

Prevalence of Depression and Somatic Symptoms Among Korean Elderly Immigrants

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Forty-one Korean immigrants in Washington, D.C. (of the United States) metropolitan area over age 60 were interviewed using the Diagnostic Interview Schedule (Korean version) with additional questions about culture-specific somatic symptoms identified in previous research with Korean populations. The lifetime and current prevalence were 29.27 percent and 14.63 percent, respectively, for major depression; 9.76 percent and 2.44 percent for generalized anxiety disorder; and 9.76 percent and 7.32 percent for somatization disorder. The lifetime and current rates of co-occurrence of major depression and somatization disorder were 25 percent and 33.33 percent. Subjects who met criteria for depression were more likely to experience culture-specific Korean somatic symptoms than subjects who did not meet those criteria.

Key Words: Depression, somatic symptoms, Korean elderly immigrants

Koreans constitute one of the fastest growing immigrant populations in the United States (U.S. Department of Commerce, Bureau of the Census 1982). Between 1970 and 1980 the Korean immigrant population in the U.S. increased by 422 percent to a total of 354,593 (U.S. Department of Commerce, Bureau of the Census 1981, 1983). Koh and Bell (1987) estimated that the Korean population in the U.S. was more than half a million at the end of 1984. An estimated 4.2 percent of that population was of age 60 or older.

Most elderly Korean immigrants are economically dependent on their adult children. Adult children have had the duty to let their aged parents live in their home indefinitely (Kim 1980). However, such arrangements have begun to be less common in the U.S.; many

elderly Korean immigrants have been living in senior citizens' apartments.

Perhaps due to the myth that elderly Korean immigrants are taken care of by the younger generation, medical and social science researchers have paid little attention to the physical health, mental health, and social service needs of this population. However, elderly Korean immigrants who experience adjustment problems appear to have particular difficulties during the first few years after arrival in the U.S. (Pang 1991) and these difficulties may be related to significant depressive symptoms.

However, several factors contribute to misconceptions about the rate of depression among elderly Korean immigrants. First, Western clinicians may have difficulty identifying symptoms of depression in this population. Studies of the experience of depression in East Asia suggest that manifestation of depressive symptoms by Asian patients is considerably different from that by Western patients. Cheng and associates (1981) examined symptom manifestation of depressed patients seen at a general medical clinic in Hong

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Kong. Not all depressed patients were aware of their depressed mood, and most did not complain primarily of their emotional distress. Depressed patients had a range of symptoms similar to the somatic symptoms of nondepressed patients with medical disorders. However, depressed patients frequently complained of vague and diffuse symptoms and when they were directly questioned about their mood, most admitted feelings of sadness. The authors concluded that somatization may be a way of manifesting depression that avoids the social stigma attributed to mental illness.

It is important to identify depression in patients who manifest the disorder through somatic symptoms because such patients may not receive proper treatment for their emotional problems even though they may make significantly more visits to physicians than patients without such problems (Weissman et al. 1991)

MATERIALS AND METHODS

Methods of study used with Korean immigrant populations may have contributed to an inaccurate picture of the rate of depression. An epidemiological study of depression among Asian Americans with western diagnostic tools may have given somewhat limited attention to differences between cultural groups in the experience of depressive symptoms (Kuo 1984). As Kleinman and Good (1985) pointed out, many researchers have used western diagnostic and epidemiological tools uncritically in studying depression among non-western populations.

The purpose of this study was to estimate the prevalence of major depression, generalized anxiety disorder, and somatization disorder, as well as their co-occurrence among a population of elderly Korean immigrants in the United States. In addition, the study examined patterns in the manifestation of depressive symptoms in this population. The study used the Korean version of structured diagnostic instruments including extra somatization symptom questions reported to be particularly common among Korean patients.

(Lee, *et al.* 1986)

The population for this study consisted of Korean immigrants residing in the Washington (D.C.) metropolitan area who were at least 60 years old and did not have serious health problems. It is estimated that about 80,000 Korean immigrants live in the Washington, D.C. area (Choi KS, personal communication, 1988); about 10 percent are 65 years old or older (Chung JY, personal communication, 1982). The majority of elderly Korean immigrants came to the United States at the invitation of their children. Most are isolated from mainstream American culture and speak little English.

