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Acculturation, Discrimination and Depressive Symptoms Among Korean Immigrants in New York City

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Abstract

Immigrant mental health issues, especially depression in relation to discrimination and acculturation, are reported to be serious problems in the United States. The current study examines the prevalence of depressive symptoms among Korean immigrants in New York City (NYC) and its relation to self-reported discrimination and acculturation. A sample of 304 Korean immigrants residing in NYC completed a survey utilizing the Center for Epidemiologic Studies Depression Scale—Korean version, Discrimination Scale, and Acculturation Stress Scale. Results indicated that 13.2% of the sample population demonstrated some symptoms of depression and that variable such as living alone, marital status, education, years in US and income impact high depression scores. Results also indicate that higher self-reported exposure to discrimination and lower self-reported language proficiency were related to higher depressive symptoms. In a regression analysis, discrimination and English language proficiency were significant predictors of depression, but acculturation stress was not significantly related to depression.

Keywords

Depression; Acculturation stress; Discrimination; Korean immigrants

Introduction

Most immigrants experience significant changes in many aspects of their lives during what is called the acculturation process. The term “acculturation” is used broadly to include language, lifestyle, cultural identity and attitudes as they are maintained or transformed by the experience of coming into contact with another culture (Miller and Chandler 2002). The

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acculturation process is defined as cultural change resulting from contact between groups with distinctive cultures, and cultural conflict; alienation can occur during this process (Kiefer 1974). During the acculturation process, certain experiences can become sources of stress, such as learning a new language, missing friends and relatives, new financial and occupational experiences, changing roles for oneself and one's family members, and new social norms (Noh and Kaspar 2003). In sum, acculturation experience can lead to acculturative stress (Oh et al. 2002), which may account for psychological health outcomes, such as depression (Miller and Chandler 2002).

According to the US Census Bureau (2008), the Asian American population will grow from its current 15.5 million to a projected 40.6 million by the year 2050 (Oh et al. 2002). As the number of Asian immigrants to the United States (US) has increased substantially in the last few decades (Oh et al. 2002), the number of such immigrants affected by acculturative stress likely has increased and will continue to do so. Studies have reported consistently that many immigrants experience a great deal of acculturative stress (Kuo and Tsai 1986; Shin 1994) and have demonstrated that acculturative stress can contribute to immigrants exhibiting depressive symptoms (Choi 1997; Miller and Chandler 2002; Oh et al. 2002; Shin 1994).

Some believe that Asian Americans function well during the acculturation process and that they experience few adjustment difficulties (Atkinson et al. 1993) and are often perceived as model minorities (Lee 1996; Oyserman and Sakamoto 1997) with few personal or emotional problems (Kawahara 2000; Lee 1996). Leong et al. (1995) report that Asian Americans were inaccurately labeled as mentally healthy, with the corresponding rates of their psychopathology also grossly underestimated and others have found that Asian Americans, experience a variety of educational, psychological, and social problems (Kim et al. 1998; Lee 1996; Liu 1998).

Additionally, US immigrants often experience stress from racial discrimination, such as being insulted, being made fun of, or being treated rudely and/or unfairly (Banks et al. 2006; Lee 2005; Gee et al. 2007). Ethnic discrimination is viewed as a significant life stressor with adverse effects on the adjustment, well-being, and health of racial and ethnic minorities (Lee 2005) which can accumulate over time (Banks et al. 2006). Researchers investigating the experience and effects of discrimination on immigrant groups have found that it is associated with mental health problems (Gee et al. 2007; Lee 2005; Noh and Kaspar 2003). Among Asian Americans, racial discrimination has been reported to be associated with increased risk of depressive disorder and/or anxiety disorder (Gee et al. 2007) and, therefore, ethnic identity can exacerbate the association between racial discrimination and the situational well-being of Asian Americans (Yoo and Lee 2008).

The prevalence of depression in the US is reported to be 7.06% of the adult population, and race and ethnicity sometimes play significant roles in creating inequities in recognizing and treating it (Rakesh et al. 2008). Among the Asian immigrant population, mental disorders, including depression, are often inadequately diagnosed and treated, and lead to impairment of psychosocial functioning. One general study reported the prevalence of major depressive disorder in 1,817 noninstitutionalized NYC adults in 2004 (Gwynn et al. 2008); 8% of the participants had a major depressive disorder, and immigrants with depression were 60% less likely to be diagnosed than their US-born counterparts even if those US-born counterparts were of the same race/ethnicity. Several studies suggest that depression is an especially serious problem among Korean immigrants (Kuo 1984; Hurh and Kim 1990; Shin 1993).

