerto Rican, Cuban, Dominican, and other Latino/a backgrounds (Zsembik and Fennell 2005; Hajat, Lucas, and Kington 2000). Because of the relative size of the Mexican Origin population in the United States, when studies do not disaggregate among Latino/a sub-group, findings are largely representative of the experiences and preferences of Mexican Origin individuals (who, in most surveys, comprise over half of the Latino respondents). This inadvertently masks the experiences and preferences of other Latino/a groups. In other words, what is known about the aggregated Latino population is, for the most part, representative of the Mexican Origin population, because of the large size of this subgroup's population.

Although there are many factors that come into play as individuals and families decide how the care needs of elders will be met, previous studies have suggested the importance of considering psychosocial characteristics when analyzing the use of formal care services among the elderly – particularly use of nursing home care (Bradley et al. 2002). Relatively little is known about how psychosocial characteristics, such as personal mastery, attitudes toward one's own aging, religiosity, and family satisfaction/perceived family support, might relate to expectations of nursing home utilization (that is, plans as opposed to actual usage). Understanding such expectations is important since ending up

in a long-term care setting that one did not expect to ever use may have negative consequences for elderly individuals and families. Even less is known about how psychosocial characteristics might help to explain the relationship between race/ethnicity and expectations of nursing home utilization.

The current research seeks to contribute to the academic discourse on factors related to long-term care utilization by examining the relationships among race/ethnicity, psychosocial characteristics, and expectations of nursing home utilization in the United States. Guided by an expanded version of Andersen and Newman's behavioral model of health service use, the current research proposes to address the following research questions with an analysis of the 2008 Health and Retirement Survey:

1. Do elderly members of racial/ethnic minority subgroups (specifically, Mexican Origin, Other Latino/a, and Black) differ from White elders with respect to their expectations for nursing home utilization (the chance that they will one day be cared for in a nursing home)?

2. Are psychosocial characteristics (specifically, personal mastery, attitudes toward one's own aging, religiosity, and family satisfaction/perceived family support) related to expectations for nursing home utilization among older people in general?

3. If so, do psychosocial characteristics help to explain (mediate/moderate) racial/ethnic differences in expectations for nursing home utilization – particularly in the case of Latino/a subgroups?

CHAPTER II

THEORETICAL ORIENTATION: MODELS OF HEALTH SERVICE UTILIZATION AND AGING IN THE CONTEXT OF LATINO/A FAMILIES

This chapter describes the general theoretical model of health service utilization that will guide my analyses. It then describes an expanded model that includes psychosocial characteristics. Finally, this chapter explores some psychosocial characteristics of Latino/a families that might influence attitudes toward nursing home utilization.

Andersen and Newman Model of Health Service Utilization

Andersen and Newman's behavioral model is the most widely used model by the medical care utilization literature. Ronald M. Andersen originally developed the behavioral model of health service utilization in the 1960s as part of his dissertation (Andersen 1995). As one of the most frequently used models in the health care research field, it has been widely critiqued, revised, and expanded (see for example, Aday and Awe 1997; Andersen 1996; Andersen and Newman 1973; Bradley et al. 2002; Mechanic 1979; Portes, Kyle, and Eaton 1992; Wolinsky 1978). The purpose of this model is to explain the use of formal acute and primary medical services. The model predicts that an individual's use of health services is influenced by three sets of factors: (1) *predisposing characteristics*, (2) *enabling characteristics*, and (3) *need* (Andersen 1995).

Predisposing characteristics are those that are associated with the individual's tendency or likelihood to need and use services. Within these are demographic factors, such as age, which may biologically predispose the individual to need health care; social structural factors which influence the person's status within the community; and health beliefs, which are the "attitudes, values and knowledge that people have about health and health services that might influence their subsequent perceptions of need and use of health services" (Andersen 1995: 2). *Enabling characteristics* are the resources that make health services more readily available to the consumer, at both the community and personal level (Andersen 1995). *Need* is the perceived and/or diagnosed existence of illness, impairment or other health condition. The outcome of these predisposing, enabling, and need-based factors is the measurement of the utilization of formal health services (Andersen 1995).

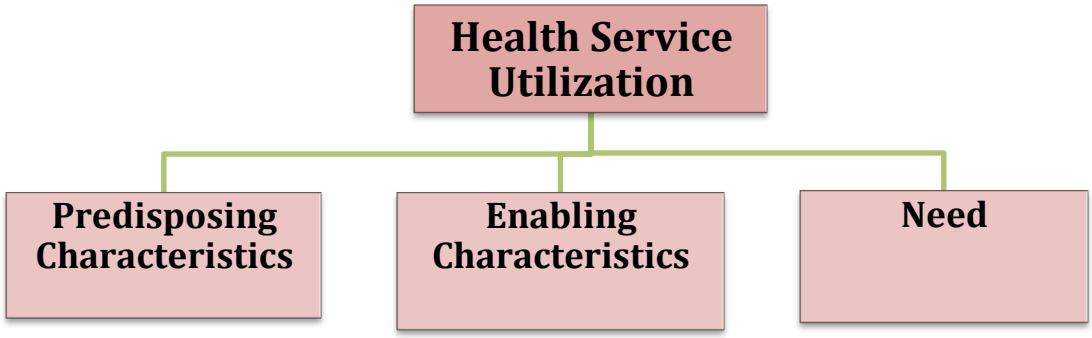

Figure 1. Andersen's Behavioral Model of Service Use (adapted from Andersen 1995

The Importance of Psychosocial Characteristics: An Expanded Model

The current research uses an expanded version of the Andersen and Newman model that is more closely suited to the patterns of long-term care use (Bradley et al.

2002). In its expanded form, the model has been widely used to predict the utilization of long-term care (Bradley et al. 2002; Wallace et al. 1998). However, because this model was designed with acute and primary care in mind (i.e. physicians, hospitalization, etc.), adaptations are necessary when considering the utilization of long-term care (Bradley et al. 2002). For the purposes of this research, long-term care (LTC) will be used as an umbrella term to describe "a variety of services and supports provided by unpaid (informal) and paid providers that concentrates on helping individuals to function as well as possible and to maintain their lifestyles in the face of disability" (Stone 2006: 397). Long-term care decisions involve not only where and from whom needed assistance will be received, but also where and with whom individuals live, eat and socialize. In addition, long-term care, as the name suggests, is a long-term commitment, and can be highly personal in nature. Because of these factors, the role of attitudes and perceptions may play a more important role when it comes to the decision to utilize formal services such as nursing facilities or home care, as opposed to the decision to seek treatment from a primary physician.

The Andersen and Newman framework has been criticized for lacking a component related to family characteristics, the role of informal support, and culture (Bass and Noelker 1987; Herrera et al. 2008). According to Bass and Noelker, the lack of a family characteristics component when considering long-term care use of the elderly "is perplexing when the strong relationship between the presence or absence of an informal support network and the aged's use of formal services is considered" (1987: 185).

In response to this call for individual context, Bradley et al. (2002) have developed an expanded version of the behavioral model. The authors suggest that there

are several aspects of the model that can be improved upon when examining ethnic variations in related to long-term care. Of particular relevance for this project are the following: 1) Bradley et al. argue for the inclusion of psychosocial characteristics in to the model; and 2) Bradley, et al. (2002) suggest that intended or expectations for use of long-term care might be the more important dependent variable to examine. As a result of the level of commitment associated with the utilization of formal long-term care services, there is likely much more intention and planning that plays in to utilization patterns. For this reason, the model set forth by Bradley et al. (2002) analyzes intended use as a precursor to actual use. Akamigbo and Wolinksy (2006) offer evidence for the appropriateness of this strategy, suggesting that expectations for long-term care use are a significant predictor of actual use. Thus, it can be expected that understanding factors that predict the expectation that one will be cared for in a particular setting can help predict future patterns of utilization. Examining expectations of nursing home utilization in particular has the advantage that it can be measured before a persons' health declines to the point of actual institutionalization – at which point, the individual may no longer be able to answer questions about their preferences.

Building on suggestions by Bass and Noelker (1987), Herrera et al (2008) and Bradley et al (2002), this study examines the predictive ability of psychosocial characteristics (specifically, personal mastery, attitudes toward one's own aging, religiosity, and family satisfaction/perceived family support) as well as predisposing, enabling and need characteristics in relationship to the expectation that one will someday be cared for in a nursing home. Because of this study's particular emphasis on Latino/a

elders, in the next section of this chapter, I explore some of these psychosocial characteristics, as well as the context of aging in Latino/a families.

Psychosocial Characteristics and Aging in the Context of Latino/a Families

As discussed above, there is much diversity among the umbrella group of "Latino/a," as it represents people of several different countries, multiple continents, and varying racial, religious, and socioeconomic classifications. Many differences have been found among Latino/a subgroups, particularly within health research (Hummer, Rogers, Amir, Forbes and Frisbie 2000; Zsembik and Fennell 2005), and use of a pan-ethnic label for Latino/as has been cautioned. However, research has suggested that among most Latino/a groups, there is a strong prioritization of familial ties and obligations (Sotomayor and Applewhite 1988), which will henceforth be referred to as "familism" (John, Resendiz, and Vargas 1997), which is characterized by a sense of duty, reciprocity, and solidarity to the nuclear family unit (Steidel and Contreras 2003). Villarreal, Blozis, and Widaman (2005) report evidence that "this particular type of familism is core to U.S. Hispanics and is stable regardless of one's country of origin or language preference" (2005: 421).

When looking at decisions regarding long-term care and caregiving, familism can be extremely influential. Some researchers have suggested that the strong familial interconnectedness said to be common to families of Latino/a origin (Sotomayor and Applewhite 1988; Purdy and Arguello 1992) may be a motive in deciding to take on the role of primary caregiver for a loved one in the event of disability or declining health (Herrera, Lee, Palos and Torres-Vigil 2008; John et al. 1997; Purdy and Arguello 1992). One of the components of familism includes the expectation that family interests will be

put before those of individuals, even if this is costly to the individual. For women, this may mean taking on the role of full-time caregiver, sometimes despite the recommendation of a professional that a loved one should be placed within a formal care setting (John et al. 1997), or even negative health consequences to the caregiver (Neary and Mahoney 2005).

Indeed, an important part of familism is the idea of intergenerational reciprocity and *perceived support from children*. To care for a parent or loved one until the end is viewed as a way to give back to them for their own years of caretaking. Neary and Mahoney quote a participant as having explained, "'It's part of our culture-to be there until the end'" (2005: 168). The strength of this familial duty plays an influential role in care setting decisions. For example, among a sample of Latino/a caregivers in the San Diego area, Herrera et al. (2008) found that a higher degree of familism was associated with lower rates of formal long-term care services use. Filial closeness is likely an important factor to consider when investigating the arrangements of caregiving.

