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Yuri Jang
University of Texas

Nan Sook Park
University of South Florida, nanpark@usf.edu

David A. Chiriboga
University of South Florida, dchiriboga@usf.edu

Hyungwoo Yoon
University of Texas

Jisook Ko
University of Texas

See next page for additional authors

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Authors

Yuri Jang, Nan Sook Park, David A. Chiriboga, Hyungwoo Yoon, Jisook Ko, Juyoung Lee, and Miyong T. Kim



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Risk Factors for Social Isolation in Older Korean Americans

Yuri Jang, PhD¹, Nan Sook Park, PhD², David A. Chiriboga, PhD², Hyunwoo Yoon, MPH, MSW¹, Jisook Ko, MSN¹, Juyoung Lee, MSN¹, and Miyong T. Kim, PhD¹

¹The University of Texas at Austin, USA

²University of South Florida, Tampa, USA

Abstract

Objective—Given the importance of social ties and connectedness in the lives of older ethnic immigrants, the present study examined the prevalence of social isolation and its risk factors in older Korean Americans.

Method—Using survey data from 1,301 participants ($M_{\text{age}} = 70.5$, $SD = 7.24$), risk groups for marginal social ties with family and friends were identified and predictors of each type of social isolation explored.

Results—Male gender and poorer rating of health were identified as common risk factors for marginal ties to both family and friends. Findings also present specific risk factors for each type of social isolation. For example, an increased risk of having marginal ties with friends was observed among individuals with perceived financial strain, greater functional impairment, and a shorter stay in the United States.

Discussion—The common and specific risk factors should be incorporated in programs to reduce social isolation in older immigrant populations.

Keywords

social ties; social isolation; ethnic minority older adults

Introduction

Social relationships are an integral part of being human and have received much attention in gerontological research, as witnessed in part by the multiple terms referencing these relationships (e.g., social networks, ties, contacts, connectedness, integration, and capital; Berkman, Glass, Brissette, & Seeman, 2000; Cornwell & Waite, 2009; Kawachi & Berkman, 2000; Kobayashi, Cloutier-Fisher, & Roth, 2009). The lack of such relationships, or what is here referred to as social isolation, is widely recognized to have detrimental consequences in later life, including increased risk for morbidity (e.g., hypertension, heart disease, and

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Corresponding Author: Yuri Jang, School of Social Work, The University of Texas at Austin, 1925 San Jacinto Blvd, D3500, Austin, TX 78712, USA. yjang12@austin.utexas.edu.

Declaration of Conflicting Interests

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cancer), mortality, cognitive decline, psychological distress, falls, nutritional inadequacies, and rehospitalization (Fiori, Antonucci, & Cortina, 2006; Litwin, 2011; Nicholson, 2012).

Despite the general agreement that social isolation is a major public health concern (Lubben et al., 2006; World Health Organization, 2002), surprisingly little attention has been paid to its own determinants. In a review of the literature from 1995 to 2010, Nicholson (2012) identified only seven articles that examined social isolation as an outcome in contrast to the abundance of literature demonstrating its adverse consequences. The exploration of risk profiles of social isolation is important because it serves as a means of identifying groups to be prioritized in prevention and intervention programs.

In efforts to explore the prevalence of social isolation and its related factors, the present study focused on older members of one ethnic immigrant group, Korean Americans. Older Korean Americans represent a population at particular risk for social isolation and are in need of more research and services (Kuo & Tsai, 1986; Park et al., 2015). The 2010 Census tallied about 1.7 million Korean Americans in the United States and ranked them as the fifth largest Asian American subgroup (U.S. Census Bureau, 2012). Most of the current generations of older Korean Americans are foreign-born, and they are particularly vulnerable to social isolation due to their limited English proficiency and lower levels of cultural adaptation in mainstream society (Park et al., 2015). Given that older Korean Americans tend to preserve traditional values on familism and interdependence, the lack of social ties with family and friends makes them prone to adverse physical and mental health consequences (Cheon, 2010; Wong, Yoo, & Stewart, 2007).

Intercontinental/national relocation requires major transformations across multiple domains of life, with one affected area being the structure and availability of support systems. This abrupt disruption in social networks may lead to social isolation, as a result of what Park and colleagues (2015) have referred to as a “broken social convoy.” In adapting to the challenges, it is likely that older immigrants place a greater reliance on their families because of difficulty in reestablishing relationships outside the family in a new society, especially when unfamiliar with the language of the host society (Dong et al., 2011; Park et al., 2015; Wong et al., 2007). Furthermore, the fundamental difference in the nature and support function of family and of friends suggests that factors affecting social connectedness or isolation in each realm might differ.

