Published in final edited form as:

J Cross Cult Gerontol. 2009 September ; 24(3): 225–239. doi:10.1007/s10823-008-9088-0.

Cultural Values and Caregiver Preference for Mexican-American and Non-Latino White Elders

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Abstract

This study examined caregiver preferences in the event of hip fracture between Mexican-American and non-Latino White elders. The differential effects of ethnicity and a cultural factor were also examined to elucidate the role of culture on caregiver preference. Data came from a cross-sectional survey of 89 Mexican-American and 30 non-Latino White elders. Hierarchical binary logistic regression was used to examine the differential impact of ethnicity and a cultural factor on caregiver preference. Fewer Mexican-American elders than non-Latino White elders preferred to rely on a formal/professional helper, and a greater proportion of Mexican-Americans than non-Latino Whites would turn to informal caregivers when faced with care needs following a hip fracture. The cultural factor significantly mediated the ethnic effect on caregiver preference. The need for culturally-relevant services based on caregiver preference for long-term care is discussed in addressing health disparities for ethnically diverse elders.

Keywords

Long-term care preference; Mexican-American elders; Cultural values; Culturally competent practice; Health disparities

Introduction

Health disparities in the U.S. have been documented not only in the prevalence of acute and chronic conditions, but also in accessibility of appropriate health services and inequitable service use by racial/ethnic minorities (Smedley *et al.* 2003; U.S. Department of Health and Human Service 2003). Hip fracture is one such acute health crisis that puts older individuals at greater risk for mortality, morbidity, and functional dependency. In 2003, more than 1.8 million people aged 65 and older were treated in emergency departments for fall-related injuries and more than 421,000 were hospitalized (Center for Disease Control and Prevention 2005). Hip fracture occurs to every 12.9 and 33.7 per 1,000 White females for age groups of 75–84 and 85+, respectively. While the Latino population as an aggregate group is at a lower rate of prevalence of hip fracture than that of the non-Latino White older population (Lauderdale *et al.* 1998), Mexican-American elders have the highest prevalence rate among Latino subgroups approaching that of the non-Latino White older population (Espino *et al.* 2000).

Despite the prevalence rate of hip fracture higher than previously estimated among Mexican-American elders, little is known about their care needs, service use, and recovery process. Most existing hip fracture studies have focused on large cohorts of non-Latino White elders, with little attention to ethnic minority groups (Mutran *et al.* 1995). According to Markides *et al.* (1997, 1999), hip fracture had the second strongest effect on six of seven activities of daily living (ADL) limitations among Mexican-American elders, next to stroke. The odds of ADL difficulty associated with hip fracture were higher than previously reported for the non-Latino White elderly population. Latino elders with hip fracture injury and their families may confront additional challenges in navigating through a complex and fragmented health/long-term care system in coping with post-fracture care, due to such potential barriers as language, cost, lack of trust, and cultural norms. These barriers may adversely affect the recovery process, furthering health disparities for ethnic minority elders (Magaziner & Hawkes 2000; Mossey *et al.* 1989).

Cultural competence of the health delivery system (Brach & Fraserirector 2000; Betancourt *et al.* 2005; Institute of Medicine 2002) and re-conceptualization of race/ethnicity as a cultural marker (LaVeist 1994, 2005) have been suggested as important steps toward reducing and eliminating persistent health disparities in the United States. Culture plays an important role in decisions on health/long-term care service use (Wolinsky 1994), although insurance status may determine the types and location of care for the most part. Knowing the cultural preference of elders toward service may provide a better understanding of their unique needs, which not only facilitates the development of culturally-competent services, but also leads to equitable access to and use of health/long-term care services (Katz 2001; Min 2005a). Furthermore, in previous research on racial/ethnic difference in service utilization, a single variable of race/ethnicity has been used as a cultural marker in the hopes that it represents unmeasured biological, social, cultural, and economic characteristics (LaVeist 1994, 2005; Wallace *et al.* 1998). Such use of the race variable, however, may mask within-group cultural heterogeneity and limit efforts to develop and test the cultural relevance of intervention approaches.

The purpose of this study is to examine caregiver preference in the event of a hip fracture and to examine the differential effects of both race/ethnicity and a cultural factor on the caregiver preference among Mexican-American and non-Latino White elders, based on a revised Andersen's model of long-term care service utilization.

