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ORIGINAL ARTICLE

Health Perception and Depressive Symptoms Among Older Korean Americans

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Abstract Given the increasing recognition of racial/ethnic health disparities, the present study focused on older Korean Americans. Using data from 230 older Korean Americans in Florida (*M* age=69.8, SD=7.05), we assessed (a) how background variables (demographic information and acculturation), health constraints (chronic conditions and functional disability), and psychosocial factors (sense of mastery and filial satisfaction) were associated with health perception and depressive symptoms; and (b) whether health perception mediated the connections between health constraints and depressive symptoms. We observed positive perceptions of health and emotional states among individuals with higher levels of acculturation, fewer chronic conditions, less disability, and a greater sense of mastery. We also found that persons who were more satisfied with their relationships with adult children and who had more positive health perception were less depressed. Additionally, the findings supported a mediation model of health perception in the linkages between physical and mental health. Findings and implications are discussed here in a cultural context.

Keywords Depressive symptoms · Health perception · Older Korean Americans

Introduction

Reflecting the increasing attention given to racial/ethnic health disparities, this study focused on older Korean Americans. Koreans are one of the fastest growing immigrant groups in the United States. Census 2000 tallied more than 1 million Korean residents, representing an increase of more than 1,500% since 1970 (U.S. Census Bureau, 2000). The limited available literature suggests that elderly Korean immigrants are at very high risk for physical and mental health problems (Hughes, 2002; Hurh & Kim, 1990). These findings

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suggest a need for a comprehensive investigation of physical and mental health parameters in this minority population.

During the past few decades, an impressive body of literature has identified physical health constraints as a major risk to lowered mental well-being among various older populations (e.g., Blazer, Landerman, Hays, Simonsick, & Saunders, 1998; Bruce, 2001). Particularly, the contributions of chronic conditions and functional disability to depressive symptoms seem to hold across both majority and minority populations (Chiriboga, Black, Aranda, & Markides, 2002; Jang, Poon, Kim, & Shin, 2004a; Johnson & Wolinsky, 1999).

Health perception, or the subjective appraisal of one's own health, may play a significant role in the dynamics of physical and mental health. Research has shown that the limitations and interferences induced by chronic conditions and functional disability erode self-perceptions of health and cause people to evaluate their health status as poorer (Borawski, Kinney, & Kahana, 1996; Idler, 1993; Menec & Chipperfield, 1997). Conversely, the degree to which a person is affected by chronic conditions and functional disability can vary substantially according to the level of health perception, and there is also evidence that health perception may function as a mediator in the physical and mental health relationships (Jang, Poon, & Martin, 2004b; Kahana *et al.*, 1995; Schulz & Williamson, 1992). Furthermore, individual variations in the experiences of depressive symptoms under similar conditions of physical health have also been found (Bruce, 2001; Kahana *et al.*). Given these findings, more research is needed to elucidate potential factors that may account for individual variations in the mechanisms between physical and mental health. This is especially true for understudied minority populations such as older Korean Americans, in which dynamic relationships may be affected by cultural and life history attributes that are relatively unique.

It is generally recognized that the lack of personal resources (e.g., low levels of income and education) is a negative correlate of physical and mental health (e.g., Bruce, 2001; Johnson & Wolinsky, 1999). For immigrant populations, an additional factor to consider is acculturation. The level of acculturation attained in a host society has been closely connected with both physical and mental health functioning (Chiriboga *et al.*, 2002; Lee, Sobal, & Frongillo, 2000; Myers & Rodriguez, 2003). Acculturation may serve as a conditioning variable that plays an essential role in determining perception of one's own health and emotional states.

Sense of mastery and filial satisfaction are also potential psychosocial predictors of health perceptions and depressive symptoms. Having sense of mastery, which is usually defined as the extent to which a person feels that he or she has control over life and environment (e.g., Pearlin & Schooler, 1978), may contribute to positive self-evaluations. Mastery has been associated with psychological resilience, and its beneficial effects on emotional states have been widely reported in studies with various populations (Lachman & Weaver, 1998; Roberts, Dunkle, & Haug, 1994), including older Koreans (Jang *et al.*, 2004a; Noh & Avison, 1996).

Given the cultural value placed on family solidarity and filial piety, we expected satisfaction with relationships with adult children to promote positive health perception and mental health among older Korean Americans. Older individuals who have satisfying relationships with adult children may enjoy a high sense of self-esteem or self-worth and have positive outlooks and attitudes toward their physical and emotional health (Kaufman & Uhlenberg, 1998; Mui, 1996).