Although familism is considered to be a value associated with Latino/a families, consensus on whether familism is more prevalent in Latino/a than Non-Latino/a subgroups is not complete. Schwartz (2007), for example, tested attitudinal measures of familism across a sample of Hispanic, non-Hispanic White, and non-Hispanic Black respondents, and found no significant differences in collectivist attitudes among the groups, suggesting that familism is not an attribute limited to Hispanic culture. Schwartz hypothesizes that groups typically considered individualist (e.g. non-Hispanic White Americans) could resemble collectivist groups in some dimensions, such as family prioritization. Regardless, this family-first value is likely to play a role in many other

facets of life, including career trajectories, family formation patterns, and personal views and attitudes towards the life course.

Research also suggests that social and cultural forces may help shape individual *attitudes towards one's own aging* (Beyenne, Becker, and Mayen 2002). As it pertains to many Latin American cultures, old age is something to be valued and respected. According to Beyenne, Becker, and Mayen, "In Latino culture, old age is perceived as a period of reward for a life lived according to one's cultural values" (2002:160). In Beyenne et al.'s (2002) study of Latino/a elders, participants generally had positive attitudes towards aging. However, these attitudes seemed to be dependent upon family interaction and closeness. As the authors explain,

> Those who expressed unsatisfactory family relations defined their health status as poor even if their health problems were minor. They felt lonely, and perceived old age as a very sad phase of their life. Those who had satisfactory family relationships defined their health status as good to excellent, and perceived aging as a blessing and a gift from God, even when they were housebound due to their illness. (P.160)

Additionally, Beyenne et al. describe that, among this sample of Latino/a elders, *religiosity* plays in important role in holding a positive view of aging. This includes the influential aspects of spirituality, as well as feelings of connectedness to the community.

Familism and attitudes towards one's own aging can be expected to relate closely to attitudes towards long-term care – including *expectations of nursing home utilization*. For many Latino/a families living in the United States, institutionalized care services for the elderly may be cast in a negative light (John, Resendiz, and Vargas 1997; Neary and Mahoney 2005; Herrera et al. 2008). For example, John et al. (1997) report that, in focus groups of Mexican American caregivers, respondents expressed a strong aversion to using institutionalized care services, such as nursing homes. According to this study,

those that did use nursing homes, even temporarily, described being met with anger and judgment by fellow family members. In one instance, when a woman placed her husband in a nursing home for two weeks, her daughter felt that her mother's loyalty as a wife had been violated: "…when she did that, the whole family was mad. Including me, you know, we were mad at her 'cause why? He's your husband, you're supposed to take care of him'" (p.154). Families are often distrustful of nursing home care, based on negative personal, or word-of-mouth experiences with them (Herrera et al. 2008).

Similarly, Neary and Mahoney (2005) describe that the participants in their study of dementia caregivers "viewed nursing home placement as a breach of their familial duty and as an option of last resort" (p.168). John et al. explains that, in the opinions of caregivers, "the nursing home represented the failure of family care and the failure of family caring" (1997: 151). However, research has suggested a theme of more positive attitudes regarding formal supports, such as personal care assistance, home health aides, and homemaker services (Herrera et al. 2008; Neary and Mahoney 2005) as a type of supplement to informal family caregiving. The current study adds to this body of literature on long-term care by examining expectations of nursing home use in a sample with racially and ethnically diverse subgroups.

Summary

The current study is guided by the suggestions of Bradley et al. and others that psychosocial characteristics (including family variables such as family satisfaction and perceived support from children) should be incorporated into the Andersen and Newman behavioral model of health service utilization and the literature on aging within the context of families. The study compares Mexican Origin, Other Latino/a and Black elders

to White elders in terms of expectations concerning use of nursing home services. It also examines the degree to which psychosocial characteristics (personal mastery, attitudes toward one's own aging, religiosity, and family satisfaction/perceived family support) help to explain (mediate) racial/ethnic differences in the expectation that one will someday be cared for in a nursing home. In addition, it explores whether racial/ethnic group membership moderates the relationship between psychosocial characteristics and expectations of nursing home use – whether the relationship varies by ethnic group.

Thus, this study seeks to build on Bradley et al.'s work in several ways: 1) It focuses on long-term care expectations; 2) it considers psychosocial characteristics in the model, and; 3) it examines interrelationships among ethnicity and psychosocial characteristics. The next chapter builds on this framework by reviewing literature related to each variable in this model – with special emphasis on what is currently known about possible relationships between predisposing, enabling, need and psychosocial characteristics and long-term care utilization and/or expected use in Latino/a subgroups.

CHAPTER III

LITERATURE REVIEW

This chapter reviews current research related to long-term care utilization, with particular attention paid to research on the tested variables in this study: race and ethnicity, need, predisposing characteristics, enabling characteristics, and the selected psychosocial characteristics (personal mastery, attitudes toward one's own aging, religiosity, family satisfaction/perceived family support). This chapter also discusses the relevancy of expectations of nursing home use, as it pertains to social research.

Use and Expectations of Use of Long-term Care for the Elderly

The term "long-term care" in itself has a wide range of meanings, as it is used as an umbrella term for a spectrum of services in the existing literature. As noted in the previous chapter, long-term care (LTC) term used to describe "a variety of services and supports provided by unpaid (informal) and paid providers that concentrates on helping individuals to function as well as possible and to maintain their lifestyles in the face of disability" (Stone 2006: 397). These services are designed to assist with activities of daily living (ADLs) - dressing, bathing, and eating to name a few - and instrumental activities of daily living (IADLs), such as household chores, finance management, and transportation.

Informal long-term care "frequently involves intense participation by family members, particularly wives and adult daughters, as providers and decision makers" (Stone 2006: 397). Of non-institutionalized older adults with care needs, 67 percent rely exclusively on unpaid, informal assistance for long-term care (Stone 2006). Older adults who receive informal caregiving typically have a primary caregiver who provides the bulk of the assistance. Stone (2006) reports that nearly 75 percent of primary caregivers are women, and that adult children and spouses make up 36 and 40 percent of primary caregivers, respectively.

Formal long-term care services can take place in a variety of settings often determined by the preferences, financial situation, and level of the recipient's' needs. The general categories for long-term care services include nursing homes, residential care, adult day care, and home care (Stone 2006). Each will be discussed below.

Nursing facilities are the institutionalized setting for long-term care, and provide ADL and IADL assistance, as well as high levels of medical care, for those who can no longer be cared for in their own home or community (Stone 2006; Centers for Medicare & Medicaid Services 2009). Residential care is a type of non-institutionalized community-based care that "tends to be regarded as an option for individuals who may not need nursing home assistance but who can no longer remain in their own homes. It is often seen as a substitute for living at home and as the next step in a downward trajectory toward nursing home placement" (Stone 2006: 404). Residential care is typically in the form of congregate living arrangements which provide 24-hour supervision, organize recreational activities, and provide assistance to the resident. Residential care may include board and care, assisted living facilities (ALF), or adult foster homes (Stone

2006). Although these terms are not consistently used throughout this literature, board and care generally refer to facilities within the community whose primary purpose is to oversee individuals with a functional disability, and provide one to two meals a day. Assisted living is similar to board and care, although ALFs tend to be larger, and assist in the arrangement of ADL care and nursing services (Stone 2006). Adult foster homes typically have very few residents (approximately three to six), and take place within a private home. The owner of the home, who is in charge of cooking, housekeeping, and personal care, provides the services (Stone 2006).

Adult day care is another form of care that takes place in a community-based setting. Adult day centers may follow the medical model of care, the social model of care (which offers no health services), or a combination of the two (Stone 2006). These centers are typically open Mondays through Fridays during normal business hours, and "provide an array of services such as therapeutic activities, health monitoring, social services, personal care services, meals, transportation, nursing services, medication management, emergency respite, and caregiver support services" (Stone 2006: 406). Home care involves a variety of long-term health and home care services that a person can receive in their own homes. Home care typically consists of skilled nursing care and assistance with ADLs and IADLs (Stone 2006). Other home care services are as follows: homemaker/health aides, personal care aids, respite care, medical equipment assistance, home repair and modification, and hospice (Centers for Medicare & Medicaid Services 2009).

With such a wide variety of services, it is difficult to synthesize all of the factors that predict the utilization of particular long-term care services; however, Borrayo et al.

(2002) attempt to do just this. Using the Andersen and Newman behavioral model of health services use, the authors analyze the characteristics affecting the utilization of nursing facilities, assisted living facilities, or home/community-based long-term care of 1,968 consumers aged 60 and older. They found that those with greater need characteristics, such as a diagnosis of Alzheimer's disease and higher levels of ADL limitations, were more likely to receive care from the most skilled care settings, such as nursing facilities and assisted living facilities. Two enabling characteristics important to utilization without regard to need characteristics were Medicaid eligibility and residential region of the state.

Although studies similar to Borrayo et al. (2002) are important for understanding long-term care use trends, recent developments in this field have seen increased consideration given to the role of expectations of long-term care utilization (Akamigbo and Wolinsky 2006; Holden, McBride, and Perozek 1997; Taylor, Osterman, Acuff, and Østbye 2005). Arguably, no one wants to require long-term care services. However, in the event of physical and mental decline, it can become a realistic option. Looking at these patterns of long-term care expectations is important, because it speaks to the way people plan for the possibility of impairment in old age. As far as predicting actual nursing home placement, this measure of expectations has proven to be helpful: In a longitudinal analysis of the survey of Assets and Health Dynamics Among the Oldest Old, Akamigbo and Wolinsky (2006) documented a significant relationship between expectations for nursing home placement and actual nursing home placement.

The factors that influence nursing home expectations appear to be similar to those cited in the literature on actual nursing home placement. Holden, McBride, and Perozek

(1997) report that need-related variables (such as health status) and living arrangements help to explain long-term care expectations. Similarly, Akamigbo and Wolinsky (2006) found that age, gender, levels of education, health conditions, and social support were associated with expectations of nursing home placement. Thus, predisposing, enabling and need characteristics have been shown to predict expectations of nursing home use as well as actual nursing home placement.

Race and Ethnicity

In recent years, studies have demonstrated that there are variations in the patterns of both formal and informal long-term care service use based on race and ethnicity (Cagney and Agree 1999; Mui and Burnette 1994; Wallace et al. 1998; Weiss, et al. 2005). The utilization of long-term care facilities is one of the areas of health care with the greatest variations based on race and ethnicity, with older Latino/as significantly underrepresented in rates of formal long-term care utilization, despite similar rates of need (Wallace, Levy-Storms, Kington, and Andersen 1998). On average, Latino/a elders tend to use less formal, institutionalized support than non-Latino/a elders, even when socio-economic status and education are controlled for (Kemper 1992; Mui and Burnette 1994; Wallace et al. 1998). Additionally, older Latino/as are less likely to utilize formal in-home services, such as in-home functional assistance, than non-Latino/a White elders (Wallace, Levy-Storms, and Ferguson 1995). Findings from the 1993 AHEAD study indicate that Latino/a elders receive more hours of informal caregiving support than non-Latino/a White and African-American elders (Weiss et al. 2005).