The selection of potential risk factors for social isolation was based on both the existing literature and a consideration of the unique characteristics of immigrant populations. Sociodemographic characteristics previously known to represent lack of power, status, and resources (e.g., advanced age, female gender, being unmarried, living alone, and low socioeconomic status) often pose a risk for social isolation (Lubben et al., 2006; Nicholson, 2012; Shimada et al., 2014). It is also expected that the characteristics of geographic region, such as population density of people with the same ethnic background and the availability of ethnically oriented resources and services, may affect social connections of older ethnic immigrants (Kuo & Tsai, 1986; Park et al., 2015). Health is another important factor. Limitations in physical health that restrict one’s participation in social activities and engagement may result in a heightened risk for social isolation (Cornwell & Waite, 2009;

Havens, Hall, Sylvestre, & Jivan, 2004; Lubben et al., 2006). However, health challenges may also serve as an obvious need for help, thereby mobilizing family and friends and increasing connectedness with them (Cassileth et al., 1984; Deeg, Kardaun, & Fozard, 1996). These two seemingly contradictory roles of health should be examined in terms not only of the severity of health conditions but also of the differing nature and function of networks with family and friends.

Because the target population consisted of foreign-born immigrants, immigration-related factors were also considered. Duration in residence in a host country is, for example, a good proxy for cultural adaptation (Lebrun, 2012; Miglietta & Tartaglia, 2009). Earlier literature suggests the 10th year as a marker of adaptation in the process of immigration (Alegria et al., 2004; Beiser & Edwards, 1994). As the establishment of social networks requires time, we were interested in whether individuals in an early stage of immigration would be at greater risk for social isolation, particularly in relationships with friends. We also considered English proficiency. Limited English proficiency may not only serve as an indicator of linguistic isolation but also have an impact on older immigrants' social ties to family and friends (Diwan, 2008).

Taken together, the present study was designed to examine the prevalence of social isolation and its risk factors in older Korean Americans, focusing on both social ties to family and friends. Sociodemographic variables (age, gender, marital status, living arrangement, education, region, and perceived financial status), physical health status (chronic conditions, functional impairment, and self-rated health), and immigration-related variables (length of stay in the United States and English proficiency) were considered as potential predictors, with particular attention being paid to similarities and differences in their respective roles in predicting social ties to family and friends.

Method

Data Sets

Surveys with older Korean Americans (aged 60 or older) were conducted in three geographic regions. The use of multisites was intended to represent a continuum of Korean American population densities by including New York (high density; 12% of the total Koreans in the United States), Texas (intermediate density; 4.5% of the total Koreans in the United States), and Florida (low density; 1.9% of the total Koreans in the United States; U.S. Census Bureau, 2012). A multisource sampling strategy was used, with sources including local Korean churches, other religious groups, senior centers, elder associations, and a directory of Korean residents. To solicit participation of individuals who were not affiliated with these groups or associations, referrals were actively sought.

The survey instrument consisted of a standardized questionnaire in Korean, developed through a back-translation and reconciliation method. Although the survey was designed to be self-administered, trained interviewers were available for anyone who needed assistance. Data collection was conducted in locations convenient to the participants, such as meeting rooms and cafeterias in churches and community centers.

The survey for the Florida sample ($n = 675$) was conducted in Tampa and Orlando in 2008. The Florida survey was replicated with Korean American older adults in the New York metropolitan area ($n = 433$) in 2010 and in the Greater Austin area in Texas ($n = 209$) in 2013. Detailed information on sampling procedures is available elsewhere (e.g., Jang, Chiriboga, Allen, Kwak, & Haley, 2010; Jang, Roh, & Chiriboga, 2014; Jang, Yoon, Park, Chiriboga, & Kim, 2014). After removal of individuals who had more than 5% of data missing, the final sample consisted of 1,301 participants (672 from Florida, 420 from New York, and 209 from Texas).