Korean immigrants are reportedly one of the fastest growing Asian immigrant groups in the US (Oh et al. 2002). During their acculturation period, studies consistently found that greater acculturation was associated with less stress among Korean Americans (Koneru et al.

2007), and also reported that they often manifest high acculturative stress through psychological reactions, such as feelings of marginality and alienation, psychosomatic symptoms, and identity confusion, leading to depression (Choi 1997; Oh et al. 2002; Shin 1993). Additionally, depression is reported to be associated with perceived discrimination among Korean immigrants (Noh and Kaspar 2003; Lee 2005). Noh and Kaspar (2003) reported in their study of Korean Canadian immigrants that there was a modest but significant association between perceived discrimination and depressive symptoms; time frequency (how often) of self-reported discrimination and emotional reactions exhibited significant direct association with depression. A study of Korean American college students found that those with high ethnic identity pride reported relatively fewer depressive symptoms and higher social connectedness when ethnic discrimination was perceived to be low, but that depressive symptoms increased and social connectedness decreased when perceived discrimination was perceived to be high (Lee 2005). Kuo (1984) conducted a survey assessing the prevalence of depression in Asian Americans in Seattle, WA, and found that Korean Americans had the highest score (14.4%), followed by Filipino Americans, Japanese Americans and Chinese Americans. However, few studies of depression in Korean immigrants in the US have been reported since 2000.

Although Korean immigrants in the US have been exposed to Western notions of individualism, gender equality, self-respect, and freedom, the fundamental philosophy of Confucianism remains to be the most influential force shaping their family structure, gender roles, and marital relations (Kim 1998;Shin 1994). The characteristics of Confucianism is consisted of filial piety, the worship of ancestors, respect for authority, and a relatively rigid social hierarchy based on age, sex, and social class (Kim 1998). Korean culture is conformed by Confucianism with its emphasis on family integrity, group conformity, and traditional gender roles, which have influenced how Korean immigrants adjust to a new culture and manifest their psychological response to stress. They often display acceptance and endurance of suffering as a way of life when dealing with depression (Bernstein 2007), which are also viewed as the strength to overcome difficulties, to endure hardships, and to maintain calm in the face of trying circumstances (Kwon-Ahn 2001). Therefore, Korean immigrants who maintain a sense of Korean identity and participation in traditional practices were negatively related to depression, while acculturation stress was positively associated with depression (Oh et al. 2002). Consequently, these findings seem to suggest that Korean Americans need to maintain a harmony between acculturation and the cultural retention for psychological well-being.

Although depression is one of the most common psychological problems among Korean immigrants, few researchers have examined its relationship to both acculturative stress and discrimination experienced among Korean American immigrants. The current study examines the association between acculturation stress and depressive symptoms, as well as between discrimination and depressive symptoms, as independent outcomes among Korean immigrants residing in NYC; it also examines the association between acculturation stress and discrimination in this population. As Korean immigrants have settled in the US, the Korean American community in NYC has steadily increased: 69,000 in 1990, 86,000 in 2000, and about 91,000 in 2005 (US Census Bureau 2006). Yet there are limited studies targeting Korean immigrants in NYC with mental health issues including depression.

Greater understanding of depressive symptoms related to acculturation stress and discrimination can lead to the development of culturally sensitive interventions that can mitigate the potentially deleterious effects of these experiences to Korean immigrants' mental health. As Korean Americans are a rapidly growing ethnic population in NYC, these issues are important for clinicians to address.

Method

Data Collection

A cross-sectional study was conducted with 304 Korean immigrants who resided in NYC. The research team consisted of five multidisciplinary members—three Korean psychiatric nurses with earned doctorate degrees and two Korean social workers who were in the doctoral program. After approval from the college Institutional Review Board, a convenience sample was obtained by distributing self-report questionnaires to Korean immigrants who volunteered to participate. Recruitment strategies included holding a press conference with Korean media in NYC, at which the research needs and plan were presented, and also contacting Korean community organizations, such as churches, Buddhist temples, senior centers, and local hospitals, to inform them about the study. The researchers first obtained permission from the head of each organization, and then a designated person from the research team distributed survey questionnaires to each organization's members directly by the researcher or the head of the organization depending on the prior arrangement. A pen and envelope were provided along with the survey questionnaires, with the instruction that the completed survey should be sealed in the provided envelope to re-enforce confidentiality of the survey information before returning to the researchers. Additional surveys were distributed to the customers and/or owners at Korean beauty salons, restaurants, and other retail stores.