Answering the question of exactly why there are such diverse patterns of long-term care use is a bit more problematic. This may be due to the cultural preference of

Latino/as to rely on informal, family care for support. In the event of physical decline, foreign-born Hispanic elders tend to express a preference for living with, and receiving care from, their adult children over formal, institutionalized care (Angel et al. 1996). In a study of caregiver preferences, Min and Barrio (2009) found that, in the event of a hip fracture, a smaller proportion of Mexican-Americans than non-Latino/a Whites would prefer to rely on professional caregivers; when compared to the non-Latino/a White group, a significantly larger portion of the Mexican-American group said they would prefer to rely on informal caregivers – though the reason for this preference is not entirely clear from previous research. In order to address these trends, this section reviews the recent literature regarding need, enabling, and psychosocial characteristics, and how these may translate in to intended and actual use of formal long-term care services.

Need

Need characteristics, which are the perceived and/or diagnosed existence of illness, impairment, or other health condition, are the biggest predictor of formal long-term care - those with a greater need for care are generally the most likely to receive it (Kemper 1992; Wallace and Lew-Ting 1992; Wallace et al. 1995). In the case of long-term care utilization, inability to independently perform activities of daily living (ADLs) such as bathing, dressing, toileting, eating and getting in and out of bed or instrumental activities of daily living (IADLs) such as managing money, housekeeping, cooking, shopping and using transportation a primary determinant of need. In a survey of disabled elderly, Kemper (1992) found that a greater number of ADL and IADL limitations was associated with a greater probability of receiving formal care assistance.

Indeed, when looking at rates of formal long-term care utilization, the disparities based on racial and ethnic groups are not for lack of need. Although subgroups of older Latino/as have lower mortality rates than non-Latino/a Whites for heart disease, cancer, or stroke (Wallace and Villa 2003), they do not have such advantages across health indicators. Latino/a elders experience similar rates of chronic disease when compared to their non-Hispanic White counterparts, and suffer higher rates of diabetes (Gallant, Spitze, and Grove 2010). The rate of mortality for diabetes among older Latino/as is nearly double that of the general population (Wallace and Villa 2003). Additionally, Latino/a elders have higher rates of activity limitations when compared to non-Hispanic White elders (Wallace and Lew-Ting 1992).

When one disaggregates the patterns of health care utilization and health outcomes among Latino/a subgroups, there are significant differences among them (Hajat, Lucas, and Kington 2000; Hummer, Rogers, Amir, Forbes, and Frisbie 2000; Zsembik and Fennell 2005). In an analysis of health outcomes among Latino/a subgroups in the 1997-2001 National Health Interview surveys, Zsembik and Fennell (2005) found that Mexican respondents had a distinct health advantage compared to White respondents in the survey, particularly in terms of the number of chronic diseases. Puerto Rican respondents, however, had worse measures of health with regards to chronic medical conditions (including hypertension, heart disease, stroke, emphysema, cancer, and diabetes), physical functioning impairments, and self-rated health. Cuban and Dominican respondents reported lower self-rated health, and mixed health advantages and disadvantages in terms of chronic conditions and functional impairments. These results are supported by other reports (Hajat, Lucas, and Kington 2000; Hummer et al. 2000),

particularly the finding that people of Mexican Origin living in the US have a comparatively good health status, despite having a low overall socioeconomic status. It is evident that there is much heterogeneity within the umbrella of 'Latino/a,' particularly in terms of health needs. Accordingly, Zsembik and Fennel (2005) stress the importance of avoiding the use a pan-ethnic Latino/a label within health research.

Even within nursing home facilities, it appears that differences exist in regards to the physical condition of the residents. A cross-sectional survey of 17 nursing homes in South Texas found that Mexican American nursing home residents had greater numbers of Activities of Daily Living limitations, and were overall more functionally dependent, than the non-Hispanic White residents (Mulrow et al. 1996). In this study, Mexican American residents also had more medical conditions than non-Hispanic White residents, including cerebrovascular disease, infections, diabetes, hypertension, and anemia. Although it is likely that these Mexican American residents were starting off their stay at the facility with more chronic diseases, Mulrow et al. can only speculate as to why, stating "it is possible that Mexican American caregivers and families had differing thresholds of caring for frail elders than non-Hispanics and that they waited until their older family member was sicker and more functionally disabled before they admitted him or her to a nursing home" (1996: 283).

Enabling Characteristics

Enabling or structural factors (the resources that make health services more readily available to the consumer) that have been found to influence service use are income, Medicaid eligibility, and the availability of services (Bass and Noelker 1987; Kemper 1992; Wallace et al. 1998). Indeed, the role of Medicaid as a predictor of long-

term care utilization is an important one to discuss. In 2004, Medicaid accounted for 35 percent of all long-term care spending (Congressional Budget Office 2004), the largest source of long-term care financing in the United States (Stone 2006). According to Stone, this "jointly federal-state funded, state-administered health insurance program for the poor is required to provide coverage for nursing home care for older people who meet certain financial eligibility requirements ([because they are low income and have negligible assets])" (2006: 401).

Other sources of long-term care financing typically include out-of-pocket spending, Medicare, and private long-term care insurance (Congressional Budget Office 2004). According to the Congressional Budget Office (2004), out-of-pocket spending accounts for nearly one third of long-term care spending, or approximately $5,000 per disabled senior for the year 2004. Medicare, although designed to finance acute and primary care, may provide coverage of long-term care skilled nursing facilities, home health care services, as well as the first 20 days of care in a nursing facility after a hospital stay that lasts at least 3 days (Kaye, Harrington, and LaPlante 2010; Stone 2006). The Congressional Budget Office reports that Medicare accounted for 25 percent of the share of long-term care spending in 2004 (Congressional Budget Office 2004).

Private long-term care insurance has become more popular since the 1980s when insurance companies began to market them to a nationwide audience (Stone 2006). As Stone says, "purchasing long-term care insurance is, in theory, a much more reasonable option than saving for long-term care, as one is likely to save either too much or too little, neither of which is an efficient or satisfactory strategy" (2006: 402). However, in 2004, private insurance only accounted for 4 percent of long-term care spending (Congressional

Budget Office 2004). Private insurance policies for long-term care generally cover costs for nursing homes and community-based care, with a maximum benefit of about $100 to $150 per day (Congressional Budget Office 2004). The owner of this type of insurance generally becomes eligible when they reach a certain standard of impairment, such as two to three ADL limitations. The average cost of long-term care private insurance annual premiums in 2002 was $2,014 (Congressional Budget Office 2004).

Indeed, paying the bill for long-term care is a costly expenditure, at both the federal and individual levels. National spending on long-term care amounted to approximately $135 billion in 2004 (Congressional Budget Office 2004). Estimates report that in 2004 the median monthly payment for long-term care services received at home totaled approximately $795; for each nursing home resident, including contributions from all sources, the median monthly payment is approximately $4,230 (Kaye, Harrington, and LaPlante 2010).

Additionally, knowledge of the available services and awareness of Medicaid coverage have been factors that may deter service use (Herrera et al. 2008). Indeed, in a study of Mexican American family caregivers, Herrera, Lee, and Torres-Vigil (2008) found that knowledge of services and the referral of a primary care provider were significant predictors of the use of long-term care services. According to the authors, "Mexican American family caregivers are not only in need of but are also inclined to participate in long-term care services when empowered with adequate knowledge of and access to such resources" (2008: 158). In Min and Barrio's (2009) study, sixty-five percent of the caregivers reported that they did not know whom to contact in order to get more information on long-term care services.

Psychosocial Characteristics

For the purposes of this study, psychosocial characteristics include: personal mastery, attitudes toward one's own aging, religiosity, family satisfaction/perceived family support. These characteristics were selected because they are both consistent with suggestions of previous research and available in the data set being used for this project.

Personal Mastery. Personal mastery may be defined as one's sense of agency in accomplishing goals. High levels of perceived control have been shown to be mediators to certain markers of health and life satisfaction (Lachman and Weaver 1998; Pearlin and Schooler 1978; Skinner 1996). For instance, having a high level of personal mastery can serve as a type of buffer to the effects of emotional and physical stressors (Neupert, Almeida, and Charles 2007). The role of one's perceived control over major life circumstances has been given much consideration over the years, particularly as a predictor of long-term well-being in adulthood and old age (Bradley et al. 2002; Lachman and Weaver 1998; Neupert, Almeida, and Charles 2007; Skinner 1996). In an analysis of health outcomes across social class groups, Lachman and Weaver (1998) found that higher perceptions of control played a mediating role between subjective health and income. For example, respondents in the lowest income level who had high perceptions of control had similar health outcomes when compared to respondents in the highest income group. Perceived control can also play a role when looking at how people cope with stress in everyday life. For example, Neupert, Almeida, and Charles (2007) looked at the emotional and physical reactions to daily stressors based on age and control beliefs. For the participants in this study, higher levels of perceived mastery and lower levels of perceived constraints were associated with less reactivity to emotional and physical

stressors. Such studies suggest the importance of perceived control when looking at levels of health. Bradley et al. (2002) also suggests that beliefs related to control, and the role of choice, are necessary to consider when researching intended use of long-term care. If one believes that they have a degree of agency over the major events in their lives, it follows that these attitudes would also be related to their expectations for nursing home use, as well as other long-term care arrangements. However, this assumption may differ for those who identify as Latino/a, since a sense of control may not have the same meaning and importance between Western and non-Western cultures. According to Aranda and Knight (1997), "non-Western cultures define the self as embedded in social roles and [are] less likely to view individual control of others and situations as part of his or her coping repertoire." A sense of control warrants measure in regards to nursing home expectations, particularly among Latino/a elders. It is likely that this perceived control over major life circumstances could be related to religiosity, and the sense that there is a divine plan, which will be discussed next.