Measures

Social ties/isolation—Each scale for ties to family and friends had three items drawn from Lubben's (1988) Social Network Scale. For each scale, questions asked for the number of family or friends seen at least once a month (0 = 0 to 5 = 9 or more), frequency of contact with family or friends (0 = less than monthly to 5 = daily), and the number of family or friends the participant felt close to (0 = 0 to 5 = 9 or more). Total scores for each scale could range from 0 to 15, with higher scores indicating a stronger tie to family or friends. The scale has been translated into Korean, and it has been validated for psychometric properties (Hong, Casado, & Harrington, 2011; Min, Moon, & Lubben, 2005). Cronbach's alpha for the present sample was moderate (.70 for family ties and .74 for ties to friends).

Because the purpose of the present study was to identify socially isolated individuals and explore their risk profiles, we created a dichotomous variable. Although the later version of the Lubben's Social Network Scale (LSNS-6; Lubben & Gironde, 2003) provided cutoff scores for marginal ties with family or friends (<6 in each subscale), it was inappropriate to use those cutoffs because of the slight item discrepancy between the LSNS-6 and the original 1988 scale employed by the present study. In the second item in each family/friend subscale, the 1988 scale asks the *frequency* of contact with family/friend that respondents feel most close to, whereas the later version of the LSNS-6 asks the *number* of family/friends that respondents feel close to such that they could call on them for help.

In the present analysis, we classified those who scored lower than the 25th percentile in each scale as having marginal ties to family and friends. This approach identified a sample-specific risk group exhibiting social isolation and allowed the opportunity to address the uniqueness of social ties in the target population. To simplify interpretation, all predictor variables were recoded into a binary or three-category format, with an attribute that potentially represents better power, status, and resources serving as a reference group (coded as "0").

Sociodemographic variables—Demographic information included age (0 = <75, 1 = 75), gender (0 = male, 1 = female), a combined marital status/living arrangement variable¹ (0 = married/not living alone, 1 = unmarried/not living alone, 2 = unmarried/living alone), educational attainment (0 = high school, 1 = < high school), region (0 = New York, 1 = Texas, 2 = Florida), and perceived financial status (0 = average, 1 = < average).

¹Marital status and living arrangement were combined because of their high correlation (Spearman's rho = .65, $p < .001$).

Physical health status—Chronic conditions, functional impairment, and self-rated health were used as indicators of physical health. The total number of chronic conditions was assessed using a checklist of nine diseases and conditions common in older populations (heart disease, high blood pressure, liver disease, kidney disease, digestive disease, stroke, diabetes, cancer, and arthritis; Fillenbaum, 1988). Functional impairment was indexed with an instrument (Fillenbaum, 1988) assessing activities of daily living (ADLs) and instrumental activities of daily living (IADLs). The scale included nine activities (eating, dressing, walking, transferring, bathing, toileting, preparing meals, managing medication, and handling transportation), and participants were asked to indicate, in a yes/no format, whether they needed help with performing each activity in the list. Cronbach's alpha was .86 in the present sample. The total numbers of both chronic conditions and functional impairments were recoded into three categories (0 = *none*, 1 = *one or two conditions/impairments*, and 2 = *three or more conditions/impairments*). Finally, participants were also asked to rate their current health on a 4-point scale. Responses were dichotomized into *very good/good* (0) and *fair/poor* (1).

Immigration-related factors—Based on the immigration literature suggesting the 10th year as a marker of adaptation (Alegria et al., 2004; Beiser & Edwards, 1994), length of stay in the United States was dichotomized (0 = *10 years*, 1 = *<10 years*). English proficiency was assessed with a question on how well the respondent speaks English, using a 4-point response format ranging from *not at all* to *very well*. Using the U.S. Census criteria (Pandya, McHugh, & Batalova, 2011), those who reported that they spoke English less than *very well* were categorized as a group with limited English Proficiency (0 = *English proficiency*, 1 = *limited English proficiency*).

Analytic Strategy

Descriptive characteristics of the entire sample were examined, and the prevalence of marginal social ties was compared by sample characteristics. A series of χ^2 analyses were conducted on prevalence by comparing each group with its reference group. Logistic regression models of marginal ties to family and friends were separately estimated with sociodemographic variables (age, gender, marital status/living arrangement, education, region, and perceived financial status), physical health status (chronic condition, I/ADL impairment, and self-rated health), and immigration-related variables (length of stay in the United States and English proficiency).