The survey questionnaires required 30–60 min to complete. They were distributed to Korean immigrants who agreed to participate in the study voluntarily. There were no limitations on how long the participant had to be in the US as an immigrant or age at the time of immigration to participate in the survey because the researchers intended to determine the relationship between their depressive symptoms and longevity of immigration, and their depressive symptoms and age at the time of immigration. Anyone who refused to participate in the survey was respected and the researchers emphasized the importance of voluntary participation. The sampling criteria were: Korean immigrant, age 18 or older, able to read and write in Korean or English, and NYC residence. The estimated sample size was determined by the generally accepted rule of thumb of $N \geq 50 + 8\ m$ (where m is the number of independent variables) (Tabachnick and Fidell 2007). Since there were 12 independent variables, a minimum of 146 cases ($50 + 8 \times 12 = 146$) were needed for a regression analysis. The participants who completed it were given $5 as a token of appreciation. There was no mechanism to determine whether members of the same family participated in the survey at the same time or not. The completed surveys were collected by the researchers through the head of each agency or directly from the participants depending on the arrangements of the survey distribution. Four hundred seventy-five surveys were distributed and 416 were collected (87.6% of response rate) between May 2008 and November 2008; based upon the sampling criteria, 304 were included, and 112 were excluded, mainly due to non-NYC residence status. The large number of exclusions was a result of the participants' non-NYC residential status because the survey sites (such as religious organizations, health care/senior centers, and local business stores) were located in NYC, but the participants' residences were located outside of NYC.

Measures

Prior to implementing the assessment protocol, the researchers conducted literature reviews to explore the use of standardized tools to assess immigrants' psychological problems related to acculturation stress and discrimination; they found no standardized options. Previous studies on immigration and mental health among Asian Americans usually focused on a relatively common type of disorder—depression (Takeuchi et al. 2007). Therefore, depressive symptom assessment was selected to measure psychological well being of

Korean immigrants. The Korean version of the Center for Epidemiologic Studies Depression Scale (CES-D) was selected because it is designed for epidemiological investigations of depressive symptoms in the general population and is a very commonly-used self-reported depression measure (Radloff 1977). Two other assessment tools used in this study included an acculturative stress scale (Vega et al. 1998) and a discrimination scale (Williams et al. 1997). Additionally, an English proficiency scale was developed by the researchers to assess its relation to depression, acculturation stress, and discrimination experiences among Korean immigrants.

Center for Epidemiological Studies: Depression Korean Scale

The CES-D-K is a 20-item scale validated by Cho and Kim (1998) with respect to reliability, with a Cronbach's alpha of .89, and a test–retest reliability of .68. In the present study, the coefficient was 0.86. Cho and Kim (1998) recommend a cut-off score for clinical depression for the CES-D-K of 21. This cut-off score is higher than in the CES-D because, in the Korean culture, openly expressing one's feelings is seen as a reflection of negative well-being; therefore, Koreans have been found to give negative responses for positive affects, thereby increasing their scores for depression even when they may not in actuality be depressed (Jang et al. 2005).

Acculturative Stress Scale

The ASS used in this study is a self-report, nine-item scale with dichotomous responses of “yes” or “no” to the following questions: (1) feeling guilty for leaving family in a home country; (2) receiving the same level of respect that immigrants had in a home country; (3) limited contact with family or friends in a home country; (4) difficulties in interaction with others because of English proficiency; (5) being treated badly because of speaking English with an accent; (6) difficulties in finding work because of Asian descent; (7) being questioned about legal status; (8) concern about being deported if one were to go to a social or government agency; and (9) the avoidance of seeking health services due to fear of immigration officials. This scale was adapted from the National Latino and Asian American Study (NLAAS), a part of the Collaborative Psychiatric Epidemiology Study (CPES) project, which in turn adapted it from the Mexican–American Prevalence and Survey (Vega et al. 1998, cited in Gee et al. 2007). Internal consistency reliability was documented with a Kuder-Richardson-20 (KR-20) of 0.59 (Gee et al. 2007). In this present study, KR-20 was 0.62. The scale ranged from 0 to 9; a higher score indicated greater acculturative stress.

