ABSTRACT

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                            FAMILISM VALUES ON LIVING
                            ARRANGEMENTS AMONG KOREAN-BORN
                            IMMIGRANT ELDERLY WIDOWS
                            IN THE U.S.: LIVING ALONE VS. LIVING
                            WITH ADULT CHILDREN
                            .

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       The general understanding of living arrangements of Korean-born immigrant

elders is based on the popular American myth that immigrants from Asian culture

tend to live together because they value living together. However, this study focuses

on the importance of practical needs of elderly widows and their adult children in

determining of residential status of elderly widows. The purpose of this study is to

examine the relationship between elderly widows' needs, adult children's needs,

familism values as a traditional value, and living arrangements among Korean-born

immigrant elderly widows in the U.S.

       Structured interviews of 103 Korean-born immigrant elderly widows were

conducted. This study included only elderly widows; therefore, the assessment of

adult children's familism values and needs was based on their elderly mothers'

perceptions.

From environmental press theory, need contingent exchange theory, and previous studies, daycare needs of adult children, economic needs and health needs of elderly parents, and social-emotional needs of both were identified. The relationship between age of elderly widows and co-residence was linear in this sample, showing that as elderly parents became older, the percentage of co-residence within each age group decreased.

It was found that adult children's total needs had interacted significantly with age of elderly widows in influencing living arrangements while elderly widows' total needs did not have a significant interaction effect with age of elderly widows. While higher elderly widows' total needs were associated with higher rates of co-residence irrespective of elderly parent's age, higher adult children's total needs were associated with higher rates of co-residence among the young-old (age 60-69) and old-old (70-79) groups than the oldest-old (80 and above) group.

Lastly, familism values of elderly widows and adult children as perceived by elderly parents were not related to the likelihood of co-residence when needs variables were controlled. Overall, the results showed that the greater elderly widows' total needs, and the greater adult children's total needs, the more likely elderly widows were to co-reside rather than to live alone. As a result, the findings of this study supported environmental press theory and need contingent theory rather than a cultural preference explanation of co-residence rates.

EFFECTS OF PRACTICAL NEEDS AND FAMILISM VALUES
ON LIVING ARRANGEMENTS
AMONG KOREAN-BORN IMMIGRANT WIDOWS IN THE U.S.:
LIVING ALONE VS. LIVING WITH ADULT CHILDREN

by

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Dedication

This dissertation is dedicated to

all the Korean-born immigrant elderly parents

who have loved their children for their whole lives and

helped them to survive and be prosperous in the U.S.

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than what I thought I would be able to achieve.

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Table of Contents

List of Tables

List of Figures

Chapter 1: Introduction

Introduction

Researchers in various fields of social science have studied issues of living arrangements—who lives with whom—because of the significant connection between these and other factors related to well-being and life circumstances. Three major factors most likely to affect one's living arrangements include the existence of relatives who could potentially live in the household, the economic and physical feasibility of various arrangements, and one's personal preferences (Goldscheider & Jones, 1989).

Recently, interest in the determinants of living arrangements has gone beyond individual characteristics and preferences and has extended to the political and economic environment (Kim & Lauderdale, 2002; McGarry & Schoeni, 2000; Mutchler & Burr, 2003). For example, Kim and Lauderdale (2002) studied the role of community characteristics in Korean immigrant elders' living arrangements using the U.S. Census Bureau 1990 Public Use Microdata Sample (PUMS). They found a correlation between the probability of Korean immigrant elders' living independently and the availability of subsidized housing near Korean communities.

Despite continuous attention and extension of the scope of previous studies, little information is yet available regarding the determinants of the residential status of Korean-born immigrant elders. This study examined those determinants. Drawing on *environmental press* theory (Lawton, 1982), the researcher assumed that the practical needs of elderly Korean-born widows and their adult children were the result

of environmental demands, and compared the circumstances of such widows living alone with those of widows who live with adult children. Based on *need-based exchange theory,* the researcher also expected that the practical needs affected choices about living arrangements among Korean-born immigrant elderly widows.

The number of Korean immigrants in the U.S. is rapidly increasing. As of 2000 (U.S. Bureau of the Census, 2005), there were 84,172 Koreans in Maryland and Virginia (39,113 in MD; 45,059 in VA), representing a 39.5% increase compared to the 1990 Census (U.S. Bureau of the Census, 1991). Of these, 4,089 people, or 4.9%, are 60 years of age or older (U.S. Bureau of the Census, 2005).

There are two main reasons why more research on Korean-born immigrant elders is needed. The first is in order to understand the dynamics and effects of the many problems experienced by those who immigrated to the U.S. in their 40s, 50s, or even 60s, such as lack of proficiency in English, poor health, loneliness, lack of transportation, and low income (Koh & Bell, 1987; Lee, 2002; Yoon, 2005). The second is the relative simplicity of identifying determinants that influence choice of living arrangements among Korean-born immigrant elders, because they are a largely homogeneous group in terms of birthplace and length of time in the U.S. This study adds to the knowledge base concerning how immigrant elders' living conditions are influenced by their unique circumstances as newcomers to Western culture, and may serve as a foundation for comparing Korean-born immigrant elders to those of other immigrant elders from traditional cultures. Moreover, data from this study can be used to help tailor appropriate social services targeting this population

While the word *immigrant* has a geographical connotation, the term *race* is "a

category of persons who are related by a common heredity or ancestry and who are perceived and responded to in terms of external features or traits. Although the members of a racial subdivision are characterized by a relatively distinct combination of physical attributes, those in an *ethnic group* share not only a national heritage but also a distinct set of customs, a language system, beliefs and values, indigenous family traditions, rituals, and ceremonials. *Ethnicity* thus includes a common cultural history and familial and other institutions" (Wilkinson, 1993, p.19). Murry, Smith, and Hill (2001) also suggested that "the term *race* should refer to phenotypic differences that arise from genetic or biological dispositions, such as skin color and hair texture, whereas *ethnicity* should refer to perceived group membership based on nationality, ancestry, or both" (pp. 912-913). Because the subject of this study is Korean-born immigrant elderly widows, that's what they are called throughout this paper. However, when other studies are described here, terms related to race and ethnicity are inevitably included.

Statement of the Problem

When considering the living arrangements of Korean-born immigrant elders, many believe the popular but unsubstantiated American myth that immigrants from Asia tend to live together because they have close extended family ties and value living together. That myth has been further promoted in studies of the relationship between traditional values and living arrangements. Some researchers assume the reason there is more co-residence among immigrants from other traditional cultures than non-immigrant White Americans is because immigrants from other traditional

cultures have a more positive attitude toward co-residence (Aquilino, 1990; Spitze, et al., 1992; Wolf & Soldo, 1988; Woroby & Angel, 1990). Studies using that approach have not directly measured and tested the relationship between traditional values and living arrangements; rather, they have used race and ethnicity as a proxy measure for traditional values as pointed by Spitze, Logan, and Robinson (1992). That bias can also produce misleading information because "race/ethnicity is often confounded with socioeconomic indicators" (Murry, Smith, & Hill, 2001, p.911).

A second approach indirectly measures cultural values by assessing assimilation and acculturation, assuming that the more assimilated or acculturated people are the more they adhere to mainstream American values (Gordon, 1964; Hirschman, 1983). In terms of living arrangements, that approach explains that the more assimilated or acculturated people are, the more likely they are to live independently of their parents or children. The level of assimilation/acculturation is usually assessed using the respondent's self-reported level of English proficiency. There are some studies in which this measure is supplemented by additional measures such as food preference, attachment to ethnic networks, and use of ethnic mass media (Burr & Mutchler, 1993). However, these assimilation/acculturation measures typically fail to capture immigrant elders' internalized values and attitudes concerning family and living arrangements. This is especially true among participants in the present study because relatively few Korean elders speak English (Kim & Kim, 2001; Lee, 2002). In other words, the extent to which Korean-born immigrant elders speak English does not reflect the extent to which they are assimilated or acculturated to the mainstream culture of the U.S. (These issues will be revisited in the literature review

chapter following this one.)

Neither approach is appropriate when examining the effect of traditional values on living arrangements among Korean-born immigrant elders. In contrast, this study examines the relationship between Korean-born immigrant elder's traditional values and their living arrangements by using a direct measure of the familism value, which is one of the most representative traditional values in Korea.

Even with the use of a more valid measure to test the effect of cultural values on the choice of living arrangement among Korean-born immigrant elders, cultural values alone are not sufficient to explain their living arrangements. Practical needs are also important to examine and will be considered in this study. According to Koh and Bell's (1987) study, 70% of their participants (151 Korean-born immigrant elders in New York City) clearly expressed a preference for living independently, even though 76% of them lived with family members (25% lived with spouse only, 51% with spouse and children and/or adult children). Their results demonstrate that preferences for living independently are higher than is generally believed about preferences of immigrant families from traditional cultures. Consequently, there is an unexamined gap between preferences and practices of living arrangements.

The current study hypothesizes that the choice of living arrangements is associated with both the elderly widows' needs and the adult children's needs, even after the effects of familism values have been controlled. Many of the needs of Korean-born immigrant elders and their immediate kinship network, including their married adult children, are produced by *environmental press* (Lawton, 1982), specifically factors related to their social, economic, and political environments. For

5

example, the history of immigration in the U.S., provisions of U.S. immigration law, inviters' socioeconomic circumstances (if immigration occurs by another person's invitation), and elder's individual characteristics, such as health status and preferences, all produce specific needs that influence elderly immigrants' living arrangements. Discovering the direct effects of socioeconomic and environmental influences on living arrangements is beyond the scope of this study. However, given the unique circumstances of Korean-born immigrant elders, one can speculate that socioeconomic and environmental influences would be manifested as practical needs, thus affecting choice of living arrangements. Little is known about what needs exist and how these needs influence choice of living arrangements among Korean-born immigrant elders and their families. Therefore, the purpose of this study was to examine the relationships among adult children's needs, elderly widows' needs, and familism values in determining the choice of living arrangements among Korean-born immigrant elderly widows. Co-resident elderly widows were compared to elderly widows living alone.

Purpose of the Study

The purpose of this study was threefold: (1) to study the extent to which familism values of Korean-born immigrant elderly widows and their adult children influenced the elderly widows' living arrangement; (2) to identify variables representing adult children's needs and elderly widows' needs and their different effects on the choice of living arrangement among Korean-born immigrant elderly widows; and finally, (3) to examine the relative importance of adult children's needs,

elderly widows' needs, and familism values in determining the choice of living arrangement among Korean-born immigrant elderly widows.

Scope and Delimitations

The subject of the current study is Korean-born immigrant elderly widows age 60 and older. Age of elderly widows is the most important control variable in the study. Even though the study measured age as a continuous variable, it divided age into three groups for some analyses and discussion: young-old (age 60-69); old-old (age 70-79); and oldest-old (age 80 and above) groups.

There are many immigrant elders from different nations of origin in the U.S. They have unique patterns of living arrangements based on their life circumstances as well as religious affiliation and traditional culture. A review of the living arrangements of immigrant elders from other traditional cultures is beyond the scope of this study. Therefore, with the exception of some cases such as the use of census data, which includes various ethnic groups, non-immigrant White American elders were used as a comparison group for Korean-born immigrant elders. This study also included only elderly widows; therefore, the assessment of adult children's familism values and needs was based on their elderly mothers' perceptions.

Chapter Two: Literature Review

Immigration History of Korean-Americans to the U.S.

To identify demographic characteristics of Korean-born immigrant elders and understand their unique situation it is first necessary to examine their immigration history. Under the 1882 treaty of peace, friendship, and commerce between the U.S. and Korea, a few Koreans began to arrive in the U.S. They were mostly students, political exiles, and ginseng merchants (National Association of Korean Americans, 2005).

However, the number of Koreans in the U.S. before the 20th century was estimated to be fewer than 50 (Hurh & Kim, 1980). The first significant Korean immigration to the U.S. and its territories was traced back to 1903, when American sugar planters in the Hawaiian Islands imported Korean laborers for their plantations to replace Japanese who had requested a wage increase (Kim, 1981). Between 1903 and 1905, approximately 7,500 Koreans, mostly men, moved to Hawaii to work on plantations (National Association of Korean Americans, 2005). Immigrating to Hawaii often served as a steppingstone to the U.S. mainland; from 1905 to 1910, 2,012 Koreans living in the Hawaiian Islands moved to the U.S. mainland (Kim, 1981).

"The largely male immigration to Hawaiian sugar plantations occurred at the crossroads of the economic circumstances in Korea, U.S. Christian missionary efforts in Korea, the Japanese encroachment in Korea, and the ethnic politics of Hawaii plantations" (Abelmann & Lie, 1995, p.53). Because of internal unrest mainly due to

external Japanese influence and opportunities for immigration through American missionaries' efforts, most of the earlier immigrants were political refugees, students, and clergy. Most were Christians, which explains why Protestant churches have been a major community organization in Korean immigrant society to the present (Kim, 1981).

For a variety of reasons, U.S. immigration laws proscribed the entry of Korean immigrants between 1904 and 1952 (see Abelmann & Lie, 1995 and INS 1990, app. A. 1-6 for details). During the same period, seeds of Korean immigration to the U.S. grew. From 1945 on, U.S. troop deployment in South Korea expanded physical, social and cultural contact between Korean women and American servicemen (Yuh, 2002), often resulting in marriage. The new "military brides" were only allowed to immigrate through a special act of Congress until 1952, when Congress ended the prohibition on Asian immigration (Yuh, 2002). Lee (1997) estimated approximately 90,000 Korean women married to American servicemen and immigrated to the U.S. between 1950 and 1989. Coinciding with this was a dramatic increase of American families adopting Korean children. From the end of the Korean War in 1953 to 1989, approximately 300,000 Korean adoptees entered the U.S. (National Association of Korean Americans, 2005).

The Immigration Act of 1965 also played an important role. It abolished the national-origin quota system and established preferences such as family reunification, scarce skills, and refugee status to dictate immigration opportunities (Yamanaka & McClelland, 1994). As a result, a dramatic shift in the composition of the immigrant stream into America occurred. The proportion of European immigrants sharply

declined, whereas the number of Asians and Hispanics grew rapidly (Keely, 1971). The Asian population in the U.S. rose between 1970 and 1980 by 141% (Gardner, Robey, & Smith, 1985) and reached more than 10 million in 2000 (U.S. Bureau of the Census, 2003), compared to 3.5 million in 1980 (Frey, 1991).

Under the 1965 immigration law, military brides often formed the first link in chain migrations through invitations to their immediate and extended family members in Korea (Yuh, 2002). Subsequently, they played an important role in forming the Korean immigrant community in the U.S. by both inviting family and helping family adjust to their new lives (Yuh, 2002). According to Lee (1997), approximately 40% to 50% of all Korean immigrants since 1965 were associated with sponsorship by military brides. Under the provision of occupational preferences as well as under family reunification, women played an important role in the formation of a Korean immigrant community; for example, more women than men entered the U.S. as nurses or other health care professionals (Park, 1997). According to the 2000 Census, Koreans have settled in every state and totaled 1,072,682 (The U.S. Bureau of the Census, 2005).

This history carries two important implications for studying the living arrangements of the Korean immigrant elderly population. The first implication is the existence of a modern generation of Korean elders not born in the U.S. (Gelfand, 1994); most of its members are first-generation immigrants who have spent most of their lives in Korea. As indicated above, it was only after 1964 that the influx of Koreans started to sharply increase. Few Koreans, who immigrated for occupational reasons and therefore were self-supporting, have reached retirement age (Min, 1998).

As a result, the vast majority of Korean elders in this country were invited by either siblings or their adult children, who had become naturalized citizens after the late 1970s. Even though existing data did not specify the proportion of each type of Korean immigrant elders, history shows there are currently three main groups, each very different in terms of degree of assimilation to American culture, dependence on adult children, and resources.

While Min (1998) defined only the first and the second groups, the researcher added the third group. Min (1998) defines the first group, invited by their adult children, as "invited" elders, who mostly came to the U.S. after reaching the age of 50 and are least likely to be assimilated, least likely to have resources, and most dependent on their children. Min calls the second group "immigrated" elders because they came for occupational reasons, without specific invitation, at a relatively younger age than the other two groups, and were therefore self-supporting; however, members of this group are now starting to reach the age of retirement (Min, 1998).

The third group, elders invited by their sisters and brothers, mostly came to the U.S. in their 40s or 50s and have some job experience in the U.S. A majority worked in factories or were engaged in clerical or other low-status jobs (Association of Korean Americans, 2005). Some of them were involved with small businesses, which their sisters or brothers ran (Park, 1997). Even though they are literally classified as invited, they are closer to the immigrated elders in terms of their job experiences in the U.S., resources, and age of entry.

Therefore, it can be surmised that all three groups of Korean-born immigrant elders are represented among members of the young-old age group (age 60-69);

11

however most elders among the old-old (70-79) and oldest-old (80 and older) age groups, can be classified as part of the first group—elders invited by their adult children. In this study, the majority of participants were those who fit this invited category. Therefore, all discussion that follows primarily pertains to elders invited by adult children.

The second implication of the history described above concerns this first invited group. As previously stated, only adult children who have U.S. citizenship can legally invite their parents. One requirement of that policy is that the adult children are then held financially and socially responsible for their parents for at least five years. That means they have at least one adult child in the U.S. Also, they tend to be dependent on their adult children in a foreign environment because of language, transportation, and cultural barriers. If Korean-born immigrant elders live with their adult children, there is a high probability that they co-reside in the adult child's household (Kim & Kim, 2001; Min, 1988).

A Life Course Perspective with Demographics

A life course perspective takes into account both individual development and changes in family structure over time (Hareven, 2001). This perspective is useful in understanding the life situations of older people and the quality and quantity of their intergenerational relationships. Life course emphasizes the effects of previous choices and experiences, as well as historical and cultural factors on choices and experiences in the present (Hareven, 2001; Hays & George, 2002; Moen, 1996). In addition, it emphasizes the interaction of three types of timing: "individual timing of life

transitions in relation to historical events; synchronization of individual and family life transitions under varying historical and cultural contexts; and the impact of earlier life events, as shaped by historical circumstances on subsequent ones" (Hareven, 2001, p.141). In studying ethnic immigrant elders who have experienced being uprooted from their native country, the life course perspective is essential. In the present study, when one identifies elderly people as "young-old" (age 60-69), "old-old" (70-79) and "oldest-old" (80 and older), one is not simply referring to chronological age, but also recognizing differences in experiences, choices, and cultural/historical influences that occur throughout life.

Elderly Parent-Adult Child Living Arrangements among Non-immigrant White Americans

In American society, the predominant values related to parent-child living arrangements are independence and privacy, meaning older people in the U.S. typically prefer to live alone in their own homes rather than share a house with their adult children (Treas & Bengtson, 1987). "If all things are equal, individuals in later life prefer to live with nuclear family members or alone; alternatively, arrangements involving non-nuclear family members in the household, relinquishing headship, or living in a nursing home are less desired" (Mutchler & Burr, 1991, p.376). One of the most dramatic changes in living arrangements in the 20th century is the increase in elderly widows living alone, from only 12% in 1910 to nearly 70% in 1990 (Kramarow, 1995).

Researchers have a tendency to underestimate co-residence in cross-sectional data (Aquilino, 1990). For example, Crimmins and Ingegneri (1990), in their analysis of cross-sectional national survey data, found that the proportion of parents aged 65 and older who lived with a child was 28% in 1962, and 18% in 1975 and 1984. Similarly, according to a report by Schmertmann et al. (2000) on the 1990 decennial census data, approximately 18% of elderly people aged 60 and older lived with adult sons or adult daughters.

However, in longitudinal studies following subjects over time, researchers have found co-residence by older parents and adult children is more frequent (Beck & Beck, 1989; Ward, Logan, & Spitze, 1992). For example, in their 15-year panel study, Beck and Beck (1989) found that between one-fourth and one-third of White middle-

aged women had lived in extended households with family members for some time over the 15-year period; this was also true for approximately two-thirds of Black middle-aged women. Therefore, while co-residence between elderly widows and adult children may not be the norm, it is more common than most research indicates.

Previous research shows that co-residence is related to the needs of elderly parents (Crimmins & Ingegneri, 1990, Soldo et al., 1990; Speare & Avery, 1993) and the needs of adult children (Aquilino, 1990; Glick & Lin, 1986; Ward et al., 1992, Ward & Spitze, 1996). As a whole, among white middle aged and young-old parents, the decision to co-reside tends to reflect children's characteristics and needs; among old-old and oldest-old parents, co-residence reflects elderly parents' characteristics and needs. In the former case, adult children's families typically co-reside in the parents' house and the parental home plays the role of a "safety net" that buffers the early failure of marriages or job loss of adult children (DaVanzo & Goldscheider, 1990). Only 3% of the 716 returning co-resident children said that they came back to help their parents (Ward and Spitze, 1996). Ward and Spitze (1996) concluded that "co-residence by children in parent households only infrequently involved care giving for parents" (p. 527). The use of the parents' home as a safety net in the U.S. is also a reflection of high rates of homeownership among elderly parents. According to the data from the Housing Our Elders Project of the U.S. Department of Housing and Urban Development (HUD, 1999), about 95% of older adults live in their own homes and 77% of them are homeowners, in spite of significant socioeconomic diversity in this group.

When co-residence is determined by the elderly parents' characteristics and

needs, the adult children may co-reside with frail elderly parents, predominantly in the children's home, in order to meet the elderly widows' health, income, and emotional needs. This arrangement is most frequently found in research targeting those in the old-old and oldest-old age groups (Coward et al., 1989; Coward & Cutler, 1991; Crimmins & Ingegneri, 1990; Soldo et al., 1990; Speare & Avery, 1993). For example, Spear and Avery (1993) found that unmarried parents aged 75 and over benefited substantially from living with children, whereas for younger unmarried parents and married parents of all ages, children were often the beneficiaries of co-residence. Given that sample surveys inevitably underrepresent those who are in the worst health, the most seriously disabled, the poorest, and the least educated (Campbell & Alwin, 1996; Freeman et al., 1992), there is a possibility that the influence of parents' needs in the 'old-old' and 'oldest-old' group was underrepresented even in the studies including relatively large numbers of respondents who fit the definition for these age groups.

Elderly Parent-Adult Child Living Arrangements among Korean-born Immigrant Families

As stated earlier, it is generally believed that Asian Americans prefer to live together as an extended family. Contrary to that belief, previous research has found that a considerable proportion of Korean elders live separately from their adult children. For example, in Koh and Bell's (1987) study of living arrangements of Korean elders in the United States, about 44% of Korean elders in the New York City area lived separately from their adult children (19% living alone and 25% living with

16

a spouse only). Similarly, Yoo and Sung (1997) found that out of 102 respondents aged 60 and older in the Dallas area, approximately 34% lived separately from adult children; and 68% lived with adult children. According to data from the U.S. Census (U.S. Bureau of the Census, 1983, 1992), the proportion of co-residence among Korean-Americans aged 65 and older decreased from about 75% in 1980 to 57% in 1990. Thus, the tendency for Korean-born immigrant elders to live separately from their adult children has increased over time.

As the life course perspective suggests (George, 1996; Hareven, 2001), previous decisions and experiences of Korean-born immigrant elders such as immigration, fertility, immigration regulations, and cohort experiences, have an influence on availability of adult children and resources related to living arrangements. These decisions and experiences yield a totally different pattern of co-residence among this population than among American-born non-Koreans. First, though a minority of elders immigrated as younger adults and have become elders, most Korean-born elders came to the U.S. at the invitation of their adult children (Kim & Kim, 2001). Given the socioeconomic circumstances of Korea in the early and middle 20th century, when the elderly immigrants were born and educated, most have low education levels, making it harder for them to adapt to American society. They are also apt to be financially dependent on their adult children and the government. In other words, in contrast to elderly non-immigrant White Americans, Korean-born immigrant elders have very limited resources, especially in terms of home ownership. Even when living separately from their adult children, they are most likely to live in subsidized housing and be supported primarily by Supplemental Security Income

17

(SSI) (Kim, 1997; Kim & Kim, 2001; Koh & Bell, 1987; Yoo & Sung, 1997). Therefore, irrespective of the age of the elder, if co-residence occurs between a Korean-born immigrant elderly widow and her adult child, it is usually the widow who co-resides in the adult child's home.

Critically reviewing studies showing that dependency needs cause co-residence between elderly widows and their adult children in American families, Lee and Dwyer (1996) concluded that there were two types of such parents likely to share a home with their children: relatively healthy, wealthy and married parents who could provide homes for their adult children if the children were unemployed, not married, or both; and the infirm, widowed, and oldest parents who need assistance themselves. However, in families with Korean-born immigrant elders, co-residence with an elderly widow does not necessarily mean the adult child takes care of the elderly widow. Literature about Korean immigrant families frequently depicts Korean-born immigrant elderly widows as active helpers for daycare of grandchildren or household chores in order to enable their daughters or daughters-in-law to work outside the home (Kauh, 1997; Kim & Kim, 2001; Kim & Lauderdale, 2002).

Previous Research Related to the Factors Determining Co-residence

Studies including both middle-aged and older parents (Aquilino, 1990; Ward, et al., 1992) have shown that co-residence between parents and adult children among non-immigrant families in the U.S. decreases as parents become older. For example, Aquilino (1990), studied co-residence for a broader age range of parents using the 1987-88 National Survey of Families and Households (*n* = 4,893). In the study, 45%

of parents aged 45 to 54 co-resided with adult children age 19 or over. The percentage declined to 28% of those aged 55 to 64, and 14% of those aged 65 and older.

However, when researchers restrict their focus to parents 60 and older, the relationship is different. A previous study including only widows aged 65 and older (McGarry & Schoeni, 2000) has indicated that the rate of living alone across age follows a slow inverted U-shaped function: a slow increase to about age 70 and a slow decrease from about age 77, ranging from 33% to approximately 70%. The overall pattern is consistent with those reported in the 1990 Census, even though the range of rates is higher than those of the 1990 Census.

Figure 1 presents the percentages of elderly people living alone by race and age in 1990 (U.S. Bureau of the Census, 1996). It shows that for all races, including Asian/Pacific Islanders, the percentage of elders living alone increased through their mid-eighties and then decreased. However, it is important to note that these percentages do not include elderly who lived or moved into nursing homes because these are classified as group quarters. Very old parents going into nursing homes may explain the decrease at higher ages, because they need more care than their children can provide. However, according to a study by Schmertmann et al. (2000), only 4% of persons aged 60 and older in the 1990 decennial census lived in group quarters. Therefore, one could speculate that the rate of co-residence across age follows a slow U-shape curve because living with adult children for many oldest-old elders is the most salient alternative to living alone.