Results

Characteristics of the Sample and the Study Variables

Table 1 summarizes the major characteristics of the sample and the study variables. Participants' ages ranged from 60 to 96 years, with an average of 70.5 ($SD = 7.24$). Approximately, 28% were aged 75 years or older. More than half were female (57.3%). About 16% were both living alone and not currently married, about 32% had received less than a high school education, and more than a quarter rated their perceived financial status as below average.

The overall physical health status was quite positive, with an average of 1.45 ($SD = 1.29$) chronic conditions and 0.42 ($SD = 1.29$) I/ADL impairment. About a quarter of the sample was disease-free, and a majority (82.5%) was functionally independent. However, their subjective perception of health was geared toward the negative side; approximately 44% of the sample rated their health as fair or poor.

With regard to the immigration-related variables, all participants were foreign-born. The length of stay in the United States ranged from 1 year to 54 years, with an average of 26.5 ($SD = 11.2$). The proportion of individuals who had been in the United States for fewer than 10 years was 11%. More than 70% of the sample had limited English proficiency.

Social network scores averaged 8.49 ($SD = 3.06$) for family ties and 7.49 ($SD = 3.34$) for ties to friends. In each of the subscales, those who scored lower than the 25th percentile (a score of 7 in family ties and 6 in friend ties) were classified as having marginal ties.

Prevalence of Marginal Social Ties by Sample Characteristics

Table 2 presents the rates of marginal social ties according to sample characteristics. In terms of ties to both family and friends, greater marginality was observed among men and those with below-average financial status, three or more chronic conditions and I/ADL impairments, and fair to poor self-rated health. Marginal family ties were more prevalent in individuals who were unmarried/living alone. As compared with those living in New York, the residents of Texas and Florida were less likely to have marginal family ties. It is interesting to note that those with one or two chronic conditions were less likely to have marginal family ties than were those with no chronic conditions. The prevalence of marginal ties with friend was notably higher among individuals with lower education, fewer years of stay in the United States, and limited English proficiency.

Logistic Regression Models of Marginal Social Ties to Family and Friends

The results from the series of logistic regression models (Table 3) confirmed the general risk profiles of marginal social ties observed in the descriptive analyses. In models for marginal ties to family and friends, common predictors were gender and self-rated health: Males and those with fair or poor ratings of health had a higher likelihood of having marginal ties with both family and friends.

Other associations were specific to the type of marginality. A greater risk of having marginal ties with family was evident among those who were younger (< 75) and unmarried and living alone. The residents of New York were more likely to have marginal ties to families, compared with those living in Florida. Reinforcing the previously mentioned support-enhancing effects of health problems, those with one or two chronic conditions showed a 31% reduced risk of having marginal family ties when compared with those with no chronic conditions.

In the model of marginal ties to friends, perceived financial status, I/ADL impairment, and length of stay in the United States emerged as significant risk factors. The risk of having marginal ties to friends was 1.45 times higher in those with below-average financial status, compared with those with an average or above-average financial status. Having three or

more I/ADL impairments increased the risk of having marginal ties to friends by 3.51 times. Those who had a shorter stay in the United States (fewer than 10 years) were more than twice as likely to have marginal ties with friends as those in the reference group with a longer residence.

Discussion

Given the well-documented importance of social ties and connectedness in the lives of older immigrants (Dong et al., 2011; Fiori et al., 2006; Park et al., 2015; Wong et al., 2007), the present study examined the prevalence of social isolation and its related factors in older Korean Americans ($n = 1,301$), a group with a potential disruption in social networks affected by their history of immigration.

A standard measure, Lubben's (1988) Social Network Scale, was used to identify individuals with marginal social ties in the realms of family and friends. To operationalize the concept of marginality in the absence of clinical cutoffs, individuals who scored lower than the 25th percentile (a score of < 7 in family ties and < 6 in friend ties) were classified as having marginal ties in each of the two realms. These quartile-based cutoff scores were quite close to cutoff scores (6 in both family and friend ties) suggested in the later version of the Lubben scale (Lubben & Girona, 2003) and reflect generally stronger connections with families than with friends in the target population. In studies using the LSNS-6 cutoff scores, 11% to 20% of community-dwelling samples of older adults in Europe and North America were deemed at risk for social isolation (Kobayashi et al., 2009; Lubben et al., 2006). Although direct comparisons cannot be made, results suggest that the status of social connectedness in older Korean Americans does not fare better than that of older adults in Europe and North America.