Discrimination Scale

The DS used in this study is the one used by the NLAAS, which originally adapted it from the Detroit Area Study. It is designed to measure more chronic, routine, and relatively minor experiences of unfair treatment (Essed 1991), and thus is considered to be a more consistent and robust predictor of health status than is the measure of major experiences of discrimination (Williams et al. 1997, cited in Gee et al. 2007). The DS is a nine-item scale which captures a respondent's self-reported frequency of the following experiences: (1) being treated with less courtesy than others; (2) being treated with less respect than others; (3) receiving poorer services than others in restaurants or stores; (4) people acting as if you are not smart; (5) people acting as if they are better than you; (6) people acting as if they are afraid of you; (7) people acting as if they think you are dishonest; (8) being called names or insulted; and (9) being threatened or harassed. Six responses are possible for each question: “never”; “less than once a year”; “a few times a year”; “a few times a month”; “at least once a week”; “almost every day.” The scale ranged from 9 to 54; higher scores indicated greater daily self-reported discrimination. Cronbach's alpha was 0.91 reported in NLAAS. In this present study, Cronbach's alpha was 0.90. In addition, respondents also were asked why they thought they were discriminated against: (1) ancestor/national origin; (2) gender; (3) race;

(4) age; (5) height; (6) skin color; (7) sexual orientation; (8) weight; (9) income or educational level; (10) other. Those who answered “other” were asked to specify.

English Proficiency Scale

An EPS was created to assess participants' self-reported level of English language fluency. The measure included three items: “How well do you speak English?” “How well do you write English?” and “How well do you read English?” The scale measurement used a 4-point Liker-type scale of: (1) poor; (2) fair; (3) good; and (4) excellent. The scale ranged from 3 to 12; higher scores indicated greater perception of English language fluency. Cronbach's alpha of the scale was .93.

Translation and Back-Translation of the Scales

The ASS and DS were translated into Korean by a doctoral-level bilingual researcher of Korean descent, and were then back translated into English by another doctoral-level bilingual researcher. Content discrepancies were discussed with a third bilingual researcher until semantic equivalence was reached. These three bilingual researchers also verified the relevance of these two scales to Korean culture after all translations were completed.

Data Analysis

Descriptive statistics were used to show the respondents' characteristics and each item of discrimination and acculturative scales. Bivariate analyses were performed using *t*-test or one-way analysis of variance (ANOVA) as appropriate to assess the relationship between depression and each of nine independent variables of socio-demographic characteristics: gender, living alone, marital status, religion, education, years in US, neighborhood, income, and age at immigration. Tukey's post hoc test was calculated to allow for inter-group comparison. Pearson Correlation tests were used to examine the strength of the relationship between the level of depression and six independent variables: age, age at immigration, self-reported degree of English proficiency, self-reported discrimination, acculturative stress, and CES-DK depression score. A Spearman' rho correlation was used to examine the strength between income and education. Finally, a hierarchical multiple regression analysis was conducted to examine predictors of depression. Statistical analyses were conducted using Stata statistical software 10 (StatCorp 2007) and a two-tailed $p<.05$ was considered statistically significant.

Results

Socio-Demographic Characteristics

The socio-demographic characteristics of the 304 Korean immigrants who participated in this study are summarized in Table 1. The mean age of the respondents was 46.7 years (SD = 14.3) and 56.6% were women. The majority of respondents were currently married (65.1%) and college educated (53.3%), with greater than $30,000 of a yearly household income (51%). Most respondents (80%) were either Protestant or Catholic. Slightly less than half of the participants lived in a neighborhood that was less than 25% Korean. The mean age of immigration was 31.8 years (SD = 10.7) and the mean years in the US was 14.8 years (SD = 4.3). Most respondents rated themselves as no better than fair in reading, writing, and speaking English.

Descriptive Statistics of Discrimination and Acculturative Stress Scales

The mean score of self-reported discrimination and of acculturative stress were 15.3 (SD = 7.0) and 2.8 (SD = 2.9), respectively (Table 1). With respect to reasons for discrimination, almost one-third (31.3%) believed that they had experienced discrimination due to their race

or ethnicity, 27.1% of them believed that they had experienced discrimination but did not know the reason why they seemingly were discriminated against, and 33.7% believed that they had experienced discrimination due to height, weight, income, education background, gender or age. Only few (7.9%) of the respondents reported other reasons such as appearance and image, character and personality, “my own flaw”, and language problems.