Figure 1. Percent Living Alone by Race and Age in 1990 Census Data

Percent Living Alone by Race and Age in 1990 Census Data
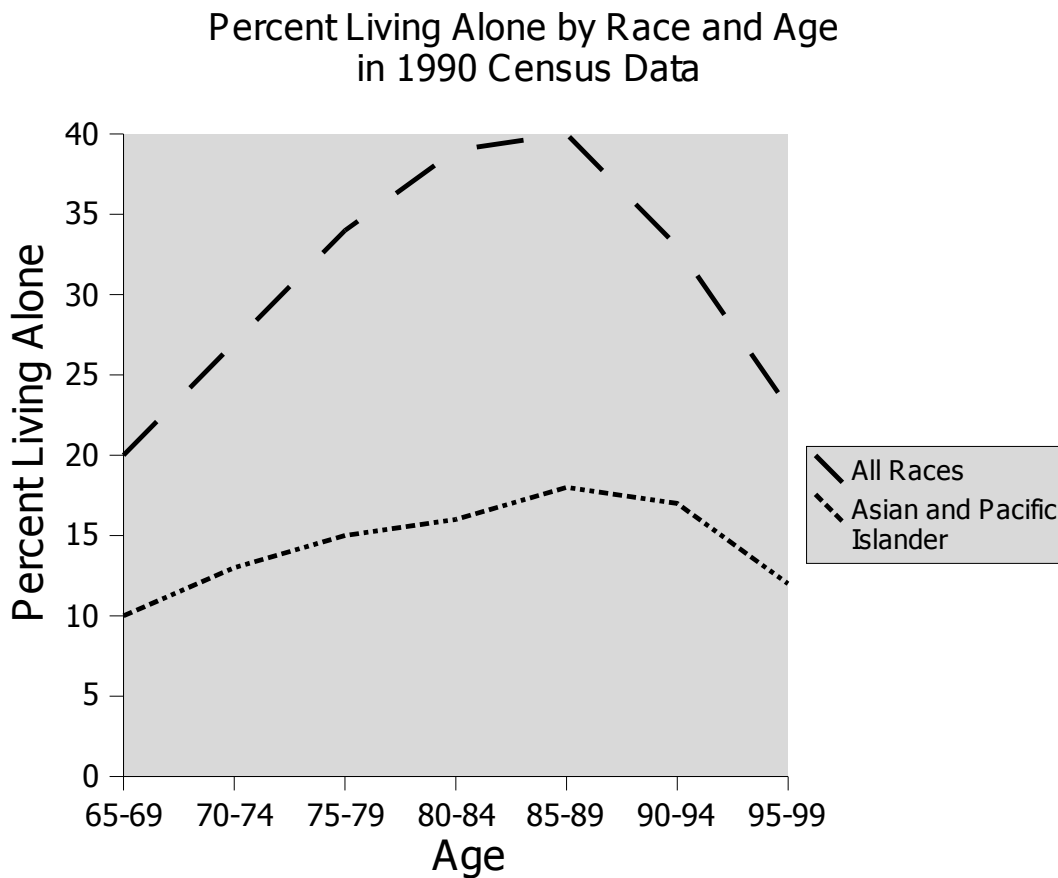
(Slightly adapted from special tabulations from 1990 Decennial Census sample files, U.S. Bureau of the Census, 1996)

Two key questions addressed in studies comparing co-residence and living alone are: "Which characteristics of elderly widows and adult children are related to the patterns of co-residence and living alone?" and "How do characteristics related to high rates of co-residence among the elderly widows differ between young-old parents and oldest-old parents?" Crimmins and Ingegneri (1990) studied the effects of socio-economic variables and the presence of adult children on co-residence using data from the 1984 National Health Interview Survey Study on Aging and the 1962

and 1975 Survey of the Aged. They found that functional disability and widowhood increased the probability of co-residence by 2% and 11% respectively in 1984. Interestingly, age was not related to the likelihood of co-residence when those two factors, functional disability and widowhood, were controlled. They concluded that living with adult children was related to concomitant losses that necessitate co-residence rather than solely the age of the elder.

The balance of adult children's needs and elderly widows' needs changes according to the age of the elders. As life expectancy increases, it becomes important to differentiate among the "young-old" (age 60 to 69), "old-old" (70-79) and "oldest-old" (80 and older) groups. Rossi and Rossi (1990) studied how the degree of help exchanged between elders and their children has changed over their lifetime. They found that parental help to adult children continued well into the children's adult years, but the balance reversed when parents were over 70. We can speculate that this change reflects change in the balance of children's versus parents' needs. As parents become older, parents' needs, such as those relating to economic resources and health issues, exceed those of their adult children. Little is known about how changes in the balance of adult children's needs and elderly widows' needs influence choices of living arrangements.

This section of the literature review is organized around the key needs variables of elderly widows and adult children. According to some research, co-residence is mainly a parental response to adult children's needs (Aquilino, 1990; Glick & Lin, 1986; Ward et al., 1992). For others, co-residence is primarily determined by parents' needs (Crimmins & Ingegneri, 1990, Soldo et al., 1990;

Speare & Avery, 1993). In this section, previous research related to the factors that determine choices of co-residence among elderly widows and their adult children will be reviewed, followed by a review of studies on familism values and other demographic variables related to living arrangements. As mentioned earlier, with some exceptions, such as the use of census data that include various ethnic groups, this study uses non-immigrant White American elderly women as a comparison group to Korean-born immigrant elderly widows.

Elderly Parents' Needs

  Economic needs. Both economic resources and health status are related to independent living in elderly widows. Research has shown that elderly widows with lower incomes are more likely to live with adult children (Aquilino, 1990; Cooney, 1989; Kobrin, 1981; Soldo, Wolf & Agree, 1990; Wolf, 1984; Wolf & Soldo, 1988). Using data from the Survey of Income and Program Participation, Mutchler and Burr (1991) examined living arrangements among the non-married population aged 55 and over. They found that economic resources play an important role in the decision-making process of transitions across different household arrangements. They included three income indicators: a measure of current income, change in income over the previous year, and assets. Assets were calculated by adding the value of assets minus one's debt. The study found that formation of single-resident households was more closely related to reported higher income or a rise in income over the previous year, than to one's total assets or wealth, irrespective of who heads the household.

  At the same time, studies about the relationship between Social Security and

living arrangements among elders attribute the increase in independent living among widows in the 20th century to increased Social Security benefits (Costa, 1999; McGarry & Schoeni, 2000). For example, McGarry and Schoeni (2000) investigated the relationship between economic growth and the rise in elderly widows' independence in the 20th century by using data from the 1940-1990 decennial censuses. They found that the percentage of elderly widows living alone rose from 18% in 1940 to 62% in 1990, while the percentage of those living with adult children declined by nearly the same proportion from 59% to 20% (McGarry & Schoeni, 2000). In the study, the dramatic shift in living arrangements was mainly caused by gradual increases in economic status due to Social Security coverage and benefits, which accounted for approximately 47% of the increase in independent living among elderly widows during the given period. While some studies showed that higher income is related to living alone, poverty among older women is concentrated among women living alone: ninety-five percent of the non-institutionalized population of unmarried women who were poor in 1979 lived alone (Holden, 1988).

These two results seem contradictory. However, it could be that the former include mostly home-owning elders and the latter mostly those that live in government subsidized housing. For example, in Aquilino's (1990) study, which found that lower income was related to living with an adult child, 93% of elderly widows were homeowners. Thus, their total actual income and financial needs, as perceived by the elders, may be more important in the determination of their living arrangements. According to the current Social Security law (The U.S. Social Security Administration, 2003), to get SSI (Supplemental Security Income), one must (1) be

age 65 or older or have a disability; (2) live in the U.S. or Northern Mariana Islands and be a U.S. Citizen or national; and (3) have an income below a certain amount. The current monthly SSI entitlement is $552 for one person and $829 for a couple. Even though the amount of income from SSI is low, it is enough to rent government subsidized or comparatively inexpensive housing. Given the fact that Korean-born immigrant elders have spent most of their lives in Korea and are likely to have a very limited income, the impact of SSI or other social security benefits on their choices of living arrangements would likely be greater than in the American-born non-Korean elderly population.

Health needs. Studies of the relationship between activities of daily living (ADL) and living arrangements have found that elderly people who require help with activities such as bathing, dressing, and eating are more likely to live with others than those who can function independently (Bishop, 1986; Soldo et al., 1984; Wolf & Soldo, 1988). Also, elderly people in poorer health are more likely to live with others than to live alone (Mutchler & Burr, 1991). Several longitudinal studies have shown that changes in health status cause changes in living arrangements among elders (Lee & Dwyer, 1996; Spitze et al., 1992; Worobey & Angel, 1990). Worobey and Angel (1990) examined the impact of functional capacity on changes in living arrangements among unmarried elderly people over a two-year period using the 1986 Longitudinal Study of Aging (LSOA). They found that a decline in functional capacity greatly increased the likelihood that an elderly person would move in with others or become institutionalized. However, even when the elders experienced significant declines in health, most single elderly people who were living alone at the initial interview

continued to live alone two years later.

Similarly, Spitze, Logan, and Robinson (1992) examined factors influencing changes between 1984 and 1986 in living arrangements of persons aged 70 and older by using the LSOA data. They found that elderly people experiencing declining health during the period were significantly more likely to become institutionalized or to begin living with their children or with others rather than maintaining independent living. Lee and Dwyer (1996) hypothesized that parental dependency on adult children most likely affected parents in the old-old and oldest-old categories. Using the 1982 National Long-Term Care Survey (NLTCS) (n = 4316), a nationally representative sample of persons aged 65 and over who reported difficulty with at least one activity of daily living (ADL) or instrumental activity of daily living (IADL), Lee and Dwyer found that the oldest parents and parents with the poorest health were most likely to live with their children.

With regard to physical functioning, self-rated health or perceived health status is the most frequently used variable in health studies of elderly people (Ferraro & Kelley-Moore, 2001; Salthouse, et al., 1990; Wolinsky, et al., 1984). Idler and Benyamini (1997) reviewed 27 studies in U.S. and international journals, evaluating the effects of self-ratings of health on mortality. All the studies reviewed included only representative community samples (not patient samples). The authors presented the result that self-rated health was an independent predictor of mortality in almost all studies. They also suggested possible explanations about the importance of self-rated health predicting mortality:

1) Self-rated health is an inclusive and accurate measure of health status and

health risk factors that reflects symptoms of disease as yet diagnosed but present and/or family history about certain diseases; 2) Self-rated health is a dynamic evaluation that reflects trajectory and not only current status of health; 3) Self-rated health influences behaviors that subsequently affect health status; and 4) Self-rated health reflects the presence or absence of resources from the social environment or within-person resources that can attenuate decline in health. (pp.27-30)

Wolinsky et al. (1984) examined the relationship among seven measures of health status using data from a two-stage random sample of 401 noninstitutionalized elderly individuals in 18 census tracts in south-central metropolitan St. Louis. Through factor analyses, they identified two dimensions: 1) a global health status dimension where perceived health status, nutritional risk, perceived sensory functions, and mental health all loaded significantly; and 2) a functional dimension on which the Activities of Daily Living, Instrumental Activities of Daily Living, and mental orientation measures loaded significantly. They also found that these two dimensions were modestly correlated ($r = .37$), adding the explanation that the "objectively" measured health status of measures and subjective evaluation of health reflect different aspects of one's health.

Social-emotional needs. Very little is known about the relationship between social/emotional needs and co-residence directly. However, various studies that have focused on social support in later life (Bowling & Browne, 1991; Thompson & Krause, 1998) and on informal caregivers (Yates, et al., 1999) permit the inference of the relationship between social/emotional needs and living arrangements.

It seems obvious that social/emotional needs are one of the major concerns among elderly people. Halpern, Shroder, and Citera (1996) examined the accuracy of adult children's perceptions of their elderly mothers' concerns. They included seven areas of functioning as elder needs: chores, transportation, finances, health, social activities, emotional support, and bureaucratic mediation. They found that emotional support and health were rated as the most important concerns reported by elderly widows. Keifer et al. (1985) studied adjustment problems of Korean American elders by interviewing 50 elderly Korean immigrants. The researchers rated adaptation level of the interviewees in five areas of functioning: social, cultural, economic, health, and emotional/cognitive. Level of adjustment, which was a global measure including all five areas of functioning, was related to education, length of residence in the U.S., and household structure. Interestingly, they found that elders living in two- and three-generation households tended to have more positive morale and better self-concepts than those who lived alone or with a spouse only, even though they often expressed some problems such as crowding, overwork, and limited social relationships.

Adult Children's Needs

　　　Marital status and temporary failure in education and jobs. Marital status is referred to most frequently as a representative variable causing adult children's needs (Ward, Logan, & Spitze, 1992). Ward, Logan, and Spitze (1992) analyzed survey data on patterns of co-residence among 811 parents and their 2,358 adult children (22 and older) to investigate the influence of parent and adult children's needs on co-residence in middle and later life. Ninety-four percent of the sample was White. The authors

found that adult children's needs and characteristics, such as marital status, were more important predictors of co-residence than parent characteristics, regardless of the ages of both parent and child. In particular, they found that, having children who never married was positively related to co-residence, suggesting that unmarried adult children are more likely to need to live with their parents and/or are more available to assist their parents. They found the same relationship, although to a lesser extent, for adult children who were divorced or separated.

Marital status is also related to co-residence by being associated with whether an adult child has any children under 21 (Ward, et al., 1992): ever-married adult children who have their own children are less likely to live with parents than those who have no children. Previous studies have shown that being an unmarried adult child is strongly related to co-residence. However, when co-residence occurs between elderly widows and married adult children, it is more often associated with care giving by the child to the parent (Aquilino, 1990; Spitze et al., 1992; Lee & Dwyer, 1996). Spear and Avery (1993) also found that parents living with married children aged 35 or over were more likely to need help with activities of daily living than parents living with an unmarried child.

In addition to change of marital status and being single, temporary job loss and failure in education were also associated with the likelihood of co-residence. Ward and Spitze (1996) studied 716 adult children co-residing in a parental home. They compared continuing and returning co-resident children in terms of the child's plans and expectations. The study found that co-residence history was related to such adult-child characteristics as marital status and education. The reasons for co-

residence given by returning co-resident adult children were as follows: school related reasons (29%); financial reasons (26%); and divorce/breakup (17%). That same year, Lee and Dwyer (1996) found that the effect on co-residence of having a child who is unmarried and not employed full-time was substantial, though the effect was weaker than that of parental characteristics.

Childcare needs. Childcare needs of the adult children may also be associated with living arrangements for Korean Americans. Traditionally in American culture, the existence of the third generation (grandchildren) makes co-residence with elderly widows less desirable because of limitations of space and desire for privacy (DeVanzo & Goldscheider, 1990; Madigan & Hogan, 1990; Ward, Logan, & Spitze, 1992; Wister, 1984). However, recent studies show that a substantial number of grandparents are involved with caring for their grandchildren on a part-time or full-time basis (Baydar & Grooks-Gunn, 1998; Vandell et al., 2003) or are even legal custodians (Hayslip & Kaminski, 2005). Baydar and Grooks-Gunn (1998) examined the characteristics of grandmothers who take care of their grandchildren using data from a nationally representative sample, the National Survey of Families and Households (*n* = 2,095). In this study, 43% of grandmothers provided care for their grandchildren on a regular basis. The likelihood of providing care for their grandchildren was associated with being between 60 and 70 years old, having younger adult children, reporting good health, and living in the same household as the grandchildren.

Using the data from the National Institute of Child Health and Human Development Study of Early Childcare, Vandell et al. (2003) studied various patterns

and their correlates in childcare done by grandparents during the first three years of life. In the longitudinal study of 1,229 children, mothers were asked to report every 3 months how much routine childcare was provided by grandparents, beginning with children who were 3 months of age and continuing until the children were 36 months of age. The researchers in this study identified four types of childcare by grandparents: extended full-time care, extended part-time care, sporadic care, and no routine care during the first three years. It was found that having a co-resident grandparent had the largest effect on the likelihood of extended full-time care and smaller but still significant effects on extended part-time and sporadic grandparents care.

Little is known about the childcare needs of adult children in Korean immigrant families and elderly widows as care providers for their grandchildren. The current data did not provide the level of specificity such as percentage of Korean elderly widows who provide childcare for their grandchildren. However, in the recent literature that describes the lives of Korean American families (Kim & Kim, 2001; Yoon, 2005), elderly widows are often depicted as active care providers for their grandchildren so that they permit their daughters or daughters-in-law to work outside the home. Also, the results from previous studies, that residence status was one of the most salient indicators to predict a care provider role for grandparents, suggests that childcare needs of adult children would be associated with the likelihood of co-residence in Korean immigrant families.

Familism Values and Related Variables.

Cultural preference is usually cited as a factor assumed to explain co-residence among immigrants from other traditional cultures in American society. As presented earlier, in previous studies, the relationship between values and living arrangements among immigrant families from other traditional cultures has been studied using two different approaches.

The first research approach uses race and ethnicity as proxy measures of traditional values without directly assessing the extent to which one adheres to his or her own traditional values as pointed by Spitze, Logan, and Robinson (1992). However, some of the studies using this approach (Aquilino, 1990; Spitze, et al., 1992; Wolf & Soldo, 1988) found that there was no evidence of cultural preference for co-residence. This approach can also produce misleading results because race and ethnicity can be confounded with socioeconomic indicators (Murry, Smith & Hill, 2001). For example, Aquilino (1990) studied the association among child, parent, and family structural characteristics and the likelihood of parents having a co-resident adult child. Although many more African-Americans than White householders had adult children living in their homes in this study, there were no significant differences between African-Americans and non African-Americans in the likelihood of having an adult child at home after the marital status of the adult child was controlled. This occurrence is because African Americans were more likely both to live with their parents and to be single, and because single adults more often live with their parents than do married adults.

The second approach indirectly measures cultural values by assessing assimilation and acculturation, assuming that the more assimilated or acculturated

people are, the more they adhere to mainstream American values (Gordon, 1964; Hirschman, 1983). The level of assimilation/acculturation is usually assessed using the respondent's self-reported level of English proficiency, though there are studies in which this variable is supplemented by additional variables such as food preference, attachment to ethnic networks, and use of ethnic mass media (Burr & Mutchler, 1993).

However, these acculturation measures typically fail to capture immigrant elders' internalized values and attitudes concerning family and living arrangements. According to Koh and Bell (1987), lack of proficiency in English was the most serious problem identified by 151 Korean elderly respondents in New York. Over two-thirds of all the respondents reported they could not speak or understand English. In a later study of 199 Korean immigrant elderly women by Lee (2002), 97.5% reported they had difficulty communicating in English. Because most Korean elders do not speak English and almost all continue to rely on Korean, one could expect that English proficiency would not have the power to differentiate the extent of acculturation among Korean-born immigrant elders.

To overcome the limitations posed by existing ways of studying the relationship between internalized cultural values and living arrangements, the present study was designed to directly measure traditional values and their association with living arrangements. Whereas in Western culture the dialogue concerning living arrangements in later life is based on a preference for independent living (Shanas, 1980; Troll, 1971) and is consistent with individualism as a dominant value, the quality of Asian American intergenerational relationships and the prevalence of intergenerational co-residence have been explained by the concept of filial obligation

32

and filial piety in the context of Confucianism (Osako & Liu, 1986; Sung, 1990). "Although not as literally adhered to as in the past, the Confucian doctrine abounds in the Korean family, especially in the aspects of filial piety, and obedience, the importance of the family as the main unit of socialization, hierarchical relations, and patriarchal domination" (Moon & Song, 1998, p.139).

Familism values are one of the most representative Asian value systems and are rooted in Confucianism. They refer to the comprehensive thinking schema that relates to the priority of family (Osako & Liu, 1986; Sung, 1990). Recently, many researchers have paid attention to norms of filial responsibility (Burr & Mutchler, 1993; Osako & Liu, 1986) and filial responsibility expectations (Lee, et al., 1995) in order to explain patterns and ethnic variations in intergenerational relationships. While filial responsibility and filial piety focus on the duty and obligation toward others in the family unit, familism is a more comprehensive frame of reference.

Familism, the opposite of individualism, is "a form of social organization in which the interests of the individual are subordinated to those of the family group" (Heller, 1970, p.73). Familism refers to the extent to which one is expected to prioritize the family's needs over one's own. Specifically, the familism value is expressed by family prioritism, perpetuation of paternal lineage, filial piety, and socio-economic bonds among siblings and relatives (Choi, 1997). There are few studies about the factors that affect the level of familism values. However, according to the previous studies about acculturation, length of time in the U.S. and level of education were related to the extent to which immigrants internalized their own cultural values. In other words, being less educated and having spent less time in the

U.S. were associated with more internalization of the values of their own culture of origin (Burr & Mutchler, 1993; Osako & Liu, 1986).

Other Demographic Variables Related to Living Arrangements

Number of children. Number of children is positively associated with the co-residence of elderly widows with an adult child (Crimmins & Ingegneri, 1990; Spitze, Logan, & Robinson, 1992). Spitze, Logan, and Robinson (1992) found that elderly people with more children were more likely to change from living alone to living with a child than those with fewer children. Number of children may be related to co-residence by increasing the likelihood of having children in need.

In addition, number of adult children is also associated with co-residence by increasing the likelihood of having unmarried children (Aquilino, 1990; Crimmins & Ingegneri, 1990). Crimmins and Ingegneri (1990), in their analysis of the 1975 Survey of the Aged studies, found that the number of children had only an indirect effect on the likelihood of an elderly widow living with an adult child, because of the probability of having an unmarried son or daughter. In the study, when the presence of an unmarried son or daughter was included in the equation, the effect of number of children no longer existed. On the other hand, McGarry and Schoeni (2000) found that additional children significantly reduced the probability of living in group quarters, including living in an institution. This suggests that having more children may increase the probability that widows receive assistance and can maintain their own household (McGarry & Schoeni, 2000).

In some studies, the number of children was not found to be related to the

probability of co-residence (Aquilino, 1990). One possible explanation for these inconsistent findings is that number of children has a different effect on co-residence according to one's perspective. While from the perspective of elderly widows, number of children may be related to the availability of options to live with—either to be cared for or to give care—from the perspective of an adult child, number of children (siblings) may be related to the availability of options to share caring for one's elderly mother. A parent who does not live with one of the children may live with another child. For example, in Ward, Logan, and Spitze's (1992) study, among the younger parent groups (whose average age was about 55), children with more unmarried siblings were less likely to live with parents. In studies using adult children as an analysis unit, the effect of parental characteristics like number of children would be underestimated (Lee & Dwyer, 1992).

Number of daughters and number of sons. Previous studies have shown that with the number of children, number of daughters and sons has important meaning in co-residence between elderly widows and adult children. Schmertmann et al. (2000) examined patterns of co-residence between elderly widows and their adult children using a very large sample ($N \geq 3.5$ million) of individuals 60 and older from the Public Use Microdata Samples (PUMS) of the 1990 US Decennial Census. They found that (1) younger elders (both men and women) were more likely to live with sons and older elders more likely to live with daughters, and (2) elderly widows age 80 and over were more likely to live with daughters than sons. Aquilino's (1990) study, using data from a representative national sample ($n = 4,893$) in 1987-88, also showed that when marital status was controlled, daughters were more likely than sons

to live with older parents, and sons were more likely than daughters to live with younger parents. Yet other studies (Crimmins & Ingegneri, 1990; Lee & Dwyer, 1996) found the likelihood of co-residence increased with an increase in the number of sons and daughters because of the increased likelihood of having unmarried and unemployed children.

Homeownership and education. In previous studies, homeownership had mixed associations with co-residence. Homeownership of elderly widows is positively associated with the likelihood of co-residence (Ward, Logan & Spitze, 1992). Aquilino's (1990) study has shown that parents were more likely to provide a home for their adult children than adult children were likely to provide a home for their parents. This finding is related to high home ownership in the study (nearly 97%). Spitze, Logan, and Robinson (1992) examined factors influencing changes between 1984 and 1986 in the living arrangements of persons aged 70 and older by using Longitudinal Study of Aging data. They found other resource variables such as family income, home ownership, and education had no effect on changes in living arrangements. According to Ward, Logan, and Spitze (1992), more educated parents are less likely to live with an adult child among the younger parent group (under 65), but the effect of education on co-residence is not significant among the older parent group (65 and over).

Age of adult child. According to Ward, Logan, and Spitze (1992), having younger children was significantly related to a greater likelihood of co-residence among the younger parents group, parents under 65. Aquilino (1990) also showed that the age of children negatively influenced the likelihood of co-residence in both

younger (age 54 and under) and older (age 55 and over) parents. In short, having older children reduced the likelihood of co-residence. However, the effect of children's age is stronger in the older parents group. Like the number of children, age of adult children may be associated with co-residence through the likelihood of having more unmarried children. Adult children's age may also be related to co-residence through the likelihood of being placed in the certain life stage when the child's ability to be independent is low.

Theoretical Background and Conceptual Framework

Need-based Exchange Theory (Contingent Exchange Theory)

According to social exchange theory, individuals act to maximize rewards and minimize costs. They maintain interaction as long as their interaction is characterized by more rewards than costs (Blau, 1964; Homans, 1961). Even though social exchange theory has contributed to explaining reciprocal relationships among individuals, there are limitations to its ability to explain exchanges that may occur in non-economic and intimate relationships (for example, between adult children and their older parents) (Dwyer, et al., 1994).

Dowd (1975, 1980) has applied social exchange theory to intergenerational relationships and argued that diminished resources in old age leave the elders in unbalanced exchange relationships. The inability to reciprocate services and benefits received from others is related to psychological distress in old age, so elderly individuals may experience feelings of demoralization and powerlessness (Hogan et al., 1993; Lee, 1985; Stoller, 1985; Wentkowski, 1981). Social exchange theory

37

cannot explain the reason why elders and their children stay in an unbalanced exchange relationship. The theory does not look at the resources elderly parents may have to offer their adult children or the needs their adult children may have that their elderly parents can meet.

About this point, Deutsch (1975) has provided a very insightful explanation. He divided social relations into three categories according to their primary goals: 1) relations in which economic productivity is a primary goal; 2) relations in which the fostering or maintenance of enjoyable social relations is the primary goal; and 3) relations in which the fostering of personal development and personal welfare is the primary goal. He explained that in the first category, the dominant principle of distributive justice is equity; in the second category, equality; and in the third category, need. In an intimate relationship such as parent-child, need is the dominant principle of distributive justice rather than equity or equality. According to previous studies (Davey & Eggebeen, 1998; Eggebeen & Davey, 1998; Silverstein & Bengtson, 1991, 1994; Spitze, Logan, & Robinson, 1992), intergenerational flows of support and assistance were highly contingent on recent crises of family life.

Environmental Press Theory

While need-based exchange theory/contingent exchange theory can explain non-reciprocal exchanges that may arise in the relationship between adult children and their older parents, the theory cannot explain the content of needs that may result in exchanges in the same relationships. Needs could be produced by individual characteristics such as age and health status. Needs may also be produced by pressure

from the environment outside the home such as work requirements or absence of social supports. The person-environment fit model is appropriate to explain the relationship between persons and environmentally caused needs. Since Lewin (1935) promulgated the formula, $B = f(P, E)$, that identifies behavior as a function of the person and the environment, there has been multidisciplinary development in the field of environment-behavior studies, especially notable in environmental gerontology (Parmelee, 1998).