Attitudes toward One's Own Aging. Research on the role of self-perceptions of aging has shown that these attitudes are significantly related to physical and mental health outcomes (Holahan, Holahan, Velasquez, and North 2008; Levy, Slade, and Kasl 2002; Levy, Slade, Kunkel, and Kasl 2002; Sarkisian, Prohaska, Wong, Hirsch, and Mangione 2005). In a 23 year longitudinal study, Levy, Slade, Kunkel, and Kasl (2002) found that respondents who reported positive self-perceptions of the aging process throughout the data collection process lived an average of 7.5 years longer than those who reported negative attitudes. Additionally, in a study of the Ohio Longitudinal Study of Aging and Retirement, Levy, Slade, and Kasl (2002) found that, over time, adults with

more positive views on aging had better overall functional health (i.e. household chores, general mobility, ability to do everyday activities), even when self-rated health was controlled for. Similarly, Sarkisian et al. (2005) found that more negative perceptions of aging were associated with low levels of physical activity. This research makes clear the idea that attitudes about the aging process are not completely independent of crucial outcomes in later life, particularly in reference to health and well-being. However, the available research leaves a want for the consideration of aging self-perceptions when it comes to long-term care planning. It is important to have an understanding of the relationship between self-perceptions of aging and nursing home expectations, particularly as it relates to Latino/a families. Previous literature has suggested that families of Latino/a origin place value on the aged, particularly in terms of respect and obligation (Beyenne, Becker, and Mayen 2002). If these perceptions of aging are reflective of cultural values, they may help to explain potential discrepancies when it comes to intended and actual use of nursing homes.

Religiosity. Religiosity and involvement in organized religion have been shown to have a relationship with health and well-being (Levin and Markides 1986; Levin and Chatters 1998). In an analysis of three national surveys, Levin and Chatters (1986) found support for the idea that religiosity is associated with health and well-being among older adults. Religiosity may also be related to views of aging, among some populations. In their study of in-depth interviews with Latino/a elders, Beyenne, Becker, and Mayen (2002) found that having a strong faith in God was particularly influential on their attitudes towards aging. The authors report the following:

> Latino elderly credited their success in life to their strong faith in God, and thanked God for answering their prayers. Those who seemed disappointed at this

> stage of their life also relied on their faith in God to comfort them. Old age is considered a gift of God, and even when people were not feeling well (P.163).

Given that religiosity seems to be closely tied with physical and mental well-being as well as attitudes, it is important to investigate the existence of any possible relationships between religiosity and intended long-term care use. As discussed above, the belief in a divine plan may be related to perceptions of control, where God determines major life events. Religiosity was found to predict health service use, and the inclusion of religiosity and other cultural values increased the utility of the Anderson model of health service use when looking at patterns of long-term care utilization among a sample of Mexican American caregivers (Herrera, Lee, Palos, and Torres-Vigil 2008). The current study seeks to further test this idea.

Family Satisfaction/Perceived Family Support. For many people, the perceived presence of a supportive family unit, as well as being satisfied with such support, can play an important role in the long-term care decision-making process, as well as other health-care related aspects. Research has suggested that among older adults, the availability of social support can help to ameliorate the effects of certain health outcomes (Berkman 1984; Peek et al. 2012). Explanations for this include the availability of assistance in the form of provided goods (food, money, transportation), having a confidant with whom to express feelings and seek advice, as well as links to outside ties that may provide access to information and resources (Berkman 1984). When considering long-term care options in the event of illness, having a supportive social network can represent assistance, advice, and potentially, a caregiver. As discussed in Chapter 2, the literature suggests that the lower rates of nursing home utilization may be due to a greater reliance on family caregivers, which may be related to having a strong sense of familial

obligation. With this in mind, it is important to test the role of family and social support in nursing home expectations and planning, especially as it pertains to older Latino/a individuals.

Somewhat paradoxically, however, Wallace et al. (1998) found that, among Latino/a elders, having their adult children living nearby predicted more nursing home use. In regards to this finding, the authors suggest that: "[e]lderly Latinos' children may act as service brokers, arranging and perhaps paying for functional assistance. Latinos' children may be particularly important because of their English-language abilities, better knowledge of possible services, and higher incomes" (1995: 974).

Summary and Research Questions

Based on this body of previous research on intended and actual use of long-term care, it clear that psychosocial characteristics may play a role in the relationship between ethnicity and expectations for nursing home use. There is evidence to support the idea that ethnic groups may vary on psychosocial characteristics that might in turn be related to expectations of nursing home utilization including: personal mastery, attitudes toward one's own aging, religiosity, and family satisfaction/perceived family support.

In order to evaluate whether the addition of psychosocial characteristics to the Andersen and Newman model helps to explain racial/ethnic differences in expectations for nursing home utilization, the current research proposes the following research questions:

Research Question 1a. – Do elderly members of racial/ethnic minority and Latino subgroups (specifically, Mexican Origin, Other Latino/a, and Black) differ from White

elders with respect to their expectations for nursing home utilization (the chance that they will one day be cared for in a nursing home)?

Research Questions 1b. Do differences in *need, predisposing* and, *enabling characteristics* explain (mediate) racial/ethnic differences in expectations for nursing home utilization? That is, when *need, predisposing,* and *need* are controlled, is the relationship between race/ethnicity and the expectation that one will someday be cared for in a nursing home no longer significant?

Research Question 2. Are psychosocial characteristics (specifically, personal mastery, attitudes toward one's own aging, religiosity, and family satisfaction/perceived family support) related to expectations for nursing home utilization among older people in general? That is, when *race/ethnicity*, *need*, *predisposing* and *enabling* characteristics are controlled, do these psychosocial characteristics predict the expectation that one will someday be cared for in a nursing home?

Research Question 3a. Do *psychosocial characteristics* explain (mediate) the relationship between race/ethnicity and expectations for nursing home utilization (over and above the effects of *need*, *predisposing*, *enabling characteristics*)? That is, when *need*, *predisposing*, *enabling characteristics* and *psychosocial characteristics* are controlled, is a previously significant relationship between race/ethnicity and the expectation that one will someday be cared for in a nursing home no longer significant?

Research Question 3b. Are *psychosocial characteristics* more important to the expectations that one will someday be cared for in a nursing home in some racial/ethnic groups than in others? Do they moderate the relationship between race/ethnicity and expectations for nursing home use? That is, do any or all of the interaction terms for

race/ethnic categories and psychosocial characteristics contribute to the model's ability to predict expectations that one will someday be cared for in a nursing home?

CHAPTER IV

METHODS

Data

The current study utilizes data from the Health and Retirement Study (HRS). The Health and Retirement Study is a national longitudinal survey of adults aged 50 and older living in United States, and is sponsored by the National Institute on Aging (NIA). At its inception in 1992, this study was designed to examine older adults' experiences of aging and retirement, with particular consideration given to health insurance, work history, economics and finances, and physical, mental, and social well-being. The first wave of the Health and Retirement study was collected in 1992, and comprises the core sample of the HRS. This includes 12,652 community-dwelling adults between the ages of 51 and 61. In 1998, the Health and Retirement study was merged with the Asset and Health Dynamics among the Oldest-Old Study (AHEAD), a national survey of respondents who were born in 1923 or earlier. Follow-up interviews have been conducted every two years since 1998, with the latest wave from 2010 being released late in 2011.

The current study uses data from wave 9 of the Health and Retirement Study, which was collected in 2008, and released as a final version in 2010. This wave consists of data from original respondents, re-interviews, and additional cohorts, bringing the total number of cases to 17,217 respondents. The response rate for the initial wave in 1992 was 81.6 percent; for wave 9 in 2008 the response rate was 88.6 percent.

A key feature of the HRS is that it oversamples for Black and Latino/a populations, in order to support research on racial and ethnic disparities. Additionally, the Health and Retirement Study data set includes: the Leave-Behind Questionnaire which provides measures of psychosocial characteristics (including personal mastery, social support, religiosity, and attitudes toward one's own aging). The Leave-Behind questionnaire left for a random sample of participants who had already completed the 2008 face-to-face core interview. Upon completion, participants were asked to mail the questionnaire to the HRS field office at the University of Michigan. This questionnaire was not left for institutionalized participants. The Leave-Behind portion is, therefore, ideal for the purposes of this research.

Sample Specifications

Overall, the total sample used in the present study consists of participants in the Leave-Behind questionnaire who also answered the question regarding expectations for nursing home use in another portion of the general HRS study. Because the item regarding nursing home expectations excluded participants younger than 65, as well as people already residing in nursing homes (explained in further detail below), the sample used is limited to those 65 and older who were not residing in a nursing home at the time of data collection. The sample relevant for this study consists of 4,044 respondents who are 65 or older and do not reside in a nursing home.

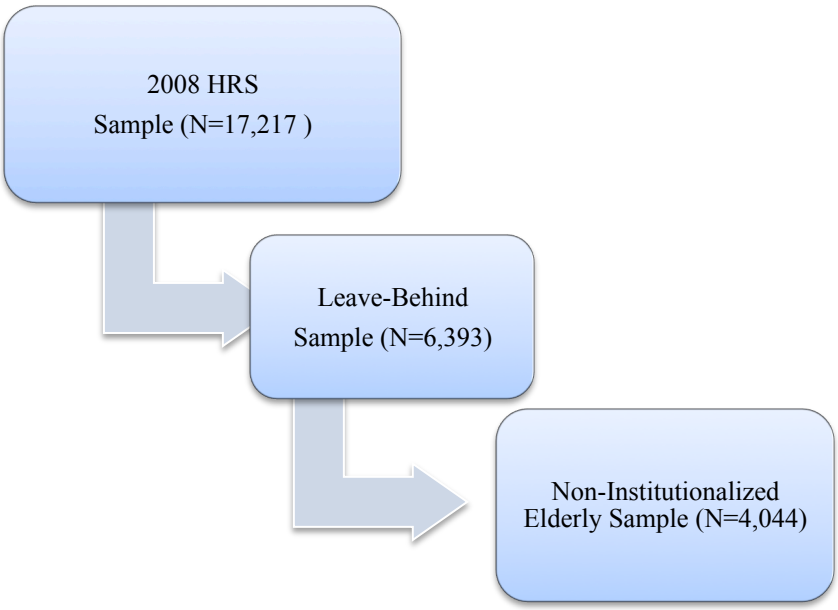

Figure 2. Sample Specifications

Limitations

There are a several limitations to the data set being used for the purposes of the current research. Most importantly, there is no information regarding country of origin available for respondents who identified as 'Other Latino/a.' There may be great variation among respondents depending on their country heritage, which the current research was unable to explore. Also, the data set lacked information on citizenship and legal residency status, as well as data on literacy and language proficiency. These variables could help to account for potential variations based on race and ethnicity. Additionally, the samples of respondents who identified as Black, Mexican Origin, and Other Latino/a, were quite small in comparison to the sample of those who identified as Non-Latino/a White. Having a larger number of these minority subgroups could make for a more accurate comparison.

Measures

Table 1 displays summary statistics for the outcome variable (expectations of nursing home use) and racial/ethnic subgroups as well as the predisposing, enabling and need characteristics available for use in this study.