Table 2 shows the response distribution for each item of discrimination, and Table 3 shows acculturative stress scales. Of nine items on the discrimination scale, the two items that most frequently reported experiencing at least a few times a year were being treated with less courtesy (39.9%) and treated with less respect than other people (30.1%). About one in five respondents reported that at least a few times a year they received poorer service than others at restaurants or stores or that others treated them as if they were not as smart or as good as others. Of nine items on the acculturative stress scale, only one item was endorsed by most respondents; 60.4% reported that they found it hard in interactions with others because of difficulties that they have with the English language. A few respondents reported that they avoided seeking health services due to fear of immigration officials (5.8%) and that they feared that they would be deported if they went to a social or government agency (7.2%).

Bivariate Analyses

Bivariate analyses were performed to examine the relationships between the participants' CES-DK scores and their socio-demographic variables mentioned in Table 1. The mean score on the CES-DK was 11.59 (SD = 9.7), with a range of 0–47. Over 13% (13.2%) of the participants scored positively for depressive symptoms on the CES-D-K, using the cut-off score of 21 points or higher recommended by Cho and Kim (1998).

Of 20 items on the CES-D-K, the five most frequently reported items of depressive symptoms (the mean scores) are: (1) I was dissatisfied with my life (Mean = 1.1, 4%); (2) I did not feel that I was just as good as other people (Mean = 0.9); (3) my sleep was restless (Mean = 0.7); (4) I did not feel hopeful about the future (Mean = 0.7,), and (5) I felt that everything I did was an effort (Mean = 0.6).

The significant relationships found between CES-D-K and socio-demographic variables are; living arrangement ($t = -2.3$, $p<.05$), educational attainment ($t = 3.3$, $p<.05$), household income ($\chi^2 = 2.8$, $p<.05$), and years in the US ($\chi^2 = 3.49$, $p<.05$). Specifically, Korean immigrants who lived alone reported higher levels of depression than those who lived with others ($t = -2.3$, $p<.05$), and those who were single had higher levels of depression than those who were married ($t = -2.8$, $p<.05$). In addition, levels of education and income were negatively related to the depression score; those with higher education (college education or higher) or income (annual income of $30,000 or more) were less depressed than those with lower education or lower income. Tukey's post hoc tests demonstrated that respondents who had lived in the US between 5 and 10 years had significantly higher depression scores than did those who had lived in the US either less than 5 years or for 11 years or more ($F = 3.49$, $p<.05$).

Correlation Test

Table 4 presents the results of Pearson Correlation analyses. The current age and age at the time of immigration were not significantly related to the level of depression. However, the self-reported level of English proficiency was negatively related to the level of depression; those who reported less English proficiency tended to report higher levels of depression. Additionally, respondents who reported experiencing more discrimination tended to report a higher score of depression, but there was no significant relationship between acculturation stress and depression.

Hierarchical Multiple Regression

Table 5 presents the results of a hierarchical multiple regression analysis to determine what factors were associated with depression. Among the socio-demographic variables, marital status, education, income, and years in the US were entered. According to Spearmans' rho correlation test, the correlation coefficient of between income and education was .19 ($p<.05$), indicating that the strength of the relationship was weak (Weinberg and Abramowitz 2002). Thus, the two variables were entered in the model. The reference groups were: Korean men; those who had less than a college education; those who had a yearly household income of less than $30,000; and those who lived in the US between 5 and 10 years.

In the final model (step 4), when self-reported discrimination was entered, the effect of acculturative stress diminished. English language proficiency (beta = −.13, $p<.05$) and discrimination (beta = .35, $p<.001$) were significantly associated with the level of depression after controlling for sociodemographic factors, years in the US, and acculturative stress. This final model was significant and accounted for 22.7% of the variance in the depression score ($p<.001$).

Discussion

The purpose of this study was to explore the prevalence of depressive symptoms among Korean immigrants in NYC by examining the relationship between depression and self-reported acculturation stress; discrimination experiences; and different sociodemographic variables. The relationship between immigrants' psychological issues and self-reported discrimination experiences during the acculturation period is rarely studied, and existing reports present inconsistent outcomes. The limited research on depression in Korean immigrants suggests that they are at elevated risk for emotional difficulties, including depression and anxiety (Kim et al. 2005; Kuo 1984; Shin 1993).