In sum, the present study assessed (a) how background variables (demographic information and acculturation), health constraints (chronic conditions and functional disability), and psychosocial factors (sense of mastery and filial satisfaction) were

associated with health perception and depressive symptoms; and (b) whether health perception mediated the connections between health constraints and depressive symptoms among older Korean Americans.

Materials and Methods

Participants

In Fall 2003, a survey of older Korean Americans was conducted in two Florida cities: Tampa and Orlando. Because immigrant populations are often hard to identify by any single approach, participants were recruited through a variety of sources, including local Korean churches, senior centers, and elder associations. An official announcement about the project was made through fliers widely distributed in local Korean communities and businesses. A referral system was used to recruit elders who were socially isolated. Participants were required to be 60 years or older and to have sufficient cognitive ability to understand and complete the interview. Consent forms were signed after the purpose of the study and use of the data were explained to the participants. The interviews, conducted by trained interviewers, were in the Korean language and in locations convenient to the participants, such as their homes, churches, and senior centers. Respondents were paid $10 for their participation. Detailed information on the study is available elsewhere (Jang, Kim & Chiriboga, 2005).

Measures

A Korean-language questionnaire was developed for this project. Several of the measures had previously been translated into Korean and evaluated for psychometric qualities in previous work by the first author of this article (Jang *et al.*, 2004a). For the additional scales, back translation was used to confirm the appropriateness of initial translations into Korean. The structured questionnaire was pilot-tested with 20 Korean older adults who were representative of the anticipated sample in this study. Because no specific difficulties or problems were reported in the pilot testing, no modifications were made. For the convenience of the subjects, survey questionnaires were printed using a large font.

Acculturation

We measured the degree of acculturation with 6 items, including English proficiency, languages used in conversations with family, preferred languages for TV or video, preferred languages for book or newspaper, food preferences, and ethnicity of close friends. The items were adopted from the work of Hazuda, Stern and Haffner (1988) and have been found useful with other immigrant populations (e.g., Chiriboga *et al.*, 2002). We coded each response from 1 to 5, with a higher score indicating greater acculturation. Total scores ranged from 6 (low acculturation) to 30 (high acculturation). Internal consistency based on the 6 items was shown to be high (α=0.86).

Chronic conditions

Individuals were asked to report existing medical conditions by using a 9-item list of chronic diseases and conditions commonly found among older populations (e.g., arthritis, stroke,

heart problems, diabetes, and cancer), using a yes/no format. The list was drawn from the Older Americans Resources and Services Questionnaire (Fillenbaum, 1988). We used a summated score for the analysis, with a higher score indicating more chronic conditions.

Functional disability

We assessed functional disability by using a composite measure of both physical and instrumental activities of daily living (Fillenbaum, 1988), the Physical Performance Scale (Nagi, 1976), and the Functional Health Scale (Rosow & Breslau, 1966). Items covered a wide range of activities, including eating, dressing, traveling, managing money, carrying a bag of groceries, and reaching out above the head with the arms. Participants were asked whether they could perform each activity. We coded responses as 0 (without help), 1 (with some help), or 2 (unable to do). We summed responses for individual items in order to arrive at total scores. The possible range for disability was 0 (no disability) to 40 (severe disability). Internal consistency for the measure was high in the present sample (α=0.89).

Sense of mastery

We measured sense of mastery by using Pearlin and Schooler's (1978) Mastery Scale. Respondents described their feelings about 7 items (e.g., "I cannot solve my problems" and "My future mostly depends on me") on a 4-point scale ranging from 1 (strongly disagree) to 4 (strongly agree). Responses to negatively worded items were reverse coded. Summary scores ranged from 7 (low mastery) to 28 (high mastery). Reliability of the mastery score was acceptable (α=0.69).

Filial satisfaction

We assessed satisfaction with relationships with adult children with 8 items modified from the Realization of Filial Responsibility scale (Seelbach, 1978). Participants reported how much they agreed with statements such as "I have contact with my children as much as I want," "My children take good care of me," and "I have a satisfying relationship with my children." The questionnaire used a 3 point rating scale, and summated scores ranged from 8 (low filial satisfaction) to 24 (high filial satisfaction). Internal consistency of the scale was shown to be high in the present sample (α=0.87).