A list of 200 elderly Korean immigrants was obtained from the telephone directory of the Korean Elderly Association members, the Korean elderly people identified by calling listed names in the telephone directory of the Greater Washington Metropolitan Area and the Korean church directories and assigned consecutive numbers.

A starting number between 1 and 5 was randomly selected, and every fifth number after the starting number was drawn. The 20 informants selected by this process introduced the researchers to 21 additional subjects from among their acquaintances by the network sampling method (Sirken 1970). Informed consents were obtained from the participants.

Data on prevalence of major depression, generalized anxiety disorder and somatization disorder were collected using the Korean version of the Diagnostic Interview Schedule (KDIS). The DIS allows interviewers or clinicians to make psychiatric diagnoses according to DSM-III or DSM-III-R criteria (Robins *et al.* 1981). The validity of the Korean version of the DIS has been measured by Lee and associates (1986). In their study, kappa values for major depression ranged from .63 to .81 and for somatization disorder from .66 to .92. The kappa value for generalized anxiety disorder was .22.

Twelve additional symptoms specific to the Korean cultural context have been added to the section of somatization disorder in KDIS. An example of the somatic symptom question is "Have you suffered from having a lump in

your chest or abdomen?" as more examples are given in table 3. The two sets of data (the questions of somatic symptoms from the original DIS and those Korean specific somatic symptoms from KDIS) were initially analyzed separately and then compared with each other.

The interviews were conducted at home in Korean by Korean interviewers. Each interview took 2~3 hours. Sometimes an interview was completed with more than one visit. All interviewers were trained by the author using the DIS training protocol. The author used the DSM-III-R criteria checklist (Helzer J, Janca A, unpublished material, 1990) to make diagnoses based on the data. Data were analyzed for the Lifetime and current rates of major depression and other disorders, demographic characteristics of subjects, Co-occurrence of disorders, and symptom distributions, using chi square tests and t tests for proportions. The SAS statistical package was used to process the data.

RESULTS

Lifetime and current rates of the diagnoses measured were 29.27 percent and 14.63 percent, respectively for major depression; 9.76 percent and 2.44 percent for generalized anxiety disorder; and 9.76 percent and 7.32 percent for somatization disorder. These rates are slightly higher than those reported by Katon and associates(1990) in a study of high utilizer of medical care. Lifetime and current rates of somatization disorder based on questions about culture-specific somatic symptoms were 17.07 percent and 9.76 percent, respectively.

Table 1 shows demographic characteristics of subjects who met criteria for a diagnosis of major depression and those who did not meet those criteria. A greater proportion of women (11 of 27) than of men (one of 14) had a diagnosis of major depression ($P < .05$).

Subjects with depression were younger (mean+SD=67.42+7.05 years) than those without depression (mean+SD=73+7.15 years) ($P < .05$).

Table 1. Demographic characteristics of elderly Korean immigrants interviewed using the Diagnostic Interview Schedule

Characteristics	Control (N=29)	Depression (n=2)	P***
Gender*			
male	13	1	
female	16	11	<.05
Age**			
Range	61 to 90	60 to 79	
Mean+SD	73+7.15	67.42+7.05	<.05
Under 65 years	5	6	
66 to 75 years	12	4	
Over 75	12	2	<.05
Education			
No formal education	4	2	
Elementary school	4	4	
High school	14	5	
College	7	1	>.05
Marital status			
married	18	6	
Divorced	1	0	
Widowed	10	6	>.05
Years in U.S.			
Range	1 to 29	4 to 22	
mean+SD	10.45+7.10	11.33+5.50	>.05
less than 10	17	7	
11 to 20	10	3	
More than 20	2	2	>.05

*Significantly more women met criteria for depression

**Younger informants were significantly more likely to meet criteria for depression.

***P value in X²-test or t-test.

There were no significant differences between the depressed and nondepressed groups in education, marital status, or length of time subjects had been in the United States.