In this study, the prevalence of depression among Korean immigrants was almost twice the rate of depression found in the general US population. This finding is consistent with that of previous studies, which report higher scores of depressive symptoms among Korean Americans compared to US community samples (Oh et al. 2002), and also compared to members of other racial/ethnic groups (Jang et al. 2005), including other Asian immigrant groups (Kuo 1984).

Studies have demonstrated that recent immigrants are at a higher risk for depression due to acculturative stress (Berry 2006; Choi 1997; Noh and Kaspar 2003; Oh et al. 2002; Shin 1993). However, the studies examining the relationship between depression and acculturative stress (Choi 1997; Noh and Kaspar 2003; Oh et al. 2002; Shin 1993) did not include discrimination as a predictor of depression along with acculturative stress. This study included both acculturative stress and discrimination, and examined the effects of both and found a positive relationship between acculturative stress and depression, but discrimination had a relatively stronger effect than acculturative stress. Examining both factors is important in understanding multiple stressors that many immigrants face as they adopt to the mainstream society at different stages of acculturation. One explanation why discrimination was significantly associated with depression is that while acculturative stress is a stress reaction in response to life events that are rooted in the experience of acculturation (Berry 2006); discrimination can be experienced throughout one's lifetime. In our sample, the mean number of years in the US was 14, indicating that many participants were not recent immigrants; it is therefore possible that their acculturative stress has diminished somewhat, even while they still reported significant discrimination experiences. The findings of this study indicated that discrimination experiences were significantly associated with levels of depression among Korean Immigrants. This finding was in line with the study

conducted by Noh and Kaspar (2003) in which the effects of overt and subtle forms of racial discrimination on mental health in Korean immigrants were investigated. The authors found that overt discrimination was linked to erosion of positive affects, whereas a subtle form of discrimination was associated with depressive symptoms. In our study, the majority of the respondents had experienced being treated with less courtesy or respect than other people. These types of discrimination experiences can often be subtle and accumulative over time. Repeated discrimination experienced by immigrants might question the legitimacy of their new membership and acceptance into the larger society (Noh et al. 2007). Overall, discrimination experiences, in its accumulated effect, can create significant stress, putting vulnerable populations such as immigrants, at potentially high risk for depression and other forms of emotional distress.

One important element to consider when studying immigrant groups is that cultural factors may contribute to higher depression scores. For example, several scholars claim that Koreans tend to endorse less positive affects, possibly due to a cultural emphasis on modesty and humility, thereby inflating their depression scores (Cho and Kim 1998; Noh et al. 1992). Therefore, the CES-D-K used in this study was tested by the researchers for the validity and reliability of the CES-D to the Korean population (Cho and Kim 1998), paying particular attention to the culturally different mode of expression of depressive feelings and thoughts that Koreans tend to score low to positively expressed questions, i.e. “Are you happy?” when rating depression scores. Therefore, the researchers (Cho and Kim 1998) validated a higher cut-off point for the CES-D-K than would be appropriate for a Western population.

Acculturation status in our study, measured by years in the US and self-reported language proficiency, was negatively correlated with depression. The result of our study confirmed a previous finding (Shin in press) that immigrants who had lived in the US between 5 and 10 years reported higher levels of depression. Shin (in press) found that many Korean immigrants are able to achieve a relatively stable life 3–5 years after immigration, called the “resolution stage”; as they gain familiarity with American culture, secure better employment, stabilize their income and improve their English proficiency; they gain more confidence and mastery over their new life and environment. Shin claimed that the initial immigration period of the first three to five years after immigration was particularly stressful for many Korean immigrants because the acculturation process requires great financial sacrifice and energy. Some Korean immigrants are not able to achieve this “resolution stage”; similarly, Korean immigrants in our sample, who had lived in the US more than 5 years and failed to reach the “resolution stage”, can be more vulnerable to emotional distress and depression than those who succeeded.

The following socio-demographic characteristics in this study indicated a significant relationship with depressive symptoms: household income, length of residency, marital status, education, and living alone. Socioeconomic status (SES) and education are reported to be important variables in relation to depression, but are often neglected in studies of Korean Americans (Kim et al. 2005), and household income and length of US residency are also reported to be related to depression (Everson et al. 2002; Muramatsu 2003; Oh et al. 2002). People in the lower economic status are disadvantaged because they encounter greater stressful life events and challenges compared to the people in higher economic classes. However, they have less access to resources to help themselves out of hardships (Kessler and Cleary 1980). In this study, a large number of respondents were highly educated, with approximately 65% having at least some college- to graduate-level education; education was positively correlated with depression, indicating that those with more education tended to be less depressed. This finding is consistent with another study (Shin 1993) which suggests that Korean immigrants with more education and greater financial resources are better able to cope with the stresses associated with immigration. It is

possible that more educated individuals may be better equipped intellectually and emotionally to navigate through a new environment, may have a greater network of connections to secure employment, and may have a greater social network for themselves and their families than do less educated people. This assumption is supported by a study (Oh et al. 2002) which reported that immigrants who have advanced their education in the United States and achieved high incomes could perceive the environment as benign and benevolent, compared with those lower in US education and income.