Health perception

We selected 3 items from the Older Americans Resources and Services Questionnaire (Fillenbaum, 1988) in order to assess subjective perception of health. The items were "How would you rate your overall health at the present time?" "How is your present health compared to five years ago?" and "How much do your health troubles stand in the way of your doing the things you want to do?" The rating scale ranged from 0 (negative health perception) to 7 (positive health perception). Reliability for the summated scale based on the three items was satisfactory (α=0.77).

Depressive symptoms

We used a short form of the Center for Epidemiologic Studies–Depression Scale (Radloff, 1977) in order to index depressive symptoms. The 10 items rated on a 4-point

scale how often symptoms (such as loneliness, feelings of fearfulness, and restless sleep) had been experienced during the past week. The scale has been translated into the Korean language and its psychometric properties have been validated (Cho, Nam & Suh, 1998; Noh, Avison & Kaspar, 1992). Reliability in the present sample was good (α= 0.80).

Demographic variables

Demographic variables included age (in years), gender (1 = male, 2 = female), marital status (1 = unmarried, 2 = married), and educational attainment (1 = less than high school, 2 = high school or greater).

Analytic strategy

In addition to performing descriptive and correlational analyses, we tested hierarchical regression models of health perception and depressive symptoms by sequentially entering the following independent blocks of predictors: (a) background variables (demographic information and acculturation), (b) health constraints (chronic conditions and functional disability), and (c) psychosocial factors (sense of mastery and filial satisfaction). For the regression model for depressive symptoms, we added health perception as a potential predictor in the final step. We assessed intercorrelations among study variables and variance inflation factors in order to determine multicollinearity.

In addition, we assessed the mediating effects of health perception in the relationship of chronic conditions and functional disability with depressive symptoms by using Baron and Kenny's (1986) criteria for mediation: (a) there is a significant association between independent variable and dependent variable, (b) there is a significant association between independent variable and presumed mediator, (c) there is a significant association between presumed mediator and dependent variable, and (d) a previously significant relationship between independent and dependent variables becomes non-significant or decreased when the mediator is controlled for. We assessed the mediating effects of health perception separately for chronic conditions and functional disability. As a way to quantify the degree of reduction in regression coefficients, we assessed each mediation model with the Sobel test, a statistical method for determining the influence of a mediator on an outcome variable (MacKinnon & Dwyer, 1993).

Results

Descriptive information of the sample and study variables

The sample consisted of 230 adults ranging in age from 60 to 92 years old, with an average age of 69.8 years. The number of years lived in the United States ranged from 1 to 49 (M=22.9, SD=10.9). More than half of the sample were women, and 73% were married. About 58% of the sample had received more than high school education. Total scores for acculturation averaged 11.4 (SD=4.45) out of a possible 30. Table I presents a summary of demographic characteristics and study variables. It is notable that, consistent with previous findings on Korean older adults (e.g., Cho *et al.*, 1998; Noh *et al.*, 1992), the total scores on the Center for Epidemiologic Studies–Depression Scale (M=8.15, SD=5.34) were high.

Table I Descriptive Characteristics of the Sample and Study Variables (N=230)

Variable	Percent	M (SD)	Range	α
Age		69.8 (7.05)	60–92	
Gender (female)	59.1			
Marital status (married)	73.0			
Education (≥ high school)	57.8			
Acculturation		11.4 (4.45)	6–25	0.86
Chronic conditions		1.36 (1.11)	0–5	
Functional disability		1.69 (3.52)	0–21	0.89
Sense of mastery		19.3 (3.26)	9–26	0.67
Filial satisfaction		18.4 (4.26)	8–24	0.87
Health perception		3.33 (1.76)	0–7	0.77
Depressive symptoms (CES–D)*		8.15 (5.34)	0–25	0.80

**CES–D* Center for Epidemiologic Studies–Depression scale.

Correlations among study variables

We calculated bivariate correlation coefficients in order to understand underlying associations among study variables. The results are shown in Table II. We observed more negative health perception and higher levels of depressive symptoms among individuals who were older, female, unmarried, less educated, less acculturated, or who had more chronic conditions, greater functional disability, and lower levels of mastery. Filial satisfaction was significantly associated with depressive symptoms but not with health perception. Finally, the two outcome variables—health perception and depressive symptoms—were interrelated; individuals who had more positive health perceptions were likely to report fewer depressive symptoms.