Lawton and Nahemow's (1973) competence-press model modified Lewin's equation as $B = f(P, E, PxE)$. The major constructs of this model are "environmental press (P)" and "personal competence (E)." Lawton (1982) defines environmental press as an environmental stimulus or context that seems to have potential demand character for any individual, if empirical evidence exists to demonstrate its association with a particular behavioral outcome for any group of individuals. Personal competence can be understood in terms of "intrinsic performance potential, the maximum expectable performance in biological, sensorimotor, perceptual, and cognitive domains" (Lawton, 1998, p.2). It is "a global concept with many dimensions including biological, psychological, and social components" (Nahemow, 2000, p.24). The interactive term PxE signifies that "the central appraisal of E by P has a causal effect on behavior that may be independent of the purely physical attributes of the environment" (Lawton, 1998, p.4). In a word, the environmental press theory is "a theory of adaptation that focuses on person variables (competencies), environmental variables (environmental press), and the interaction between the two variables" (Lichtenberg et al., 2000, p.549). Choices of living

39

arrangements among ethnic elders can be seen as adaptive responses to environmental press, which negatively or positively affect the elders and their immediate family members. Lawton's environmental press variables developed in 1970 include:

> (1) personal environment - the significant others constituting the major one-to-one social relationships of an individual (family members, friends, work associates); (2) supra-personal environment - the modal characteristics of all the people in physical proximity to an individual (for example, the predominant race or the mean age of other residents in a person's neighborhood); (3) social environment - the norms, values, and institutions operating in the individual's subgroup, society, or culture; and (4) physical environment - defined as the non-personal, non-social aspects of the environment. (Lawton, 1982, p.40)

In this study, various needs of elderly widows and adult children can be understood in relation to feelings of deficit and unbalance caused by environmental press, as described in Lawton's model. Resources of elderly widows and adult children are often perceived as indicators of personal competence. Therefore, elderly widows and their adult children may make choices about living arrangements in response to their relative evaluation of their needs, which are primarily related to environmental presses, even ones that may seem to be personal. For example, economic needs felt by elderly widows partly depend on provisions that determine SSI beneficiaries and benefits. Under current law, SSI benefits are reduced by one third if the recipient lives in another person's household (McGarry & Schoeni, 2000), so SSI recipients who live with others can be expected to have a lower income than

SSI recipients who do not.

Childcare needs also represent a combination of family and environmental factors. Employment of daughters or daughters-in-law affects elderly widows' choices of living arrangements in two different ways. Employment outside of the home may make it difficult for daughters and daughters-in-law to care for their elderly mothers, therefore causing a decline in co-residency. On the other hand, employment of daughters or daughters-in-law may make the presence of parents in the home more valuable as a potential source of childcare or other assistance (McGarry & Schoeni, 2000). The choice of living arrangements will reflect the internalized values of elderly widows and their adult children, an evaluation of the relative importance of elderly widows' and adult children's needs, and availability of resources that can satisfy those needs. The relative evaluation of elderly widows' needs and their adult children's needs will be directly related to the age of the elderly widows.

This study tests the equation: Living Arrangements = f (Needs, Values, Age). Its constructs are elderly widows and adult children's needs (Needs), elderly widows and adult children's familism values (Values), and the age of elderly widows, respectively. The needs could be produced in the interaction between individuals and the environment surrounding them. Figure 2 presents a conceptual model about environmental factors of elderly widows/adult children and living arrangements based on Lawton's (1982, 1998) environmental press model. Of course, resources shape the relationship between adult children and their elderly widowed mothers as much as by needs. This research focuses on needs because they are more consistent with the wording of need-based exchange theory. This choice is not meant to diminish the

importance of resources and resiliency in Korean immigrant families.

**Figure 2. A Conceptual Model about Environmental Factors
of Elderly Widows/Adult Children and Living Arrangements**

Personal Environment
Supra-personal Environment
Social Environment
Physical Environment

Personal Environment
Supra-personal Environment
Social Environment
Physical Environment

Press

Press → Elderly
Parents ← Press

Press

Press

Press → Adult
Children ← Press

Press

Elderly Parents'
Needs
& Familism Values

Relative
Evaluation

Adult Children's
Needs
& Familism Values
as Perceived
by Elders

Choices of Living Arrangements
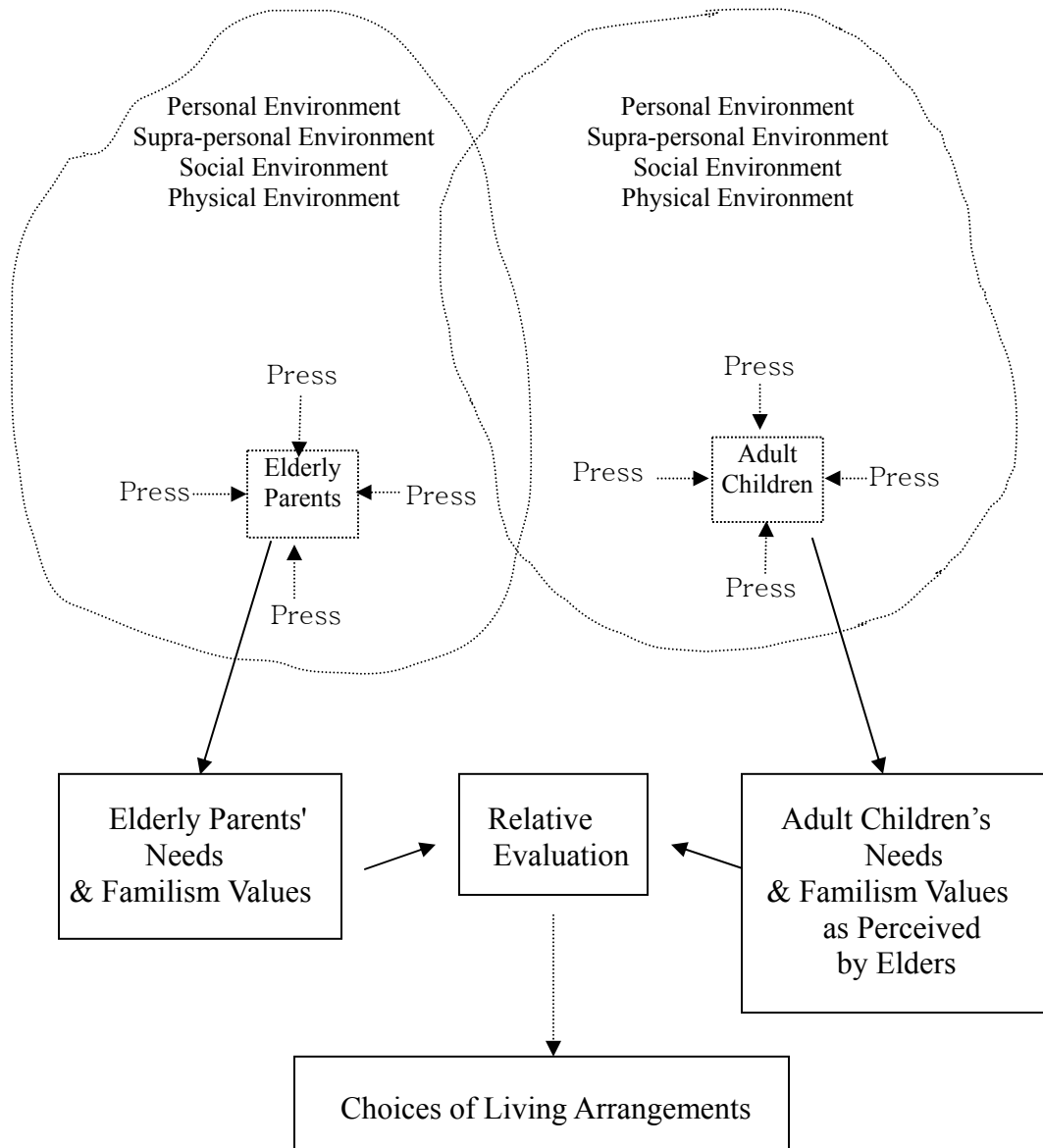
Figure 3 presents a conceptual framework for the determinants of living arrangements among Korean-born immigrant elders. Living arrangements, the dependent variable of this study, is conceptualized as a dichotomous variable: living alone or living with adult children. The framework is based on need-based exchange theory (Deutsch, 1975) in order to explain the time when exchange occurs between elderly widows and their married adult children. According to the theory, co-residence can be explained as a function of individual decisions according to relative evaluation of elderly widows' needs and married adult children's needs. Theoretically, it is expected that the choice of living arrangements will be made to maximize meeting elderly widows' needs and their married adult children's needs when resources that satisfy the needs are available. The needs can arise from personal or environmental factors (Lawton, 1982).

In the framework, conceptualization of the determinants of living arrangement focuses on three dimensions of relationships between Korean-born elders and their adult children: (1) elderly widows' needs and familism values as independent variables; (2) adult children's' needs and familism values as perceived by elderly widows as independent variables; and (3) elderly widows' and adult children's demographic variables as control variables. The elderly widows' needs considered were health, economic and social/emotional needs. The adult children's needs considered were childcare and social/emotional needs.

Age of the elders, number of children, number of sons/daughters, length of time in the U.S., homeownership, education level, age of the youngest child of adult children, employment status of daughters/daughters-in-law, and marital status were all

included as demographic variables.

Figure 3.   A Conceptual Framework for the Determinants of Living Arrangements among Korean-Born Immigrant Elders

Elderly Parents' Demographic Characteristics

Age of elderly widows
The number of children/sons/daughters
Length of time in U.S.
Education
Homeownership
Income

Elderly Parents' Needs:
    Health needs
    Economic needs
    Social/emotional needs

Elderly Parents' Familism Values

Adult Children's Needs:
    Childcare needs
    Social/emotional needs

Adult Children's Familism Values
    as perceived by elderly widows

Living Arrangement
of Elderly Widows

Adult Children's Demographic Characteristics
    Age of adult children
    Age of the youngest child of adult children
    Marital status
    Employment status of adult child
        or adult child's family
    Homeownership
    Education

Chapter Three: Methods

Hypotheses

The purpose of this study was to examine the relationship of elderly widows' needs, adult children's needs, and their familism values in determining the living arrangements of elderly widows among Korean-born immigrant elderly women. The purpose of this study was threefold: (1) to study the extent to which familism values of Korean-born immigrant elders and their adult children influenced the elder's living arrangement; (2) to identify variables representing adult children's needs and elderly widows' needs and their different effects on the choice of living arrangement among Korean-born immigrant elders; and finally, (3) to examine the relative importance of adult children's needs, elderly widows' needs, and familism values in determining the choice of living arrangement among Korean-born immigrant elderly female parents. The hypotheses are:

Hypothesis 1:   The relationship between the age of the elders and co-residence will be curvilinear, showing higher rates of co-residence among the young-old group (age 60-69) and the oldest-old group (age 80 and over) than among the old-old group (age 70-79).

Hypothesis 2-1: After controlling for age of elderly widows, the more educated elderly widows are, the lower the levels of familism they will have.

Hypothesis 2-2: After controlling for age of elderly widows, the longer they have lived in the U.S., the lower the levels of familism they will have.

Hypothesis 2-3: After controlling for age, the more educated elderly widows are, the

lower the levels of familism they will perceive in their adult children.

Hypothesis 2-4: After controlling for age, the longer elderly widows have lived in the U.S., the lower the levels of familism they will perceive in their adult children.

Hypothesis 2-5: After controlling for demographic factors, the higher the levels of familism are for elderly widows, the more likely elderly widows will co-reside with their adult children.

Hypothesis 2-6: After controlling for demographic factors, the higher the levels of familism are for the adult children (as perceived by elderly widows), the more likely elderly widows will co-reside with their adult children.

Hypothesis 3-1: After controlling for demographic factors and familism values, adult children's total need scores (as perceived by elderly widows) will be more strongly associated with co-residence among the young-old group (age 60-69) than among the old-old (age 70-79) and the oldest-old (age 80 and over) groups.

Hypothesis 3-2: After controlling for demographic factors and familism values, elderly widows' total need scores will be more strongly associated with co-residence among the oldest-old group (age 80 and over) than with the young-old (age 60-69) and the old-old (age 70-79) groups.

Hypothesis 4-1: After controlling for demographic factors, elderly widows' total need scores will be more strongly associated, than will familism values, with co-residence.

Hypothesis 4-2: After controlling for demographic factors, adult children's total need

scores (as perceived by elderly widows) will be more strongly

associated, than will familism values, with co-residence.

Definitions of Variables

Korean-born immigrant elderly widows and adult children. Korean-born immigrant elderly widows were defined as elderly women without spouses, aged 60 and over, who were born in Korea and immigrated to the U.S. Adult children were defined as sons or daughters of Korean-born immigrant elderly widows, aged 20 and over, married or single. When elderly widows had more than one adult child in the U.S. and lived alone, the elders were asked questions about the adult child with whom they are in most frequent contact. On the other hand, when elderly widows have more than one adult child in the U.S. and co-reside with one adult child, the elderly widows will be asked to answer about the adult child with whom they live.

Living arrangements. In this study, there are two kinds of living arrangements: living alone and living with adult children. Living alone means living independently in one's own residence without family members or friends. Living with adult children means co-residence between elderly widows and their adult children in either the elderly widows' home or the adult children's home. Living with adult children includes living with a single child, living with a married child, and living with both single and married children. In cases of co-residence with adult children in an apartment, whoever pays rent for the apartment is considered an owner of the house.

Needs. Needs are defined in terms of social, emotional, physical, and economic situation, and feelings of deficit that may require assistance from others or an organization outside the home, to maintain everyday life successfully. Elderly widows' needs include health, economic, and social/emotional needs. Adult children's needs include daycare and social/emotional needs as perceived by elderly widows.

Familism values. In this study, familism values refer to the extent to which one prioritizes family interests relative to one's own interests as a frame of reference in all aspects of life. Two kinds of familism values are measured and analyzed: the familism values of elderly widows and the familism values of adult children as perceived by their elderly widows. *Familism values of elderly widows* is defined as the extent to which elderly widows value familism, as reported by the elderly widows. *Familism values of adult children as perceived by their elderly widows* is defined as the extent to which their adult children hold familism values, as perceived and reported by the elderly widows themselves.

Age of the elder, adult child, and the youngest grandchild. Age of the elder means chronological age of elderly widows. Elders were asked to report their age in years. For purposes of analyses, the elderly women were divided into three groups according to their age: young-old (age 60-69); old-old (age 70-79); and oldest-old (age 80 and over). The analyses used both age in years as a continuous variable and grouped age as a nominal variable. Elders were also asked to report age of the adult child and age of the youngest grandchild.

The total number of children, daughters, and sons in the U.S. Elders were asked to give the total number of their children, the number of daughters in the U.S.,

49

and the number of sons in the U.S.

Homeownership of the elder and adult child. Homeownership was measured by asking, "What best describes your place of residence?" and "Who pays (or paid off) the rent or mortgage payments?" The responses were coded as rented room, apartment, condominium, townhouse, single home, or other. Homeownership of the elder was categorized into four options: home owned by the elder, owned by the adult child, rented by the elder, and rented by the adult child. The home owned by elderly widows category includes condominiums, townhouses, and single homes paid for or paid off by the elderly widows. The home owned by adult child category includes condominium, townhouse, and single home paid for or paid off by the adult child.

Level of education of the elder and adult child. Level of education means the highest school level that the elderly widows or adult child completed. Elders answered none, elementary school (1-6 grades), junior high school, senior high school, college, and graduate school.

Length of time in the U.S. of the elder and adult child. Length of time in the U.S. refers to how long elderly individuals or adult child have lived in the U.S. as immigrants or non-immigrant students. Time was reported in years.

Marital status. Marital status of the adult child was coded as single-never married, single-widow or widower, separated, single-divorced, married-never divorced, remarried after divorce, and remarried-previously widowed. For analysis purposes, marital status was categorized as either single or married. The single category includes single due to never being married, widow or widower, separated, and divorced. The married category includes married-never divorced, remarried after

divorce, and remarried-previously widowed.

Employment status of adult child or adult child's family. When elders answered about a single child, they were asked to report the employment status of the child. The response was coded as unemployed, part-time employed, full-time employed, in school full-time, and other. For analysis purposes, employment status of the adult child was condensed into two categories—employed and unemployed. The employed category includes part-time employed, full-time employed, and in school full time. However, when elders answered about a married child, they were asked to report the employment status of the child's family. The response was coded as husband only employed, wife only employed, husband and wife employed, husband and wife unemployed, and other. Employment status of the adult child's family was condensed into three categories: husband or wife employed; husband and wife employed; and husband and wife unemployed.

Research Design

A cross-sectional study of Korean-born immigrant elderly widows was conducted to examine the relationship among needs variables, familism values, and living arrangements of elderly widows. All subjects spoke Korean so the interview schedule and consent form were written in Korean. However, for the convenience of the reader, the researcher has translated both into English. The translated schedule and consent form were checked for accuracy by two Korean/English bilingual graduate students and can be found in Appendices A and B, respectively. This study was approved by the Institutional Review Board on May 21, 2004 (IRB HSR

Identification Number 04-0271) (Appendix B). The researcher conducted all interviews.

Sampling and Inclusion Criteria

In this study, single elderly women were defined as those 60 or older without husbands. In order to eliminate the effect of spouse characteristics, only Korean-born single elderly women were included in the study. They were mostly widowed although a few elders were separated. As pointed out earlier, the church is the most important organization in the Korean American community. According to the *Korean Churches Yellow Pages* (2004), there were 138 Korean churches in Maryland and 154 in Virginia in 2004. Korean churches often have elder groups, but rarely operate their own senior centers. There are several Korean senior centers that are not directly affiliated with churches in Maryland and Northern Virginia. A total of 103 Korean single elderly women living with their adult children and those living alone were sampled from these elder groups in churches and Korean senior centers using convenience and snowball sampling techniques. The researcher asked the elder women to participate in the survey and to introduce acquaintances who might be willing to participate.

Procedures

The researcher conducted all interviews. Again, sites for data collection included Korean senior centers and senior groups in Korean churches in the Maryland and Northern Virginia areas. The researcher first visited the largest church in northern

Virginia and the largest church in Maryland as initial contact points and visited other medium sized churches later. The Maryland church has approximately 2,000 congregation members and its own senior group with about 200 elders. The Virginia church has approximately 3,000 congregation members and runs its own senior center. The senior center had 333 elderly participants registered in the Spring semester of 2004. The researcher met directors in each of the centers and senior groups first. With the permission of the directors, the researcher met with elders during their meetings at centers or churches to explain the purpose of the study, eligibility criteria, confidentiality of their responses, and their right to end the interview at any time. Then, the researcher invited the eligible elderly people to participate in this study.

Once respondents agreed to participate in the study, the researcher asked where and when they wanted to be interviewed. The researcher individually interviewed those who preferred the centers or churches at those places after the classes ended. The researcher got their home phone numbers and addresses if they wanted to be interviewed in their home or their adult children's home in which they live with. After making an appointment on the phone, the researcher visited their house and conducted the interview. Overall, the researcher visited three churches and four senior centers for recruitment of participants.

At the beginning of their interviews, the researcher reminded participants about the confidentiality of their responses as well as their right to end the interview at any time, then asked each to sign the consent form. After she addressed each participant's questions and concerns, she interviewed each for approximately one and a half hours. In order to draw more accurate and consistent answers, participants were

shown 4 x 6-inch index cards containing possible answers to a given question. For example, for questions about familism values, the five answer cards were shown, each containing only one answer, from strongly agree to strongly disagree. After the researcher displayed the cards in front of the elderly, allowing them to read the answer cards, they were asked to point out the card that matched their answers for each question. All participants were literate, irrespective of their level of education.

After the interview, each elder was compensated for their time and effort with a token gift such as liquid soap, body lotion, or a big bowl. After completing the interview, each participant was asked to introduce friends who were eligible for the study. Participants either brought their friends back to meet the researcher or phoned them to ask if they were interested. Whenever friends agreed to participate voluntarily, the same procedure was repeated. The researcher met participants at their homes, centers, or churches by appointment. It took about four months to complete the interviews from June to September of 2004.

Instrumentation

The researcher constructed the interview schedule to examine the characteristics and needs, and the familism values of both the elderly widows and the adult children (as perceived by the elderly widows) (Appendix A). Elderly widows' needs were grouped into three categories: health needs, economic needs, and social/emotional needs. Health needs, social/emotional needs, and familism values were measured using existing instruments: the *Activities for Daily Living Scale* (ADL) adapted from the Katz ADL scale (Katz et al., 1970) for health needs; Dean's

(1961) *Social Isolation Scale* for social/emotional needs; and the *Short-Form Familism Scale* (Ok, Sung & Shin, 2000) for familism values.

Elderly Parents' Characteristics and Needs

      Health need. Health need was measured by slightly adapting and using the Katz ADL scale (Katz et al., 1970). The scale measures how much assistance elders require in six domains of physical functioning: bathing, dressing, toileting, transferring, continence, and feeding. Evaluation of one's disability is performed using a series of questions and observations based on these domains. Although no reliability and validity are reported, the scale has been used in evaluating functional status in the elderly population for three decades (Shelkey & Wallace, 1998).

      The researcher changed the response scale in the Katz ADL, as follows. In the current study, each ADL item had four response alternatives: none (0), some (1), a lot (2), or unable to perform the activity at all (3). The original ADL scale is for observational evaluation and contains narrative descriptions for each item, which was not appropriate for a structured interview. The six ADL items were summed for analysis. The total ADL score for each respondent ranged from 0 to 18; a higher score reflected greater health needs. Self-rated health was designed to detect elders' subjective assessment of their own health status. Respondents were asked to rate their global health status as compared to others their age and sex on a five-point scale ranging from very poor to excellent. The items measuring the health needs of elderly widows are located in section II of the interview schedule (Appendix A).

      Economic needs. Economic needs were measured via two questions: (1) "Do

you have a regular income?" and (2) "Do you need any financial help from your adult children?" For the first question, if the answer was "yes," it was coded 0, if "no," 1. For the second question, if the answer was "no," it was coded 0, if "yes," 1. Therefore, the economic needs score for each respondent ranged from 0 to 2, with a higher score reflecting greater economic need. The items measuring the economic needs are presented in items 14 and 15 of section I of the interview schedule (Appendix A).

Social and emotional needs. Social and emotional needs were measured using Dean's (1961) Social Isolation Scale, one part of a three-part general alienation measure, in which the other components of alienation were powerlessness and normlessness. The social isolation scale had 9 items with a response format ranging from 0 (strongly disagree) to 4 (strongly agree). Therefore, total scale scores ranged from 0 (lowest level of loneliness) to 36 (highest level of loneliness); five items (items 2, 3, 5, 6, and 8) were negatively worded and therefore reverse-scored. In the present study, elders were asked to rate the extent to which they agreed or disagreed with each item. Dean (1961) studied political apathy using the scale among a final sample of 384 people in Columbus, Ohio. In his study, the internal consistency reliability coefficient (α) for the social isolation subscale was .84. The items measuring social/emotional needs of elderly widows are presented in section III of the interview schedule (Appendix A).

Each of the three needs questions (health, economic, and social-emotional) were assessed individually and then added together for elderly widows' total needs score. To ensure the same weight for each component of the total needs scores, the three subscales were adjusted mathematically, based on response scores. See chapter

four for the mathematical formula used.

   Familism values. Another emphasis of this study is on the relationship between familism values and living arrangements. In order to measure the familism values of elders and the familism values of adult children as perceived by their elderly mothers, this study used the Short-Form Familism Scale (Ok, Sung, & Shin, 2000), which was developed and tested in Korea. Ok, Sung, and Shin (2000) studied family and kinship values among urban ($n = 716$) and rural families in Korea ($n = 593$). They used a familism value scale with 21 items for urban families. Based on the results for the urban families, they made the Short-Form Familism Scale for rural families. From multiple regression analysis, eight items were included in the Short-Form Familism Scale. The eight items were found to account for 88% of the familism scale with 21 items. The Short-Form Familism Scale consists of four subconcepts: prioritization of family, perpetuation of paternal side lineage, filial piety, and consciousness of social-economic ties among siblings and relatives. Each subconcept has two items. Cronbach's alpha for the Short-Form Familism Scale was .79. In the current study, the Short-Form Familism Scale was used for elderly widows who had difficulty answering many items. Therefore, "the familism value scale" in the study means the Short-Form Familism Scale. Table 1 presents subconcepts and their questions of familism value scale.

Table 1 *The Subconcepts and the Items for Familism Values of Elderly Widows*

Subconcepts	Numbers	Items
Prioritization of Family	1	The selection of a spouse should be determined by the potential harmony of the spouse with the family rather than with the child.
	2	Children should place family matters over personal matters.
Consciousness of Social-economic Ties among Siblings and Relatives	3	When there arises a financial need, priority goes to helping relatives on the husband's side of the family rather than the wife's side of the family.
	4	During difficult times, relatives are more dependable than neighbors and friends.
Perpetuation of Paternal Side Lineage	5	Discontinued family lineage due to the absence of a son is a misfortune, both to the immediate family and to the entire extended family.
	6	Children should not bring disgrace to the family and should help the family preserve its reputation.
Filial Piety	7	The oldest married son should live with and take care of the parents.
	8	Married children need to discuss daily matters with parents and then act accordingly.

Elders were asked to express how much they agreed or disagreed with eight statements concerning familism values. Then, they were asked to rate what they perceived their adult child would say regarding the statements. The scale has a five-point response format, from strongly disagree (0) to strongly agree (4). Elders' answer for 8 items of familism values were summed into a total score of familism values. The score could range from 0 to 32; a higher score means higher internalization of

familism value. The question and the items to measure familism values of elderly widows are presented in section IV of the interview schedule (Appendix A).

Demographic and background variables of elderly widows. In addition to the existing scales, various demographic and background items were included as part of the interview schedule, such as living arrangement of elderly widows, age of elderly widows, number of children, number of sons/daughters, homeownership, self-rated health status, education of elderly widows, and length of time in the U.S. of the elderly widows. The age of the elders was measured using a continuous scale. However, for some hypotheses testing, they were grouped as young-old (age 60-69), old-old (age 70-79), and oldest-old (age 80 and over).

Adult Children's Characteristics and Needs

Adult children's needs and their familism values were measured through interviews with the elders as well. As stated earlier, adult children's needs fall under two categories—childcare needs and social/emotional needs. The elders answered the items measuring their adult children's characteristics and needs for their adult child. The elders served as surrogate responders for their adult child. If the elder lives alone, she was asked to answer in terms of her most frequently contacted child. If she lived with an adult child, she answered for the child with whom she lives.