Other significant SES in relation to depression is marital status and living arrangements. Respondents who reported being single or living alone showed higher levels of depression than those who reported being married or living with others. Several studies reported that social support reduces depression (Choi 1997; Kim et al. 2005; Lee et al. 2004) and that the depression experienced by Korean immigrants may be mitigated by the availability of social support by buffering psychosocial stressors (Shin 1993). Shin also reports that an individual who has access to a support network, whether or not this network is used by this individual, might benefit psychologically from it, and also might benefit from the actual supportive behaviors received from that network, including both tangible assistance and expressions of caring and concern. Family and social support serve an important function for Korean immigrants. The traditional Korean culture places a strong emphasis on family inter-dependence, and insulates members from stressful conditions by being supportive both financially and socially (Kim et al. 2005; Oh et al. 2002). Therefore, Korean immigrants seldom reveal their or other family members' depressive symptoms to others outside the family out of fear of “losing face” and bringing disgrace to the entire family (Kim 1997). As stated earlier, Korean culture is heavily influenced by Confucianism with its emphasis on family integrity and group conformity. For the sake of group harmony, an individual is expected to manage his or her own problems and avoid burdening the family. Being single and living alone might limit further social and familial support, thereby exacerbate psychological distress, wherein individuals are expected to regulate feelings of depression on their own and those who cannot do so are likely to be seen as lacking in willpower (Pang 1998).

This study showed no significant relationships between depression and the sociodemographic characteristics of age, gender, age at the time of immigration, neighborhood ethnic composition, and religious affiliation. Although Korean women reported higher mean scores on the CES-D-K than did men, these differences were not statistically significant, a finding at odds with the popular view of the relationship between gender and depression. In fact, although a number of studies report higher levels of depression in women than in men, others do not (Oh et al. 2002), so the relationship between gender and depression is still inconclusive (Banks et al. 2006). It is possible that acculturative stress may add to depressive symptoms regardless of gender.

The literature also presents mixed results about the relationship of age to depression. One study reported a high rate of depression among Asian immigrants older than age 65, including Korean immigrants (Mui and Kang 2006). The authors claimed that depression might occur frequently in older Asian immigrants because they may have limited resources to deal with the multiple losses associated with the process of adaptation, acculturation, and family disruption. However, another study reported that older respondents had lower depression scores (Oh et al. 2002).

Several limitations of this study need to be noted. First, this study is cross-sectional, so no causal inferences can be made. Secondly, the results are based on self-report measures. Although the researchers assured each participant anonymity and confidentiality, it is possible that some might not have answered all questions honestly. Thirdly, due to the

convenience sampling, the findings can not be generalized. Additionally, in the sampling criteria, we did not limit only one member of each family to participate in the survey; and there was also a bias for a potential contamination of the survey information generated by the same family members. Fourthly, the participants were Korean immigrants residing in NYC, a majority of whom had a college education. Thus, they do not represent Korean immigrants to the US and US-born Korean Americans in general. Lastly, as indicated earlier, the ASS may not have been fully relevant to this population; further study may be needed to develop a more relevant acculturation stress screening tool.

Despite these limitations, this study contributes to a deeper understanding of the relationship between depression, self-reported discrimination and particular sociodemographic factors among Korean immigrants. The results suggest that health and mental health care practitioners need to be keenly aware of the impact of discrimination on mental health when treating patients from this population. The significant relationship found here between depressive symptoms and household income, length of residency, marital status, education, and living alone provide important information for clinicians and researchers. Perhaps a more thorough screening for depression can be given by health care providers to this particular group of Korean immigrants through community health fairs or health clinics. Further studies need to be conducted throughout the US to determine the severity of depression in this population and to test the findings reported here.