Contrary to what was anticipated on the basis of past research, the younger members (aged < 75 years) of this older immigrant sample showed a greater likelihood of having marginal ties to family than did their older counterparts (those aged ≥ 75 years). Men were more likely to display evidence of marginality, and this male vulnerability was observed for ties to both family and friends. The findings can be considered in the contexts of age differences in support needs and gender differences in the nature, desire, and ability for forming and maintaining social relationships (Cornwell & Waite, 2009). It is interesting to note that participants living in Florida had a reduced risk for marginal family ties compared with their counterparts in New York. This finding might be attributed to geo-social differences in ethnic density of Koreans and the availability of ethnically oriented services in the two geographic areas. In New York where such resources are abundant, older Korean Americans themselves may be less reliant on family support, and their family members may also feel less obligated to make frequent contacts with them. However, immigration and life in low Korean population density areas such as Florida are likely to be family based, and the lack of ethnic resources may necessitate the ties to family.

Health emerged as having disparate associations with marginality. For example, an individual's perception of poorer health served as a common risk factor for marginal ties to both family and friends. However, the risk of marginal family ties was lower among those

with one or two chronic conditions than in the reference group of persons without any condition. This finding concerning the support-enhancing role of health problems is in line with literature suggesting that having a nonfatal and manageable chronic condition in later life may result in increased attention and support from family members (Cassileth et al., 1984; Deeg et al., 1996).

With regard to marginal ties to friends, we found that individuals with below-average financial status, three or more I/ADL impairments, and fewer than 10-year residence in the United States had a substantially higher risk. In studies with Western samples of older adults (Miche, Huxhold, & Stevens, 2013), such factors as financial difficulty, restriction in physical function, and geographic relocation have been identified as barrier to friendship development. In the case of these older immigrants, keeping ties with friends may be more difficult because immigration has disrupted their previous social relationships. This “broken social convoy” (Park et al., 2015) phenomenon deserves further attention. Despite the disruption, it seems that personal resources (e.g., socioeconomic status and health) and the passage of time enable older immigrants to build and maintain their relationships with friends.

Some limitations to the present study need to be noted. The foremost concern is the nonrepresentative nature of the sample. Although efforts were made to increase the pool of study participants by use of multiple strategies for sample recruitment, those who were less involved in their ethnic communities were more likely to be excluded. Thus, the rates of social isolation reported in the present study could be underestimates. Also, the use of non-probability sampling strategy and cross-sectional design may limit the study’s generalizability and the drawing of causal inferences. It should not be ignored that some of the variables that were conceptualized as a risk to social isolation in the present investigation could be a consequence of social isolation. Particularly, the directionality of the link between health and social isolation deserves further attention. Although the present study used a multisite sample to consider geographic variations, the absence of objective data on ethnic density and availability of ethnic-oriented resources in each community adds to the study limitations. Because the employed measure of social ties focused on the structural aspects of relationships (e.g., number of people and frequency of contacts), future studies need to incorporate subjective aspects such as relationship quality and perceived satisfaction.

Despite these limitations, the findings from the present study advanced our current knowledge about social isolation in older immigrants and suggest important implications for future interventions. Findings on similarities and differences in risk factors for social isolation in the two realms of family and friends need to be incorporated into the development of prevention or intervention programs. Attention must also be paid to helping older immigrants expand their social networks by providing opportunities for community participation and engagement.

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Table 1Sample Characteristics ($N = 1,301$).

	Value
Demographic variable	
Aged 75, %	27.9
Female, %	57.3
Marital status/living arrangement	
Married/not living alone, %	70.7
Unmarried/not living alone, %	12.8
Unmarried/living alone, %	16.4
Education (< high school), %	31.6
Region	
New York, %	32.3
Texas, %	16.1
Florida, %	51.7
Perceived financial status (< average), %	27.5
Health-related variable	
Chronic conditions	
None, %	25.4
One or two, %	55.7
Three or more, %	18.9
I/ADL impairment	
None, %	82.5
One or two, %	12.8
Three or more, %	4.7
Fair or poor self-rated health, %	43.9
Immigration-related variable	
Length of stay in the United States 10 years, %	11
Limited English proficiency, %	70.1
Outcome	
Marginal family ties (family ties < 25th percentile [7]), %	22.7
Marginal friend ties (friend ties < 25th percentile [6]), %	24.4

Note. I/ADL = activities of daily living/instrumental activities of daily living.