Literature Review

Hip fracture and Mexican-American elders

There is limited information on hip fracture and its associated care needs for older Latinos in the U.S. compared to the extensive information available for non-Latino Whites. According to the U.S. Department of Health and Human Service Administration on Aging (2005), the Latino older population is projected to grow from 2.2 million in 2004 to over 15 million by 2050, representing an increase from 6% to 17.5%. By 2028, the Latino population aged 65 and older is projected to be the largest racial/ethnic minority in this age group. Latinos of Mexican origin comprise the largest Latino subgroup in the U.S. Currently, Latinos of Mexican origin represent 63% of the older Latino population (U.S. Department of Health and Human Service 2005). The extant research on the prevalence of hip fracture in Mexican-Americans is limited to one seminal study: the Hispanic Established Populations for Epidemiologic Studies of the Elderly (EPESE). Findings from this study indicated that the prevalence of hip fractures in older Mexican-Americans was 4.0% and that the overall incidence of hip fractures was 9.3 fractures/1,000 person-years for women and 4.8/1,000 for men (Espino *et al.* 2000). A study of hip fracture in another Latino subgroup (i.e., Cuban-American elders) found that poorer mental health status was related to more activity limitations at the time of discharge from the rehabilitation hospital (Kirk-Sanchez 2004). However, based on data from the Hispanic

EPSE, Black and colleagues (1998) found a hip fracture, although having a substantial impact on functional status, was not predictive of psychological distress in older Mexican-Americans. The authors postulated that older Mexican-Americans might be more likely to have recovered substantial physical and social functioning as a result of a greater availability of social support. Sociocultural influences related to caregiving practices were often implicated in studies of mental health outcomes and use of formal services among Mexican-Americans (Angel *et al.* 1996; Valle 1998).

Cultural values of Mexican-Americans

The research literature characterizes Latino culture as family-oriented and collectivistic (Barrio 2000; Sabogal *et al.* 1987; Vega 1990). This strong family orientation among Latinos has been termed, *familism* (John *et al.* 1997), with a web of relationships that extends across relatives and generations to provide a support network. This network is sustained by affiliative emotional bonds, traditions, rules, and expectations of mutual obligation (Moore-Hines *et al.* 1999; Talamantes *et al.* 1995). A multigenerational structure, undergirded by collectivistic cultural values and traditions, creates conditions for the care and support of family members in times of need. Collectivistic practices and extended support systems often result in a family member being identified as primary caregiver (Gallagher-Thompson *et al.* 1996). The cultural preferences for strong family relationships and responsibility may lead to higher expectations in the availability and presence of social support in time of need (Himes *et al.* 1996). While these familial traditions may serve as protective cultural resources, they may also act as a barrier to seeking formal care (Kane 2000). Families may seek advice or help from informal sources, which may result in seeking professional help for a family member as a last resort (Salman *et al.* 1997). A large study of nursing home use among older Mexican-Americans found that although functional limitations (ADL) and cognitive impairment were strong predictors of institutionalization and death, living with family and access to social support independently decreased the probability of dying in a nursing home (Angel *et al.* 2004). However, several factors, such as longer life spans, female employment, the decline of two-parent families, and long-distance migration by children, may increase the number of older individuals who do not have a support system immediately available. As a result, there will be a growing demand for community-based long-term care services in Latino communities (Angel *et al.* 2004). As such, it is likely that formal long-term care will become necessary and more common among Latinos. The growing diversity of persons receiving long-term care will force the recognition of cultural issues in the development and provision of services in meeting their unique needs (Min 2005b; Wallace *et al.* 1994).

Previous studies examined preferred long-term care arrangements for older non-Latino Whites and Blacks (Bradley *et al.* 2002; Bradley *et al.* 2004; Keysor *et al.* 1999; Sudha and Mutran 1999), older Korean Americans (Min 2005a), and older Japanese Americans (McCormick *et al.* 1996). They identified demographic characteristics, social support, previous use of formal support, Medicaid coverage, acculturation, and traditional values as significant factors for preferred long-term care arrangements or intended long-term care use. However, previous research has not examined preference for long-term care services among Latino elders. A major focus of our investigation is on the extent to which cultural influences mediate caregiver preference as this may shed light on the ways in which to improve the cultural relevance of services for the Latino elders.