Co-occurrence of disorders

As Table 2 shows, the lifetime and current rates of co-occurrence of major depression and somatization disorder were 25 percent and 33.33 percent, respectively. There was significant difference ($P < .05$) in co-occurrence of major

Table 2. Lifetime and current co-occurrence of depression with generalized anxiety disorder and somatization disorder in elderly Korean immigrants who met criteria for depression(N=12)

Diagnosis	Lifetime (N=12)	Current (N=6)
Generalized anxiety disorder	0%	0%
Somatization disorder*	41.6%	33.33%
Somatization disorder	25%	33.335

*Diagnosis made using Korean culture-specific somatic symptoms

depression and somatization disorder between when culture-specific somatic symptoms were added and when only the original somatic symptoms were used in the diagnostic procedure with KDIS. When culture-specific somatic symptoms were used in the diagnostic procedure, the lifetime rate of co-occurrence of major depression and somatization disorder increased to 41.67 percent although the current rate remained at 33.33 percent.

No pattern of co-occurrence of generalized anxiety disorder and major depression was found. This finding may be related to the low level of validity of the KDIS for generalized anxiety disorder detected by Lee(1986). Breier and associates (1985) have suggested that there is little evidence supporting the validity of generalized anxiety disorder as a distinct diagnostic entity.

Symptom distribution

Subjects who met the criteria for depression were significantly more likely than subjects who did not meet those criteria to show the following symptoms of somatization disorder; abdominal pain, back pain, pain in the arms or legs, headaches, vomiting, being blind, fainting spells, double vision, shortness of breath, a feeling of the heart beating hard, dizziness, weakness, difficult swallowing, feeling ill most

Table 3. Culture-specific somatic symptoms experienced by depressed and nondepressed elderly Korean immigrants, in percentages

Symptom	% in Depressed (N=12)	% in Nondepressed (N=29)	P*
Indigestion	58.33	17.24	<.05
Lumps in gastro-intestinal tract	50.00	3.45	<.005
White-coated tongue; dry mouth	75.00	6.90	<.005
Tight feelings in chest	58.33	6.90	<.005
Hot face	66.67	0.00	<.005
Pushed chest	41.67	6.90	<.025
Body chills and hotness	75.00	10.34	<.005
Sighs frequently	83.33	24.14	<.05
Numbness	33.33	6.90	<.05
Heavy and pressured headaches	66.67	17.24	<.025
Lays down often due to fatigue	83.33	13.79	<.05
Edema; sweating on extremities	33.33	6.90	<.05

*P value In X²-test, df=1 for all comparisons.

of the time, giving up work or regular activities, loss of sense in an arm or a leg, crying, worrying about somatic symptoms, and that life is hopeless.

The number mean+SD of DIS somatization symptoms experienced by the depressed subjects was 10.31+6.03 compared with 2.54+3.05 for the nondepressed subjects. When frequencies of culture-specific somatic symptoms were added to the analysis, the total mean number of symptoms increased to 17.00+8.77 for the depressed subjects and 3.79+4.71 for the nondepressed subjects.

Table 3 shows the culture-specific somatic symptoms investigated. Depressed subjects showed significantly higher frequencies of all culture-specific somatic symptoms, compared with nondepressed subjects.

The occurrence of several symptoms of depression among subjects who met criteria for

Table 4. Symptoms of depression experienced by Korean elderly immigrants who did and did not meet criteria for somatization disorder in percentages

Symptoms	% in Somatization (N=4)	% in Control (N=37)	P*
Depressed for two weeks	75.00	45.95	<.1
Depressed for two years, sometimes okay	75.00	32.43	<.1
Lost appetite	25.00	27.02	<.97
Lost weight(more than two pounds a week)	75.00	5.41	<.005
Eating increased; gained weight	0.00	0.00	—
Trouble falling asleep	100.00	29.73	<.005
Sleeping too much	25.00	0.00	<.005
Tired all the time	75.00	43.24	<.25
Talked or moved more slowly	50.00	27.03	<.9
Moving all the time	50.00	13.51	<.1
Less interest in sex	50.00	16.22	<.1
Felt worthless	75.00	24.32	<.05
Trouble concentrating	50.00	21.62	<.1
Thoughts came much slower	75.00	24.32	<.05
Thought a lot about death	100.00	35.14	<.05
Thought of wanting to die	75.00	21.62	<.05
Thoutght of committing suicide	50.00	18.92	<.05
Attempted suicide	50.00	5.41	<.01

*P value in X²-test, df=1 for all comparisons

somatization disorder was also investigated. As Table 4 shows, subjects who met the criteria for somatization disorder were significantly more likely than those who did not meet those criteria to experience the following symptoms of depression: weight loss, sleeping problems, thoughts came slower, and thoughts about death and suicide attempts.