Regression models of health perception and depressive symptoms

Table III summarizes the results of the hierarchical regression models of health perception and depressive symptoms. We based the sequence of models primarily on chronology, entering more stable or antecedent sets earlier; we added psychosocial factors last because their chronology was least certain. For health perception, background variables (demographic information and acculturation) explained 20% of the variance, with female gender and lower levels of acculturation constituting significant predictors of a more negative health perception. Health-related factors (chronic conditions and functional disability) explained an additional 25% of the variance. Persons who had more chronic conditions and functional disability were likely to report poorer health. After we controlled for background and health-related variables, psychosocial factors (sense of mastery and filial satisfaction) explained an additional 8% of the variance. We found that, among psychosocial factors, low sense of mastery was a significant predictor of poor health perception. The total variance explained by the model was 53%.

In the model of depressive symptoms, background variables and health-related variables contributed 13 and 16%, respectively, to the model. We observed higher levels of depressive symptoms among older individuals with less acculturation, more chronic conditions, and greater functional disability. In addition, psychosocial factors contributed 17% of the variance, with lower levels of sense of mastery and filial satisfaction being significant predictors of depressive symptoms. With the entry of health perception, an additional 5% of the variance was accounted for, resulting in a total of 51% of the variance

Table II Correlations Among Study Variables (N=230)

Variable	1	2	3	4	5	6	7	8	9	10	11
1. Age											
2. Female	0.00										
3. Married	−0.25***	−0.37***									
4. Education (≥ high school)	−0.25***	−0.32***	0.26***								
5. Acculturation	−0.36***	−0.15*	0.25***	0.43***							
6. Chronic conditions	0.14*	0.19**	−0.17**	−0.07	−0.07						
7. Functional disability	0.33***	0.09	−0.27***	−0.15*	−0.23***	0.28***					
8. Sense of mastery	−0.23**	−0.24***	0.20**	0.22**	0.41***	−0.22**	−0.38***				
9. Filial satisfaction	0.23**	0.12	−0.16*	0.01	−0.09	−0.01	0.09	−0.04			
10. Health perception	−0.26***	−0.27***	0.26***	0.27***	0.32***	−0.46***	−0.49***	0.51***	−0.00		
11. Depressive symptoms	0.14*	0.18**	−0.24***	−0.21**	−0.30***	0.37***	0.35***	−0.57***	−0.15*	−0.61***	

*p<0.05; **p<0.01; ***p<0.001.

Table III Regression Models of Health Perception and Depressive Symptoms (N=230)

Step	Predictor	Health perception			Depressive symptoms		
		β	R^2	ΔR^2	β	R^2	ΔR^2
1	Age	−0.11	0.20***	0.20***	−0.05	0.13***	0.13***
	Female	−0.21**			0.10		
	Married	0.07			−0.10		
	Education (≥ high school)	0.08			−0.05		
	Acculturation	0.21**			−0.28**		
2	Chronic conditions	−0.35***	0.45***	0.25***	0.33***	0.29***	0.16***
	Functional disability	−0.33***			0.20**		
3	Sense of mastery	0.32***	0.53***	0.08***	−0.41***	0.46***	0.17***
	Filial satisfaction	0.02			−0.21**		
4	Health perception	–	–	–	−0.34***	0.51***	0.05***

Betas represent standardized regression coefficients in each step after controlling for the previous variables.
**p<0.01; ***p<0.001.

explained by the estimated model. Negative health perception was a significant predictor of depressive symptoms.

Mediating effects of health perception

Earlier we noted that perceptions of one's health may play an intervening role in the outcomes experienced by those with physical health constraints. Employing criteria formulated by Baron and Kenny (1986), we tested the mediating effects of health perception in regressions of depressive symptoms on chronic conditions and functional disability, respectively. The analyses controlled for the effects of background variables (age, gender, marital status, education, and acculturation). As is shown in Fig. 1, independent paths among the two independent variables (chronic conditions and functional disability), the presumed mediator (health perception), and dependent variable (depressive symptoms) were significant. When health perception was controlled, the initially significant direct effects of chronic conditions on depressive symptoms (B=1.65, β=0.35, p<0.001) became non-significant (B=0.58, β=0.12, p>0.05), and the initially significant effect of functional disability (B=0.45, β=0.30, p<0.001) became non-significant (B=0.12, β=0.08, p>0.05) as well. We then used Sobel's test in order to confirm that the reductions in regression coefficients were statistically significant (z=5.75, p<0.001 for the analysis with chronic conditions; z=5.44, p<0.001 for the analysis with functional disability).