Expectations of Nursing Home Use. The outcome variable being measured is the respondents' expectations regarding nursing home utilization. Respondents were asked: "What is the percent chance that you will ever have to move to a nursing home?" Participants were allowed to skip this question if they were under the age of 65 and were already interviewed in a previous wave, which was a majority of those younger than 65. Additionally, respondents were not asked this question if they were already a residing at a nursing home. Answers were given as a percentage, ranging from zero percent to 100 percent. The average percent chance reported was 14.3 (SD= 21.2). However, because of the heavy clustering of responses towards certain percentages (particularly percentages ending in 0 and 5), as well as a heavy tendency to select the zero percent chance option, this dependent variable was recoded in to categories: 0 percent chance, 1 to 10 percent chance, 11 to 50 percent chance, and 51 to 100 percent chance (following procedures used by Akamigbo and Wolinsky 2006).

Race/Ethnicity. Racial and ethnic classifications were based on the following categories: Mexican Origin (regardless of race), Other Latino/a (all others who identify as Latino regardless of race), Black (those who identify as Black and not as Latino), Non-Latino/a Other (those who identify as "other" but not as Latino), and Non-Latino/a White. Those who self-identified as being of Mexican Origin comprised 4 percent of the

sample, and participants identified as Other Latino/a made up 2.6 percent. Due to the small number of respondents who identified as Non-Latino/a Other, and the fact that the ethnic composition of this category is unknown, individuals in this group were not included in the analyses presented in the next chapter. Excluding these respondents reduces the sample size to 3,599 individuals who are 65 or older, do not reside in a nursing home and are classified as White, Black, Mexican Origin or Other Latino/a.

Predisposing, Enabling, and Need-Based Characteristics. Predisposing characteristics as available in this data set include: age, gender, marital status, nativity status, neighborhood classification and educational attainment as well as potential sources of support such as: whether or not the respondent has children, lives with a spouse, and has other family members. Unfortunately, the data set does not contain information on citizenship/legal residency status, language proficiency or literacy.

Respondents were asked how old they were, and age was recorded as a continuous variable. Ages ranged from 65 to 107, with an average age of 74.4 (S.D.= 6.8). Respondents were also asked to identify their gender as either male or female, with 58.1 percent of this sample identifying as female. At the collection of the 2008 HRS wave, respondents were asked to identify their current marital status as either married, divorced or separated, widowed, or never married. Within the sample of respondents who completed the Leave-Behind questionnaire, 58 percent reported being married. To measure nativity, respondents could report being born in the United States or being born in a foreign country: 9.3 percent of respondents were born in a foreign country.

The neighborhood classification was calculated based on geographic information related to where the respondent was contacted during the year of the interview. Each

participant was assigned the classification of urban, suburban, or exurban. The educational categories were based on the highest degree obtained by the respondents, with these available options: Less than a high school degree; graduated from high school or obtained GED; obtained either a 2 year or 4 year college degree; or earned a graduate or professional degree. The majority (54.7 percent) of respondents reported that a high school or GED was their highest degree achieved. In terms of potential sources of support, 92/5% of respondents had children, 60.6% lived with a spouse or partner and 92.4% had other family members at the time of the survey.

Enabling characteristics are those that directly influence the accessibility of services, particularly in terms of finances. For the purposes of this study, enabling factors were whether or not the respondent reported being covered by three types of insurance: Medicaid, Medicare, and long-term care insurance. Medicaid is included, as it covers the largest portion of long-term care expenditures (Congressional Budget Office 2004). For both Medicaid and Medicare, respondents were asked if they were currently covered by each, and responded "yes" or "no". In regards to long-term care insurance, respondents were asked: "Not including government programs, do you now have any long-term care insurance which specifically covers nursing home care for a year or more or any part of personal or medical care in your home?" Responses were recorded as either "yes" or "no". As can be seen from Table 1, 97.5% of the respondents were covered by Medicare, 8% were covered by Medicaid and 13% had long-term care insurance.

The measure for need was based on the respondents' self-rated health. For this question, participants were asked, "Would you say your health is excellent, very good, good, fair, or poor?" and responded accordingly ("poor" was coded as 1, and "excellent"

was coded as 5). Research supports the idea that self-rated health is consistently related to health outcomes (Mossey and Shapiro 1982), and is therefore used as a proxy for health status. Table 1 shows the following distribution of self rated health: excellent (9%), very good (30%), good (32%), fair (21%) and poor (8%).

Table 1. Sample Characteristics

N=4,004	*Percent* (%)	*Frequency*
Expectations for Nursing Home Placement (0-100)		
0%	47.2	1908
1-10%	22.4	907
11-50%	25.7	1039
51-100%	4.7	190
Race/Ethnicity		
Mexican Origin	4.0	161
Other Latino/a	2.6	106
Black	11.6	470
Other	1.3	51
White	80.5	3256
Predisposing Characteristics		
Age range	65-107	
Mean age	74.4 (SD=6.8)	
Gender		
Female	58.1	2351
Male	41.9	1693
Marital Status		
Married	58.0	2345
Divorced/Separated	11.2	453
Widowed	28.4	1149
Never married	2.4	97
Has children	92.5	3599
Lives with spouse or partner	60.6	2344
Has other family members	92.4	3679
Nativity		
Born in US	91.8	3711
Born outside of the US	8.3	330
Neighborhood Classification		
Urban	45.4	1837

Table 1 Continued

Suburban	22.1	895
Exurban	32.4	1310
Education		
Less than High school	21.8	882
High school/GED	54.7	2211
2yr/4yr college degree	14.7	593
Graduate/professional degree	8.9	358
Enabling Factors		
Medicare coverage	97.5	3941
Medicaid coverage	8.3	334
Long-term care insurance	14.8	599
Need		
Self-rated health		
Excellent	8.2	330
Very good	30.3	1223
Good	33.8	1365
Fair	20.1	813
Poor	7.7	311

Personal Mastery. Table 2 displays summary statistics for the first psychosocial characteristic. The Personal Mastery scale includes five items related to the measurement of personal mastery and control: 1) "I can do just about anything I really set my mind to," 2) "When I really want to do something, I usually find a way to succeed at it," 3) "Whether or not I am able to get what I want is in my own hands," 4) "What happens to me in the future mostly depends on me," and 5) "I can do the things that I want to do." Participants could respond to these items with one of the following: "strongly disagree," "somewhat disagree," "slightly disagree," "slightly agree," "somewhat agree," or "strongly agree." With "strongly agree" coded 6 and "strongly disagree" coded 1. In this sample, the mean for the composite measure of Personal Mastery was 4.8 with an alpha of .89.

Table 2. Personal Mastery Measure

Item Wording	Alpha	Mean	SD
Personal Mastery Measure	***0.89***	***4.8***	***1.1***
• I can do just about anything I really set my mind to.	---	4.8	1.3
• When I really want to do something, I usually find a way to succeed at it.	---	5.0	1.2
• Whether or not I am able to get what I want is in my own hands.	---	4.6	1.3
• What happens to me in the future mostly depends on me.	---	4.8	1.3
• I can do the things that I want to do.	---	4.7	1.4

(1= Strongly Disagree, 6= Strongly agree)

Attitudes Toward One's Own Aging. Table 3 displays summary statistics for the psychosocial characteristic "attitudes toward one's own aging." This variable is measured using the Attitude Toward Own Aging subscale of the Philadelphia Geriatric Center Morale Scale (Lawton 1975; Liang and Bollen 1983). This subscale includes five items related to self-perceptions of aging: 1) "Things keep getting worse as I get older," 2) "I have as much pep as I had last year," 3) "As you get older you are less useful," 4) "As I get older, things are better/worse than I thought they would be," and 5) "I am as happy now as when I was younger" (Lawton 1975). In this portion of the survey, participants could respond to these items with one of the following: "strongly disagree," "somewhat disagree," "slightly disagree," "slightly agree," "somewhat agree," or "strongly agree." Items 1 and 3 were reverse scored in order to uniformly measure for positive Attitudes toward One's Own Aging. An alpha of .72 was reported for this measure. Responses to the five items were averaged in order to form a composite measure of attitudes toward one's own aging.

Table 3. Attitudes toward Ones' Own Aging Measure

Item Wording	Alpha	Mean	SD
Attitudes toward One's Own Aging Measure	***0.72***	***4.0***	***1.1***
• Things keep getting worse as I get older.*	---	3.5	1.6
• I have as much pep as I did last year.	---	3.8	1.6
• The older I get, the more useless I feel.*	---	4.4	1.6
• I am as happy now as I was when I was younger.	---	4.0	1.7
• As I get older, things are better than I thought they would be.	---	4.2	1.5

(1= Strongly Disagree, 6= Strongly agree)

* Items were reverse coded for these measures.

Religiosity. Table 4 displays summary statistics for the final psychosocial characteristic examined in the current study. Religiosity was measured using a scale provided in the HRS Leave-Behind questionnaire. This measure is intended to investigate religious beliefs, meanings, and values. It included the following four items: 1) "I believe in a God who watches over me" 2) "The events in my life unfold according to a divine or greater plan" 3) "I try hard to carry my religious beliefs over into all my other dealings in life" and 4) "I find strength and comfort in my religion." Responses ranged from "strongly disagree" (coded as 1) to "strongly agree (coded as 6). An alpha of .93 was obtained for these items. These items were averaged in order to form a composite score with a minimum of 1 (not very religious) and a maximum of 6 (very religious).

Table 4. Religiosity Measure

Item Wording	Alpha	Mean	SD
Religiosity	***0.92***	***5.1***	***1.3***
• Things keep getting worse as I get older*	---	3.5	1.6
• I have as much pep as I did last year.	---	3.8	1.6
• The older I get, the more useless I feel.*	---	4.4	1.6
• I am as happy now as I was when I was younger.	---	4.0	1.7
• As I get older, things are better than I thought they would be.	---	4.2	1.5
(1= Strongly Disagree, 6= Strongly agree)			

Family Satisfaction/Perceived Family Support.

Family Satisfaction/Perceived Family Support was measured using a series of items that are described in Table 5 below. For the variable of family satisfaction, respondents were asked, "Right now, how satisfied are you with your family life?" and could respond from "not at all satisfied" (coded as 1) to "completely satisfied" (coded as 5). The mean score for this measure was 4.2 (S.D.= 0.87), reflecting a sample that is fairly satisfied with their family life.

Perceived family support was measured using a scale of social support that was included in the HRS Leave Behind Questionnaire. This measure consisted of the following questions, asked in regards to the respondent's spouse, children, and other family members: 1) "How much can you rely on them if you have a serious problem?" 2) "How much do they really understand the way you feel about things?" 3) "How much can you open up to them if you need to talk about your worries?" "4) How often do they make too many demands on you?" "5) How much do they criticize you?" "5) How much do they let you down when you are counting on them?" 6) How much do they get on your

nerves? Responses ranged from "A lot" (coded as 1), "Some" (coded as 2), "A little" (coded as 3), and "Not at All" (coded as 4). As such, low scores represented high levels of social support. Items 4 through 6 were reverse scored in order to follow this scale. These measures of social support proved to be fairly reliable, with alphas of .83, .80, and .76 for social support in regards to spouse, child, and other family members, respectively. The items were averaged in order to form a composite measure, with the minimum and maximum scores matching those of the individual items. Summary statistics for this variable are found in Table 5.