Childcare needs. For childcare needs, two questions were posed: (1) "Does your daughter/son have any children who need to be cared for by adults during the daytime?" and (2) "Who cares for these children?" For the first question, if the answer was "yes," it was coded 1; if "no," 0. For the second question, if the answer

was "myself," it was coded 1, if "other," 0. Therefore, the score for each respondent ranged from 0 to 2. A higher score reflected greater childcare needs.

Social and emotional needs. The Dean (1961) Social Isolation Scale was used to measure the social and emotional needs of the adult child as perceived by his/her elderly mother. Elderly widows were asked to rate their perception of their adult child's agreement with the statements on the scale. The question and the items to measure social and emotional needs as perceived by elderly widows were presented in section II of the adult child part in the interview schedule (Appendix A).

Total needs score. Each of the two needs questions, childcare needs and social/emotional needs, were assessed individually, then added together for adult children's total needs score. In order to ensure the same weight of each of the needs scores toward the adult children's total needs score, the social/emotional score was adjusted mathematically. Because the formula is based on response scores, it will be presented in the result section.

Familism values. Elderly widows were also asked to rate their adult child's agreement with the statements on the familism value scale. The scale has a five-point value system, from strongly disagree (0) to strongly agree (4). In order to summarize the data concerning the degree to which elders and their adult child internalized familism values, the scores for each individual from the eight items were summed into a total score of familism values. The scale score could range from 0 to 32; a higher score meant higher internalization of familism values of respondents. The question and the items to measure familism values as perceived by elderly widows were presented in section III of the adult child part in the interview schedule

(Appendix A).

Demographic and background variables of adult children. Finally, elderly widows were asked to answer demographic items about their adult children, such as age of the youngest child of their adult children, employment status of the adult child or adult child's family, marital status, age of adult children, education of adult children, homeownership, and length of time in the U.S. Table 2 provides a summary of how the independent and dependent variables were operationalized in the present study. Elderly widows' needs and familism values and adult children's needs and familism values as perceived by elderly widows, of interest in this current study, were independent variables. Other demographic variables, found to be associated with living arrangements of elderly widows from previous studies, were control variables which should be controlled for in the following analyses.

Table 2 *The Description of Independent Variables and the Dependent Variable*

	Variables	*Measurement Scale*	*Descr- iption*	*Recodes*
Dependent Variable	Living Arrangements of elderly widows		1 Item	Living with adult children=1 Living alone=0
Independent Variables I: Elderly Parents' Needs and Familism Values	Health needs	The Katz ADL/ Self-rated Health	6 Items/ 1 Item	0-18 Higher score= higher need. 1-5 Higher
	Economic Needs		2 Items	0-2 Higher score=Higher need
	Social/Emotional Needs	Social Isolation Scale	9 Items	0-36 Higher score=Higher
	Familism Values of elderly widows	Familism Value Scale	8 Items	0-32 Higher score=Higher
Independent Variables II: Adult Children's Needs and Familism Values as Perceived by elderly	Childcare Needs		2 Items	0-2 Higher score=Higher
	Social/Emotional Needs as Perceived by elderly widows	Social Isolation Scale	9 Items	0-36 Higher score=Higher need
	Familism Values of Adult Children as Perceived by elderly widows	Familism Value Scale	8 Items	0-32 Higher score=Higher value
Control Variables	Age of elderly widows		1 Item	
	The Number of Children elderly widows		1 Item	
	The Number of Sons/Daughers		2 Items	
	Homeownership of elderly widows		1 Item	
	Education of elderly widows		1 Item	
	Length of Time in the U.S. of elderly widows		1 Item	
	Age of Adult Children		1 Item	
	Age of the Youngest Child of Adult Children		1 Item	
	Marital Status of Adult Children		1 Item	
	Homeownership of Adult Children		1 Item	
	Employment Status of Adult Child ('s family)		1 Item	
	Education of Adult Children		1 Item	
	Length of Time in the U.S. of Adult Children		1 Item	

Analyses

Descriptive statistics were used to summarize the demographic characteristics of this sample, including living arrangement, education, and type of immigration, income sources, homeownership, and housing patterns. Means and standard deviations were calculated for age, length of time in the U.S., the total number of children, the total number of children in the U.S., the total number of sons in the U.S., and total income.

Independent *t* tests were conducted to test for significant differences between elderly widows living alone and co-resident elderly widows (the two levels of the dependent variable living arrangements) when comparing demographic characteristics, familism values, and needs variables. Correlational analyses were performed to examine the bivariate relationship between elderly widows' characteristics and adult children's characteristics and living arrangements.

This study had more than 10 demographic variables in addition to elderly widows' and adult children's needs variables and familism values. The sample consisted of only 98 subjects. Stevens (1996) recommended using about 15 subjects per variable for a reliable analysis in social science research. If all the variables are entered simultaneously into a regression model for hypotheses testing, the statistical power of the tests could be threatened. Therefore, the researcher performed two separate logistic regression analyses, for elderly widows' and adult children's characteristics (both including needs' variables and familism values), to identify the significant demographic variables predicting the living arrangements of elderly

widows. She then examined the independent variables found to be significant in the second round of multiple regression model building in hypothesis 2, and the logistic regression model building in hypotheses 3 and 4.

The researcher conducted paired sample t tests to test for significant differences between elderly widows' familism values and social-emotional needs, and the familism values and social-emotional needs of adult children (as perceived by elderly widows) (research question 1). She then conducted a cross-tabulation analysis to test the relationship between age of elderly widows and living arrangements (hypothesis 1), and multiple regressions to test education and length of time in the U.S. and familism values (hypothesis 2-1, 2-2, 2-3, 2-4). She performed logistic regression analyses to test the relationship among familism values, needs variables, and living arrangements (hypotheses 2-5, 2-6, 3-1, 3-2, 4-1, and 4-2).

Logistic regression is "a form of regression which is used when the dependent variable is dichotomous and the independent variables are of any type" (Garson, 2005). The goal of logistic regression procedures is to obtain the maximum likelihood estimation to predict the observed frequencies in the dependent variable through iterative procedures to add and delete certain independent variables (Tabachnick & Fidell, 2001). Iterative procedures are tempered by using various methods such as forward selection, backward selection, and stepwise selection. In this study, the researcher used backward selection because it is a relatively liberal method to build models. In backward selection, all independent variables are entered at first and gradually removed until no other variable can be removed according to the removal criteria (Likelihood Ratio, POUT = 0.10, PIN = 0.05) (Afifi et al., 2004; Norusis,

1993).

Logistic regression analyses provide several meaningful statistics including -2 log likelihood, model chi-square, R-squared like measures, logit coefficient (unstandardized logit coefficients or beta weight), the Wald statistic, and odds ratio. The Wald statistic is "the ratio of the unstandardized logit coefficient to its standard error, which shows significance of individual logistic regression coefficient for each independent variable" (Garson, 2005, p.1). The -2 log likelihood and model chi-square are related to the poorness or robustness of the model. The -2 log likelihood presents the significance of the unexplained variance in the dependent variable, which is analogous to the sum of squared errors in linear regression. Therefore, the -2 log likelihood statistic is often called "deviation chi-square" or "goodness of fit" test in SPSS. On the other hand, model chi-square is the statistic that shows how much improvement is needed to explain the variance of the dependent variable when independent variables enter the model as compared to the null hypothesis. Therefore, the best fitting model would have an insignificant -2 log likelihood and a significant model chi-square statistic. Even though there is no widely accepted measure analogous to R-squared in linear regression, several R-squared like measures were presented to measure strength of association between the independent and dependent variables (Garson, 2005; Tabachnick & Fidell, 2001). In this study, Nagelkerke's R-Square, which is the most-reported of the R-squares, was presented to show the strength of association. Because the R-squared measure in logistic regression is not a stable measure, all interrelations of R-squared like measures should be interpreted with caution.

Logit coefficient, the Wald statistic, and odds ratio are related to show contributions of each independent variable to the model. The Wald statistic is the ratio of the logit coefficient to the standard deviation for each independent variable and tests the significance of individual logit coefficients (Garson, 2005). A standardized coefficient is used to compare the relative power of the independent variables in explaining the variance of a dependent variable in linear regression. However, odds ratios are preferred for this purpose in logistic regression because whereas odds ratios hold relative importance among the independent variables in terms of effects on the dependent variable's actual odds, the standardized coefficient holds relative importance among the independent variables in terms of effects on the dependent variable's logged odds, which is less intuitive (Garson, 2005).

Therefore, interpretation of the results from logistic regressions predominantly depends on the odds ratio, rather than on logit coefficients. An odds ratio greater than one means there is an increase in odds of an outcome of the "response" category, which is coded as 1, with a one unit increase as the predictor. On the other hand, an odds ratio less than one means there is a decrease in the odds of that outcome with a one unit increase in the predictor (Garson, 2005; Tabachnick & Fidell, 2001). In terms of odds ratio in logistic regression, "the statistically reliable predictors that change the odds of the outcome the most are interpreted as the most important. That is, the farther the odds ratio from one, the more influential the predictor" (Tabachnick & Fidell, 2001, p.550).

To conduct logistic regression analyses, the researcher dichotomized living arrangements (the dependent variable) as living alone and living with an adult child; it

was given the value of 1 if the elder lives with adult children, 0 if living alone. Therefore, the co-resident elderly parent group is considered a *response* group and the elderly widows living alone as the *reference* group in this study. The following presents the specific procedures for testing each hypothesis under investigation.

Hypothesis 1:   *The relationship between the age of the elders and co-residence will be curvilinear, showing higher rates of co-residence among the young-old group (age 60-69) and the oldest-old group (age 80 and over) than among the old-old group (age 70-79).*

In order to test Hypothesis 1, which examines effects over the age range of elders on living arrangements, the researcher divided the sample into three age groups for cross-tabulation: young-old (60-69), old-old (70-79), and oldest-old (80 and above). She cross-tabulated age of elderly widows with the two levels of living arrangements, living alone and co-residence. She produced a 2 by 3 cross-tabulation table and conducted Chi-square (χ^2) tests.

Hypothesis 2-1: After controlling for age of elderly widows, the more educated elderly widows are, the lower the levels of familism they will have.

Hypothesis 2-2: After controlling for age of elderly widows, the longer they have lived in the U.S., the lower the levels of familism they will have.

Hypothesis 2-3: After controlling for age, the more educated elderly widows are, the lower the levels of familism they will perceive in their adult children.

Hypothesis 2-4: After controlling for age, the longer elderly widows have lived in the

U.S., the lower the levels of familism they will perceive in their adult

children.

To analyze the four hypotheses above, the researcher conducted two multiple regressions. She regressed on elderly widows' education level, length of time in the U.S., and age, and on familism values of both the elderly widows and the adult children, respectively, both as perceived by the elderly widows.

Hypothesis 2-5: After controlling for demographic factors, the higher the levels of familism are for elderly widows, the more likely elderly widows will co-reside with their adult children.

Hypothesis 2-6: After controlling for demographic factors, the higher the levels of familism are for the adult children (as perceived by elderly widows), the more likely elderly widows will co-reside with their adult children.

Because the dependent variable, living arrangements, has only two categorical values, two logistic regression analyses were performed to test the relationship between (1) familism values of elderly widows and living arrangements and (2) familism values of adult children (as perceived by elderly widows) and living arrangements. As described earlier, it takes the value of 1 if the elder lives with adult children, 0 if living alone as a *reference* group.

Hypothesis 3-1: After controlling for demographic factors and familism values, adult children's total need scores (as perceived by elderly widows) will be

more strongly associated with co-residence among the young-old

group (age 60-69) than among the old-old (age 70-79) and the

oldest-old (age 80 and over) groups.

Hypothesis 3-2: After controlling for demographic factors and familism values,

elderly widows' total need scores will be more strongly associated

with co-residence among the oldest-old group (age 80 and over) than

with the young-old (age 60-69) and the old- old (age 70-79) groups.

To test these two hypotheses, the researcher performed a sequential logistic

regression analysis with interaction terms. To control for the possible effects of

demographic factors, she entered into the first model five demographic variables,

which had been found to be significant in the previous analysis: total number of

children, length of time in the U.S. and age of elderly widows; and age and length of

time in the U.S. of adult children, and in the second model, she added four

psychosocial predictors: total needs score of elderly widows, total needs score of

adult children, and two interaction terms (elderly parents' total need score* age of

elderly widows, adult children's total need score* age of elderly widows). For making

interaction terms, age of elderly widows was recoded: 1 for 60-69 year old, 2 for 70-

79 years old, and 3 for 80-94 years old.

Hypothesis 4-1: After controlling for demographic factors, elderly widows' total need

scores will be more strongly associated, than will familism values,

with co-residence.

Hypothesis 4-2: After controlling for demographic factors, adult children's total need

scores (as perceived by elderly widows) will be more strongly associated, than will familism values, with co-residence.

The researcher performed a sequential logistic regression analysis to test the relative importance of familism values and needs variables on living arrangements. In order to control for the possible effects of demographic factors, she entered in the first model five demographic predictors that had been found to be significant in the previous analysis: total number of children, age, and length of time in the U.S. of elderly widows; and age and length of time in the U.S. of the adult children. Then she added, to the second model, two familism value variables (familism values of elderly widows and familism values of adult children as perceived by elderly widows). Finally she added the total needs scores of both the elderly widows and the adult children. For data analyses, Statistical Package of Social Sciences (SPSS) software version 12.0 for Windows (SPSS Inc., 2003) was used.

Chapter Four: Results

To examine the research questions and hypotheses described above, the researcher conducted: independent sample *t* tests, Chi-square analyses, correlations, and logistic regressions. This chapter presents the findings as follows: (1) descriptive statistics and frequencies of the variables under investigation; (2) elderly widows' needs and their familism values for living alone and co-residence; (3) adult children's needs and their familism values as perceived by elderly widows for elderly widows living alone and co-resident elderly widows; (4) bivariate relationship between elderly widows' characteristics and living arrangements and between adult children's characteristics and living arrangements; (5) elderly widows' characteristics and adult children's characteristics as predictors of living arrangements, and (6) results of hypotheses testing.

Descriptive Statistics and Frequencies of Variables under Investigation

The sample consisted of 98 Korean-born immigrant elderly women. While 103 elderly women were interviewed, 5 were excluded in the analysis. One was too young, 2 had no adult children in the U.S., and 2 were living with their husbands. The sample includes 96 widowed elderly women and 2 separated elderly women.

Demographic Characteristics for Those Living Alone and Those Co-residing

The demographic characteristics of study participants are reported in Table 3. The women ranged in age from 61 to 94 years with a mean age of 75.3 (*SD* = 7.6). On

71

average, they had been in the U.S. for 19.6 years (SD = 8.8). Independent t tests were

conducted to compare scores on major demographic variables for elderly widows

living alone and co-resident elderly widows (Table 3). Elderly widows living alone

were significantly older (M = 77.4, SD = 5.95) than elderly widows living with adult

children (M = 72.7, SD = 8.64); t(96) = 3.16, p < .01. Similarly, elderly widows living

alone were found to have lived in the U.S. for a significantly longer period of time (M

= 21.9, SD = 7.44) than elderly widows living with adult children (M = 16.7, SD =

9.62; t(96) = 3.02, p < .01.elderly widows living alone had significantly more children

living in the U.S. (M = 2.9, SD = 1.59) than their counterparts (M = 2.3, SD = 1.23);

t(96) = 2.30, p < .05.

Table 3. *Characteristics of Elderly Widows in the Study (n = 98)*

Characteristics	Range	All elderly widows (*n* = 98) M (SD)	Elderly Parents Living Alone (*n* = 54) M (SD)	Co-resident elderly widows (*n* = 44) M (SD)
Age of elderly widows	61-94	75.3 (7.6)	77.4 (6.0)	72.7 (8.6) **
Length of time in the U.S.	2-45	19.6 (8.8)	21.9 (7.4)	16.7 (9.6) **
Number of children in the U.S.	1-7	2.6 (1.4)	2.9 (1.6)	2.3 (1.1) *
Number of sons in the U.S.	0-6	1.37 (1.1)	.9 (.3)	.8 (.4)

Note. * p < .05, ** p < .01.

Socio-demographic Characteristics of Participants Living Alone and Co-residing

   Table 4 shows frequencies for the socio-demographic variables investigated in this study. Overall, respondents had a low level of education; the highest grade was 6th grade (Table 4).

Table 4. *Socio-demographic Characteristics of the Sample (n = 98)*

Characteristics	All elderly widows (*n* = 98) n (%)	Elderly Parents Living Alone (*n* = 54) n (%)	Co-resident elderly widows (*n* = 44) n (%)
Education			
No school	18 (18.4)	11 (20.4)	7 (15.9)
Elem. School (1-6th)	40 (40.8)	24 (44.4)	16 (36.4)
Middle school (7-9th)	18 (18.4)	11 (20.4)	7 (15.9)
High school (10-12th)	18 (18.4)	7 (13.0)	11 (25.0)
College	3 (3.1)	1 (1.9)	2 (4.5)
Graduate school	1 (1.0)	0	1 (23)
Immigration types			
By child	68 (69.4)	40 (74.1)	28 (63.6)
By sibling	12 (12.2)	7 (13.0)	5 (11.4)
Employment-based Immig	12 (12.2)	5 (9.3)	7 (15.9)
other	6 (6.1)	2 (3.7)	4 (9.1)
Income sources^{a}			
Savings	3 (3.1)	2 (3.7)	1 (2.3)
Wages	4 (4.1)	0	4 (9.1)
Child's support	26 (26.5)	10 (18.5)	16 (36.4)
Supplemental Security Income	63 (64.5)	45 (83.3)	18 (40.9)
Social Security Allowance	15 (15.3)	8 (14.8)	7 (15.9)
Food Stamps	46 (46.9)	40 (74.1)	6 (13.6)

^{a} Percents add to more than 100 because respondents could give more than one response.

The majority of elderly widows (69%) came to the U.S. via invitation from their adult child. Elderly widows had very little income; the mean was $643.80 per month ($SD = 413.7$). When examining income source, the majority (64.5%) received Supplemental Security Income (SSI); 26.5% received regular monetary support from their adult children; and 15.3% reported Social Security Allowance (SSA).

Residential Characteristics of Those Living Alone and Co-residing

Table 5 presents residential characteristics of elderly widows, of which 55% lived alone and 45% lived with adult children. Nearly all of those sampled (98%) did not own homes, with 49% living in government subsidized senior apartments, 31% in single houses, 8 % in townhouses, and 7% in apartments.

Table 5 *Residential Characteristics of Elderly Widows (n = 98)*

	All elderly widows ($n = 98$)	Elderly Parents Living Alone ($n = 54$)	Co-resident elderly widows ($n = 44$)
Characteristics	n (%)	n (%)	n (%)
Homeownership			
No home owned	96 (98.0)	52 (96.3)	44 (100)
Condo owned	1 (1.0)	1 (1.9)	0
Single house owned	1 (1.0)	1 (1.9)	0
Type of houses			
Apartment	7 (7.1)	2 (3.7)	5 (11.4)
Condominium	5 (5.1)	2 (3.7)	3 (6.8)
Townhouse	8 (8.2)	0	8 (18.2)
Single house	30 (30.6)	2 (3.7)	28 (63.6)
Senior apartment	49 (49.0)	48 (88.9)	0

Elders Immigrated by Adult Child Invitation vs. Elders Immigrated for Other Reasons

Independent *t* tests were conducted to compare the scores on major demographic variables for elderly widows who immigrated by adult children's invitation versus elderly widows who immigrated for other reasons. Elderly widows who immigrated by adult children's invitation were significantly older ($M = 77.4$ years, $SD = 7.2$) than elderly widows who immigrated for other reasons ($M = 70.6$ years, $SD = 6.3$); $t(96) = 4.45$, $p < .001$ and were found to have lived in the U.S. for a significantly shorter period of time ($M = 18.1$ years, $SD = 7.6$ vs. $M = 22.9$ years, $SD = 10.55$, respectively); $t(96) = -2.52$, $p < .05$ (Table 6). Additionally, elderly widows who immigrated by adult children's invitation had less monthly income ($M = \$520.80$, $SD = 209.3$) when compared to elderly widows who immigrated for other reasons ($M = \$922.50$, $SD = 596.2$); $t(96) = -4.93$, $p < .01$. There was no significant difference between the two groups in the number of children who resided in the U.S.

Table 6 *Independent* T *Test for Elderly Widows Who Immigrated by Children's Invitation vs. Others*

	Elderly immigrated by adult child's invitation ($n = 68$)	Others ($n = 30$)
	M (*SD*)	*M* (*SD*)
Age	77.4 (7.24)	70.6 (6.27) ***
Length of time in the U.S.	18.1 (7.60)	22.9 (10.55) *
Monthly Income (dollars)	520.81 (209.26)	922.53 (596.20) **
Number of children in U.S.	2.62 (1.48)	2.67 (1.35)

Note. * p < .05, ** p < .01, *** p < .001

Social-emotional Needs of Elderly Widows vs. Social-emotional Needs of Adult Children as Perceived by Elderly Widows

Social-emotional needs were measured using items from Dean's Social Isolation Scale (1961). According to Dean (1961), the social-emotional need scale has good internal consistency, $\alpha = .84$. In the current study, the Cronbach alpha coefficient was .72 for elderly widows and .80 for adult children as perceived by elderly widows. Again, negatively worded items were recoded so that higher scores indicated higher needs.

A paired samples *t* test was conducted to compare the social-emotional need scores for elderly widows and adult children as perceived by elderly widows. Overall, the social-emotional need scores of both elderly widows and adult children were a little lower than the midpoint of the total score. There was no significant difference between total social-emotional needs for elderly widows ($M = 13.05$, $SD = 6.00$) and adult children's needs as perceived by their elderly widows ($M = 12.01$, $SD = 5.95$); $t(96) = 1.605$, p = .112. The results of paired samples *t* tests for individual items that comprise the social-emotional need scale are included in Appendix (C-6).

Familism Values of Elderly Widows vs. Familism Values of Adult Children as Perceived by Elderly Widows

To measure the familism values of elderly widows and adult children, the researcher used the short form familism value scale, which Ok et al. (2000) report has good internal consistency, with a Cronbach alpha coefficient reported of .79. However, in the current study, the Cronbach alpha coefficient was found to be .59 for elderly

widows and .65 for adult children as perceived by elderly widows.

The mean scores for familism values of elderly widows and adult children as perceived by elderly widows were 17.59 (*SD* = 4.58) and 17.58 (*SD* = 5.27) respectively (range of the scale: 0-32) and the difference was not significant; t(96) = .024, p = .98. The mean scores were much lower than Ok et al.'s (2000) study, in which the mean score was reported as 26.31 (range of the scale: 8-40). The results of paired samples *t* tests for individual items that comprise the adult children's social-emotional needs scale perceived by elderly widows are presented in Appendix (C-7).

Elderly Parents' Needs and their Familism Values for Living Alone and Co-residence

The means and standard deviations of all elderly widows' needs and familism values and results from an independent *t* test for elderly widows living alone vs. co-resident elderly widows are presented in Table 7.

Co-resident elderly widows' economic needs (*M* = .72, *SD* = .83) were significantly higher than the needs of elderly widows living alone (*M* = .22, *SD* = .46); t(95) = -3.761, p < .001. An independent groups *t* test was conducted to compare social-emotional needs for elderly widows living alone and co-resident elderly widows. Negatively worded items were recoded. Therefore, a higher score means higher needs irrespective of wording. The means for social-emotional needs in this sample was 10.98 (*SD* = 5.5) for elderly widows living alone and 15.65 (*SD* = 5.5) for co-resident elderly widows, both of which are lower than the midpoint (score ranged from 0 to 36). However, there was a significant difference in the social-emotional need score between elderly widows living alone and co-resident elderly

widows, with co-resident elderly widows having higher social-emotional needs than elderly widows living alone; for elderly widows living alone (*M* = 10.98, *SD* = 5.56), and co-resident elderly widows (*M* = 15.65, *SD* = 5.55); t(95) = -4.109, p < .001. The results of independent *t* tests for the individual social-emotional needs items for elderly widows living alone and co-resident elderly widows are presented in Appendix (C-1).

Table 7. *The Means and Standard Deviations of All Elderly Widows' Needs and Familism Values (n = 98) and Independent* T *Test for Elderly Widows Living Alone vs. Co-resident Elderly Widows*

		All elderly widows (*n* = 98)	Living Alone elderly widows (*n* = 54)	Co-resident elderly widows (*n* = 44)
Variables	Range	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)
Economic Needs	0-2	.44 (.69)	.22 (.46)	.72 (.83) ***
Health Needs [a]	0-3	.46 (.82)	.60 (.88)	.30 (.70)
Social-emotional Needs	0-36	13.05 (6.0)	10.98 (5.5)	15.65 (5.5) ***
Elderly Parents' Total Needs	0-2	.59 (.36)	.49 (.35)	.70 (.33) **
Familism Values	0-32	17.59 (4.58)	18.28 (4.79)	16.72 (4.19)

Note. [a] Heath needs were logged to compensate for skewness.
* p < .05, **p < .01, ***p < .001.

As mentioned earlier, health needs were measured by an index slightly adapted from Katz's index for Activities of Daily Living (ADL). In the current study, the Cronbach alpha coefficient for the scale was .86. A total health need score was calculated by summing all scores from the 6 items. Overall, the health needs of the sample were very low (M = .88, SD = 1.92; Range, 0 to 18). An independent sample t test was conducted to compare the health need scores for elderly widows living alone and those for co-resident elderly widows. There was no significant difference in total health need score for elderly widows living alone (M = 1.13, SD = 2.15) and co-resident elderly widows (M = .57, SD = 1.58); t(96) = 1.446, p = .151. There was no significant difference in self-rated health need score for elderly widows living alone (M = 1.19, SD = 1.15) and co-resident elderly widows (M = 1.57, SD = .90); t(96) = 1.80, p = .07. Only ADL scores as health needs were utilized in the analyses that follow. The results of independent t tests for the individual items that comprised the health needs scale are presented in Appendix (C-2).

Elderly parents' total need score included economic needs, health needs, and social-emotional needs. Economic needs ranged from 0 = no economic need to 2 = high economic need. The possible score range of social-emotional needs was 0 = no social-emotional need to 36 = high social-emotional need; however, it ranged from 0 = to 26 for this sample. The possible score range of the total health score was 0 = no health need to 18 = high health need; however, it ranged from 0 to 9 with M = .88, SD = 1.92, showing that data were skewed to the right. "When data are skewed to the right, a log transformation often can produce a data set that is closer to symmetric" (Simon, 2005, p.3). Therefore the health need score was logged to compensate for

skewness. After the score was logged, it ranged from 0 to 3.elderly widows' total needs score was calculated as follows to ensure the same contribution of each needs score: (economic needs score + logged health needs score x .7 + social-emotional needs score/13)/3.