DISCUSSION

The finding of a higher rate of depression among women in the study coincides with results of earlier studies by Frank and Faux (1990), Lee and Chung (1985), Min and associates (1986) and Noh and associates (1992). The higher rate of depression in women has been attributed to differences between men and women in biological and psychosocial functioning. Psychological explanations of depression among women implicate stress, lack of social support, and unfavorable styles of coping,

such as learned helplessness. Learned helplessness in particular has been linked to women's relative lack of social power and the tendency of traditional family structures to discourage independence among girls (Frank and Faux 1990). The men in the study may have underexpressed depressive emotional states because their role in the Korean family and society involves the expectation of stoically enduring the hardships. However, the men who were interviewed indicated they had faced many situations that could be related to loss of self-esteem and depression, including loss of their leadership role in the family and underemployment.

The younger mean age of subjects who met criteria for depression may be related to several factors. The younger of the elderly Korean immigrants may for the first time be experiencing stresses of old age—physical limitations, issues of economic dependence—in addition to the stresses of immigration. They may be more engaged than older subjects in the daily life problems of their families. For

example, one subject, a 67-year-old widow, worked as a housekeeper and sent some of the money she earned to her son in Korea. She was sad because her children, even some who were over 40, had difficulty supporting themselves and asked her to earn money. She felt they should be telling her that she was too old to have to work.

Although there were no significant differences between the depressed and nondepressed groups in education, less educated elderly Koreans were more likely to meet the criteria for depression. Table 1 indicates that only one college-educated subject received a diagnosis of depression. The seven college educated subjects may have used better adaptive coping strategies such as stress management. In addition, education is highly valued among Koreans. Higher educational attainment may be associated with increased self-esteem, which reduces the likelihood of depression.

Being married was also associated with a reduced likelihood of depression. Beiser (1988) studied a group of Southeast Asian refugees and found that unmarried or otherwise unattached people experienced high levels of depression. In this study, the majority of subjects expected to be supported by their children, but some may be in transition toward a more independent role through acculturation to American society. In such a situation, married subjects may feel less isolated and therefore less likely to develop depression.

It appears that the longer the Korean elderly immigrants lived in the United States, the more likely they were to meet the criteria for depression although there was no statistical significance. It could be suggested that the Korean elderly immigrants experience increasing difficulty in adapting to the life in the United States as they become older. It may need to be studied further in relation to age and acculturation.

Subjects who met the criteria for a diagnosis of depression were significantly more likely to experience the majority of chronic and stress-related symptoms of somatization disorder, compared with subjects who did not meet the criteria for depression. All of the Korean

culture-specific somatic symptoms examined in the study had higher frequencies among the depressed subjects than among the nondepressed subjects. This finding supports those of Silver (1987) who studied physical complaints as part of the core depressive syndrome in Israel. He suggested that the higher rate of physical distress among depressed patients could be attributed to cultural factors that affect expression of physical symptoms and the emphasis placed on physical symptoms by both patient and physician.

Although this study found a higher lifetime prevalence of depression than the 6 percent reported in the Epidemiologic Catchment Area (ECA) study (Weissman *et al.* 1991), the relationships between demographic factors and prevalence rates of major depression and somatization disorder among Korean elderly immigrants are similar to those in the ECA results (Weissman *et al.* 1991). For example, women in the ECA study were more likely than men to report a depressive episode. Preliminary use of longitudinal ECA data has shown that loss of a spouse through divorce or widowhood is associated with both new and recurring depressive episodes in all age groups and for both sexes (Weissman *et al.* 1991). Although the prevalence of somatization disorder among the elderly Korean immigrants studied was higher than that reported in the ECA data, rates of co-occurrence of depression and somatization disorder were similar in the two studies (Swartz *et al.* 1991).

The results concerning Korean culture-specific somatic symptoms should be interpreted with caution due to the limited sample size. However, the higher rate of somatization disorder found when culture-specific somatic symptoms were used in the diagnostic procedure highlights the importance of considering transcultural issues in the diagnostic process.

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