Conceptual framework

The conceptual framework for this study is based on a modified version of Andersen's behavioral model of health care utilization (Andersen 1995). The Andersen model posits that three factors, *predisposing*, *enabling*, and *need*, explain or predict access to and the use of health services. Typically, predisposing factors refer to the normative predisposing

characteristics that are present prior to the access to or use of health services (Stein *et al.* 2007). They include demographic (e.g., gender, age, marital status, or race), socio-structural characteristics (e.g., education or employment), and health beliefs. Enabling factors refer to those personal, familial, and community resources that facilitate or impede individuals from obtaining services, such as income, health insurance, and family support. Need factors include physical functioning, cognitive impairment, and chronic conditions. The Andersen model was modified previously to explain the intended use of long-term care among African-American and White elders (Bradley *et al.* 2002, 2004) and preferred long-term care arrangements among older Korean-Americans (Min 2005a). Bradley *et al.* (2004) included psychosocial factors in addition to the existing three factors of the Andersen model. The psychosocial factors measured attitude toward services, social norms about caregiving, and perceived control by African-American and White elders. They found significant mediating roles of social norms and perceived ability to obtain informal long-term care in accounting for the observed race/ethnicity effect on the intended long-term care use. In addition, in a study of older Korean Americans, Min (2005a) examined the effect of traditional cultural values as a part of the enabling factor of the Andersen model, and found that traditional cultural values significantly influenced their preferred long-term care arrangements in the event of hip fracture and stroke. Taken together, such previous attempts to modify the Andersen model contributed to the identification and greater understanding of unexplored concepts relevant to ethnic minority populations in cross-cultural long-term care research. Moreover, findings from the two studies suggest that the explicit specification of traditional cultural values and psychosocial factors rather than the sole use of race/ethnicity as their proxy may help to better understand cross-ethnic differences in service use. In addition, little has been studied on cultural factors and caregiver preferences among Mexican-American elders based on the Andersen model. Therefore, this study aims to examine the effect of cultural factors on caregiver preferences for Mexican-American and non-Latino White elders by applying an enhanced Andersen model.

Building on previous work, in this study two major enhancements were made to the Andersen model: (i) an inclusion of a culture as a fourth factor, and (ii) separation of the needs factor into two sub-factors to facilitate the use of hypothetical scenarios. The objective in adding the cultural factor as a separate component was to highlight the importance of considering culture beyond the use of race/ethnicity as a proxy. Regarding the needs factor, this was conceptually and methodologically divided into two sub-factors, *pre-existing* and *the current needs* factor, in order to accommodate the use of scenarios in the study. While the pre-existing need factor represented physical illness, functional limitation, and chronic conditions, the current needs factor was posed as a hypothetical disability scenario depicting a hip fracture.

Methods

Research design and sample

Data were obtained from a cross-sectional survey of 89 Mexican-American and 20 non-Latino White elders aged 65 or older who were living in the community in Southern California. Multiple barriers such as health beliefs of potential participants and negative perceptions regarding the benefit of participation have been identified in engaging and recruiting diverse ethnic populations including Latino elders in health-related research (Curry & Jackson 2003). Therefore, nonprobability purposive and snowballing sampling methods were used to recruit participants. They were recruited from social service agencies (nutritional program sites), religious organizations, and publicly subsidized senior apartments. Trained bilingual research staff made presentations to Mexican-American and non-Latino White elders about the purpose of the study and their involvement. In order to enhance participation, culturally appropriate recruitment methods were employed including face-to-face communications, personalized bilingual telephone follow ups, and culturally adapted brochures with study information. A

total of 156 seniors agreed to be contacted, 36 later declined to participate in the survey over the telephone, and the remaining 120 seniors participated in the survey. For the Mexican-American elders who declined to participate, 25 cited concerns regarding the risk of disclosure of their immigration status and/or that their poor health did not allow them to participate. For the non-Latino White elders who declined to participate, 11 cited concerns over their poor health and/or their plans to be out of town for a long period of time. One participant withdrew from the interview during the survey. The final sample size was 119. A face-to-face interview was used to collect data in a secure and private location of the participant's choice. Informed consent was obtained from participants, and approval was obtained from the university institutional review board. The survey instrument consisted of six major sections asking about demographic and socioeconomic status, physical and functional health status, social network and support, traditional values, health/long-term care service awareness and utilization, and caregiver and care location preference, totaling up to 160 survey questions. On average, the interview took about one to one and half hours to complete.