Figure 4 displays the difference between elderly widows living alone and co-resident elderly widows on total elderly widows need score at all age of elderly widows. Overall, co-resident elderly widows appear to have higher levels of total need than elderly widows living alone through all the age groups of elderly widows. In order to examine whether these differences in elderly widows' total needs for elderly widows living alone and co-resident elderly widows reach statistical significance, an independent groups *t* test was conducted. There was a significant difference in elderly widows' total need score for elderly widows living alone (*M* = .49, *SD* = .35) and co-resident elderly widows (*M* = .70, *SD* = .33); t(95) = -2.95, p = .004. Co-resident elderly widows had a higher score than elderly widows living alone.

**Figure 4. The Effect of Age on Elderly Widows' Needs
for Living Alone and Co-residence**
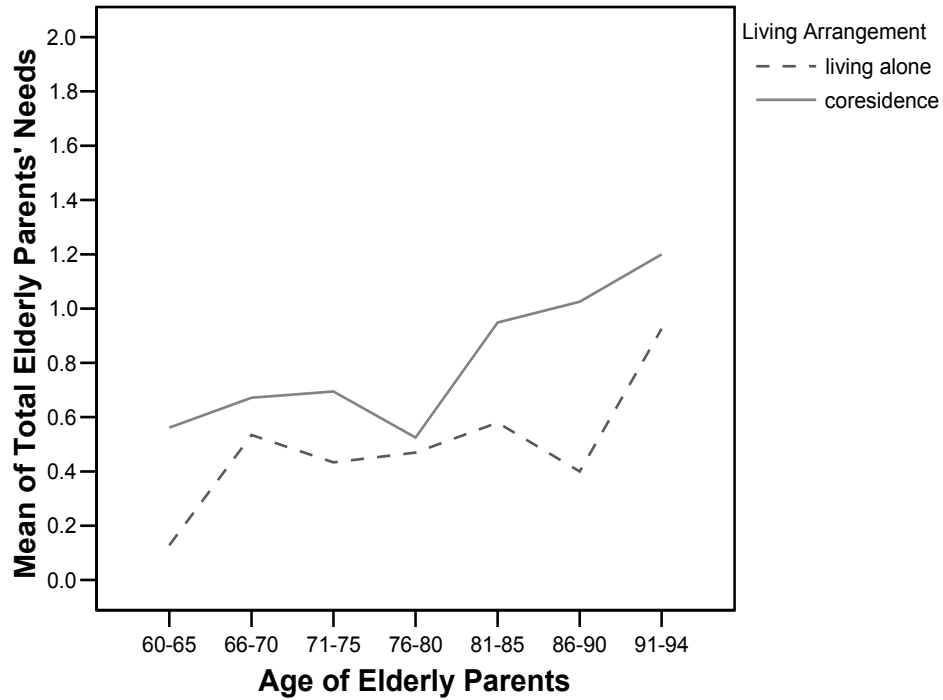
An independent *t* test was conducted to compare familism values for elderly widows living alone and co-resident elderly widows. There was no significant difference in total familism value score for elderly widows living alone (*M* = 18.28, *SD* = 4.79) and co-resident elderly widows (*M* = 16.72, *SD* = 4.19); t(95) = 1.681, p = .096. The results of independent *t* tests for individual familism value items for elderly widows living alone and co-resident elderly widows are presented in Appendix (C-3).

Adult Children's Needs and Familism Values as Perceived by Elderly Widows

Comparing Those Living Alone and Those Co-residing

The means and standard deviations of adult children's needs and familism values as perceived by all elderly widows and independent *t* test comparing the scores of elderly widows living alone and co-resident elderly widows are presented in Table 8. Co-resident elderly widows (*M* = 1.16, *SD* = .94) reported their adult children to have higher daycare needs than their counterparts who were living alone (*M* = .21, *SD* = .46); t(96) = -1.804, p < .001. An independent sample *t* test was conducted to compare the social-emotional needs of adult children as perceived by elderly widows for elderly widows living alone and co-resident elderly widows. There was a significant difference in the social-emotional needs score of adult children as perceived by elderly widows between elderly widows living alone and co-resident elderly widows, with co-resident elderly widows perceiving their adult children to have higher social-emotional needs than elderly widows living alone; for elderly widows living alone (*M* = 10.93, *SD* = 5.64), and co-resident elderly widows (*M* = 13.37, *SD* = 6.11); t(95) = -2.044, p = .044. Results for individual social-emotional need items of adult children as perceived by elderly widows are presented in Appendix (C-4).

Table 8. *The Means and Standard Deviations of Adult Children's Needs and Familism Values as Perceived by All Elderly Widows (n = 98) and Independent T Test for Elderly Widows Living Alone vs. Co-resident Elderly Widows*

Variables	Range	All elderly widows ($n = 98$) M (SD)	Living Alone elderly widows ($n = 54$) M (SD)	Co-resident elderly widows ($n = 44$) M (SD)
Daycare Needs	0-2	.65 (.86)	.21 (.46)	1.16 (.94) ***
Social-emotional Needs of Adult Children	0-36	12.01 (5.95)	10.93 (5.64)	13.37 (6.11) *
Adult Children's Total Needs Score	0-2	.77 (.52)	.50 (.34)	1.09 (.52) ***
Familism Values of Adult Children	0-32	17.58 (5.27)	18.76 (5.30)	16.09 (4.90) *

Note. * p < .05, ***p < .001.

Adult children's total need score was involved with daycare needs and social-emotional needs. Daycare needs ranged from 0 to 2 and social-emotional needs ranged from 0 to 27. Therefore, following the same rationale for calculating elderly widows' total need score, adult children's total needs score was calculated as follows: (daycare need score + social-emotional need score/13.5)/2.

Figure 5 shows the difference between elderly widows living alone and co-resident elderly widows on adult children's total need score. Co-resident elderly

widows appear to perceive their adult children having higher total needs than do elderly widows living alone at all age of the elderly widows. Although the difference for the older group is small, there appears to be a big discrepancy for the younger age groups.

Figure 5. The Effect of Age on Adult Children's Needs for Living Alone and Co-residence
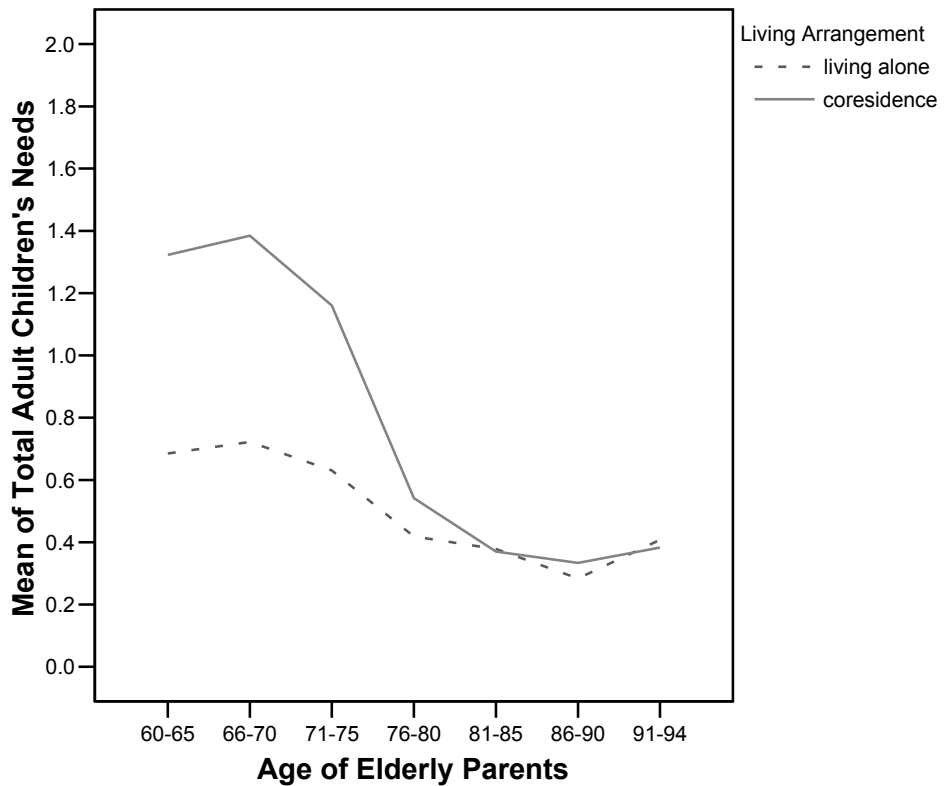
In order to examine whether or not these differences in adult children's total needs for elderly widows living alone and co-resident elderly widows reach statistical

significance, an independent groups *t* test was conducted. There was also a significant difference in adult children's total need score for elderly widows living alone (*M* = .50, *SD* = .34) and co-resident elderly widows (*M* = 1.09, *SD* = .52); t(93) = -6.60, p < .001. Co-resident elderly widows perceived their adult children had higher needs than did those who lived alone.

An independent sample *t* test was conducted to compare familism values of adult children (as perceived by elderly widows) of elderly widows living alone with those of co-resident elderly widows. The means of familism values of adult children as perceived by elderly widows were 18.76 for elderly widows living alone and 16.09 for co-resident elderly widows, which are moderate levels of familism value (Range: 0 to 32). There was a significant difference in total familism value of adult children as perceived by elderly widows between elderly widows living alone and co-resident elderly widows, with elderly widows living alone perceiving their adult children as having higher familism values than co-resident elderly widows (*M* = 18.76, *SD* = 5.30 vs. co-resident elderly widows *M* = 16.09, *SD* = 4.90, respectively); t(95) = 2.543, p = .013. The results of individual items for adult children's familism values as perceived by elderly widows for elderly widows living alone and co-resident elderly widows are presented in Appendix (C-5).

Bivariate Relationship between Elderly Widows' Characteristics/

Adult Children's Characteristics and Living Arrangements

Elderly parents' characteristics and living arrangements

Table 9 presents Pearson's correlations for living arrangements and elderly widows' demographic characteristics. When one variable is dichotomous and the other is non-dichotomous, the point biserial correlation coefficient is usually used, which does not exist in SPSS (Lowry, 2005). However, because "the point biserial correlation is just the Person correlation with one of the variables being dichotomous" (Information Technology Services, 2005, p.1), the Pearson correlation procedure can be used in SPSS (Information Technology Services, 2005). Living alone for elderly widows was negatively correlated with parent's age in years ($\underline{r}$ = -.31, p < .01), length of time in the U.S. ($\underline{r}$ = -.30, p < .01), the number of adult children in the U.S. ($\underline{r}$ = -.23, p < .05), and total number of children ($\underline{r}$ = -.26, p < .05).

Table 9 also describes how living arrangements of elderly widows were correlated with elderly widows' psychosocial variables. Co-residence was positively correlated with economic need ($\underline{r}$ = .36, p < .01), social-emotional need ($\underline{r}$ = .39, p < .01), and elderly widows' total need score ($\underline{r}$ = .29, p < .01). Health needs and familism values of elderly widows were not correlated with the living arrangements of elderly widows. Zero order correlations among all variables are included in Appendix D-1 and Appendix D-2.

Adult Children's Characteristics and Living Arrangements

Table 10 shows Pearson's correlations between living arrangements and adult children's characteristics. Co-residence was negatively correlated with age of adult child (r = -.28, p < .01), length of time in the U.S. of adult child (r = -.30, p < .01), and age of youngest grandchild (r = -.24, p < .05).

Table 10 also shows correlations for living arrangements of elderly widows and adult children's psychosocial variables. Co-residence was positively correlated with daycare needs (r = .55, p < .01), social-emotional needs (r = .21, p < .05), total children's need score (r = .57, p < .01), and negatively correlated with familism value of adult children as perceived by elderly widows (r = -.25. p < .01). Zero order correlations among all variables are included in Appendix D-3 and Appendix D-4.

Table 9 *Intercorrelations Between Elderly Widows' Characteristics and Living Arrangements (n = 98)*

	Living Arrangements of elderly widows[1]
Demographic Characteristics	
Age	-.31**
Number of Daughters in US	-.17
Number of Sons in US	-.16
Kinds of Immigration	.15
Education	.18
Length of Time in Years	-.30 **
Income	-.06
Number of Children in US	-.23 *
Total Number of Children	-.26 *
Psychosocial Variables	
Economic Need	.36 **
Health Need	-.15
Social-emotional Need	.39 **
Total Need Scores	.29 **
Familism Value	-.17

Note. [1] Living arrangements were coded as 0 for living alone; 1 for co-residence.
　　* p < .05 (2-tailed), ** p < .01 (2-tailed).

Table 10 *Intercorrelations Between Demographic Variables of Adult Children and Elderly Widows' Living Arrangements*

	Living Arrangements of Elderly Parents [1] (*n*)	
<u>Demographic Characteristics of</u>		
<u>Adult Children</u>		
Age of Adult Child	-.28 **	(98)
Length of Time in Years	-.30 **	(97)
Employment	.15	(98)
Number of Grandchild	-.18	(95)
Age of Youngest	-.24 *	(95)
Single/Married	-.03	(98)
Dual career	.13	(93)
<u>Psychosocial Variables</u>		
Daycare need	.55 **	(96)
Social-emotional Need	.21 *	(95)
Total Children's Need Score	.57 **	(95)
Familism Value	-.25 *	(97)

Note. [1] Living arrangements were coded as 0 for living alone; 1 for co-residence.
*p < .05 (2-tailed), ** p < .01 (2-tailed).

Elderly Widows' Characteristics and Adult Children's Characteristics

as Predictors of Living Arrangements of Elderly Widows

Elderly Parents Characteristics as Predictors of Living Arrangements

The first sequential logistic regression analysis using backward selection was performed to assess prediction of membership in one of two categories (living alone and living with adult children) among all predictor variables related to elderly widows. The demographic variables found to be significant in these logistic regressions were later examined in the second round of logistic regression model building to test hypothesis 3-1, hypothesis 3-2, hypothesis 4-1, and hypothesis 4-2.

The analysis started on the basis of 6 demographic predictors; then, four psychosocial predictors were added. Demographic predictors were age of elderly widows, length of time in the U.S. of elderly widows, education of elderly widows, types of immigration, the number of children in the U.S., and total number of children. Psychosocial predictors were familism values of elderly widows, economic needs of elderly widows, health needs of elderly widows, and social-emotional needs of elderly widows. Education was recoded either 1 for low education level (6 years and less) or 2 for high education level (7 years and more).

Table 11 shows the regression coefficients, Wald statistics, and odds ratios for each of the predictor variables. According to the Wald criterion, age of elderly widows ($z = 6.42$, $p < .05$), economic needs of elderly widows ($z = 5.13$, $p < .05$), and social-emotional needs of elderly widows ($z = 10.88$, $p < .01$) predicted living arrangements of elderly widows.

90

Table 11 *Final Logistic Regression Model Using Backward Selection:*
Elderly Widows' Characteristics and Needs Predicting Living Arrangements (n = 97)

	Model 1 [a]			Model 2 [b]		
	B (*SE*)	Wald	Odds Ratio	B (*SE*)	Wald	Odds Ratio
Age	-.08 (.04)	5.18*	.92	-.10 (.04)	6.42*	.90
Length of Time in the U.S.	-.06 (.03)	5.18*	.94	-.04 (.03)	1.28	.96
Total Number of Children	-.33 (.17)	3.84*	.72	-.35 (.20)	3.13	.71
Economic Needs				.97 (.43)	5.13*	2.63
Social-emotional Needs				.17 (.05)	10.88**	1.18
Intercept	8.12	9.88		6.62		
Model Chi-square (df)	21.75 (3)			43.65 (5)		
-2 Log Likelihood	111.47			89.58		
Nagelkerke R Square	.27			.49		

Note. Reference category for all outcomes is living alone . [a] Variable(s) entered on step 1: age of elderly widows, length of time in the U.S. of elderly widows, education (1 = 6 years and less, 2 = 7 years and more), types of immigration (1 = by adult children's invitation, 2 = others), the number of children in the U.S., and total number of children, [b] Variable(s) entered on step 1: familism values of elderly widows, economic needs of elderly widows, health needs of elderly widows (logged), social-emotional needs of elderly widows.   * p < .05, ** p < .01.

The odds ratio of .90 for age, 2.63 for economic needs of elderly widows, and

1.18 for social-emotional needs of elderly widows show that economic needs of

elderly widows are the most influential predictor in the likelihood of co-residence on

the basis of one unit change in three significant predictors. Older elderly widows are more likely than their younger counterparts to live alone and those elderly widows who have higher economic needs and social-emotional needs are more likely than their counterparts to live with their adult children.

Adult Children's Characteristics as Predictors of Living Arrangements

A sequential logistic regression analysis was performed to assess the prediction of living arrangements among predictor variables related to adult children. The demographic variables found to be significant in these logistic regressions were later examined in the second round of logistic regression model building to test hypothesis 3-1, hypothesis 3-2, hypothesis 4-1, and hypothesis 4-2. First, six demographic predictors were entered in the model and then three psychosocial predictors were added. Demographic predictors of adult children were age of adult child, education of adult child, length of time in the U.S. of adult child, age of youngest grandchild, employment status of family, and housing status of adult child. Psychosocial predictors of adult children were familism values of adult child as perceived by their elderly widows, social-emotional needs of the adult child as perceived by their elderly widows, and daycare needs of adult child as perceived by their elderly widows. Education of adult children was recoded as "1" for 12 years or less and "2" for 13 years or more. Employment status of adult children in the family was recoded as "1" for husband or wife only or "2" for dual career. Housing status of adult child was also recoded either "1" for rented or "2" for own.

Table 12 shows the regression coefficients, Wald statistics, and odds ratios for each of the predictors. According to the Wald criterion, age of adult children ($z = 3.69$,

p < .05), familism values of adult children as perceived by elderly widows ($z = 4.86$, $p < .05$), and daycare needs of adult children ($z = 15.32$, $p < .001$) predicted living arrangements of the elderly widows. The odds ratio of 1.09 for age of adult children shows little change in the likelihood of co-residence on the basis of one unit change in age of adult children. On the other hand, the odds ratio of 6.71 for daycare needs of adult children shows that an elderly widow is approximately 7 times more likely to live with adult child if they have day care needs. The odds ratio of .88 for the familism value of adult children as perceived by elderly widows shows little change in the likelihood of living alone on the basis of 1 unit change in familism values of adult children as perceived by elderly widows. Those elderly widows who have older adult children and adult children with higher daycare needs are more likely to live with adult children. Elderly widows who perceive their adult children to have higher familism values are also more likely than their counterparts to live alone.

Table 12 *Final Logistic Regression Model Using Backward Selection: Adult Children'
(AC) Characteristics and Needs Predicting Living Arrangements (n = 98)*

	Model 1 [a]			Model 2 [b]		
	B (*SD*)	Wald	Odds Ratio	B (*SD*)	Wald	Odds Ratio
Age of AC	-.06 (.032)	3.93*	.94	-.09 (.05)	3.69*	1.09
Length of Time in the U.S. of AC	-.06 (.028)	4.41*	.94	-.06 (.04)	2.91	.94
Familism Value of AC				-.13 (.06)	4.86*	.88
Daycare Needs				1.90 (.49)	15.32***	6.71
Intercept	4.08	6.64		-2.18	.85	
Model Chi-square (df)	11.85 (2)			37.13 (4)		
-2 Log Likelihood	112.21			86.92		
Nagelkerke R Square	.17			.45		

Note. Reference category for all outcomes is living alone. [a] variable(s) entered on step 1: age of adult child, education of adult child (1 = 12 years and less, 2 = 13 years and more), length of time in the U.S. of adult child, age of youngest grandchild, employment status of family (1 = husband or wife only, 2 = dual career), housing status of adult child (1 = rented, 2 = owned). [b] Variable(s) entered on step 1: familism values of adult child, social-emotional needs of adult child, and daycare needs of adult child.
* p < .05, *** p < .001.

Tests of Hypothesis 1: The relationship between the age of the elders and co-residence will be curvilinear, showing higher rates of co-residence among the young-old group (age 60-69) and the oldest-old group (age 80 and over) than among the old-old group (age 70-79).

Hypothesis 1 describes the relationship between co-residence and three age groups. Therefore, subjects were divided into three groups according to their age (Group 1: 60-70 years; Group 2: 71-80 years; Group 3; 81 and above). Figure 6 displays percent co-residence by three age groups.

Figure 6. Percent Co-residence by Three Age Groups
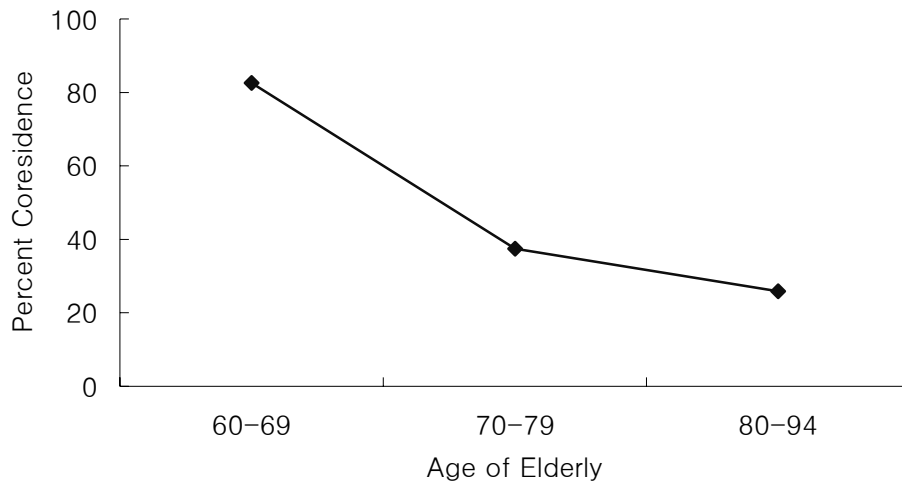
A chi-square analysis was conducted to examine the relationship between age of elderly widows and living arrangements. The result of a 2 x 3 cross tabulation is presented in Table 13. While 82.6% of the young-old group lived with adult children, 74.1% of oldest-old group lived alone. The living arrangement differences among the three age groups were significant, χ^2 (2, *n* = 98) = 18.21, p < .001. The younger age

95

group was more likely to live with adult children and the older age group was more likely to live alone. Therefore, hypothesis 1 which expected high rate of co-residence in both young-old age group and oldest-old age group was not accepted based on the low co-residence rate in the oldest-old group.

Table 13 *Living Arrangements (LA) by Age of Elderly Widows (n = 98)*

LA			Age		Total
		60-69	70-79	80-94	
Living alone	Count	4	30	20	54
	% within Age	17.4	62.5	74.1	55.1
	% of Total	4.1	30.6	20.4	55.1
Co-residence	Count	19	18	7	44
	% within Age	82.6	37.5	25.9	44.9
	% of Total	19.4	18.4	7.1	44.9
Total	Count	23	48	27	98
	% of Total	23.5	49.0	27.6	100.0

Note. 0 cells (.0%) have expected count less than 5. The minimum expected count is 10.33. Pearson Chi-Square = 18.211, df = 2, p < .001.

Tests of Hypothesis 2-1: After controlling for age of elderly widows, the more educated elderly widows are, the lower the levels of familism they will have.

Tests of Hypothesis 2-2: After controlling for age of elderly widows, the longer they have lived in the U.S., the lower the levels of familism they will have.

A multiple regression analysis was conducted to examine the independent effects of elderly widows' characteristics on their familism values. Age of elderly widows as a continuous variable, level of education, and length of time in the U.S. of elderly widows were regressed on their familism value scores. The results are

presented in Table 14. Only length of time in the U.S. (p < .01) and age of elderly

widows (p < .01) were significant predictors of the level of familism values of elderly

widows, for the total model $F (3, 93) = 7.95$, $p < .001$. The two variables in the model

accounted for 18% of the variance in the familism value scores of elderly widows.

Findings suggest that the older elderly widows become and the shorter amount of

time they reside in the U.S., the higher familism values they have. Education was not

significant in this model (p = .307). Therefore, hypothesis 2-1 was not accepted.

Table 14 *Summary of Regression Analysis for Elderly Widows' Characteristics*
Predicting Familism Value of Elderly Widows (n = 97)

	B	Std. Error	Beta
Education	-.42	.41	-.10
Length of Time in the U.S.	-.14	.05	-.27**
Age in Years	.23	.06	.37**
Adjusted R Square	.18		

Note. ** p < .01

While the direction of the effect of length of time in the U.S. on familism

value of elderly widows was negative, the direction of age in years was positive. In

order to examine the relationship among length of time in the U.S., age of elderly

widows, and familism value of elderly widows, a two-way between-groups analysis

of variance with an interaction term was conducted as a post-hoc test. Subjects were

divided into three groups according to their age (Group 1: 60-70 years; Group 2: 71-

80 years; Group 3; 81 and above) and their length of time in the U.S. (Group 1: 15 years or less; Group 2: 16-23 years; Group 3: 24 and above). The results of the test are presented in Table 15. There was a statistically significant main effect for age [F(8, 88) = 9.19, p <.001] with a large effect size (eta squared = .17) (Cohen, 1988). Post hoc comparison using the Tukey HSD indicated that the mean score for the 80 years and above age group (*M* = 19.61, *SD* = 1.16) was significantly higher than that of the 60-70 years age group (*M* = 15.89, *SD* = 1.02) at p < .01. The 71-80 years age group (*M* = 17.31, *SD* = 1.02) did not differ significantly from either of the other groups.

Table 15 *Analysis of Variance for Age and Length of Time in the U.S. Predicting Familism Value of Elderly Widows (n = 97)*

Source	df	F	η (eta)	p
Age [a]	2	9.19***	.17	.000
Length of Time in U.S.[b]	2	5.89**	.12	.004
Age x Length of Time in U.S.	4	3.86**	.15	.006
Error	88	(16.28)		
Adjusted R-Square	.22			

Note. The values enclosed in parentheses represent mean square errors.
[a] grouped: 60-70 years old; 71-80 years old; 81-94 years old. [b]. grouped: 15 years and less; 16-23 years; 24 years and more.
** p < .01, *** p < .001.

There was a statistically significant moderate main effect (eta squared = .12) (Cohen, 1988) for length of time in the U.S. [F(8, 88) = 5.9, p < .01]. However, post

hoc comparison using the Tukey HSD specified that none of the three groups was significantly different from each other group (15 and less years group: M = 18.59, SD = 1.05; 16-23 years group: M = 17.58, SD = .97; 24 and above years group: M = 16.75, SD = 1.05).