Table 2

Prevalence of Marginal Social Ties by Sample Characteristics.

	Marginal family ties	Marginal friend ties
Age		
60–74 ^a	23.0	23.8
75	21.2	25.6
Gender		
Male ^a	27.1	29.2
Female	19.2 ^{**}	20.7 ^{***}
Marital status/living arrangement		
Married/not living alone ^a	20.2	23.8
Unmarried/not living alone	22.4	27.3
Unmarried/living alone	33.3 ^{***}	24.8
Education		
High school ^a	21.8	22.6
<High school	24.2	28.0 [*]
Region		
New York ^a	30.5	25.4
Texas	21.5 [*]	19.6
Florida	18.1 ^{***}	25.2
Perceived financial status		
Average ^a	20.2	21.6
<Average	28.8 ^{**}	32.1 ^{***}
Chronic condition		
None ^a	23.2	24.8
1–2	20.1 ^{**}	22.6
3	29.6 ^{**}	29.0 [*]
I/ADL impairment		
None ^a	21.2	22.6
1–2	27.1	25.9
3	36.1 ^{***}	52.5 ^{***}
Self-rated health		
Good or very good ^a	18.6	20.7
Fair or poor	27.9 ^{***}	29.1 ^{***}
Length of stay in the United States		
10 years ^a	22.5	22.6
<10 years	19.6	36.2 ^{***}
English proficiency		

	Marginal family ties	Marginal friend ties
Not limited ^a	15.2	20.6
Limited	15.4	25.9*

Note. I/ADL = activities of daily living/instrumental activities of daily living.

^a χ^2 analyses were conducted in comparing each group with its reference group.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

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Table 3

Logistic Models of Marginal Ties to Family and Friends.

	Odd ratio [95% confidence interval]	
	Marginal family ties	Marginal friend ties
Age		
<75	1.0 [reference]	1.0 [reference]
75	0.66 [0.47, 0.92] [*]	0.68 [0.67, 1.29]
Gender		
Male	1.0 [reference]	1.0 [reference]
Female	0.50 [0.37, 0.68] ^{***}	0.52 [0.38, 0.70] ^{***}
Marital status/living arrangement		
Married/not living alone	1.0 [reference]	1.0 [reference]
Unmarried/not living alone	1.21 [0.76, 1.93]	1.00 [0.64, 1.57]
Unmarried/living alone	1.96 [1.33, 2.87] [*]	1.02 [0.68, 1.53]
Education		
High school	1.0 [reference]	1.0 [reference]
<High school	1.18 [0.84, 1.66]	1.32 [0.95, 1.84]
Region		
New York	1.0 [reference]	1.0 [reference]
Texas	0.76 [0.49, 1.17]	0.80 [0.51, 1.26]
Florida	0.62 [0.45, 0.86] ^{**}	1.27 [0.92, 1.76]
Financial status		
average	1.0 [reference]	1.0 [reference]
<average	1.17 [0.84, 1.63]	1.45 [1.06, 2.00] [*]
Chronic condition		
None	1.0 [reference]	1.0 [reference]
One or two	0.69 [0.49, 0.98] [*]	0.76 [0.54, 1.08]
Three or more	0.96 [0.61, 1.52]	0.80 [0.51, 1.26]
I/ADL impairment		
None	1.0 [reference]	1.0 [reference]
One or two	1.41 [0.93, 2.12]	1.07 [0.71, 1.62]
Three or more	1.82 [0.98, 3.39]	3.51 [1.93, 6.40] ^{***}
Self-rated health		
Good or very good	1.0 [reference]	1.0 [reference]
Fair or poor	1.50 [1.08, 2.07] [*]	1.63 [1.18, 2.24] ^{**}
Length of stay in the United States		
10 years	1.0 [reference]	1.0 [reference]
<10 years	0.92 [0.58, 1.48]	2.12 [1.41, 3.18] ^{***}
English proficiency		
Not limited	1.0 [reference]	1.0 [reference]
Limited	0.92 [0.65, 1.31]	1.01 [0.72, 1.44]

	Odd ratio [95% confidence interval]	
	Marginal family ties	Marginal friend ties
Summary statistics	-2 log likelihood = 1,229.3 $\chi^2/df = 73.4^{***}/15$	-2 log likelihood = 1,273.3 $\chi^2/df = 81.9^{***}/15$

Note. I/ADL = activities of daily living/instrumental activities of daily living.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

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