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Table 1

Sociodemographic characteristics

Variables	%
Gender	
Male	43.4
Female	56.6
Age	
<30 Years	14.6
31–40	21.6
41–50	19.9
51–60	21.3
61 and over	22.6
Marital status	
Married	65.1
Single	34.9
Education	
Primary school	1.7
Middle school	4.7
High school	29
College	53.3
Graduate school	11.3
Income	
Less than $30,000	40.9
$30,000–$59,999	36
$60,000–$89,999	13.3
$90,999 or more	9.9
Age at immigration	
<17	10.2
18–34	51
≥35	38.8
Acculturative stress	
Mean	2.8
SD	1.9
Range	0–9
Discrimination	
Mean	15.3
SD	7
Range	9–43
Religion	
Protestant	55.2
Buddhism	6.6
Catholic	24.6

Variables	**%**
No religion	13.6
Other religion	1
Years in the US	
<5 Years	15.3
5–10	28
11–20	27.7
More than 20 years	29
Neighborhood	
<25% of same ethnicity	47
25–50% of same ethnicity	33.9
>50% of the same ethnicity	19.1
English proficiency Speaking	
Poor/fair	78.3
Good/excellent	21.7
Reading	
Poor/fair	76.6
Good/excellent	23.4
Writing	
Poor/fair	80.6
Good/excellent	19.4

More than 100% due to rounding

Table 2

Descriptive statistics on discrimination scale

Item	Almost everyday (%)	At least once week (%)	Few times month (%)	Few times year (%)	Less than once year (%)	Never (%)
Treated with less courtesy	1.0	7.6	8.7	22.6	20.8	39.2
Treat with less respect than other people	1.4	5.5	8.7	14.5	24.9	45.0
Receive poorer service than other people at restaurants or stores	0.4	1.7	2.8	14.9	23.9	56.4
People act as if they think you are not smart	1.0	2.4	3.8	11.5	20.8	60.4
People act as if they are afraid of you	0	1.7	2.1	9.8	12.5	73.9
People act as if they think you are dishonest	0	2.8	1.7	4.2	13.9	77.4
People act as if you are not as good	0.4	3.9	2.8	10.5	21.3	61.2
Called names or insulted	0.4	0.7	3.8	7.7	23.3	64.1
Threatened or harassed	2.3	1.5	3.0	3.4	11.7	78.0

Table 3

Acculturative stress

Items	Yes (%)	No (%)
Do you feel guilty for leaving family or friends in your country of origin?	13.6	86.4
Do you feel that in the US you have the respect you had in your country of origin?	23.1	76.9
Do you feel that living out of your country of origin has limited your contact with family or friends?	42.1	57.9
Do you find it hard interacting with others because of difficulties you have with the English language?	60.4	39.6
Do people treat you badly because they think you do not speak English well or speck with an accent?	23.7	76.3
Do you find it difficult to find the work you want because you are of Asian descent?	30.5	69.6
Have you been questioned about your legal status?	24.9	75.1
Do you think you will be deported if you go to a social or government agency?	7.2	92.8
Do you avoid seeking health services due to fear of immigration officials?	5.8	94.2

Table 4

Pearson correlations

Variables	1	2	3	4	5	6	7
Age							
Age at immigration	.73**						
Years in the US	.67**	−.02					
English proficiency	−.16**	.37**	.20**				
Discrimination	.17**	−.08	−.18**	−.11			
Acculturative stress	−.15*	.04	−.27***	−.25***	.40***		
CES-D-K score	−.03	−.04	−.011	−.27***	−.38**	.23	

* $p < .05$;

** $p < .01$;

*** $p < .001$

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Table 5

A hierarchical multiple regression

Variables	Beta	SE	R^2
Step 1			.03*
Marital status	.07	1.29	
Education	−.13*	1.28	
Income		−.07	1.27
Step 2			.09***
Marital status	.1	1.27	
Education	−.07	1.31	
Income		−.04	1.24
English proficiency	−.21**	.32	
Years in the US	−.13*	1.26	
Step 3			.12***
Marital status	.11	1.25	
Education	−.08	1.29	
Income		−.04	1.22
English proficiency	−.16*	.32	
Years in the US	−.07	1.29	
Acculturative stress	.19**	2.88	
Step4			.23***
Marital status	.08	1.17	
Education	−.09	1.12	
Income		−.04	1.15
English proficiency	−.13*	.30	
Years in the US	−.05	1.22	
Acculturative stress	.06	2.89	
Discrimination		35**	.73

* $p < .05$;

** $p < .01$;

*** $p < .001$