Measures

Consistent with the conceptual framework, measures relevant to each of the four factors were included as follows:

Predisposing factor—The predisposing factor included major demographic characteristics including ethnicity, gender, age, marital status, education, and living arrangement.

Enabling factor—The enabling factor included presence of children, receipt of informal support, previous use of home- and community-based long-term care services, and Medicaid coverage. Regarding the presence of children, respondents were asked whether they had any family members whom they could rely on for instrumental support or assistance. Regarding receipt of informal support, respondents were asked whether they received help from their family members or relatives during the previous month in fourteen different areas. The fourteen areas included filling out application forms, translation of government documents, house repairs, housekeeping, cooking, medication, personal care, transportation, managing money, getting help when ill, receiving financial assistance, monetary gifts, other gifts, and regular vacations. The number of received supports was summed to create a variable indicating the level of informal support. Higher scores represent higher levels of informal support. Regarding previous use of long-term care services, respondents were asked whether they ever used home- and community-based long-term care services. Home- and community-based services included homemaker service, personal care services, visiting nurse service, health aides, and adult day care. If the respondent reported having used any of the five types of services, it was coded as a "Yes." For Medicaid Coverage, a dichotomous variable was created to indicate whether a respondent had this type of coverage or not.

Pre-existing needs factor—The pre-existing needs factor included three components: physical, functional, and self-assessed health status. First, respondents were asked whether they were ever diagnosed by their physicians to have the following medical conditions: stroke, diabetes, arthritis, or cancer, with a dichotomous response ("0" = No and "1" = Yes). Second, functional health was measured by basic ADL and instrumental ADL (IADL). Respondents were asked about any difficulty performing any of six ADL tasks: eating, bathing, dressing, toileting, transferring in and out of bed, and getting around the house (Katz 1983) and five IADLs such as preparing meals, shopping for groceries, managing money, making telephone calls, and taking medication (Jette *et al.* 1992). Lastly, respondents were asked to rate their overall health status using five response categories ranging from excellent to poor.

Cultural factor—The level of adherence to traditional values regarding long-term care was assessed by four statements on cultural values specific to long-term care. These were used in a previous study to tap cultural dimensions related to familism, family harmony, and attitude toward care in a nursing home (Min 2005a). The four statements were: “*Adult children should be more responsible than elderly parents for making long-term care arrangement of the parents,*” “*Care should be provided by family members, not by an outsider,*” “*It is OK for children to place their impaired elderly parents in a nursing home for proper care,*” and “*It is desirable not to share bad news with family members.*” Responses were measured on a 4-points Likert scale ranging from “*Strongly disagree,*” “*to*” “*Strongly agree.*” These were dichotomized in the subsequent data analysis due to small sample size.

Caregiver preference—The assessment of a preferred caregiver was based on a disability scenario of hip fracture. This scenario depicted a hip fracture injury situation with a potential ADL limitation from the time of hospital discharge to a 6-month recovery period. Open-ended questions were asked regarding own preference for choosing a caregiver. Qualitative responses were audio-taped and coded into three groups of caregivers (spouse, children, or paid helper). These responses were dichotomized into formal/professional helper or informal helper/caregiver.

Data analysis

Bivariate relationships were examined between preferred caregiver and each variable in predisposing, enabling, need, and cultural factors, using a series of binary logistic regressions. Then, two models of multivariate analyses were tested with one model with the cultural factor, and the other without the cultural factor. This hierarchical approach was used to assess the mediating effect of the cultural factor between the three factors of the Andersen model, and the selection of preferred caregiver. The mediating effect was tested by a chi-square difference test in logistic regression (Hosmer and Lemeshow 2000), which is equivalent to the change in R-square in linear regression (Alwin & Hauser 1975). Specifically, Model 1 contains three factors of predisposing, enabling, and pre-existing needs. Model 2 adds the cultural factor to Model 1. To examine a mediating effect of the cultural factor in Model 2, the difference in model chi-square statistics for Model 1 versus Model 2, and the difference in associated degrees of freedom were calculated. The interaction terms such as ethnicity X living alone, ethnicity X four items from the cultural factor were examined for their substantive importance in understanding the preferred long-term care arrangement. As these interaction terms were not significant, they were excluded from the final model. Finally, as there was evidence of multicollinearity between marital status and living alone, marital status was dropped from the multivariate logistic regression model. STATA 8.0 was used for data analysis (StataCorp 2004).