There was also a significant interaction between age and length of time in the U.S. on familism values of elderly widows [F(8, 88) = 3.86, p < .01], and there was an effect size (eta squared = .15) (Cohen, 1988). This finding indicates that there was a significant difference in the effect of age on familism value of elderly widows for the different groups of length of time in the U.S. As can be seen in Figure 8, while the oldest-old elderly widows who lived in the U.S. for less than 15 years had the highest familism value scores, those young-old elderly widows who lived in the U.S. for both 16-24 years and 25 years and more had the lowest familism value scores. The effect of length of time in the U.S. on familism values of elderly widows was the biggest among the oldest-old age group, demonstrating that the less time they lived in the U.S., the higher their familism values. Therefore, hypothesis 2-2 was accepted only for the oldest old age group when examining the length of time in the U.S.

Figure 7.

The Effect of Age on Familism Value of Elderly Widows for Length of Time in the U.S.
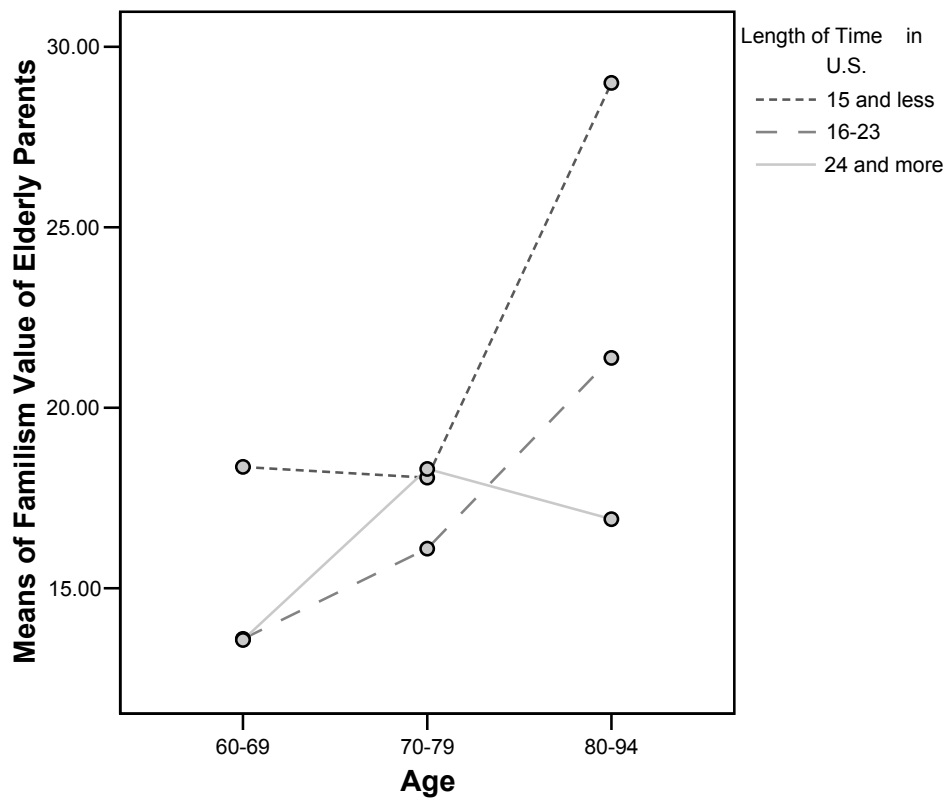
Tests of Hypothesis 2-3: After controlling for age, the more educated elderly widows are, the lower the levels of familism they will perceive in their adult children.

Tests of Hypothesis 2-4: After controlling for age, the longer elderly widows have lived in the U.S., the lower the levels of familism they will perceive in their adult children.

A multiple regression analysis was conducted to examine hypotheses 2-3 and 2-4. Age of elderly widows as a continuous variable, level of education, and length of

time in the U.S were regressed on familism values of adult children as perceived by elderly widows. The results are presented in Table 16. Only length of time in the U.S. (p < .05) and age of the elderly widows (p < .01) were significant predictors of familism values of adult children as perceived by elderly widows, for the total model $F (3, 93) = 6.62$, p < .001. These two variables accounted for 15% of the variance in the familism value scores of adult children. Findings suggest that the older elderly widows become and the shorter amount of time they reside in the U.S., the higher familism values they have. Education was not significant in this model (p = .306). Therefore, hypothesis 2-3 was not accepted.

Table 16 *Summary of Regression Analysis for Elderly Widows' Characteristics Predicting Familism Value of Adult Children as Perceived by Elderly Widows (n = 97)*

	B	Std. Error	Beta
Education	-.49	.48	-.11
Length of Time in the U.S.	-.13	.06	-.23*
Age	.25	.08	.35**
Adjusted R Square	.15		

Note. * p < .05, ** p < .01

Likewise in the previous regression analysis for familism values of elderly widows, while the direction of the effect of length of time in the U.S. on adult children's familism values as perceived by elderly widows was negative, the direction of the age of elderly parents was positive. In order to further explore the impact of age

and length of time in the U.S. on adult children's familism values as perceived by elderly widows, a two-way between-groups analysis of variance with an interaction term was conducted as a post hoc test. The findings are presented in Table 17.

There was a statistically significant main effect for age [$F(8, 88) = 3.54$, $p = .033$] with a moderate effect size (eta squared = .07) (Cohen, 1988). Post hoc comparison using the Tukey HSD indicated that the mean score for the 80 and older age group ($M = 19.85$, $SD = 1.41$) was significantly higher than that of the 60-70 year old group ($M = 15.09$, $SD = 1.25$) at $p < .01$. The 71-80 years age group ($M = 17.54$, $SD = 1.20$) was not significantly different from either of the other two groups. The main effect for length of time in the U.S. [$F(8, 88) = 1.45$, $p = .24$] and the interaction effect [$F(8, 88) = 1.51$, $p = .21$] were not statistically significant. Although length of time in the U.S. was found to be significant in the regression analysis ($p < .05$) (Table 16), it was not significant in two-way analysis of variance (Table 17). This difference may be due to change of variable level; length of time in the U.S. was a continuous variable in the regression analysis, however, it was a nominal variable in two-way analysis of variance. Therefore, hypothesis 2-4 was also not accepted.

Table 17 *Analysis of Variance for Age and Length of Time in the U.S. Predicting Familism Value of Adult Children as Perceived by Elderly Widows (n = 97)*

Source	df	F	n (eta)	p
Age (A) [a]	2	3.54*	.07	.03
Length of Time in U.S. (L) [b]	2	1.45	.03	.24
A x L	4	1.51	.06	.21
Error	88	(24.21)		
Adjusted R Square	.13			

Note. The value enclosed in parentheses represents mean square errors.
[a] grouped: 60-70 years old; 71-80 years old; 81-94 years old. [b] grouped: 15 years and less; 16-23 years; 24 years and more. * p < .05.

Tests of Hypothesis 2-5: After controlling for demographic factors, the higher the levels of familism are for elderly widows, the more likely elderly widows will co-reside with their adult children.

Tests of Hypothesis 2-6: After controlling for demographic factors, the higher the levels of familism are for the adult children (as perceived by elderly widows), the more likely elderly widows will co-reside with their adult children.

In the previous regression analysis, age of elderly widows and length of time in the U.S. were found to be associated with both familism values of elderly widows and adult children's familism values as perceived by elderly widows. Also, age in years of elderly widows and length of time in the U.S. were significantly correlated with living arrangements based on the correlation analyses. Therefore, controlling for

age of elderly widows and length of time in the U.S., a sequential logistic regression analysis was performed to assess prediction of membership in one of two categories (living alone and living with adult children) first on the basis of the two demographic predictors and then after adding two familism value predictors, which are familism values of elderly widows and familism values of adult children as perceived by elderly widows. As a predicted variable, living alone was coded as "0", which is the reference category, and co-residence was coded as "1".

Table 18 shows the regression coefficients, Wald statistics, and odds ratios for each of the predictors. According to the Wald criterion, length of time in the U.S. ($z = 6.92$, $p < .01$) and familism values of adult children as perceived by elderly widows ($z = 4.57$, $p < .05$) predicted living arrangements of elderly widows. The odds ratio of .93 for length of time in the U.S. and .90 for familism value of adult children as perceived by their elderly widows shows little change in the likelihood of living alone on the basis of one unit (a year) change in length of time in the U.S. and familism value of adult children as perceived by elderly widows. Those elderly widows who have lived longer in the U.S. and perceive their adult children to have higher familism values are more likely than their counterparts to live alone. Elderly widows' familism values did not predict their residence status. Therefore, hypothesis 2-5 was not accepted; hypothesis 2-6 was accepted.

Table 18 *Summary of Logistic Regression Analysis for Familism Value Variables Predicting Living Arrangements (n = 97)*

	Model 1 [a]			Model 2 [b]		
	B (SE)	Wald	Odds Ratio	B (SE)	Wald	Odds Ratio
Age of Elders	-.09 (.03)	7.58**	.91	-.07 (.04)	3.50	.94
Length of Time in the U.S. of Elders	-.06 (.03)	4.76*	.94	-.08 (.03)	6.92**	.93
Familism Value of Adult Children				-.10 (.05)	4.57*	.90
Intercept	7.95	9.83		8.07		
Model Chi square (df)	17.70 (2)			22.46 (3)		
-2 Log Likelihood	115.52			110.76		
Nagelkerke R Square	.22			.28		

Note. Reference category for all outcomes is living alone.
[a] Variable(s) entered on step 1: age of elderly widows, length of time in the U.S. of elderly widows, age of adult child, and length of time in the U.S. of adult child. [b] Variable(s) entered on step 2: familism values of elderly, familism values of adult children.
* $p < .05$, **$p < .01$.

Tests of Hypothesis 3-1: After controlling for demographic factors and familism values, adult children's total need scores (as perceived by elderly widows) will be more strongly associated with co-residence among the young-old group (age 60-69) than among the old-old (age 70-79) and the oldest-old (age 80 and over) groups.

Tests of Hypothesis 3-2: After controlling for demographic factors and familism values, elderly widows' total need scores will be more strongly associated with co-residence among the oldest-old group (age 80 and over) than with the young-old (age

60-69) and the old-old (age 70-79) groups.

A sequential logistic regression analysis with an interaction term was conducted to test hypothesis 3-1 and hypothesis 3-2. In order to control for the possible effects of demographic variables, the demographic variables found to be significant in the previous analyses were entered into the sequential logistic regression analyses. The results of the analysis are presented in Table 19. Prediction of membership was assessed in one of two categories (living alone and living with adult children) - first on the basis of five demographic predictors and second after an addition of four psychosocial predictors. Demographic predictors were the age of elderly widows, length of time in the U.S., total number of children, age of adult child, and length of time in the U.S. of adult child. Age of elderly widows was recoded as "1" for 60-69 years old, "2" for 70-79 years old, or "3" for 80-94 years old. Psychosocial predictors were total needs score of elderly widows, total needs score of adult children, and two interaction terms (elderly parents' total need score* age of elderly widows, and adult children's total need score* age of elderly widows).

Table 19 shows regression coefficients, Wald statistics, and odds ratios for each of the predictors. According to the Wald criterion, total number of children (z = 4.10, p < .05), elderly widows' total needs (z = 7.55, p < .01), and the interaction of adult children's total needs and age of elderly widows (z = 8.50) predicted living arrangements of elderly widows. The odds ratio of .66 for total number of children shows little change in the likelihood of living alone on the basis of 1 unit change in total number of children. The odds ratio of 12.15 for elderly widows' total needs shows that an elderly widows with greater needs is approximately 12 times more

likely to live with their adult child irrespective of their age. The odds ratio of 6.79 for an interaction of adult children's total need and old-old age (70-79) of elderly widows means the old-old age group of elderly widows is approximately 7 times more likely to live with their adult child than oldest-old counterparts.

In the interaction of adult children's total needs and age of elderly widows, one thing should be noticed. The odds ratio for the interaction between adult children's total needs and young-old age group of elderly widows was 39.48. Even though the odds ratio did not reach statistical significance ($z = 2.81$, $p = .09$) because of a higher standard deviation, it indicates that the likelihood that one unit change in adult children's total needs in the young-old age group of elderly widows is associated with co-residence. The young-old age group of elderly widows is 39 times more likely to live with adult child if they have high total adult child needs than those in the oldest-old age group of elderly widows. While those elderly widows who have higher elderly widows' total needs are likely to live with adult children irrespective of their age, those young-old and old-old groups of elderly widows who have adult children with higher adult children's total needs are much more likely than their oldest counterparts to live with adult children. As hypothesized in hypothesis 3-1, the effect of adult children's total needs on co-residence was greater in young-old and old-old age groups of elderly widows than those in the oldest-old age group. However, contrary to expectation in hypothesis 3-2, the effect of elderly widows' total needs on co-residence was not different among the three age groups of elderly widows. Therefore, hypothesis 3-1 was accepted and hypothesis 3-2 was not accepted.

Table 19 *Final Logistic Regression Model Using Backward Selection with Interaction Term: Elderly Widows' (EP) Characteristics and Needs and Adult Children's (AC) Characteristics and Needs Predicting Living Arrangements (n = 97)*

	Model 1 a			Model 2 b		
	B (*SD*)	Wald	Odds Ratio	B (*SD*)	Wald	Odds Ratio
Total # of Children	-.39 (.18)	5.07*	.67	-.42 (.21)	4.10*	.66
Length of Time in U.S. of AC	-.07 (.05)	5.03*	.93	-.03 (.04)	.63	.97
Age group		11.50**			.52	
Age group(1)	2.27(.76)	8.87**	9.69	-.88 (2.47)	.13	.42
Age group(2)	.16 (.62)	.07	1.17	-.66 (.96)	.47	.52
Total Needs of EP				2.50 (.91)	7.55**	12.15
Total Needs of AC * age group					8.50*	
Total Needs of AC by age group(1)				3.68 (2.19)	2.81	39.48
Total Needs of AC by age group(2)				1.92 (.82)	5.50*	6.79
Intercept	2.08	3.10		-.71	.20	
Model Chi-square (df)	29.51 (4)			53.03 (7)		
-2 Log Likelihood	100.12			76.60		
Nagelkerke R Square	.36			.58		

Note. Reference category for all outcomes is living alone. a Variable(s) entered on step 1: total number of children, age of adult child, length of time in the U.S. of elderly widows, length of time in the U.S. of adult child, and age of elderly widows (1 = 60-69, 2 = 70-79, 3 = 80-94 as a reference group), b Variable(s) entered on step 2:elderly widows' total needs, adult children's total needs score, elderly widows' total needs score * age, adult children's total needs score * age
* p < .05, ** p <.01

Tests of Hypothesis 4-1: After controlling for demographic factors, elderly widows' total need scores will be more strongly associated, than will familism values, with co-residence.

Tests of Hypothesis 4-2: After controlling for demographic factors, adult children's total need scores (as perceived by elderly widows) will be more strongly associated, than will familism valus, with co-residence.

A sequential logistic regression analysis was performed to test hypothesis 4-1 and hypothesis 4-2. In order to control for the possible effects of demographic variables, four demographic predictors, which were significantly associated with living arrangements of elderly widows, were entered first, followed by the addition of two familism value predictors (familism values of elderly widows and familism values of adult children) and finally, the addition of 2 total need scores (elderly parents' total need scores and adult children's total needs score). Demographic predictors entered were total number of children, age of adult children, length of time in the U.S. of adult children, age of elderly widows, and length of time in the U.S. of elderly widows.

The results of the logistic regression are presented in Table 20. In the first model when demographic predictors were entered, total number of children ($z = 4.05$, $p < .05$), length of time in the U.S. of adult children ($z = 4.73$, $p < .05$), and age of elderly widows ($z = 4.74$, $p < .05$) predicted living arrangements of elderly widows. In the second model when the two familism value scores were added, only length of time in the U.S. of adult children ($z = 6.76$, $p < .01$) was significant when predicting living arrangements of elderly widows. There was no trend of familism values of

adult children (z = 3.38, p = .066) to predict the residential status of elderly widows. The familism value of elderly widows did not reach statistical significance to predict the residential status of elderly widows.

In the full logistic regression model when all predictors were entered together by backward method, the effects of demographic variables and familism values were no longer significant. Both elderly widows' total needs score (z = 6.79, p <.01) and adult children's total needs score (z = 10.14, p <.01) were statistically significant. The odds ratio of 10.38 for elderly widows' total needs and 11.62 for adult children's total needs indicates a big change in the likelihood of co-residence on the basis of one unit change in elderly widows' total needs scores and adult children's total needs scores. As hypothesized, elderly widows' total needs and adult children's total needs had a greater positive effect on co-residence than familism values of elderly widows and familism values of adult children as perceived by elderly widows, suggesting that the greater the elderly widows' total needs and the greater the adult children's total needs, the more likely it is that elderly widows would co-reside with their adult children. These results support both hypothesis 4-1 and hypothesis 4-2.

Table 20 *Final Logistic Regression Model Using Backward Selection: Elderly Widows' (EP) Characteristics and Needs and Adult Children's (AC) Characteristics and Needs Predicting Living Arrangements (n=97)*

	Model 1 a			Model 2 b			Model 3 c		
	B (SD)	Wald	Odds Ratio	B (SD)	Wald	Odds Ratio	B (SD)	Wald	Odds Ratio
Total # of Children	-.34 (.17)	4.05*	.71	-.28 (.17)	2.58	.76	-.38 (.21)	3.23	.68
Length of Time in the U.S. of AC	-.06 (.03)	4.73*	.94	-.09 (.03)	6.76**	.92	-.05 (.04)	1.53	.95
Age of Elderly	-.08 (.04)	4.74*	.93	-.05 (.04)	2.13	.95	-.00 (.05)	.00	1.00
Familism Value of AC				-.09 (.05)	3.38	.91	-.07 (.06)	1.24	.94
Total Needs of EP							2.34 (.90)	6.79**	10.38
Total Needs of AC							2.45 (.77)	10.14**	11.62
Intercept	7.99	9.61		8.16	9.83		.06	.000	
Model Chi-square (df)	20.49 (3)			24.01 (4)			48.37 (6)		
-2 Log Likelihood	109.14			105.62			81.27		
Nagelkerke R Square	.26			.30			.54		

Note. Reference category for all outcomes is living alone. a Variable(s) entered on step 1: the number of total children, age of adult children, length of time in the U.S. of adult child, age of elderly widows, and length of time in the U.S. of elderly widows. b. Variable(s) entered on step 2: familism values of elderly widows and familism values of adult children. c. Variable(s) entered on step 3:elderly widows' total needs score and adult children's total needs score.

* p < .05, ** p <.01

Chapter Five: Discussion

The purpose of this study was to examine the effects of elderly widows' needs, children's needs as perceived by the elderly widows, and familism values on the living arrangements of elderly widows. This chapter presents a discussion of the results, the implications of the study, limitations of the study, and recommendations for future research, public policy, and program planning.

Discussion of Results

Demographic Variables and Living Arrangements

Age of elderly widows and living arrangements. It was hypothesized that the relationship between the age of elderly widows and co-residence would be curvilinear, showing higher rates of co-residence among the young-old group (age 60-69) and the oldest-old group (age 80 and over) than among the old-old group (age 70-79). Contrary to findings in the 1990 Census (U.S. Bureau of the Census, 1996) and a previous study (McGarry & Schoeni, 2000), the relationship was linear rather than curvilinear in this sample, suggesting that as elderly widows became older, the percentage of co-residence within each age group decreased. In other words, contrary to expectations, the percentage of co-residence among the oldest-old group of the sample was very low.

One possible explanation for this finding may be related to sampling bias. Those oldest-old elderly widows who have lived alone could be easily accessed in senior apartments. However, it was very difficult to find oldest-old elderly widows

112

living with adult children, because most were scattered and resided in suburban residential areas. Even when the researcher found eligible participants for the study, access was usually blocked by their adult children, who did not want their elderly parents talking with strangers. Also, because the oldest-old may be frailer, it may be impossible for adult children to care for these elders in their homes. Therefore, oldest-old elderly widows are more likely to be in nursing facilities compared to elders of other categories. As a result, it is likely that co-resident oldest-old elderly widows were underrepresented in the sample.

Another possible explanation is that many of the oldest-old group of elderly widows might have co-resided with their adult children while their adult children had young children needing childcare, but then moved to independent housing after their grandchildren no longer needed childcare. The fact that adult children of almost 70% of the elderly widows had invited them to co-reside with them, makes this explanation for the low rate of co-residence among the oldest-old group more plausible. However, because this was not a longitudinal study and no information was gathered about transition of elderly widows' residential status, this explanation is based only on the researcher's inference.

The number of children. Contrary to results from previous studies (Spitze, et al., 1992), total number of children was negatively associated with the likelihood of co-residence among elderly widows in this sample. This was surprising considering that having more children likely increases the chance that elderly parents have adult children in need. However, having more children may also mean more resources or options are available in the family to help those elderly in need. For example, Spitze

et al. (1992) found that having more children was associated with the transition from living alone to living with a child. They interpreted this as more children being related to an increase in potential neediness of the adult children rather than an increase in availability of co-residence opportunities, pointing out that an increasing number of children did not buffer elderly widows from the likelihood of being institutionalized (Spitze et al., 1992).

One potential explanation for the findings in this study may be related to diffusion of responsibility (Forsyth et al., 2002). When elderly widows have many adult children, the children tend to share responsibility of taking care of their elderly parents. Therefore, adult children may feel less motivated to support their elderly parents in their own home. However, the relationship between the number of children and living arrangements of elderly widows needs further clarification in future research.

Homeownership. Only two of the 98 subjects owned their homes. If elderly widows co-reside with adult children, they predominantly lived in their adult child's house. As a whole, it is difficult to access those who are in a higher social economic status who might own their own houses. It is also worth noting, as described in the literature review, that Korean elderly widows tend to immigrate at the invitation of their adult children, on whom they tend to depend economically; those who immigrated for other reasons, such as an invitation from siblings or to seek employment, had just started to reach the age of retirement. For many of these parents, their spouses may still be alive. This study included only single Korean elderly women. In other words, due to sampling limitations and exclusion criteria those

elderly widows who owned their homes were underrepresented in this study.

Marital status of adult children. Previous studies (Lee & Dwyer, 1996; Ward et al., 1992) found the marital status of adult children to be one of the most powerful predictors of living arrangements, showing that having an adult child who is single (never-married, divorced, or separated) was related to co-residence of elderly widows. In the current study, however, marital status of adult children was not found to be a significant variable to predict living arrangements of elderly widows, probably because only six of the adult children were single— too few to detect any significant influence.

One explanation for the small number of single adult children in the study may be that marital stability in the Korean community is higher than in mainstream society in the U.S. (Rhee, 1998). Another potential explanation may be related to the Korean culture where divorce and separation is considered shameful and dishonorable (Rhee, 1998). In this study, elderly widows were asked to answer in terms of one adult child, not all adult children: co-resident elders would answer in terms of the child with whom she lived; elderly widows living alone would answer in terms of the most frequently contacted adult child. It could not be ignored that there might be more single adult children among those who were not selected as the index child by the elderly widows. There is also a possibility that those elderly widows who have unmarried adult children due to divorce or separation refused to participate in this study.

Familism Values and Living Arrangements

Familism values of elderly widows and familism values of adult children as perceived by elderly widows. The mean scores for familism values of elderly widows and adult children as perceived by elderly widows were 17.59 (SD = 4.58) and 17.58 (SD = 5.27) respectively (range of the scale: 0-32). The mean score for familism values in the Ok et al. (2000) sample in Korea was 26.31 (range of the scale: 8-40). The elderly widows' familism mean score (17.59) in the current study corresponds to a score of 21.98 in the Ok et al. study, because they use different method of scoring: While the current study used 0 to 4, Ok et al. used 1 to 5. The mean score in the current study was much lower than the one in Ok et al.'s study. While Ok et al.'s internal consistency of the familism scale was good, with a Cronbach alpha coefficient of .79, internal consistency of the same scale in the current study was relatively poor—Cronbach alpha = .59 for elderly widows and Cronbach alpha = .65 for adult children.

One possible explanation for the low mean score and low internal consistency may be related to cultural incompatibility of the familism scale for this sample. The familism scale (Ok, et al., 2000) was developed in Korea and should be understood in the family and kinship culture in Korea. Koreans in the U.S. may be very different from Koreans living in Korea in terms of availability, proximity, and accessibility to family members and relatives. These differences may lead elderly widows in the present sample to have difficulties answering some questions. For example, when elderly widows were asked to answer the question, "When there arises a financial need, priority goes to helping relatives on the husband's side of the family rather than

the wife's side of the family," they might find that they did not have any husband's side relatives in the U.S. or vice versa. Their answer would be restricted by reality, even though the question was about their attitude rather than reality.

The other potential explanation may be that elderly widows in this sample were sensitized to some items of the familism value scale. For example, elderly widows were notified that this study was designed to examine the relationship between some psychosocial variables and living arrangements before starting the interview. When elderly widows living alone were asked to answer the question, "The oldest married son should live with and take care of the parents," they might be reluctant to agree because it would put their family in a negative light.

Also, as is often the case in studies measuring values, elderly widows in the sample might mix their own opinions and norms when they answered some questions on the familism value scale. Specifically, this may have been the case when they were asked to answer in terms of their adult children. As a result, items may not elicit parents' true values about family and kinship in this sample. Lastly, the relatively low internal consistency may be related to the relatively small sample size of this study. In other words, it can be pointed out that the internal consistency among items in the familism value scale would have been better if there were more items in the scale or the sample size was larger.

Familism values of elderly widows, familism values of adult children and living arrangements. After examining the relationship between the familism values of elderly widows and adult children and living arrangements, it was found that only the familism values of adult children as perceived by elderly widows were significantly

related to living arrangements. Surprisingly, elderly widows living alone were more likely than their co-resident counterparts to perceive their adult children as having high familism values. One possible explanation is that elderly widows living alone do not want to appear left out by not having filial adult children; therefore, they describe their children as being more traditional than they are in reality.

A more positive explanation may be that those adult children who do not co-reside with elderly widows may show more courteous and filial attitudes than their co-residing counterparts by frequently making phone calls, providing regular financial support, giving gifts, or doing their elderly widows' grocery shopping. Therefore, elderly widows living alone may perceive their adult children as having higher familism values than do those who co-reside with them.

Familism values of elderly widows and familism values of adult children as perceived by elderly widows. In the current study, both familism values of elderly widows and familism values of adult children were obtained through elderly widows. There was no significant difference between the total familism values of elderly widows and those of adult children as perceived by elderly widows, suggesting that elderly widows and their adult children have similar attitudes about familism values.

One possible explanation of the finding may be that parents' attitudes and values are transmitted to their offspring, and thus, elderly widows perceive their adult children as having similar attitudes regarding familism values. In addition, parents may have projected their own values onto their children. Another potential explanation may be that questions in the interview were too complicated for elderly widows to differentiate their values with their adult children's values even though the

researcher explained the distinction.