Discussion

The present study was designed to explore the roles of background variables, health constraints, and psychosocial attributes in predicting health perception and depressive symptoms among older Korean Americans. We were also interested in whether subjective health perception functioned as a critical mediator in the connection between physical health constraints and depressive symptoms. The latter interest was prompted by the fact that health perception is an attribute of people that may be open to interventions by health professionals.

The analyses provided supporting evidence for the proposed model, demonstrating that critical elements of the model of health play a significant role in the lives of older Korean Americans. Health perception and depressive symptoms were influenced not only by physical health conditions but also by background and psychosocial factors. We observed positive perceptions of health and emotional state among individuals with higher levels of acculturation, fewer chronic conditions, less disability, and greater sense of mastery. We also found that those who were more satisfied with their relationships with adult children and who had more positive health perception were less depressed. Additionally, the mediating models of health perception were supported, proving the intervening roles of health perception in the linkages between physical and mental health.

It is noteworthy that acculturation, a variable not usually included in standard health models, played a substantial and independent role in determining health perception and depressive symptoms. Becoming knowledgeable about a new culture may be an indicator of one's adaptability, which is in turn linked to positive perceptions and evaluations of one's health and emotion. Although higher levels of acculturation are generally associated with higher socioeconomic status and increased access to resources and benefits, the present results were observed with a control for education. Some studies have also suggested that acculturation serves as an index of chronic strains associated with adaptation to a host country (Chiriboga, 2004). Another interesting explanation may have to do with culturally

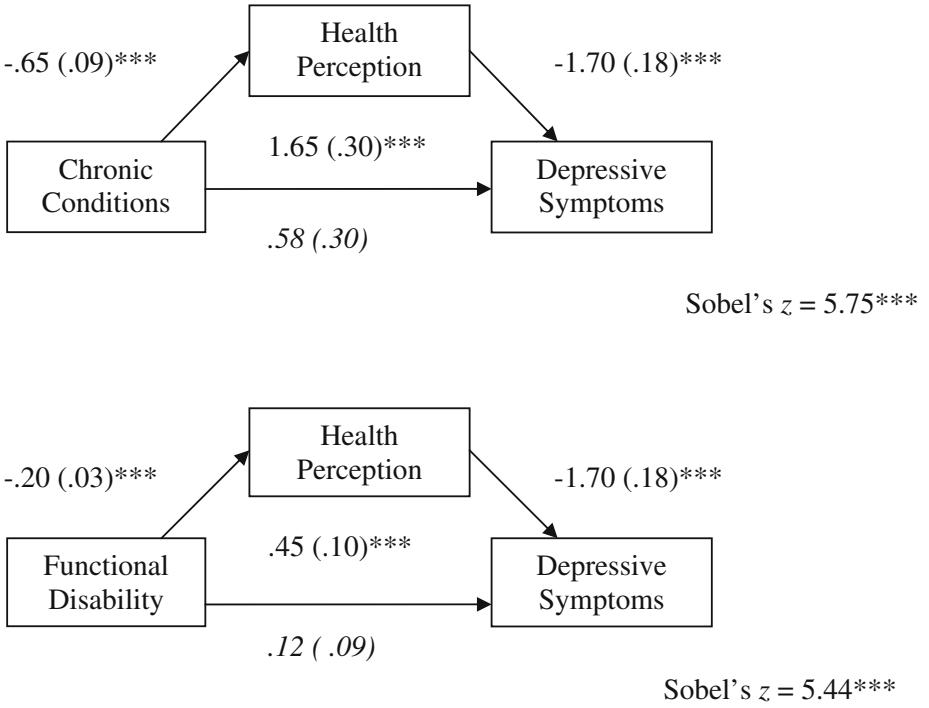

Fig. 1 Mediating effects of health perception in the relationship between health constraints and depressive symptoms. *Note*. Numbers indicate unstandardized regression coefficients with standard errors in parentheses. The *italicized values* represent the indirect effect of health constraints on depressive symptoms after controlling for health perception. We conducted all analyses with a control of background variables (age, gender, marital status, education, and acculturation). *** $p<0.001$.

different ways of manifesting or expressing concerns or emotions. For example, older Korean Americans with lower levels of acculturation may be more likely to adhere to the traditional Confucian ethic, which places an emphasis on modesty as a cultural virtue. In this light, older Koreans are more reluctant to express positive emotions (Jang *et al.*, 2005; Noh *et al.*, 1992). However, older Korean Americans who are more acculturated may be more accepting of Western ways of thinking and expression, and for this reason may be more likely to express themselves in a positive way. The connection between acculturation and response patterns is definitely worth further investigation.