Results

Characteristics of the sample

As presented in Table 1, 80% of the two ethnic groups were female. Ages ranged from 65 to 91, with a mean age of 73.1 for Mexican-American elders and 72.8 for non-Latino White elders. Approximately 60% of the respondents lived alone. On average, Mexican-Americans reported more children (3.7) than non-Latino White elders (2.6). A significant difference was found in educational level with 67% of the Mexican-Americans indicating 6 years or less of education, while 73.4% of non-Latino White elders reported 12 years or more of formal education. There was a significant difference in income with 91% of Mexican-Americans reporting a monthly income of less than \$1,000 compared with 43.5% of non-Latino White elders. There was also a significant difference on Medicaid coverage with 74.4% of Mexican-Americans compared to 30% of non-Latino White elders reporting this type of health care insurance.

Approximately two-thirds of the respondents reported a diagnosis of arthritis, and 21 to 30% reported having diabetes. A significant difference was noted on self-rated health status in that about 60% of Mexican-Americans rated their health as either “fair” or “poor,” compared with only 23.3% of the non-Latino Whites. However, the two groups did not differ significantly in terms of ADL and IADL functional limitations. None of the respondents reported a previous hip fracture injury.

Preferred caregiver and cultural values related to long-term care

Table 2 presents cross-ethnic comparison of preferred caregiver in the event of a hip fracture. Approximately 55% of Mexican-American elders preferred to rely on a formal/professional helper, while 45% would turn to informal caregivers or helper when faced with care needs following hip fracture. Among non-Latino White elders, 83.3% expressed their preference to rely on a formal/professional helper, and only 17% would rely on either spouse or children for future care needs. The between-group difference was significant in preference to rely on formal vs. informal caregivers.

The two ethnic groups showed significant differences with regard to four items assessing cultural values specific to long-term care. For example, for the item on adult children’s responsibility for parents’ long-term care, 75% of Mexican-Americans agreed to the statement by indicating “somewhat” or “strongly,” compared with only 33.3% of non-Latino White elders. When asked about whether “*Care should be provided by family members, not by an outsider,*” about three-quarters of the Mexican-Americans agreed to the statement either “somewhat” or “strongly,” in contrast to a third of non-Latino White elders. Similarly, the majority of Mexican-American elders (80.0%) endorsed the item on family harmony compared to less than half of non-Latino Whites (48.3%). Finally, for the item, “*It is OK for children to place their impaired elderly parents in a nursing home for proper care,*” about 69% of Mexican-Americans disagreed indicating either somewhat or strongly compared to 26.7% of non-Latino Whites.

Multivariate analyses

The hierarchical binary logistic regression results for the two models are presented in Table 3. In Model 1, an ethnic group membership of “Mexican American” was significantly associated with a greater likelihood of turning to informal caregiver for future care needs following a hip fracture injury. Those who lived alone, however, were significantly less likely to rely on informal caregivers. None of the variables included in the enabling and pre-existing need factors were significantly related to the preference for an informal caregiver. When the four items that comprise the cultural factor were added to Model 1 as a block, a significant ethnic effect from Model 1 disappeared. Instead, two of the four items from the cultural factor were significantly related to the likelihood of turning to informal caregiver. Those who agreed to a statement, “*Care should be provided by family members, not by an outsider,*” were three times more likely than those who disagreed to select an informal caregiver in case of a hip fracture. On the other hand, those who endorsed the statement, “*It is OK for children to send them to a nursing home for proper care,*” were 70% less likely to rely on an informal caregiver, compared with those who did not endorse it. The effect of living alone on the preference of informal caregiver remained significant in the Model 2. In Model 2, those who had Medicaid coverage were significantly less likely to turn to an informal caregiver. Finally, the significant effect of adding the cultural factor was tested by using changes in model chi-square statistics. The difference was significant at .05 level ($\Delta\chi^2=9.61$, $\Delta df=4$, $p<.04$), indicating that the contribution of the cultural factor as a block was significant in explaining the likelihood of selecting an informal caregiver. The cultural factor appears to mediate the relationship between ethnic group membership and the likelihood of selecting an informal caregiver.