One interesting finding was the difference between participants' perceptions of their own and their children's values on one of the items in the familism values scale as presented in Appendix C-7. There was a significant difference in the means of the seventh item ["I (My son or daughter) think(s) that the oldest married son should live with and take care of the parents."]; elderly widows perceived their adult children to have a more traditional attitude about this item than they did themselves. However, there was no significant difference in the means of the same item between elderly widows living alone and co-resident elderly widows. Contrary to the general belief that old men and women tend toward conservatism, these elderly widows thought their adult children had more traditional attitudes about the filial duty of the oldest married son, irrespective of their current living arrangements. As mentioned earlier, it is possible that elderly widows in this sample would be especially sensitive to the item directly related to living arrangements. Even those elderly widows who lived alone may unwittingly want to say that living alone was their choice rather than due to the low filial attitudes of their adult children.

Elderly Parents' Needs and Living Arrangements

Health needs. Elderly widows' health needs were measured using the Katz Activities of Daily Living Index (Katz et al., 1970).elderly widows' health needs were very low and skewed, showing that most elderly widows in this sample did not have any problems performing activities of daily living. Even though original health need scores were logged to compensate for the skewness, health need was not associated

with living arrangements in this study. A possible explanation for the finding may be related to sampling bias just as was the case for some of the demographic variables. Those elderly widows who were willing to participate in the study would be more likely than those who refused to participate to be healthier. In other words, those elderly widows who might have received high scores on the health needs scale if included were omitted from this study.

Economic needs. Economic needs consisted of two items; one measured whether elderly parents had a regular income and the other had to do with their subjective monetary needs. Co-resident elderly widows showed higher economic need than elderly widows living alone. The majority of elderly widows living alone received Supplemental Security Income (SSI) and/or Food Stamps. They considered these benefits to be regular income. Only 18 of 44 co-resident elderly widows, received SSI, but the amount was also approximately one third the amount of those of elderly widows living alone ($454.63 for elderly widows living alone, $185.43 for co-resident elderly widows, t(96) = 5.886, p < .001).

In terms of total income, which includes savings, wages, and support from adult children, there were no statistically significant differences between elderly widows living alone and co-resident elderly widows (*M* = $664.65, *SD* = 252.9 for elderly widows living alone, *M* = $618.18, *SD* = 553.2 for co-resident elderly widows). Overall, the results suggest that elderly widows living alone tended to perceive their monetary situation to be more secure than their co-resident counterparts, and their security mostly came from social security benefits. As with McGarry and Shoeni's (2000) study, it seems that the choice of living alone was associated with

higher monetary security of elderly widows in this sample.

Social-emotional needs. Regarding social-emotional needs, co-resident elderly widows had higher social-emotional needs than elderly widows living alone. This result seems contradictory to Peek and colleagues (2002) work that elders living alone are less likely to receive emotional and instrumental care than co-resident counterparts (Peek, Coward, & Peek, 2000). However, co-resident elderly widows' living environments may explain the results from the current study. Most of the co-resident elderly widows lived in town houses or single houses. In contrast to apartment complexes, town houses and single houses are usually located in suburban residential areas. Those elderly widows who do not have their own transportation are apt to be isolated from the outside world. Moreover, the adult children with whom they live may be too busy to take care of their elderly widows' social/emotional needs. Describing Korean-born immigrant elderly widows' experience at an adult children's house, Kim and Kim (2001) suggested that "they often become marginalized in their married children's house (p. 51)." As a whole, high social-emotional needs of co-resident elderly widows may be a reflection of elderly widows' isolation from society and marginalization in the family.

Interaction of elderly widows' total needs and age on living arrangements. Elderly widows' total needs consisted of health needs, economic needs, and social-emotional needs. Co-resident elderly widows' total needs were higher than those of elderly widows living alone. Contrary to expectation, there was no significant interaction effect between elderly widows' total needs and age on living arrangements. elderly widows' total needs were positively associated with likelihood of co-residence

of elderly widows among all age groups. A possible explanation for the nonsignificant finding may be found in the makeup of the elderly widows' total needs. As explained earlier, elderly widows' total need score consisted of health needs, economic needs, and social-emotional needs. Different effects of each element of elderly widows' total needs on different age groups may offset possible interactive effects of elderly widows' needs and age on living arrangements. For example, suppose that health need is high in the oldest-old age group and economic need is high in the young-old age group. As a whole, the effect of total needs as a composite score on living arrangements would be the same for both age groups rather than differentiated for different age groups. Unfortunately, it was impossible to identify the different interactive effects between each need variable and living arrangement due to small sample size (see Tabachnick & Fidell, 1996, p 521) in this study. Further research will be needed to examine this relationship in detail.

Adult Children's Needs and Living Arrangements

  Daycare needs. In this study, it was perceived that adult children of co-resident elderly widows had much higher daycare needs than adult children of elderly widows living alone. Daycare needs were measured using two questions about whether or not adult children had children who needed care during the daytime and the availability of adults other than the elderly widows who could care for the children. Thus, the meaning of high daycare needs in the co-resident elderly widows group was that elderly widows, who live with adult children and have young grandchildren who need daycare, predominantly take care of their grandchildren

during the day. However, this study did not include the cases where elderly widows are taking care of their young grandchild during the daytime, while living separately from their adult children such as   dropping and picking up grandchildren at elderly widows' apartment by adult child or coming to adult child's house and taking care of grandchildren during the daytime. According to Yoon (2005)'s study, 42.5% of 101 Chinese-American (*n* = 50) and Korean-American (*n* = 51) grandparent caregivers in New York City did not live with their grandchildren's parents (adult child in this study). The high proportion of elderly widows, who lived alone but did childcare for young grandchildren while their adult children and their spouses went to work, may indicate this phenomenon is more pervasive than expected among Korean immigrant families.

Social-emotional needs of adult children as perceived by elderly widows. Co-resident elderly widows perceived their adult children having higher social-emotional needs than their counterparts living alone. Observing their adult children's daily lives, elderly widows may feel that their adult children are struggling just to survive in the U.S. and that there is no room for relaxation and leisure to meet their social-emotional needs.

Adult children's needs, elderly widows' needs, age, and living arrangements. Adult children's total needs consisted of daycare needs of adult children and social-emotional needs of adult children as perceived by elderly widows. As with elderly widows' total needs, co-resident elderly widows perceived their adult children as having higher total needs than their counterparts living alone in this sample. There was also a significant interaction between adult children's needs and parental age on

living arrangements, showing that those old-old aged (70-79) elderly widows who perceived their adult children had higher total needs were more likely than the other two age groups to live with their adult children. Even though it did not reach statistical significance due to high standard deviation, the likelihood that one unit change in adult children's total needs in the young-old age group of elderly widows is associated with co-residence is highest among three age groups. In other words, young-old and old-old age group of elderly widows have a higher likelihood of co-residence when they perceived their adult child to have higher needs. This result suggests that young-old and old-old age groups of elderly widows have more capability that could satisfy their adult children's needs such as good health and wisdom to take care of young grandchildren.

Elderly Parents' Total Needs, Adult Children's Total Needs, and Living Arrangements

As summarized earlier, while higher elderly widows' total need scores were associated with a greater chance of co-residence irrespective of the elderly widows' age, higher adult children's total need scores were associated with a greater chance of co-residence among young-old and old-old elderly groups than the oldest-old elderly group. Previous studies examining factors influencing living arrangements of elderly widows suggest that while having unmarried children was associated with co-residence (Ward, Logan, & Spitze, 1992), when co-residence occurs between elderly widows and married adult children, it is more often associated with elderly widows' needs such as care giving (Aquilino, 1990; Spitze et al., 1992; Lee & Dwyer, 1996). Contrary to the previous findings targeting American-born non-Koreans, the results of

this study suggest that adult children's needs as well as elderly widows needs play a role in determining co-residence with even married adult children.

Needs, Familism Values, Age, and Living Arrangements

According to the last full logistic regression model, elderly widows' total needs and adult children's total needs were associated with the likelihood of co-residence. As hypothesized, familism values of elderly widows and familism values of adult children as perceived by elderly widows were not related to the likelihood of co-residence when needs variables were controlled in this study. Overall, results suggested that the greater the elderly widows' total needs and the greater the adult children's total needs, the more likely elderly widows were to live with adult children rather than living alone. Along with the findings of Crimmins and Ingegneri (1990), age was not associated with the likelihood of co-residence when needs and familism value variables were controlled in this study. In conclusion, it appears that living arrangements of Korean-born immigrant elderly widows in this sample were predominantly explained by environmental-press theory and need-based exchange theory rather than cultural preference theory.

The fact that need variables overbalance familism values in determining living arrangements does not justify neglecting familism values in studies of living arrangements among Korean immigrant family. As discussed earlier, given the instability of the familism value scale items in the present study, further research is necessary to develop a scale that measures familism values in Korean Americans more reliably.

Implications of Research

Theories, Research, and Identification of Predictors

This study has several implications for research in the area of Korean-born immigrant elderly widows and living arrangements. This research tried to integrate theories related to the field of gerontology with an empirical research framework. Specifically, this study was designed to identify variables that affect living arrangements of Korean-born immigrant elders across age and to examine the relationship among elderly widows' characteristics and needs, adult children's characteristics and needs, familism values, and living arrangements. Because of a paucity of empirical studies related to parents and adult children's needs in Korean immigrant families, variables were selected based on the assumption that Korean immigrant families are interdependent on the physical, social, cultural, political, and economic environment surrounding them. The environment may cause environmental press; the elderly widows' and adult children's needs would be the responses to environmental press.

In the process of creating needs variables, this study drew from need contingent exchange theory (need based exchange theory), environmental press theory, and a life course perspective. While environmental press theory was helpful to explain how and where elderly widows' needs and adult children's needs come from, need contingent exchange theory was useful in investigating when and why elderly widows' needs and adult children's needs interacted with each other. A life course perspective was helpful to understand the differences between a Korean-born immigrant elderly population and non-ethnic White American elders by emphasizing

126

their different experiences from varying historical and cultural backgrounds. As a result of trying to make a bridge between theories and research in studies of Korean immigrant families, several meaningful variables such as childcare needs of adult children, economic needs of elderly widows, and the social-emotional needs of both were identified.

The findings from the current study also support the significance of environmental press theory and need contingent exchange theory in understanding the implications of the high percentage of Korean immigrants who are self-employed or own a small business. One third of Korean-American households in the U.S. are in business for themselves (Han, 2003). For many families this means that both husband and wife have to work outside of the house for a long time. For those with young children, the absence of reliable extended childcare and a kinship network to help, combined with economic pressures, would create environmental press that induces them to invite their elderly mother to live with them and do childcare.

The Importance of Practical Needs

This study presented a view of the Korean immigrant family not typically found in the research literature, namely the view of need-based interdependent choices on living arrangements. Findings from the logistic regression models suggest that there is a very important relationship between elderly widows' needs, adult children's needs and living arrangements. Examining the best predictors of the living arrangements of elderly widows, elderly widows' total needs and adult children's total needs emerged as significant predictor variables, indicating that higher needs in both

elderly widows and adult children were associated with a higher likelihood of co-residence.

Previous research has failed to identify practical needs such as daycare needs and economic needs may be related to the fact that these studies did not include particular segments of elderly widows, such as individuals who have not attended senior center programs or church groups due to their responsibilities of taking care of grandchildren or adult children's houses during the daytime, lack of transportation, or frailty. This is also the reason why little is known about elderly widows' role as daycare providers for grandchildren or household care providers for adult children's houses. Even though there has been some recent research on Korean immigrant families (Kim & Kim, 2001), there are relatively few empirical studies about the stay-at-home population. The present study utilized a snowball sampling technique. The researcher visited elder groups in large Korean churches and Korean senior centers and asked the elder participants in the group to participate in the interview and to introduce acquaintances who might be willing to participate. Therefore, even though the initial contact point of this study also was elder groups from large Korean churches and senior centers, a relatively high number of the stay-at-home elderly widows were also included in the study.

New Perspective for Needs and Resources

Previous studies (Cooney, 1989; Wolf & Soldo, 1988; Spitze et al., 1992) have separated need variables and resource variables. Most frequently noted resource variables included education, income, and homeownership, which might be expected

to increase one's options for living arrangements. However, the present study did not divide needs variables and resource variables separately. As described in the result section, most elderly widows in the current study did not have their own houses, were less educated, and had low income. In other words, they are not resourceful in terms of homeownership, education, and income, but they were still valuable resources to their adult children. Results from this study indicate that even though most elderly widows have few tangible and socially recognizable resources, they may have other resources that satisfy certain needs for their adult children.

The results also suggest that need and resource variables should be considered as two ends of a continuum rather than being separated. For example, for those who have a higher level of health need, the existence of those who have a lower level of health need can be perceived as a resource. For those who do not have time to take care of their children, the existence of those who have time to do it can be perceived as a resource. Resources refer to not only economic power but also one's social, emotional, physical, and economic strengths and belongings that could make up for their own and other's needs and deficits. This view works especially for Korean-born immigrant elders who have limited economic resources.

Direct Measure of Familism Values

The present study challenged the myth that immigrant families tend to live together due to their high value on co-residence. Most previous research on the topic of immigrant families and living arrangements did not directly measure traditional values. Rather, they have been using ethnicity as a proxy measure of values, or

129

measuring cultural values using assimilation and acculturation scales. Neither of these measures is precise enough to measure one's values related to living arrangements in an ethnic family.

To examine the relationship between familism values and living arrangements in the Korean-born immigrant family, this study used the familism value scale to measure the extent to which elderly widows have traditional values and perceive their adult children to have traditional values. The study found that both familism values of elderly widows and familism values of adult children as perceived by elderly widows were not significant predictors of elderly widows' living arrangements when elderly widows' needs and adult children's needs were controlled for. Contrary to the generally accepted idea, these results suggest that living arrangements of Korean-born immigrant families were more likely to be related to adaptation to realistic necessities (i.e. daycare needs) rather than a reflection of cultural values. Even though the familism value scale in this study has relatively low reliability, the current findings using a direct measure of value holds important implications.

Reciprocity of Exchange

This study lends support to the findings of Kauh (1997) and Koh and Bell (1987) who investigated intergenerational relations and living arrangements. Specifically, both research efforts revealed that assistance between generations was reciprocal. The current study found that living arrangements were the result of relative evaluation concerning needs of elderly widows and adult children, where

both could be donors or beneficiaries. At some point of the life cycle of elderly widows, they could satisfy adult children's needs; at other points, adult children could satisfy elderly widows' needs. Because this study did not measure goods and services exchanged at each stage of the lifecycle specifically, it is unclear whether or not balanced exchanges have occurred in these intergenerational relationships. However, the findings suggest that over a period of time, assistance between elderly widows and adult children was reciprocal even though unbalanced exchanges may occur at some point in the life cycle.

Specifically, it is interesting to note that while higher elderly widows' needs were associated with co-residence among all age groups, higher adult children's needs were associated with co-residence among young-old and old-old age groups. These results may demonstrate that once co-residence occurs in young-old and old-old age groups, both elderly widows and adult children are likely to be beneficiaries and donors; once co-residence occurs in the oldest-old age group, elderly widows are more likely than adult children to be beneficiaries.

Limitations of Research

Sampling Bias

This study utilized convenience and snowball sampling techniques, which means that the researcher asked the elder participants in the group to participate in the survey and to introduce acquaintances who might be willing to participate. Also, in order to eliminate the effect of spouse characteristics, only single Korean elderly women were included in the study. Therefore, this study has limited the generalization

of the results beyond Korean-born single elderly women.

The elderly sample was drawn from Korean Senior Centers and elder groups in large Korean churches in Maryland and Northern Virginia. These centers and groups were affiliated with churches directly or indirectly. Therefore, most of the elderly participants in the sample were from one religion, which may bias the results. For example, Shin (1992) studied correlates of descriptive symptomatology in Korean American women in New York City. In this study, Korean immigrant women with Buddhism backgrounds showed a significantly higher level of stress than Christian counterparts. Overall, participants of this study showed low health needs and social-emotional needs. The tendency might be related to effects of religion. Additionally, as is often the case in elderly studies, the frailest and the richest elderly people were not included in the sample.

Interviewer Biases

This study used a structured interview. As a result, response rates of participants were relatively high. However, there could be biases committed by the interviewer. For example, when elderly widows asked to read again or said that they were not able to understand, there was no option but to read again or explain more; the interviewer could give inconsistent input to elderly participants, which could unwittingly cause potential errors by the interviewer.

Two Living Arrangements

Definitions of the two levels of living arrangements may have limited the

scope of this research, since other studies may also include living with a spouse only, living with friends, living with relatives, or living in institutions. Thus, further research on these other types of living arrangements is also warranted.

Paucity of Information about Adult Children

More detailed demographic information about adult children, such as income, types of jobs, and living arrangements, was not considered in this study. In particular, economic needs of adult children were excluded because of the difficulty in getting accurate information about adult children from their elderly mothers. Such information may have helped to reveal greater understanding of the relationship between adult children's characteristics and living arrangements of elderly widows. Also, a more detailed description of the elderly participant's marital history, such as how long they have been single due to death of spouses or separation, was not gathered in the study. It may be useful to identify the relationship between transition of elderly widows' marital status and living arrangements.

Instability of Measurements

One of the most important limitations of this study is related to instability of measurements. This study assessed health needs using Katz Activities of Daily Living (Katz et al., 1970). However, having been developed for hospitalized patients rather than a community population, the measure made it challenging to reach the research objective of distinguishing between those elderly widows who have health needs and

those who do not. One of the most obvious limitations of the health needs scale in this study was manifested in skewness, showing most of the elderly participants falling in the low health need criteria. Even though the researcher logged the original score of health needs to compensate for the skewness, there was little range in scores. It suggests that other types of health index may be needed to evaluate the health status of a community sample.

This study measured familism values by using a familism value measure developed in Korea. Not having adjusted for this special population, the scale showed relatively low reliability in this study, which may have negatively influenced some results. Also, even though this scale was supposed to measure elderly widows' values and attitudes, it was hard to draw ones' value as it differentiated from normative answers.

Additionally, the present study has obtained information about adult children through elderly widows. In other words, adult children's familism values and social-emotional needs as well as objective and demographic information are based on elderly widows' perception. Therefore, aside from objective and demographic information about adult children, subjective information, such as familism values of adult children and social-emotional needs of adult children, should be taken into account when they are interpreted. Not including adult children further limited the scope of this study. Future studies in this field should continue to make an effort to incorporate the voices of adult children as well as those of elderly widows to examine the relationship among parental characteristics, children's characteristics, familism values, and living arrangements.

Longitudinal Studies

Whereas cross-sectional studies allow inferences only about inter-individual differences, longitudinal studies help to identify intra-individual changes and their determinants and inter-individual variability in determinants of intra-individual change (Schaie & Hofer, 2001, pp. 54-55). Findings from this study suggest that elderly Korean parents' and their adult children's needs have greater effects on living arrangements than familism values. Given the cross-sectional framework used in the current study, it cannot be determined whether the effect of needs on living arrangements is a reflection of socio-cultural and historical influences over a period of time or a product of coping strategies unique to immigrants. The current study cannot identify the effects of imperativeness of needs and perpetual effects of traditional values, such as familism values on one's choices of living arrangements. In a certain stage of life, one's values may be covered because of the imperativeness of needs.

Longitudinal studies may provide more fruitful information about transitions of living arrangements over one's life course and across one's epoch making events such as immigration, social-cultural and/or familial influences that affect these transitions. Through longitudinal studies, it would be possible for researchers to provide more balanced interpretations of the effects of needs and values on living arrangements. In order to conduct further valuable research on the relationship among elderly widows' needs, adult children's needs, and their traditional values and living arrangements, more longitudinal research is needed.

Comparative Studies

The effects of needs on living arrangements of elderly widows is a salient piece of this study and raises another research question: Do the effects of needs on living arrangements among this sample represent a coping strategy related to the immigration experiences of this ethnic group? As part of this question, it is necessary to investigate whether similar strategies may be found in other ethnic groups in the U.S. or if this is a unique phenomenon to Korean born immigrants; in this case, could one find similar strategies among Korean families in Korea? In order to answer the question, comparative studies are needed, including at least three groups, Korean-born immigrant families, Korean families in Korea, and families from other ethnic groups in the U.S.

Familism Value Scale Development

A goal of this study was to consider needs variables and familism values simultaneously. The familism value scale was a relatively direct measure assessing values that might be related to living arrangements. Even though issues related to instability of the measure were addressed in the discussion, the question still remains: does the low internal consistency of the familism scale in this study mean Koreans in the U.S. have somewhat different concepts about family and relatives than Koreans in Korea? If yes, what sub-concepts should be added to and dropped from the existing familism values measure? In order to develop a familism scale appropriate to the Korean immigrant families, a change in concept of family and kinship should be

examined first. Park (1997) pointed out that one of the most salient changes in the kinship structure of the Korean immigrant family was the rise of women-centered kinship and the decrease of the importance of the eldest son in her ethnographic study about Korean immigrant families running small business in New York City. Development of a familism values scale that could embrace the change in traditional concepts of kinship ties and functions is needed.

Lee (2002) proposed a measure very similar to the familism measure. She called the measure 'interdependency'. She examined psychosocial variables associated with resilience among mother-daughter dyads in Korean immigrant families. Whereas the familism value scale used in the current study included items concerning prioritization of family, perpetuation of paternal side lineage, filial piety, and consciousness of social-economic ties among siblings and relatives, the interdependency measure included items concerning cultural interdependency, cultural beliefs regarding obedience, honoring parents, respecting elders, interdependency in intergeneration, and interdependency of the Asian culture. The reported internal consistency of the measure was good (Cronbach's Alpha = .69 for mothers and .76 for daughters). The study suggested that interdependency was positively related to resilience for both mothers and daughters and was a predictor of resilience in mothers. More research is needed to develop scales measuring familism values in Korean immigrant population.

Dyad Studies Needed

Current research efforts paid particular attention to elderly widows'

perceptions. Adult children's familism value, social-emotional needs, and demographic information depended on the elderly widows' perception. More research is needed to further understand the relationship between elderly widows' needs, adult children's needs, and living arrangements from both the adult child's perspective and the elderly widows' perspective. In short, elderly widows and adult children dyad research is needed. Even though more time and money would be needed to conduct dyad studies, it would be worthwhile in producing more valid findings.

Identification of Two Subgroups in Korean-born Immigrant elderly widows

Korean immigration history in the U.S. celebrated its centennial in 1993; however, it was only in the 1970s and 1980s that Korean immigration began to sharply increase (Han, 2003). Those who immigrated to the U.S. in their 30s and 40s have just started to reach the age of retirement. Other than Korean-born elderly immigrants invited by their adult children, early immigrants were predominantly employment-based immigrants and totally different from Korean-born elderly immigrants invited by their adult children in terms of job experiences in the U.S. and the level of acculturation. In other words, there are two elder groups in the Korean American community: 1) those elders who have immigrated at a young age, worked in the U.S., and just reached retirement age, and 2) those elders who have immigrated in relatively old age by invitation of their adult children with limited work experience in the U.S. Currently, most elderly widows fall into the invited elderly widows category. However, in the near future, the percentage of elders who have immigrated at a younger age and reached old age will gradually increase among the entire Korean

elderly population. Further research should be conducted to understand the unique characteristics of these two subgroups in the Korean elderly population and how differences affect living arrangements in each group.

Recommendations for Public Policy and Program Development

There are several important policy concerns to be addressed if the needs of the Korean-born immigrant population in the U.S. are to be met. One of the most important premises in public policy and program planning for Korean-born immigrant elders drawn from this research is that public policies and programs must be sensitive to needs rather than focusing only on chronological age. For example, for those younger elderly widows who are taking responsibility and caring for grandchildren during the daytime, respite programs such as "grandma's day out" and providing daycare and grand parenting seminars would be helpful to release stress and risk factors. Also, integrating senior centers with low cost daycare centers could provide socialization opportunities for elders, while providing day care for their grandchildren.

On the other hand, for those older co-resident elderly widows who have high health and social-emotional needs, programs that could keep them from being isolated in society and marginalized within the family should be developed. For example, the "Friendly Visitor" program (Korte & Gupta, 1991, National Multiple Sclerosis, 2005) is one of the prevalent programs for isolated elderly people in U.S. communities. The program consists of weekly or monthly visiting by a volunteer. Those kinds of programs could be expanded for the Korean-born immigrant elders who are in need.

Health educators and helping professionals should be aware of the importance

of cultural competency in dealing with Korean-born elderly widows. Cultural competency may include understanding of and familiarity with Korean society and culture and the ability to communicate in Korean. It is important that those who work with elderly Korean immigrants understand the importance of elders' roles in many Korean families. The current study suggested that even though few Korean-born elderly widows work outside of the home, (especially young-old and old-old elderly widows), many have contributed to the next generation's adaptation and prosperity in the U.S. by helping satisfy adult children's practical needs. Positive evaluation and acknowledgement of Korean-born elderly widows' roles in family and society would increase psychological capacities such as self-esteem and optimism. The increase in psychological capacity would result in better adaptation to the host culture, as found in Lee's (2002) study, which showed that optimism and self-esteem were associated with resilience in both Korean-born immigrant elderly mothers and their adult children. More efforts to discover strengths and merits of Korean-born immigrant elderly widows should be made. Such efforts could protect them from risks such as mental and psychological suffering by empowering them based on their strengths.

As pointed out by many researchers (Bengtson, Rosenthal, & Burton, 1996; Johnson & Barer, 1990; Ishii-Kuntz, 1997; Yeo, 1991), the assumption that immigrant families, especially Asian immigrant families, have a preference for intergenerational co-residence due to their traditional value could hinder the development of public policies and program planning designed for those ethnic elderly widows who do not belong to strong supportive extended kin networks and are in need of assistance. Current research efforts have demonstrated there may be a discrepancy between

social preconceptions and reality in reasons for living arrangements among Korean-born immigrant elderly widows. In a recent study about the characteristics and needs of Asian-American grandparent caregivers, Yoon (2005) also found that 70% of Asian-American grandparent caregivers (N = 101) in her study wanted to participate in events or services related to their needs, such as events in grandparents support groups, contrary to the widespread perception that Asian-Americans usually do not want access to social services. In order to develop policies appropriate to the target population under study, policymakers and helping professionals must recognize the discrepancy and potential harmful effects of policies that ignore this discrepancy. Policymakers must take a look inside the lives of the target population and try to understand the reality of phenomenological patterns of living situations in which these living arrangements occur. With such efforts, it would be possible for policymakers to create policies, which could help those elderly widows who need the most support, balancing both family involvement and social services as a safety net.

Appendix A. Interview Schedule

Date _____

Number_____

Interview Schedule

The purpose of this study is to look at how living arrangements relate toelderly widows' needs and their adult children's needs as perceived byelderly widows among Korean-born immigrant families. The responses will be tabulated by computer and reported in statistical tables in which no individual person's responses can be identified. Confidentiality of responses is guaranteed. No personal information about any of the survey participants will be disclosed. Thank you for your coorperation.