Sense of mastery was shown to have beneficial effects on health perception and emotional states, and its significance sustained even after we controlled for the effects of chronic conditions and functional disability. Feeling in control seems to bolster older individuals' positive outlooks and generate better mental health. Along with sense of mastery, filial satisfaction was shown to be important in warding off depressive symptoms. Satisfying relationships with adult children may enhance self-esteem, thereby enabling older individuals to have positive emotional states (Kaufman & Uhlenberg, 1998; Mui, 1996). The findings that both sense of mastery (often associated with the Western or modern valuation of individualism) and filial satisfaction (which reflects cultural values of familism and collectivism) emerged as critical factors for mental health provide implications for policy development and programming. It appears that some degree of integration of the modern with the traditional promotes optimal mental health for older Korean Americans. Given these findings, there should be an effort to assist older Korean Americans in maintaining and improving sense of mastery under family-oriented culture by harmonizing traditional values with the elder's needs for independence.

As other researchers have shown in studies with non-Hispanic White populations (e.g., Kahana *et al.*, 1995; Schulz & Williamson, 1992), we found that health perception serves as a critical mediator between physical and mental health among Korean American older adults. Persons who perceived their health as poor were also more vulnerable to depressive symptoms. The beneficial effects of an optimistic view of one's own health have been emphasized in previous studies that showed high associations with more healthful behaviors, quicker recovery, greater physical and emotional well-being, and even increased longevity (Borawski *et al.*, 1996; Idler, 1993). Given that favorable health perceptions lead to positive adjustment to health problems and enhanced well-being, the mediating roles of health perception suggest a possible avenue for intervention. By enhancing positive perceptions of and attitudes toward their own health, older individuals may be protected from the negative emotional consequences of physical health problems in later years of life.

Although the present results are promising, the use of a convenience sample and a cross-sectional design suggest that caution must be exercised in generalizing the findings and inferring causality. These implications would benefit from a longitudinal examination of dynamic changes and adaptational processes of physical and mental health. Moreover, the present study is based on self-reported data. In order to accurately address the mechanisms that mediate physical and mental health, future researchers should utilize objective health indicators. The examination of the mechanisms of physical and mental health and the impacts of psychosocial attributes should include other racial/ethnic groups in order to properly address the needs of diverse populations.

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References

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, *51*, 1173–1182.

Blazer, D., Landerman, L., Hays, J., Simonsick, E., & Saunders, W. (1998). Symptoms of depression among community-dwelling elderly African-American and White older adults. *Psychological Medicine*, *28*, 1311–1320.

Borawski, E. A., Kinney, J. M., & Kahana, E. (1996). The meaning of older adults' health appraisals: Congruence with health status and determinant of mortality. *Journal of Gerontology: Social Sciences*, *51B*, S157–S170.

Bruce, M. L. (2001). Depression and disability in late life: Direction for future research. *American Journal of Geriatric Psychiatry*, *9*, 102–112.

Chiriboga, D. (2004). Some thoughts on the measurement of acculturation among Mexican American elders. *Hispanic Journal of Behavioral Sciences*, *26*, 274–292.

Chiriboga, D., Black, S., Aranda, M., & Markides, K. (2002). Stress and depressive symptoms among Mexican American elderly. *Journal of Gerontology: Psychological Sciences*, *57B*, 559–568.

Cho, M., Nam, J., & Suh, G. (1998). Prevalence of symptoms of depression in a nationwide sample of Korean adults. *Psychiatry Research*, *81*, 341–352.

Fillenbaum, G. (1988). *Multidimensional functional assessment: The Duke older Americans resources and services procedure*. Hillsdale, NJ: Erlbaum.

Hazuda, H., Stern, M., & Haffner, S. (1988). Acculturation and assimilation among Mexican Americans: Scales and population-based data. *Social Science Quarterly*, *69*, 687–705.