Discussion

This study examined ethnic differences between Mexican-American and non-Latino White elders on caregiver preference in the likely event of hip fracture based on an enhanced Andersen's behavioral model of health service utilization. We examined whether *ethnicity* and a measure of *cultural values* independently affected caregiver preference. The findings indicated that there was a significant difference between Mexican-American and non-Latino White elders in their caregiver preferences. Fewer Mexican-American elders than non-Latino White elders preferred to rely on formal/professional caregivers, and a greater proportion of Mexican-American than non-Latino White elders preferred to rely on informal caregivers. In addition, based on the multivariate analysis, the cultural factor significantly mediated the ethnic effect on the caregiver preference. The cultural factor assessed familism and attitude toward nursing home care. Familism has been considered a major influence in caregiving practices in Mexican culture (John *et al.* 1997) but has not been explicitly assessed in caregiver preferences among Mexican-American elders. The significant effect of a cultural factor on the caregiver preference by Mexican-American elders in the present study is consistent with previous research among Korean Americans elders, an ethnic group also known for their collectivistic cultural orientation (Min 2005a). Min (2005a) found a significant cultural effect on the preference for a caregiver. Similarly, the study by Bradley and colleagues (2004) found that race/ethnicity alone did not explain the intended use of long-term care, while psychological factors mediated the racial effect on the intended use of long-term care. Taken together, the findings above demonstrate that race/ethnicity alone does not account for preference for long-term care among Mexican-American elders. In addition, Medicaid coverage significantly decreased the odds of relying on informal caregivers, which was also consistent with previous research (Min 2005a; Wallace *et al.* 1998). A significant effect of living alone on the preference for caregiving arrangement was consistent with a previous study that reported a greater preference for informal assistance among older adults living with spouses than those who were living alone (Sudha and Mutran 1999). However, in the present study, variables that have been associated with preference for long-term care in previous research (i.e., age, gender, education, self-rated health status, and functional limitation) did not have a significant effect on preference for a caregiving arrangement.

The findings from this study have several implications for informing and thereby improving the cultural relevance of services to the growing numbers of Mexican-American elders. National reports have identified such factors as low socioeconomic status and the health care delivery system that do not consistently consider the cultural relevance of services as comprising some of the underlying causes for the persistent ethnic disparities in health care access and outcomes (Institute of Medicine 2002; U.S. Surgeon General 2001; U.S. Department of Health and Human Service 2003). Given the demonstrated pattern of underutilization of formal services among Mexican-American elders compared with other older groups in the population (Dietz 2001; Hinton 2002; Ho *et al.* 2000; Lampley-Dallas 2002), patient preferences may explain in part the racial and ethnic disparities in use of health care resources (Katz 2001). Identification and incorporation of caregiving preferences in assessment and service provision (Kane & Kane 2000; 2001) is an essential first step for enhancing the cultural relevance of care for ethnic minority elders and non-minorities as well (Min 2005b). Findings on caregiving preferences also have policy implications due to the long lasting consequences of racial discrimination and social and economic inequities that historically have limited the availability and accessibility of services (Katz 2001).

The present findings revealed the salience of cultural values in caregiving preferences, which were consistent with previous studies indicating that Latino elderly have a greater tendency to rely on informal support for their care needs based on their deep rooted familism (Wallace *et al.* 1994, 1998). The preference for informal caregiving among Mexican-American elders may

contribute to their reluctance to use paid professional services even when they are medically necessary or when familial or informal caregivers are not available to provide appropriate care. Such reluctance may result in “bumping-down” (Wallace *et al.* 1998) of their long-term care needs. This suggests that ethnic minority families shoulder a disproportionate share of the caregiving burden. It may also mean that if family members are not available, the needs of elders may go unattended or a crisis may result before appropriate care is obtained (Min 2005a). Although familism engenders a sense of obligation in adult children toward their aging parents, multiple issues, such as intergenerational conflict, family stress, and geographical distance, may prevent family members from being able to fulfill traditional role expectations for caring of the elderly. For example, one study found that although many Mexican-American families maintained contact with aging relatives, they were not able to provide instrumental support for critical problems that impact ADL (Dietz 2001). Conversely, it is also important to highlight the cultural strengths and resources that are reflected in the beliefs and values that underlie the cultural preference toward informal caregiving. Studies suggest that protective factors such as high family and social support are associated with better health and mental health outcomes among Mexican immigrant families (Finch and Vega 2003). As such, an assessment of the beliefs, perceptions, and preferences of the elder and the family system that indicates a familistic cultural orientation can be useful; such qualities can be cultivated and fostered in group or family centered modalities to increase the cultural fit of services with the culture of the population being served. Providers should also provide guidance on how to balance formal and informal care options so that culture-laden preferences and expectations for informal care can be managed better by available family caregivers. It is also important for service programs to provide culturally appropriate education and advocacy services to Mexican-American elders and their families. Such services need to take into account preferred language and literacy level; they should provide useful information about available service options and ways of accessing them (Brach & Fraserirector 2000).