Because the individual measures of family support from the respondent's spouse, child, and other family members are only relevant to individuals who have spouses, children and other family members, many respondents have missing values on one or more of the perceived family support measures. This is particularly true for support from one's spouse, which is only relevant for 61% of the sample. Including the Perceived Family Support measures in all analyses would, as a consequence, severely restrict the sample size. Doing so would also restrict generalizability to of findings to those with spouses, children and/or other relatives. As a consequence, the family satisfaction measure is included in the main analyses and perceived support from children is included in a follow-up analysis for those who have children.

Table 5. Family Satisfaction and Support Measures

Item Wording	Alpha	Mean	SD
Family Satisfaction			
• Right now, how satisfied are you with your family life?	---	4.2	0.9
Support from Spouse	***0.83***	***3.2***	***0.6***

Table 5 Continued

• How much do they really understand the way you feel about things?	---	3.3	0.8
• How much can you rely on them if you have a serious problem?	---	3.7	0.7
• How much can you open up to them if you need to talk about your worries?	---	3.4	0.8
• How often do they make too many demands on you?*	---	2.0	0.9
• How much do they criticize you?*	---	2.1	0.9
• How much do they let you down when you are counting on them?*	---	1.6	0.8
• How much do they get on your nerves?*	---	2.0	0.8
(1= Not at all, 4= A lot)			
Support from Children	***0.80***	***3.4***	***0.5***
• How much do they really understand the way you feel about things?	---	3.3	0.8
• How much can you rely on them if you have a serious problem?	---	3.5	0.8
• How much can you open up to them if you need to talk about your worries?	---	3.2	0.9
• How often do they make too many demands on you?*	---	1.6	0.8
• How much do they criticize you?*	---	1.6	0.8
• How much do they let you down when you are counting on them?*	---	1.6	0.8
• How much do they get on your nerves?*	---	1.7	0.8
(1= Not at all, 4= A lot)			
Support from Other Family Members	***0.74***	***3.2***	***0.5***
• How much do they really understand the way you feel about things?	---	2.9	0.9
• How much can you rely on them if you have a serious problem?	---	3.0	1.0
• How much can you open up to them if you need to talk about your worries?	---	2.8	1.0
• How often do they make too many demands on you?*	---	1.4	0.7
• How much do they criticize you?*	---	1.5	0.7
• How much do they let you down when you are counting on them?*	---	1.5	0.8
• How much do they get on your nerves?*	---	1.6	0.8
(1= A lot, 4= Not at all)			

* Items were reverse coded for these measures.

Correlations between each measure of family support and the variable of family satisfaction were examined in order to explore the potential use of family satisfaction as a

reasonable proxy for family support (Table 6). Additionally, this relationship was tested among all of the represented racial and ethnic categories, in order to investigate patterns of family support and family satisfaction by race/ethnic group. Sample sizes in Table 6 are reduced because questions were only relevant to certain people: only respondents living with a spouse or partner answered the question about spousal/partner support; only respondents with children answered the question about support from children; and only those with other family members answered the question about other family support.

Table 6. Relationship Between Family Satisfaction and Family Support by Ethnic Group

	Spousal/Partner Support		Children Support		Other Family Support	
	N	Spearman's correlation	N	Spearman's correlation	N	Spearman's correlation
Mexican Origin	88	.36**	135	.29**	135	.22**
Other Latino/a	60	.32*	93	.45**	95	.50**
Black	233	.26**	421	.30**	432	.22**
White	2078	.42**	2942	.35**	2952	.25**
All Respondents	2459	.40**	3591	.35**	3614	.25**

*p<0.05, **p<0.01

This measure of family satisfaction was significantly and positively correlated with the composite measures of spousal support, children support, and other family support. When this variable was correlated with measures of familial support, there was a positive, significant relationship. This suggests that the presence of support from one's children, spouse, and other family members has a salient relationship with one's satisfaction with their family life. For Non-Latino/a Whites, having support from one's spouse (r_s=0.40, p<0.01) was more strongly correlated with family satisfaction than support from children (r_s=0.35, p<0.01) and other family members (r_s=0.25, p<0.01).

However, among other Latino/as, spousal support (r_s=0.32, p<0.05) was not as strongly correlated with family satisfaction as support from children (r_s=0.45, p<0.01) and other family members (r_s=0.50, p<0.01). This may relate back to the idea of familism discussed in Chapter 2, insofar as the needs of, and support from, the extended family network is highly valued and heavily emphasized among Latino/a families. Regardless, because of the strong, positive relationship between family satisfactions and these measures of family support, the decision was made to test for family satisfaction in place of family support in order to minimize the exclusion of unmarried, widowed, and childless respondents from the analyses.

Methods of Analysis

In order to address the research questions set forth by the current study, a series of OLS regression models were run. To address the first question (whether expectations of nursing home utilization among older people differ based on their racial/ethnic subgroup), the outcome variable of expected nursing home use was regressed on racial and ethnic categories. To address question 1b (whether the relationship between race/ethnicity and expectations of future nursing home use persists, even when need, enabling, and other predisposing factors are controlled for), the second, third, and fourth regression models tested need-based, predisposing, and enabling characteristics, as set forth by the Andersen model (Table 11). In order to address question 2 (whether psychosocial characteristics predict expectations of nursing home utilization), Model 5 of the regression analysis includes the psychosocial characteristics discussed. Questions 3a and 3b(whether the relationship between ethnicity and expectations of nursing home utilization are either mediated or moderated by psychosocial characteristics), are tested in

the fifth and sixth models. The fifth model tests the four psychosocial characteristics explained above (Table 12). A sixth model tested the importance of interactions between race and ethnicity and the psychosocial characteristics. Results of these multivariate OLS regression models are presented in the next chapter.

CHAPTER V

FINDINGS

The current chapter presents the findings for the analyses conducted in this thesis. It first starts by exploring racial and ethnic differences in the variables tested, including predisposing, enabling, need, and psychosocial characteristics. Then, the results of the multivariate analyses are described. These findings are then summarized at the end of the chapter.

Racial/Ethnic Differences in Predisposing, Enabling, Need and Psychosocial Characteristics

Before evaluating the mediating effects of predisposing, enabling, need and psychosocial characteristics in the relationships between race/ethnicity and expectations for nursing home use, we first need to examine racial/ethnic differences in the these potential mediating variables. Tables 7 - 10 below show descriptive statistics for each variable by racial/ethnic category. An analysis of variance (ANOVA) was used to test for group differences on each variable. F-ratios for ANOVAs are shown in the last column of the tables. Where groupwise results were significant, pairwise differences between groups were tested and significant results are indicated in the footnotes. In Table 7, it is evident that the average ages of Mexican Origin and Black respondents are significantly lower than those of White respondents, $F=14.7$, $p<0.001$, reflecting groups that are

slightly younger than the majority of the sample. It is possible that this may play a role in the outcome variables of expectations for nursing home use, as it is likely that younger respondents may not give as much thought to potential future care needs as older respondents. There were also significant group differences when looking at marital status, particularly for the statuses "married" and "divorced". A higher percentage of White respondents compared to Black respondents reported being married ($F=21.9$, $p<0.001$). Also, Black (18.1%) and Other Latino/a (17.9%) respondents had higher percentages of being divorced or separated, compared to White respondents (9.9%) ($F=12.0$, $p<0.001$). Mexican Origin respondents, on the other hand, did not differ from White respondents on any of the marital status measures. It would be logical to surmise that marital status could play a role when considering ethnic differences in plans for future care arrangements, so this information is important to consider in the analysis nursing home expectations.

Table 7. Racial and Ethnic Group Differences in Predisposing Characteristics

	Mexican Origin N=161		Other Latino/a N=106		Black N=470		White N=3256		F Ratio
	Percent (%)	*Frequency*	*Percent* (%)	*Frequency*	*Percent* (%)	*Frequency*	*Percent* (%)	*Frequency*	
Age range	65-91		65-92		65-95		65-107		
Mean age	72.9 (SD=6.0)		73.6 (SD=6.9)		72.9 (SD=6.0)		74.8 (SD=7.0)		14.7***ab
Gender									
Female	61.5	99	63.2	67	63.2	297	57.1	1858	2.8*a
Male	38.5	62	36.8	39	36.8	173	42.9	1398	
Marital Status									
Married	54	87	52.8	56	41.5	195	60.7	1977	21.9***ad
Divorced/Separated	15.5	25	17.9	19	18.1	85	9.9	322	12.0***ac
Widowed	28.6	46	26.4	28	36	169	27.3	889	5.1**a

Table 7 Continued

Never married	1.9	3	2.8	3	4.5	21	2.1	68	3.4*a
Has children	93.8	137	91.8	89	91.2	413	92.7	2919	0.6
Lives with spouse or partner	59.4	85	49.5	48	42.1	186	63.6	1995	27.3***acd
Has other family members	93.5	145	93.1	94	94.2	435	92.1	2961	0.91
Nativity									
Born in US	32.3	52	24.5	26	94.7	25	95.6	3113	386.2***bcdef
Born outside of the US	67.7	109	75.5	80	5.3	443	4.4	142	
Region									
Urban	29.2	47	76.4	81	63.8	300	42.4	1381	46.3***abcdf
Suburban	51.6	83	10.4	11	17.2	81	21.8	709	32.8***bcdf
Exurban	19.3	31	13.2	14	18.9	89	35.8	1166	29.4***abc
Education									
Less than High school	66.5	107	39.6	42	37.9	178	16.7	544	81.3***abcdf
High school/GED	31.7	51	47.2	50	47	221	57.4	1870	
2yr/4yr college degree	1.9	3	8.5	9	9.8	46	16.2	527	
Graduate/professional degree	0	0	4.7	5	5.3	25	9.7	315	

*p< 0.05, **p<0.01,***p<0.001

a. Black significantly different from White (p < .05)

b. Mexican Origin significantly different from White (p < .05)

c. Other Latino/a significantly different from White (p < .05)

d. Black significantly different from Mexican Origin (p < .05)

e. Black significantly different from Other Latino/a (p < .05)

f. Mexican Origin significantly different from Other Latino/a (p < .05)

Next, there were also significant differences in terms of nativity, with higher percentages of Mexican Origin and Other Latino/a respondents born outside of the U.S. than Black and White respondents (F=386.2, p<0.001). It is also interesting to note that a higher percentage of respondents within the Other Latino/a group (75.5%) than those of Mexican Origin (67.7%) reported having been born outside of the U.S. There are also significant differences in terms of education levels: 16.7 percent of White respondents reported having less than a high school degree, compared to 66.5 percent of Mexican Origin respondents, 39.6 percent of Other Latino/a respondents, and 37.9 percent of Black respondents (F=81.3, p<0.001).