Hughes, D. (2002). *Quality of health care for Asian Americans: Findings from the Commonwe*alth Fund 2001 Health Care Quality Survey (Publication No. 525). New York: Commonwealth Fund.

Hurh, W., & Kim, K. (1990). Correlates of Korean immigrants' mental health. *Journal of Nervous and Mental Disease*, *178*, 703–711.

Idler, E. (1993). Age differences in self-assessments of health: Age changes, cohort differences, or survivorship? *Journal of Gerontology: Social Sciences*, *48*, S289–S300.

Jang, Y., Kim, G., & Chiriboga, D. (2005). Acculturation and manifestation of depressive symptoms among Korean American older adults. *Aging and Mental Health*, *9*, 500–507.

Jang, Y., Poon, L. W., Kim, S., & Shin, B. (2004). Self-perception of aging and health among older adults in Korea. *Journal of Aging Studies*, *18*, 485–496.

Jang, Y., Poon, L. W., & Martin, P. (2004). Individual differences in the effects of disease and disability on depressive symptoms: The role of age and subjective health. *International Journal of Aging and Human Development*, *59*, 125–137.

Johnson, R., & Wolinsky, F. (1999). Functional status, receipt of help, and perceived health. *Journal of Clinical Geropsychology*, *5*, 105–125.

Kahana, E., Resmond, C., Hill, G. J., Kercher, K., Kahana, B., Johnson, J. R. *et al.* (1995). The effects of stress, vulnerability, and appraisal on the psychological well-being of the elderly. *Research on Aging*, *17*, 459–489.

Kaufman, G., & Uhlenberg, P. (1998). Effects of life course transitions on the quality of relationships between adult children and their parents. *Journal of Marriage and the Family*, *60*, 924–938.

Lachman, M. E., & Weaver, S. L. (1998). The sense of control as a moderator of social class differences in health and well-being. *Journal of Personality and Social Psychology*, *74*, 763–773.

Lee, S., Sobal, J., & Frongillo, E. (2000). Acculturation and health in Korean Americans. *Social Science and Medicine*, *51*, 159–173.

MacKinnon, D., & Dwyer, J. H. (1993). Estimating mediated effects in prevention studies. *Evaluation Review*, *17*, 144–158.

Menec, V. H., & Chipperfield, J. G. (1997). The interactive effect of perceived control and functional status on health and mortality among young–old and old–old adults. *Journal of Gerontology: Psychological Sciences*, *52B*, P118–P126.

Mui, A. (1996). Depression among elderly Chinese immigrants: An exploratory study. *Social Work*, *41*, 633–645.

Myers, H. F., & Rodriguez, N. (2003). Acculturation and physical health in racial and ethnic minorities. In K. M. Chun, P. B. Organista, & G. Marin (Eds.), *Acculturation: Advances in theory, measurement, and applied research* (pp. 163–185). Washington, DC: American Psychological Association.

Nagi, S. Z. (1976). An epidemiology of disability among adults in the United States. *Milbank Memorial Fund Quarterly*, *54*, 439–467.

Noh, S., & Avison, W. (1996). Asian immigrants and the stress process: A study of Koreans in Canada. *Journal of Health and Social Behavior*, *37*, 192–206.

Noh, S., Avison, W., & Kaspar, V. (1992). Depressive symptoms among Korean Immigrants: Assessment of a translation of the Center for Epidemiologic Studies–Depression scale. *Psychological Assessment*, *4*, 84–91.

Pearlin, L. I., & Schooler, C. (1978). The structure of coping. *Journal of Health and Social Behavior*, *24*, 2–15.

Radloff, L. (1977). The CES–D scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement*, *1*, 385–401.

Roberts, B. L., Dunkle, R., & Haug, M. (1994). Physical, psychological, and social resources as moderators of the relationship of stress to mental health of the very old. *Journal of Gerontology: Social Sciences*, *49*, S35–S43.

Rosow, I., & Breslau, N. (1966). A Guttman Health Scale for the aged. *Journal of Gerontology*, 21, 556–559.

Schulz, R., & Williamson, G. M. (1992). Psychosocial and behavioral dimensions of physical frailty. *Journal of Gerontology*, *48*, 39–43.

Seelbach, W. (1978). Correlates of aged parents' filial responsibility expectations and realizations. *Family Coordinator*, *27*, 341–350.

U.S. Census Bureau (2000). *Population census*. Washington, DC: U.S. Department of Commerce.