In particular, by enhancing the Andersen model (1995) with the addition of culture as the fourth factor, this study makes a theoretical contribution to the field by bringing to light the significant influence of a cultural dimension in the empirical investigation of long-term care among Mexican-American elders. While the race or ethnicity variable has been used as a proxy for such cultural characteristics (LaVeist 1994, 2005) in previous studies, the enhancement via the cultural factor in this study allowed for the empirical testing of cultural components that have not been explicitly specified before. This study underscores the importance of considering cultural factors and explicitly measuring them. Such explicit conceptualization and operationalization of culture is an essential empirical step in helping us to advance our understanding of its role in health disparities. The findings from this research support the development of long-term care services and programs that are more responsive to the needs and preferences of an increasingly diverse older population (Bradley *et al.* 2004). In addition, this study shows that when modified with strong theoretical rationale, the Andersen model remains a powerful and useful conceptual framework that can be adapted specifically for cross-ethnic studies on service utilization in older populations.

Findings from this study should be interpreted with the following limitations in mind. First, this study was based on a relatively small sample size and a nonprobability sampling method that limits generalizability of the findings. Second, in the current study, because the focus was on a cross-cultural comparison of preference for long-term care arrangement between two ethnic groups, there were important variables specific to Mexican-American elders (i.e., nativity, the length of residence in the U.S., linguistic acculturation) that were not included in the analysis. Finally, this study was based on a cross-sectional research design, which limited our understanding of the long-term effects of cultural values on caregiver preferences between two the ethnic groups.

In sum, the findings from this study indicate that any long-term care, home- and community-based or institutional, should consider the service needs of ethnic minority elders by explicitly taking into account their care preference and thereby provide service options that are respectful and relevant to their cultural values.

Acknowledgments

The authors thank Maricela Rodriguez for assistance with recruitment of Latino elders and data collection, and the Latino and non-Latino White elders for participation in this study. This research was generously supported by the John A. Hartford Foundation Geriatric Social Work Faculty Scholars program.

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Table 1

Characteristics of the Study Sample

Characteristics	Ethnic Groups (%)		χ^2 or t-value
	Mexican-American (N=89)	Non-Latino White (N=30)	
Gender			
Female	79.8	80.0	
Age	(M=73.1;SD=5.7)	(M=72.8;SD=7.7)	
65–74	61.8	56.7	
75–84	35.9	36.7	
85 or older	2.3	6.6	
Marital Status			
Single	14.9	16.7	
Married	25.3	23.3	
Widowed	35.9	40.0	
Separated/Divorced	23.6	20.0	
Education	(M=5.1; SD=3.4)	(M=10.4; SD=3.0)	7.3***
Elementary school or less	66.7	13.3	27.8***
Middle school	17.8	13.3	
High school	11.1	36.7	
College graduate	4.4	36.7	
Living arrangement			
Live alone	58.4	60.0	
Live with spouse	16.9	30.0	
Live with spouse & children	11.2	6.7	
Live with children only	7.9	0.0	
Live with relative other than children	5.6	3.3	
The number of children	(M=3.7; SD=2.5)	(M=2.6; SD=2.3)	2.15*
None	8.0	16.7	
1 or more	92.0	83.3	
Receipt of Informal Support (0–14)	(M=3.0; SD=2.6)	(M=2.7; SD=2.2)	
Previously used LTC services (%)	25.6	30.0	
Monthly income			
Less than \$1,000	91.0	43.5	31.5***
\$1,001–\$1,500	4.5	20.0	
\$1,501 or more	4.5	26.7	
Have Medicaid coverage	74.4	30.0	19.13***
Told by physician to have stroke	5.7%	7.1%	
Told by physician to have diabetes	29.6	20.7	
Told by physician to have arthritis	67.1	62.1	
Told by physician to have cancer	2.3	6.9	
Activities of Daily Living (ADL) (0–6)	(M=0.6; SD=1.3)	(M=0.6; SD=1.3)	