Table 8. Racial And Ethnic Group Differences in Enabling Characteristics

	Mexican Origin N=161		Other Latino/a N=106		Black N=470		White N=3256		F Ratio
	Percent (%)	*Frequency*	*Percent* (%)	*Frequency*	*Percent* (%)	*Frequency*	*Percent* (%)	*Frequency*	
Medicare coverage (Yes=1)	98.1	158	96.2	102	95.3	448	97.9	3185	4.4**a
Medicaid coverage (Yes=1)	32.3	52	31.1	33	22.8	106	4.2	136	147.6***a bcde
Long-term care insurance (Yes=1)	8.2	13	8.7	9	8.5	40	16.5	532	10.1***ab

*P≤ 0.05, **P≤0.01, ***P≤0.001

a. Black significantly different from white (p < .05)

b. Mexican Origin significantly different from white (p < .05)

c. Other Latino/a significantly different from white (p < .05)

d. Black significantly different from Mexican Origin (p < .05)

e. Black significantly different from Other Latino/a (p < .05)

Next, Table 8 displays some significant differences with regards to enabling characteristics. In terms of Medicaid coverage, 4.2 percent of White respondents reported that they were currently being covered by Medicaid, compared to 32.3 percent of Mexican Origin respondents, 31.1 percent of Other Latino/a respondents, and 22.8 percent of Black respondents ($F=147.6$, $p<0.001$). This is likely a marker of socio-economic status, as Medicaid typically serves people with lower incomes. It is also important to note that long-term care options available through Medicaid can sometimes be limited to nursing homes. There are also significant group differences in long-term care insurance coverage. Among White respondents, 16.5 percent reported having some type of long-term care insurance, compared with 8.2 percent of Mexican Origin respondents, 8.7 percent of Other Latino/a respondents, and 8.5 percent of Black respondents. Long-term care insurance is privately purchased, and generally includes a larger variety of care options than Medicaid, including home health care options.

Table 9 displays group differences with regards to need characteristics, which, for the purposes of this study, is self-rated health. Here it is shown that, on average, White respondents had a higher self-rated health score than Mexican Origin respondents, Other Latino/a respondents, and Black respondents ($F=33.6$, $p<0.001$).

Table 9. Racial and Ethnic Group Differences in Need Characteristics

	Mexican Origin N=161		Other Latino/a N=106		Black N=470		White N=3256		F Ratio
	Mean	*S.D.*	*Mean*	*S.D.*	*Mean*	*S.D.*	*Mean*	*S.D.*	
Self-rated health (1= Poor, 5=Excellent)	2.6	1	2.7	1	2.8	1.1	3.2	1.1	33.6***abc

*p<0.05, **p<0.01, ***p<0.001

a. Black significantly different from White ($p < .05$)

b. Mexican Origin significantly different from White ($p < .05$)
c. Other Latino/a significantly different from White ($p < .05$)

Table 10 shows the group differences for the psychosocial characteristics tested in the current study. For the Attitudes toward One's Own Aging composite, respondents within the Other Latino/a category an average score that was significantly lower than the average scores for White respondents and Black respondents ($F=4.0$, $p<0.01$). In terms of religiosity, White respondents scored significantly lower tha Black and Mexican Origin respondents ($F=27.5$, $p<0.001$).

Table 10. Racial and Ethnic Group Differences in Psychosocial Characteristics

	Mexican Origin N=161		Other Latino/a N=106		Black N=470		White N=3256		F Ratio
	Mean	*SD*	*Mean*	*SD*	*Mean*	*SD*	*Mean*	*SD*	
Personal Mastery (1= Strongly Disagree, 6= Strongly agree)	4.7	1.2	4.7	1.3	4.7	1.2	4.8	1.1	0.3
Attitudes toward one's own Aging (1= Strongly Disagree, 6= Strongly agree)	3.9	1.1	3.6	1.1	4	1	4	1.1	4.0**ce
Religiosity (1= Strongly Disagree, 6= Strongly agree)	5.4	1.1	5.3	1.2	5.6	1	5	1.4	27.5***ab
Family Satisfaction (1= Not at all satisfied, 5= Completely satisfied)	4.2	0.8	4.2	0.9	4.1	0.8	4.2	0.9	0.6
Children Support (1= Not at all, 4= A lot)	3.4	0.6	3.3	0.6	3.3	0.6	3.4	0.5	4.1**a

*p<0.05, **p<0.01, ***p<0.001
a. Black significantly different from White ($p < .05$)
b. Mexican Origin significantly different from White ($p < .05$)
c. Other Latino/a significantly different from White ($p < .05$)
d. Black significantly different from Mexican Origin ($p < .05$)
e. Black significantly different from Other Latino/a ($p < .05$)
f. Mexican Origin significantly different from Other Latino/a ($p < .05$)

In summary, results of the ANOVAs and subsequent pairwise comparisons show that elderly members of minority sub-groups differed from White elders on many of the predisposing, enabling, need and psychosocial characteristics that are expected to predict expectations of nursing home use. When compared to White elders, Black elders were younger, more likely to be female, less likely to be married, more likely to be divorced, widowed or never married and less likely to be living with a spouse or partner. They were also more likely than White elders to live in urban areas, less likely to live in exurban areas and less likely to have completed high school. Probably due to age differences, they were less likely to be covered by Medicare. They were more likely to be covered by Medicaid and less likely to have LTC insurance. Black elders reported themselves to be in worse health and reported higher levels of religiosity and more support form children than did their White counterparts.

When Mexican Origin elders were compared to White elders, they were younger, less likely to have been born in the US, less likely to live in urban or exurban areas and more likely to live in the suburbs. They were also less likely to have a high school education, more likely to be covered by Medicaid and less likely to have LTC insurance. They reported themselves to be in worse health and reported higher levels of religiosity than did their White counterparts.

Other Latino/a elders were more likely than White elders to be divorced and less likely to live with a spouse or partner. They were also less likely than White elders to have been born in the US, more likely to live in urban and less likely to live in suburban or exurban areas and were less likely than White elders to have completed high school.

They were also more likely to be covered by Medicaid. They report lower levels of health and less positive views of their own aging than do White elders.

Finally, when Mexican Origin and Other Latino/a elders are compared to each other, Mexican Origin elders are more likely than those in the Other Latino/a group to have been born in the US, less likely to live in urban and more likely to live in suburban areas and are less likely to have completed high school. These two groups did not differ on any of the psychosocial variables.

Ethnic differences in these predisposing, enabling, need and psychosocial characteristics may help to explain ethnic differences in expectations of nursing home utilization. Their role in this relationship is examined in the multivariate analyses summarized in the next section.

Multivariate Analyses

Table 11 displays the results of the regression analyses for the first four models. Model 1 tested the relationship between expected nursing home use and racial and ethnic identification. In this model, other Latino and Black respondents were significantly less likely to expect future nursing home use in comparison to the Non-Latino White reference group. This remains true in the second model as well, when the need-based variable, self-rated health, is introduced. As could be expected, having a higher self-rated health is related to a lower likelihood of expecting nursing home use. The third model incorporated predisposing variables, including gender, age, marital status, nativity, education, residential region, and family characteristics. Here, one can see that women are significantly more likely to expect future nursing home use. Also, as age increases, so too does the expectation to utilize a nursing home. When these predisposing

characteristics are controlled for, the nursing home expectations of Black respondents no longer differ significantly from the reference group. Mexican Origin respondents still do not differ significantly from the reference group. However, those within the Other Latino category are still less likely to expect future nursing home placement. This trend remains, even when the enabling factors, including Medicare, Medicaid, and long-term care insurance coverage are incorporated, with the introduction of the fourth model. This model shows that the presence of long-term care insurance actually reduces the likelihood of expecting nursing home use. This may be explained by the fact that most long-term care insurance policies cover the expenses of in-home, private care, which may be preferable when one has the option between that and being placed within a nursing home.

Table 11 also displays the results of model 5 of the regression analyses. Model 5 tests the relationship between the selected psychosocial characteristics and the dependent variable of expected nursing home use. The results suggest that having a stronger sense of control (personal mastery) reduces one's chances of expecting nursing home use. Additionally, respondents with positive self-perceptions of aging had a smaller chance of expected nursing home use, even when variables such as age and self-rated health were controlled for. Religiosity and family satisfaction were not significantly related to the outcome variable. Interestingly, even with these psychosocial characteristics included, respondents within the Other Latino category were still significantly less likely to expect nursing home use.

Table 11. Regression of Expected Nursing Home Use Net of Ethnicity, Need, Predisposing, Enabling, and Psychosocial Factors

	Model 1		Model 2		Model 3		Model 4		Model 5	
	B	S.E.	B	S.E.	B	S.E.	B	S.E	B	S.E
(White)										

Table 11 Continued

Mexican Origin	-0.08	0.08	-0.11	0.08	-0.01	0.09	0.01	0.09	0.003	0.08
Other Latino	-.41***	0.1	-.43***	0.1	-.33**	0.11	-.31**	0.11	-.32**	0.1
Black	-.14**	0.05	-.15**	0.05	-0.09	0.05	-0.063	0.05	-.05**	0.05
Need										
Self-rated health			-.05**	0.02	-.06***	0.02	-.06***	0.02	-0.02	0.02
Predisposing Characteristics										
Female					.08**	0.03	.08*	0.03	.07*	0.03
Age					.01***	0	.01***	0	.01***	0
(Married)										
Divorced/Separated					-0.08	0.05	-0.06	0.05	-0.07	0.05
Widowed					-0.03	0.04	-0.02	0.04	-0.03	0.04
Never Married					-0.1	0.11	-0.08	0.11	-0.1	0.12
Born outside of the U.S.					-0.05	0.07	-0.03	0.07	-0.01	0.07
(Urban)										
Suburban					0.04	0.04	0.04	0.04	0.04	0.04
Exurban					0.05	0.04	0.05	0.04	0.06	0.04
Education					.07***	0.02	.05**	0.02	.06**	0.02
Has children					-0.05	0.07	-0.04	0.07	-0.04	0.07
Has other family members					0.05	0.06	0.05	0.06	0.1	0.06
Enabling Factors										
Medicare							-0.03	0.03	-0.04	0.03
Medicaid							0.03	0.02	0.03	0.02
LTC Insurance							-.04***	0.01	-.04**	0.01
Psychosocial Characteristics										
Personal Mastery									-.07***	0.02
Attitudes toward One's Own Aging									-.05**	0.02

Religiosity					0.01	0.01
Family Satisfaction					-0.03	0.02
F	7.93***	8.82***	6.14***	6.15***	6.96***	
R^2	0.005	0.008	0.02	0.024	0.035	

*p< 0.05, **p<0.01, ***p<0.001

Model 6 (not shown in table) included interaction terms between racial and ethnic classifications, and each psychosocial characteristic. These terms tested whether or not the importance of psychosocial characteristics on nursing home expectations differed for respondents from the racial and ethnic categories listed compared to Whites. None of these interaction terms were significant, which may suggest the limited importance of race and ethnicity when looking at the role of psychosocial characteristics in expectations for nursing home use. In case of potential multicollinearity issues, each interaction term was entered in to the sixth model of the regression individually. This did not alter the R^2 value, and none of the interaction terms were significant (R^2=0.035; F=4.87). For this reason, model 6 was not shown in the table.