<Elderly Widows Section >

I. Personal information

1. Where do you live?
    1) Maryland 2) Virginia   3) Washington D.C.

2. How old are you?   _____ years
    old

3. How many daughters do you have in Korea and U.S.?
    Korea _____ U.S. _____ Other Country _____

4. How many sons do you have in Korea and U.S.?
    Korea _____ U.S. _____ Other Country _____

5. How did you come to the U.S.?
    1) Invitation by Adult Children
    2) Invitation by Siblings
    3) Employment-based immigration
    4) Other _____

6. What best describes your place of residence?
    1) Rented room   2) Apartment
    3) Condominium   4) Townhouse
    5) Single home   6) Other: _____
7. Who pays the rent or mortgage payments (including paid off mortgage)?
    1) Myself   2) Adult child(ren)   3) Both

8. Whose home do you live in?
    1) My home   2) Child's home   3) Jointly owned
9. Who do you live with?
    1) Alone
    2) Living with single child, never married
    3) Living with single child, widow/widower
    4) Living with single child, separated
    5) Living with single child, divorced
    6) Living with married child, never divorced
    7) Living with remarried child after divorce
    8) Living with remarried child, previously widowed/widowered
    9) Living with friend(s)   10) Others _____

10. How satisfied are you with the current living arrangement?

very satisfied	satisfied	fair	unsatisfied	very unsatisfied
1	2	3	4	5

11. How long have you lived in the current living arrangement? _____ year(s)

12. What is the highest level of education you have completed?
    1) None   2) Elementary school
    3) Junior high school   4) Senior high school
    5) College   6) Graduate school
    7) Other: _____

13. How long have you lived in the U.S.?   _____year(s)

14. Do you have a regular income?

    1) Yes _____   2) No _____

    13-1. If 'yes', please indicate your main income source and amount per month.
    1) Personal savings $____   2) Wages $ ____
    3) Assistance from adult children $ ____
    4) Supplemental Security Income (SSI) $ ____
    5) Social Security Income (SSA) $ ____
    6) Food Stamps $ ____
    7) Other _____

15. Do you feel you need any financial help from your adult children?
    1) Yes _____   2) No _____

16. Are you driving a car?
    1) Yes _____   2) No _____

II. These items refer to your own activities for daily living. After you listen to the following statements, please indicate how well you are able to perform the activities without anyone's help.

Activities	Description of Activities	No Diffi-culty	Some	A Lot	Unable to Perform the Activity At All

Activities	Description of Activities	No Diffi-culty	Some	A Lot	Unable to Perform the Activity At All
Bathing	Bathing yourself completely or needing help in bathing only a single part of the body such as the back, genital area or disabled extremity.				
Dressing	Getting clothes from closets and drawers and putting on clothes and outer garments complete with fasteners without help.				
Toileting	Going to toilet, getting on and off, arranges clothes, cleaning genital area without help.				
Transferr-ing	Moving in and out of bed or chair unassisted. Mechanical transferring aides are acceptable.				
Continence	Exercising complete self control over urination and defecation.				
Feeding	Getting food from plate into mouth without help. Preparation of food may be done by another person.				

II-1. Compared to others in your age and sex group, how would you describe your health?

excellent	very good	fair	not very good	very poor
1	2	3	4	5

III. These questions refer to your feelings about your social relationships.
Indicate how much you agree or disagree with each statement during the past year.

		Strongly Agree	Agree	Un-certain	Disagree	Strongly Disagree
1	Sometimes I feel all alone in the world.					

		Strongly Agree	Agree	Un-certain	Disagree	Strongly Disagree
2	I don't get invited out by friends as often as I'd really like.					
3	Most people today seldom feel lonely.					
4	Real friends are as easy as ever to find.					
5	One can always find friends if he shows himself friendly.					
6	The world in which we live is basically a friendly place.					
7	There are few dependable ties between people any more.					
8	People are just naturally friendly and helpful.					
9	I don't get to visit friends as often as I'd really like.					

IV. These questions refer to your attitude about your family and kinship. Indicate how much you agree or disagree with each statement.

		Strongly disagree	Somewhat Disagree	undetermined	Somewhat agree	Strongly agree
1	The selection of a spouse should be determined by the potential harmony of the spouse with the family rather than with the child.					
2	Children should place family matters over personal matters.					
3	When there arises a financial need, priority goes to helping relatives on the husband's side of the family rather than the wife's side of the family.					
4	During difficult times, relatives are more dependable than neighbors and friends.					
5	Discontinued family lineage due to the absence of a son is a misfortune, both to the immediate family and to the entire extended family.					

146

		Strongly disagree	Somewhat Disagree	undetermined	Somewhat agree	Strongly agree
6	Children should not bring disgrace to the family and should help the family preserve its reputation.					
7	The oldest married son should live with and take care of the parents.					
8	Married children need to discuss daily matters with parents and then act accordingly.					

< Adult Child Section as Perceived by Elderly Widows >

This part is about *your adult children*. Please answer how you think your adult child would respond: 1) If you live alone, answer on behalf of the child you are in the most frequent contact with; 2) If you live with an adult child, the adult child you are living with; and 3) If you live with more than one adult child, answer about the oldest one.
   * Whom are you going to answer about?
   (Give only order and sex of the child , ex: the first son)

   _____

I. Personal Information

1. How old is your adult child?   _____ years old

2. What is the highest level of education your adult child has completed?
   1) None   2) Elementary school
   3) Junior high school   4) Senior high school
   5) College   6) Graduate school
   7) Other: _____

3. How long has your adult child lived in the U.S.?   _____year(s)

4. What best describes your adult child's place of residence?
   1) Rented room   2) Apartment
   3) Condominium   4) Townhouse
   5) Single home   6) Other: _____

5. Who pays the rent or mortgage payments (including paid off mortgage)?
   1) Myself   2) Adult child(ren)   3) Both

6. What best describes your adult child's employment status?
   1) Unemployed   2) Part-time employed
   3) Full-time employed   4) In school full time
   5) Other   _____

7. What is your child's current marital status?

1) Single, never married	2) Single, widow or widower
3) Separated	4) Single, divorced

---> go to #9

5) Married, never divorced	6) Remarried after divorce
7) Remarried, previously widowed/widowered	

--> go to #8

   5) Other: _____ (---> go to #8)

8. What best describes the employment status of your adult child's family?
   1) Husband only employed   2) Wife only employed
   3) Husband and wife employed   4) Husband and wife unemployed
   5) Other: _____

9. Does your child have child(ren)?
   1) Yes (go to #10)   2) No (go to II)

10. How many children does your child have?   _____

11. How old is the youngest child of your adult child?   _____ years old

12. Does your adult child have any children who need to be cared for by adults during the daytime?
    1) Yes   2) No

13. Who predominantly cares for these children?
    1) Myself   2) Others: _____

II. These questions refer to your adult child's feelings about his/her social relationships.

Indicate how much you think your adult child agrees or disagrees with each statement during the past year.

		Strongly Agree	*Agree*	*Un-certain*	*Disagree*	*Strongly Disagree*
1	Sometimes my son or daughter feels all alone in the world.					
2	My son or daughter doesn't get invited out by friends as often as he or she would really like.					
3	My son or daughter thinks that most people today seldom feel lonely.					
4	My son or daughter thinks that real friends are as easy as ever to find.					
5	My son or daughter thinks that one can always find friends if he or she shows himself or herself friendly.					
6	My son or daughter thinks that the world in which he or she lives is basically a friendly place.					
7	My son or daughter thinks that there are few dependable ties between people any more.					
8	My son or daughter thinks that people are just naturally friendly and helpful.					
9	My son or daughter doesn't get to visit friends as often as he or she would really like.					

III. These questions refer to attitudes about family and kinship.
  Indicate how much you think your child agrees or disagrees with each statements.

		Strongly disagree	Somewhat Disagree	undetermined	Somewhat agree	Strongly agree
1	My son or daughter thinks that the selection of a spouse should be determined by the potential harmony of the spouse with the family rather than with the child.					
2	My son or daughter thinks that children should place family matters over personal matters.					
3	My son or daughter thinks that when there arises a financial need, priority goes to helping relatives on the husband's side of the family rather than the wife's side of the family.					
4	My son or daughter thinks that during difficult times, relatives are more dependable than neighbors and friends.					
5	My son or daughter thinks that discontinued family lineage due to the absence of a son is a misfortune, both to the immedicate family and to the entire extended family.					
6	My son or daughter thinks that children should not bring disgrace to the family and should help the family preserve its reputation.					
7	My son or daughter thinks that the oldest married son should live with and take care of the parents.					
8	My son or daughter thinks that married children need to discuss daily matters with parents and then act accordingly.					

-- Thank You For Answering This Interview--

Appendix B IRB Approval Letter with Informed Consent Form

U N I V E R S I T Y O F
MARYLAND

INSTITUTIONAL REVIEW BOARD

2100 Lee Building
College Park, Maryland 20742-5121
301.405.4212 TEL 301.314.1475 FAX

Reference: IRB HSR Identification Number 04-0271

May 21, 2004

MEMORANDUM
Notice of Results of Final Review by IRB on HSR Application

TO: Dr. Jacqueline Wallen
Ji-Young Cho
Department of Family Studies

FROM: Dr. Phylis Moser-Veillon, Co-Chairperson
Dr. Marc Rogers, Co-Chairperson
Institutional Review Board

PROJECT ENTITLED:
"Effects of Elderly Parents' Needs/Resources, Adult Children's Needs/Resources. Familism Values, and Age on Living Arrangements among Korean-born Immigrant Elderly Widows in the U.S.: Living Alone vs. Living with Adult Children"

The Institutional Review Board (IRB) concurs with the departmental Human Subjects Review Committee's (HSRC's) preliminary review of the application concerning the above referenced project. The IRB has approved the application and the research involving human subjects described therein. We ask that any future communications with our office regarding this research reference the IRB HSR identification number indicated above.

We also ask that you not make any changes to the approved protocol without first notifying and obtaining the approval of the IRB. Also, please report any deviations from the approved protocol to the Chairperson of your departmental HSRC. If you have any questions or concerns, please do not hesitate to contact us at irb@deans.umd.edu. Thank you.

ADDITIONAL INFORMATION REGARDING IRB/HSRC APPROVALS

EXPIRATION OF IRB APPROVAL—Approval of non-exempt projects expires one year after the official date of IRB approval; approval of exempt projects expires three years after that date. If you expect to be collecting or analyzing data after the expiration of IRB approval, please contact the HSRC Chairperson in your department about submitting a renewal application. **(PLEASE NOTE: If you are not collecting data from human subjects and any on-going data analysis does not increase the risk to subjects, a renewal application would not be necessary.)**

STUDENT RESEARCHERS — Un less otherwise requested, the IRB will send copies of approval paperwork to the supervising faculty researcher (or advisor) of a project. We ask that such persons pass on that paperwork or a copy to any student researchers working on that project. That paperwork may be needed by students in order to apply for graduation. **PLEASE BE ADVISED THAT THE IRB MAY NOT BE ABLE TO PROVIDE COPIES OF THAT PAPERWORK, particularly if several years have passed since the date of the original approval.**

Enclosures (where appropriate), will include stamped copy of informed consent forms included in application and any copies of the application not needed by the IRB; copies of this memorandum and any consent forms to be sent to the Chairperson of the Human Subjects Review Committee

Informed Consent Form

<u>Effects of Elderly Parents' Needs/Resources, Adult Children's Needs/Resources,</u>
<u>Familism Values, and Age on Living Arrangements among Korean-Born Immigrant</u>
<u>Elderly Widows in the U.S.: Living Alone vs. Living with Adult Children</u>

I state that I am over 18 years of age and wish to participate in a program of research being conducted by Ji-Young Cho in the Department of Family Studies at the University of Maryland, College Park.

The purpose of this research is to identify the effects of elderly parents' needs/resources, adult children's needs/resources, familism values, and age on living arrangements among Korean-born immigrant elderly widows in the U.S. This form requests my consent to participate in an interview about myself and my adult child. At the interview, I will be asked to answer the questions given by the researcher. I will be interviewed for approximately one and a half hours. Sample interview questions are as follows.

```
<Sample Questions>
    1. How satisfied are you with the current living arrangement?
       very satisfied    satisfied    fair    unsatisfied    very unsatisfied
            1                2           3          4              5
    2. Compared to others in your age and sex group, how would you describe
       your health?
       excellent    very good    fair    not very good    very poor
           1            2          3           4              5
    3. How long have you lived in the current living arrangement?  ____ year(s)
```

All information collected in this study is confidential to the extent permitted by law. I understand that the data I provide will be grouped with data others provide for reporting and presentation purposes and that my name will not be used.

Participation in the study is completely voluntary and I can choose not to answer any questions or to withdraw from the study at any time without affecting me in any way. There are no physical risks associated with participation. I am free to ask questions at any time. There is no direct benefit to me from participation, but results of the study have the potential to help a large number of Korean elders and their families within services.

If I have any questions, I can call Ji-Young Cho at (571) 232-5462.

If you have questions about your rights as a research subject or wish to report a research-related injury, please contact: Institutional Review Board Office, University of Maryland, College Park, MD 20742; (e-mail) irb@deans.umd.edu; (telephone) 301-405-4212

NAME OF SUBJECT _____   DATE _____

SIGNATURE OF SUBJECT _____
                      * This consent form will be translated into Korean.

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IRB APPROVED
VALID UNTIL

MAY 3 1 2007

UNIVERSITY OF MARYLAND
COLLEGE PARK
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152
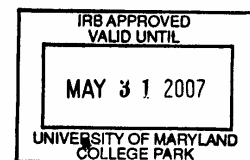
Appendix C The Means and Standard Deviations of   Individual Scales Under Investigation

Appendix C-1

Independent T-test of Individual Items of Social-emotional Need Scale of elderly widows for elderly widows Living Alone vs. Co-resident elderly widows

	Elderly Parents Living Alone (n=54)	Co-resident elderly widows (n=43)
	Means (SD)	
1. Sometimes I feel all alone in the world. [a]	1.09 (1.28)	1.35 (1.34)
2. I don't get invited out by friends as often as I would really like. [a]	1.19 (1.20)	2.00 (1.40)**
3. I think that most people today seldom feel lonely.	1.43 (1.04)	1.72 (1.18)
4. I think that real friends are as easy as ever to find.	2.07 (1.48)	3.00 (1.11)**
5. I think that one can always find friends if he or she shows himself or herself friendly.	.61 (.98)	.77 (.97)
6. I think that the world in which I live is basically a friendly place.	.30 (.63)	1.09 (.84)***
7. I think that there are few dependable ties between people any more. [a]	1.52 (1.34)	1.79 (1.22)
8. I think that people are just naturally friendly and helpful.	.79 (.83)	1.26 (.95)*
9. I don't get to visit friends as often as I would really like. [a]	1.98 (1.41)	2.72 (1.42)*
Total Social-emotional Needs Score	10.98 (5.56)	15.65 (5.55)***

Note. Score of each item ranged from 0 to 4, total score 0 to 36. [a] Negatively worded items were recoded: Higher score means higher needs.
* $p<.05$, **$p< .01$, *** $p < .001$

Appendix C-2

The Means and Standard Deviations of Individual Items of Health Need Scale for All elderly widows and Independent T-test for elderly widows Living Alone vs. Co-resident elderly widows

Items	All elderly widows (n=98)	elderly widows Living Alone (n=54)	Co-resident elderly widows (n=43)
	Mean (SD)	Mean (SD)	Mean (SD)
1. Bathing	.21 (.52)	.22 (.50)	.20 (.55)
2. Clothing	.08 (.31)	.11 (.37)	.05 (.21)
3. Toileting	.08 (.28)	.11 (.32)	.05 (.21)
4. Moving	.34 (.64)	.46 (.75)	.18 (.45)*
5. Inconsistency	.05 (.22)	.06(.23)	.05 (.21)
6. Eating	.11 (.38)	.17 (.47)	.05 (.21)
Total Score	.88 (1.92)	1.13 (2.15)	.57 (1.56)
Cronbach's Alpha	.860		

Note. Score of each item ranged from 0 to 3, total score 0 to18. Higher score means higher health needs.
* $p < .05$.

Appendix C-3

Independent T-test of Individual Items of Familism Values of elderly widows for elderly widows Living Alone vs. Co-Resident elderly widows

	elderly widows Living Alone (n=54)	Co-resident elderly widows (n=43)
	Means (SD)	
1.I think that the selection of a spouse should be determined by the potential harmony of the spouse with the family rather than with the child.	2.13 (1.29)	2.07 (1.18)
2. I think that children should place family matters over personal matters.	2.93 (.84)	2.60 (.85)
3. I think that when there arises a financial need, priority goes to helping relatives on the husband's side of the family rather than the wife's side of the family.	2.72 (1.52)	2.56 (1.44)
4. I think that during difficult times, relatives are more dependable than neighbors and friends.	2.44 (1.30)	2.40 (1.14)
5. I think that discontinued family lineage due to the absence of a son is a misfortune, both to the immediate family and to the entire extended family.	1.93 (1.41)	1.16 (1.43)*
6. I think that children should not bring disgrace to the family and should help the family preserve its reputation.	3.07 (.87)	2.93 (.55)
7. I think that the oldest married son should live with and take care of the parents.	.85 (1.29)	.79 (1.12)
8. I think that married children need to discuss daily matters with parents and then act accordingly.	2.20 (1.20)	2.21 (1.19)
Total Familism Value Score	18.28 (4.79)	16.72 (4.19)

Note. Score of each item ranged from 0 to 4, total score 0 to 36. Higher score means higher familism value.   ** p < .01, *** p < .001.

Appendix C-4

Independent T-test of Individual Items of Social-emotional Needs of Adult Children as Perceived by elderly widows for elderly widows Living Alone vs. Co-resident elderly widows

	Elderly Parents Living Alone (n=54)	Co-resident elderly widows (n=43)
	Means (SD)	
1. Sometimes my son or daughter feels all alone in the world. [a]	.70 (1.11)	.95 (1.21)
2. My son or daughter doesn't get invited out by friends as often as he or she would really like. [a]	1.22 (1.14)	1.53 (1.33)
3. My son or daughter thinks that most people today seldom feel lonely.	1.19 (.97)	1.58 (.96)*
4. My son or daughter thinks that real friends are as easy as ever to find.	1.96 (1.13)	2.49 (1.20)*
5. My son or daughter thinks that one can always find friends if he or she shows himself or herself friendly.	.69 (.77)	.67 (.68)
6. My son or daughter thinks that the world in which he or she lives is basically a friendly place.	.69 (.77)	1.19 (.82) **
7. My son or daughter thinks that there are few dependable ties between people any more. [a]	1.41 (1.09)	1.58 (1.03)
8. My son or daughter thinks that people are just naturally friendly and helpful.	1.07 (.72)	1.19 (.93)
9. My son or daughter doesn't get to visit friends as often as he or she would really like. [a]	2.00 (1.41)	2.19 (1.44)
Total Social-emotional Needs Score	10.93 (5.64)	13.37 (6.11)*

Note. Score of each item ranged from 0 to 4, total score 0 to 36. [a] Negatively worded items were recoded : Higher score means higher needs. * p< .05, **p< .01.

Appendix C-5

Independent T-test of Individual Items of Familism Values of Adult Children as Perceived by elderly widows for elderly widows Living Alone vs. Co-resident elderly widows

	Elderly Parents Living Alone (n=54)	Co-resident elderly widows (n=43)
	Means (SD)	
1. My son or daughter thinks that the selection of a spouse should be determined by the potential harmony of the spouse with the family rather than with the child.	2.04 (1.24)	2.21 (1.06)
2. My son or daughter thinks that children should place family matters over personal matters.	2.98 (.98)	2.56 (.93)*
3. My son or daughter thinks that when there arises a financial need, priority goes to helping relatives on the husband's side of the family rather than the wife's side of the family.	2.98 (1.38)	1.95 (1.33)***
4. My son or daughter thinks that during difficult times, relatives are more dependable than neighbors and friends.	2.46 (.97)	2.12 (1.00)
5. My son or daughter thinks that discontinued family lineage due to the absence of a son is a misfortune, both to the immediate family and to the entire extended family.	1.70 (1.42)	1.26 (1.36)
6. My son or daughter thinks that children should not bring disgrace to the family and should help the family preserve its reputation.	2.78 (.84)	2.58 (.85)
7. My son or daughter thinks that the oldest married son should live with and take care of the parents.	1.52 (1.51)	1.53 (1.55)
8. My son or daughter thinks that married children need to discuss daily matters with parents and then act accordingly.	2.30 (1.19)	1.88 (1.33)
Total Familism Value Score	18.76 (5.30)	16.09 (4.90)*

Note. Score of each item ranged from 0 to 4, total score 0 to 32.
* p < .05 *** p < .001.

Appendix C-6

Paired T-test of Individual Items of Social-emotional Need Scale for elderly widows
vs.   Adult Children as Perceived by elderly widows

	Elderly Parents ($\underline{n}$=97)	Adult Children as Perceived by elderly widows ($\underline{n}$=97)
	Means ($\underline{SD}$)	
1. Sometimes I (my son or daughter) feel(s) all alone in the world. [a]	1.21 (1.31)	.81 (1.16) *
2. I (My son or daughter) do(es)n't get invited out by friends as often as he or she would really like. [a]	1.55 (1.35)	1.36 (1.23)
3. I (My son or daughter) think(s) that most people today seldom feel lonely.	1.56 (1.13)	1.36 (.98)
4. I (My son or daughter) think(s) that real friends are as easy as ever to find.	2.46 (1.39)	2.20 (1.19)
5. I (My son or daughter) think(s) that one can always find friends if he or she shows himself or herself friendly.	.68 (.97)	.68 (.73)
6. I (My son or daughter) think(s) that the world in which he or she lives is basically a friendly place.	.65 (.83)	.91 (.83) *
7. I (My son or daughter) think(s) that there are few dependable ties between people any more. [a]	1.64 (1.29)	1.48 (1.06)
8. I (My son or daughter) think(s) that people are just naturally friendly and helpful.	1.00 (.91)	1.12 (.82)
9. I (My son or daughter) do(es)n't get to visit friends as often as he or she would really like. [a]	2.30 (1.45)	2.08 (1.42)
Total Social-emotional Needs Score	13.05 (6.00)	12.01 (5.95)
Cronbach's Alpha	.720	.799

Note. Score of each item ranged from 0 to 4, total score 0 to 32: [a]Negatively worded items were recoded: Higher score means higher needs.
* p< .05.

Appendix C-7

Paired T-test of Individual Items of Familism Values for elderly widows vs. Adult

Children as Perceived by elderly widows

	Elderly Parents (n=97)	Adult Children as perceived by elderly widows (n=97)
	Means (SD)	
1. I (My son or daughter) think(s) that the selection of a spouse should be determined by the potential harmony of the spouse with the family rather than with the child.	2.10 (1.24)	2.11 (1.16)
2. I (My son or daughter) think(s) that children should place family matters over personal matters.	2.78 (.86)	2.79 (.98)
3. I (My son or daughter) think(s) that when there arises a financial need, priority goes to helping relatives on the husband's side of the family rather than the wife's side of the family.	2.65 (1.48)	2.53 (1.44)
4. I (My son or daughter) think(s) that during difficult times, relatives are more dependable than neighbors and friends.	2.42 (1.22)	2.31 (.99)
5. I (My son or daughter) think(s) that discontinued family lineage due to the absence of a son is a misfortune, both to the immediate family and to the entire extended family.	1.59 (1.46)	1.50 (1.41)
6. I (My son or daughter) think(s) that children should not bring disgrace to the family and should help the family preserve its reputation.	3.01 (.74)	2.69 (.85) **
7. I (My son or daughter) think(s) that the oldest married son should live with and take care of the parents.	.82 (1.21)	1.53 (1.52) ***
8. I (My son or daughter) think(s) that married children need to discuss daily matters with parents and then act accordingly.	2.21 (1.19)	2.11 (1.27)
Total Familism Value Score	17.59 (4.58)	17.58 (5.27)
Cronbach's Alpha	.587	.650

Note. Score of each item ranged from 0 to 4, total score 0 to 32.
** $p < .01$, *** $p < .001$.

Appendix D Intercorrelation of Variables under Investigation

Appendix D-1
Intercorrelations Between Demographic Variables of elderly widows and Living Arrangements (n=98)

	1	2	3	4	5	6	7	8	9	10
1. Living Arrangement	—									
2. Age	-.31 **	—								
3. # of Daughters in US	-.17	.12	—							
4. # of Son in US	-.16	.25 *	.01	—						
5. Kinds of Immigration	.15	-.37 **	.00	-.08	—					
6. Education	.18	-.37 **	-.03	-.12	.30 **	—				
7. Length of Time	-.30 **	.25 *	.22 *	.20 *	.14	.09	—			
8. Income	-.06	-.26 **	.13	.07	.35 **	.28 **	.34 **	—		
9. # of Children in US	-.23 *	.26 **	.67 **	.75 **	-.05	-.12	.30 **	.14	—	
10. Total # of Children	-.26 *	.26 **	.47 **	.39 **	-.20 *	-.18	.03	-.08	.60 **	—

* P< .05 (2-tailed), ** p< .01 (2-tailed).

160

Appendix D-2

Intercorrelations Between Psychosocial Variables of elderly widows and Living Arrangements (n=98)

	1	2	3	4	5	6
1. Living Arrangement	–	.36 **	-.15	.39 **	.29 **	-.17
2. Economic Need		–	-.05	.14	.68 **	.17
3. Health Need			–	.14	.52 **	.01
4. Social-emotional Need				–	.60 **	-.10
5. Total Need Scores					–	.11
6. Familism Value						–

** p< .01 (2-tailed).

161

Intercorrelations Between Demographic Variables of Adult Children and Living Arrangements

	1	2	3	4	5	6	7	8
1. Living Arrangement	—	-.28 ** 98	-.30 ** 97	.15 98	-.18 95	-.24 * 95	-.03 98	.13 93
2. Age of child		—	.24 * 97	-.28 ** 98	.41 ** 95	.86 ** 95	.05 98	-.08 93
3. Length of Time			—	-.13 97	.12 94	.30 ** 94	-.06 97	-.02 92
4. Employment				—	-.32 ** 95	-.29 ** 95	.03 98	.56 ** 93
5. # of Grandchild					—	.26 * 95	-.01 95	-.28 ** 93
6. Age of Youngest						—	.02 95	-.02 92
7. Single/Married							—	.17 93
8. Dual career								—

* p< .05 (2-tailed), ** p< .01 (2-tailed).

162

Appendix D-4

Intercorrelations Between Psychosocial Variables of Adult Children and Living Arrangements

	1	2	3	4	5
1. Living Arrangement	–	.55 **	.21 *	.57 **	-.25 *
		96	97	95	97
2. Daycare need		–	.20	.91 **	-.17
			95	95	95
3. Social-emotional Need			–	.59 **	-.23 *
				95	97
4. Total Need Score				–	-.25 *
					95
5. Familism Value					–

* p< .05 (2-tailed), ** p< .01 (2-tailed).

163

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