Characteristics	Ethnic Groups (%)		
	Mexican-American (N=89)	Non-Latino White (N=30)	χ^2 or t-value
None	73.9	80.0	
1 or more	26.1	20.0	
Instrumental Activities of Daily Living (IADL) (0–5)	(M=0.6; SD=1.2)	(M=0.4; SD=0.9)	
None	70.8	76.7	
1 or more	29.2	23.3	
Self-rated health status			
Excellent	3.4%	23.3%	21.9***
Very good	9.1	23.3	
Good	28.4	30.0	
Fair	51.1	13.3	
Poor	7.9	10.0	

*
 $p < .05$;

**
 $p < .01$;

 $p < .001$

Table 2

Preferred Caregiver in the Case of Hip Fracture and Cultural Values

	Ethnic Groups (%)		
	Mexican-American (N=89)	Non-Latino White (N=30)	χ^2
Preferred Caregiver			
Formal/Paid helper	54.6	83.3	7.85**
Informal caregiver (spouse or children)	45.4	16.7	
Cultural Values			
<i>Adult children should be more responsible than elderly parents for making LTC arrangement of the parents.</i>			
Strongly/ Somewhat disagree	25.8	66.7	16.20***
Somewhat/Strongly agree	74.2	33.3	
<i>Care should be provided by family members, not by an outsider.</i>			
Strongly/ Somewhat disagree	26.7	67.4	15.21***
Somewhat/Strongly agree	73.3	32.6	
<i>It is OK for children to place their impaired elderly parents in a nursing home for proper care.</i>			
Strongly/ Somewhat disagree	68.5	26.7	16.14***
Somewhat/Strongly agree	31.5	73.4	
<i>It is desirable not to share bad news with family.</i>			
Strongly/ Somewhat disagree	20.0	51.7	9.16**
Somewhat/Strongly agree	80.0	48.3	

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

Table 3
Results from Binary Logistical Regression on the Selection of Informal Caregiver in Hip Fracture Scenario

	Model 1		Model 2	
	Odd ratio	95% CI	Odd ratio	95% CI
Predisposing factors				
Ethnicity (1 = Mexican American)	4.6*	(1.1–19.1)	4.2	(0.9–18.1)
Sex (1 = Female)	0.7	(0.2–2.1)	0.7	(0.2–2.3)
Education (in years)	0.9	(0.8–1.1)	0.9	(0.8–1.1)
Age	1.0	(0.9–1.1)	0.9	(0.9–1.1)
Living alone (1 = Yes)	0.4*	(0.2–0.9)	0.4*	(0.1–0.9)
Enabling factors				
Presence of Children to rely on (1 = Yes)	1.6	(0.4–6.8)	1.1	(0.1–5.0)
Receipt of informal support (0–14)	1.0	(0.9–1.1)	1.0	(0.9–1.1)
Previous use of LTC service (1 = Yes)	1.2	(0.4–3.7)	1.4	(0.5–4.4)
Medicaid coverage (1 = Yes)	0.4	(0.1–1.1)	0.3*	(0.1–0.9)
Pre-existing need factors				
IADL limitation (1 = Yes)	1.0	(0.6–1.6)	1.1	(0.6–1.7)
Self-rated health status (1 = EX/VG/G)	0.9	(0.4–4.0)	0.9	(0.3–2.4)
Cultural factors				
Adult children responsible for LTC arrangement			1.9	(0.7–5.5)
Care by family, not by an outsider			3.0*	(1.1–9.6)
OK to send parents to nursing for proper care			0.3*	(0.3–0.9)
Not sharing bad news with family			0.7	(0.3–2.2)
N	111		111	
LR Chi-square (df)	15.36 (11)		24.97* (15)	
Pseudo R2	.12		.17	
Log Likelihood	–65.86		–62.05	
H-L Goodness-of-fit chi-square (df)	3.33 (8)		8.05 (8)	
Chi-square difference with df difference		9.61* (4)		

*
 $p<.05$;
**
 $p<.01$;

 $p<.001$