Summary of Findings

The purpose of this study is to examine variations in relationships among selected psychosocial characteristics, race/ethnicity and expectations of nursing home utilization in the United States, with a particular focus on Latino/a subgroups. The study used a modified version of the Andersen and Newman model to answer five specific questions related to three broad research questions. Answers to these five specific questions are summarized below.

Research Question 1a. – Do elderly members of racial/ethnic minority subgroups (specifically, Mexican Origin, Other Latino/a and Black) differ from White elders with respect to their expectations for nursing home utilization (the chance that they will one day be cared for in a nursing home)? Findings suggest that members of Other Latino and Black subgroups differed significantly from White elders in terms of expectations of nursing home utilization. Before predisposing, need, and enabling characteristics were accounted for, these groups were significantly less likely to expect nursing home use. Members of the Mexican Origin group, however, never significantly differed from White elders with regards to nursing home expectations.

Research Questions 1b. Do differences in need, predisposing and enabling characteristics explain (mediate) racial/ethnic differences in expectations for nursing home utilization? That is, when need, predisposing and need are controlled, is the relationship between race/ethnicity and the expectation that one will someday be cared for in a nursing home no longer significant? The findings for this question revealed mixed answers. When predisposing, enabling, and need characteristics were accounted for, members of the Other Latino group were still significantly less likely than White elders to expect future nursing home use. However, the inclusion of these variables did explain differences in nursing home expectations for Black respondents.

Research Question 2. Are psychosocial characteristics (specifically, personal mastery, attitudes toward one's own aging, religiosity, and family satisfaction/perceived family support) related to expectations for nursing home utilization among older people in general? That is, when race/ethnicity, need, predisposing and enabling characteristics are controlled, do these psychosocial characteristics predict the expectation that one will

someday be cared for in a nursing home? The inclusion of these psychosocial characteristics increased the overall explanatory power of this model. Specifically, having a high sense of personal mastery and having a more positive view of one's own aging were associated with being less likely to expect future nursing home use. However, religiosity and family satisfaction/perceived family support were not significant in predicting nursing home expectations.

Research Question 3a. Do psychosocial characteristics explain (mediate) the relationship between race/ethnicity and expectations for nursing home utilization (over and above the effects of need, predisposing, enabling characteristics)? That is, when need, predisposing, enabling characteristics and psychosocial characteristics are controlled, is a previously significant relationship between race/ethnicity and the expectation that one will someday be cared for in a nursing home no longer significant? The psychosocial characteristics tested in these analyses did not mediate the differences in expectations for nursing home utilization based on race/ethnicity. When psychosocial characteristics were included in to the analyses (need, predisposing, and enabling characteristics already having been accounted for), members of the Other Latino subgroup were still significantly less likely to expect future nursing home utilization.

Research Question 3b. Are psychosocial characteristics more important to the expectations that one will someday be cared for in a nursing home in some racial/ethnic groups than in others? That is, do any or all of the interaction terms for race/ethnic categories and psychosocial variables contribute to the model's ability to predict expectations that one will someday be cared for in a nursing home? The importance of psychosocial characteristics in predicting nursing home expectations did not differ

significantly based on race/ethnicity. The interaction terms tested for psychosocial characteristics and race/ethnicity did not increase the ability to predict nursing home expectations. Thus, the psychosocial characteristics found to have a significant relationship to expectations of nursing home use (having a high sense of personal mastery and having a more positive view of one's own aging) are important across racial/ethnic categories.

CHAPTER VI

CONCLUSION

The current study used data from the 2008 wave of the Health and Retirement Study to test the relationship between selected psychosocial characteristics, race and ethnicity, and expectations of nursing home use among elders living in the United States. Results of this study suggest that, particularly for Other Latino/as, plans and expectations regarding nursing home use are informed by more than simply need and access variables. However, this was true only for those who identified with the Other Latino category, not for either Mexican Origin respondents or Black respondents. While those within the category of Other Latino remained significantly less likely than the White reference group to expect nursing home use across all models of the regression analyses, Mexican Origin respondents never differed significantly from the reference group. This may suggest that the acculturative patterns of those of Mexican Origin are leading them to more closely resemble those of the White population.

Respondents within the Mexican Origin and Other Latino/a subgroups had extremely dissimilar patterns in regards to nursing home expectations – perhaps in part because Mexican Origin elders were more likely to have been born in the US and have had longer to assimilate. This provides evidence for the idea that the groups categorized within the umbrella term 'Latino/a' are anything but homogenous and do not behave

uniformly when looking at nursing home expectations. This also puts our current knowledge of the aggregated Latino population in to question. Data about Mexican Origin and Other Latino individuals are often aggregated, and analyzed as one group. However, because of how large the Mexican Origin population is, important variations among these groups are often eclipsed. Indeed, these results support the idea that Latino/as should not be treated as a pan-ethnic group, particularly with regards to health research (Zsembik and Fennell 2005).

Overall, the inclusion of psychosocial characteristics increased the explanatory power across all of the regressions that were run. This supports the ideas set forth by Bradley et al. (2002), that psychosocial characteristics may enhance our understanding of long-term care expectations. In particular, having a high sense of perceived control over major life situations seems to reduce one's likelihood of expecting nursing home use, regardless of self-rated health and structural factors such as health insurance. This finding falls in line with previous work in the field of health research, where having a high sense of perceived control can serve as a type of buffer when looking at health outcomes (Lachman and Weaver 1998; Neupert, Almeida, and Charles 2007). In the case of expected nursing home use, it may be that having a strong sense of control over one's situation is compatible with the idea that one can influence or avoid the trajectory that would lead to the necessity of nursing home use. This is an important finding, and future studies should explore the role of one's perceived control in regards to actual nursing home use.

Although more positive levels self-perceptions of aging and perceived control reduced the likelihood that one would expect to utilize nursing homes, the inclusion of

these variables in to the analysis did not account for the relationship between Other Latino/as and their lower expectations of nursing home utilization. Additionally, there were no significant interaction terms between ethnicity and the psychosocial characteristics when looking at the nursing home expectation outcome variable. The importance of psychosocial characteristics in predicting expectations of nursing home use did not vary based on race or ethnicity. This is particularly important in light of the fact that Other Latino/a elders reported less positive views of their own aging than White elders. Regardless of this difference, one's attitude toward aging is an equally important predictor of expectations of nursing home utilization in both groups.

Clearly, the findings regarding racial/ethnic group differences in terms of expected nursing home use suggest the need for further investigation. It may be that these differences may be related to cultural beliefs and attitudes that were not available in the data set used for the current research. In order to gain a deeper understanding of these differing patterns, future research should inquire as to what shapes an individual's future long-term care expectations through interviews and focus groups with people of diverse backgrounds.

The findings of this research make important theoretical contributions to the field of long-term care research. When investigating expectations for long-term care utilization, the Andersen model proves to be useful. This makes sense, because a person probably wouldn't expect to use a nursing home in the future if, one, they didn't already have signs physical and mental limitations; or two, they knew that they wouldn't have the financial means of obtaining this type of care. However, some components of this model are still in need of refinement, particularly for the Other Latino and Black subgroups.

Predisposing, enabling, and need-based characteristics served to account for some of the differences in expectations for nursing home use based on race and ethnicity, but certainly not all. Despite having subjective health, insurance coverage, and predisposing characteristics accounted for, respondents within the Black and Other Latino/a categories still had significantly lower expectations for future nursing home use than did White elders. Clearly, there is still a need for context in the original model- something this project sought to explore.

The importance of self-perceptions of aging and perceived control should not be ignored. In the linear regression models, even when need-based (i.e. subjective health) and enabling characteristics were controlled for, having a positive attitude towards one's own aging is related to a lower likelihood of expected nursing home use. This may be because those with more positive views of their own aging may not be as likely to expect significant future decline. This is an important contribution to the literature, and supports the idea that attitudes towards aging can have significant meaning when looking at real life outcomes, such as health and well-being outcomes (Levy, Slade, and Kasl 2002). This is an area requires further research, particularly with regard to actual nursing home utilization, as well as health outcomes.

One of the interesting results of this study is that, unlike Black and Other Latino/a elders, members of the Mexican Origin group never differed significantly from the White reference group in terms of attitudes towards one's own aging. Both the Mexican Origin and White subgroups scored relatively high on the Attitudes towards One's Own Aging measure, implying that both have relatively positive views on their aging experience. Although it would be difficult to explain definitively why these similarities exist (a

qualitative study would be necessary to explore these similarities), one can speculate that the cultural attributes of Mexican Origin elders (at least for those living in the United States) are coming to more closely resemble those of White elders. This is likely because a healthy portion of the Mexican Origin individuals in this study were born in the U.S. This nativity status may serve to partially explain why the expectations for future nursing home use were so similar to that of the White reference group. Individuals from the Other Latino subgroup, on the other hand, are much more likely to have been born outside of the United States, and likely in countries further from the U.S.

Policy Implications

The findings of this research have important policy implications. Most importantly, it provides further evidence that, particularly within the health care sector and health care research, the Latino/a population in the United States should not be treated as a homogenous, pan-ethnic group. Indeed, the fact that respondents in the Other Latino/a group may be indicative of an either cultural aversion to institutionalized care services, as speculated in much of the literature in this field (Beyene et al. 2002); or lack of knowledge on the available services for older people with health needs (Bradley et al. 2002). Regardless, long-term care outreach and education initiatives should incorporate these findings in to their efforts, and acknowledge the importance of diversity, cultural norms, and psychosocial characteristics such as perceptions of the aging process and perceived control. It is important that such outreach initiatives take in to account the fact that there substantive diversity within the umbrella term 'Latino/a.' It would also be useful to provide information on the variety of services (i.e. home health care options, adult day care) besides nursing homes availability to elders with functional impairments.

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