Asian Journal of Counselling, 2006, Vol. 13 No. 2, 235–270

The Relationship Among Acculturation, Acculturation Stress, and Depression for a Korean and a Korean–American Sample

Peter Ji

University of Illinois at Chicago

Changming Duan

University of Missouri – Kansas City

The relationships among acculturation, acculturation stress, and depression among a sample of 177 Koreans and Korean Americans were examined. Results showed that 49% of the participants obtained a score on a depression scale that would indicate a diagnosis of depression. A path analysis indicated that both acculturation and acculturation stress were predictors of the depression scale scores. Discussion focused on how the results could be interpreted within the context of the Korean culture. The possibility that Western measures of depression were culturally biased to the Koreans' and Korean Americans' disadvantage was also discussed.

A number of studies have consistently reported that Koreans and Korean Americans were more likely than White Americans to be assessed as being depressed, according to various Western depression

Correspondence concerning this article should be addressed to Peter Ji, Institute of Health Research and Policy, University of Illinois at Chicago, 1747 W. Roosevelt Road, Room 558, M/C 275, Chicago, IL 60608, U.S.A. E-mail: petji@uic.edu

measures (Aldwin & Greenberger, 1987; Cho & Kim, 1998; Cho, Nam & Suh, 1998; Fugita & Crittenden, 1990; Park, Upshaw, & Koh, 1988). This finding was consistent even in comparison to other ethnic groups (Flaskerud & Hu, 1992), other Asian groups (Crittenden, Fugita, Bae, Lamug, & Un, 1992; K. I. Kim, Li, & Kim, 1999; L. S. Kim & Chun, 1993; Kuo, 1984; Mui, 2001; Nakane et al., 1991), regardless of the geographic location of the studies (Hurh & Kim, 1990; Jho, 2001; Noh, Speechley, Kaspar, & Wu, 1992; Shin, 1993), and even if different assessment instruments were used to diagnose the depression (Crittenden et al., 1992; Kuo, 1984; Sung, Lubin, & Yi, 1992). This phenomenon is intriguing and explanations have not yet been explicit.

Reported research evidence concerning the demographic characteristics of Koreans' depression profiles makes this phenomenon even more thought-provoking. Based on results obtained from Western depression measures in both the U.S. (Noh, Wu, Speechley, & Kaspar, 1992) and Korea (Fugita & Crittenden, 1990; O. Kim, 2001; Mui, 2001), researchers have reported that Korean women are more likely than men to be assessed as depressed. Additionally, Koreans with a lower income or education level, or who were unemployed, were likely to be assessed as depressed (Hurh & Kim, 1990; Noh, Speechley, et al., 1992).

What is it that led Koreans and Korean Americans to being assessed as depressed, according to Western instruments? The majority of Koreans living in the U.S. are first or second generation of Korean Americans or Koreans who have immigrated to the U.S. (B. S. K. Kim, Brenner, Liang, & Asay, 2003). Unavoidably, they need to focus on adjusting to living in a culture that is very different from their own. This adjustment process is consuming and constitutes an integral part of Korean immigrants' life. Thus, no understanding of their psychological health, such as depression, is possible without an examination of their culture and cultural experiences.

One potential cultural explanation for the elevated diagnosis of depression among Korean immigrants is acculturation stress. Acculturation stress refers to the difficulties a person has while adjusting to the daily living tasks in a foreign environment (Berry, 1980; U. Kim, 1991; Kuo, 1984; Palinkas, 1982; Phinney, 1990). For example, many Korean immigrants have to learn a new language (Hurh & Kim, 1990), deal with limited employment opportunities (Hurh & Kim, 1990; Nah, 1993), or face intergenerational cultural conflicts within the family (Kuo, 1984; Nah, 1993; Noh, Wu, Speechley, et al., 1992; Shin, 1993). It is reasonable to assume that these sources of acculturation stresses can lead to psychological problems, such as depression (Berry, Kim, Minde, & Mok, 1987; Hirayama & Cetingok, 1988; Lin et al., 1992; Noh, Speechley, et al., 1992). However, direct evidence showing the relationship between acculturation stress and depression is sparse and non-conclusive. Shin's (1993) study found that acculturation stress did not predict depression after controlling for demographic variables, such as a person's length of residence in the U.S. However, the study used only one survey item to measure acculturation stress, so the non-relationship could be due to a lack of precision in how acculturation stress was measured.

Acculturation stress can vary according to a combination of the demographics and the cultural orientation of the Korean individual. For example, male and female Korean immigrants may experience stress because they must be wage earners in a foreign country, but compounding this stress may be difficulties in reconciling value orientations over males' and females' division of labor and domestic roles within a family (Hurh & Kim, 1990; S. Kim & Rew, 1994). Acculturation stress might also be different for first- and second-generation Koreans. For example, second-generation Koreans may have to adjust to their families' pressure to be academically successful (Aldwin & Greenberger, 1987; Sung et al., 1992). First- and second-

generation Koreans may also experience acculturation stress due to generational conflicts that are based on differences of cultural orientation. For example, first- and second-generation Koreans may have traditional or contemporary views regarding the role expectations of family members (Hurh & Kim, 1990). These differences in cultural views may result in stress. For example, Aldwin and Greenberger (1987) found that Korean–American college students who perceived their parents as adhering toward traditional Korean values were more depressed than Caucasian college students. Thus, acculturation stress can include stress due to daily functioning in a foreign environment, but also include adjusting to different cultural value orientations.

One cultural factor that describes the different cultural orientations of members within an ethnic group is acculturation. Within-group differences exist since a common ethnicity does not necessarily dictate that each member adopts the values, attitudes, and behaviors that are associated with that group (Phinney, 1992, 1996; Sodowsky, Kwan, & Pannu, 1995; Tata & Leong, 1994). Within-group differences exceed between-group differences on most psychological constructs including acculturation (Phinney, 1992; Sodowsky, Kwan, et al., 1995; Tata & Leong, 1994). Like acculturation stress, acculturation is an accompanying phenomenon in Koreans' and Korean Americans' adjustment to the host U.S. culture. In this context, acculturation refers to the degree to which a person reconciles one's own culture's values, attitudes, preferences, and behaviors with those of the host culture (Berry, 1980; Phinney, 1990; Suinn, Khoo, & Ahuna, 1995; Suinn, Rickard-Figueroa, Lew, & Vigil, 1987).

Demographic factors are associated with a person's degree of acculturation with the host culture. For example, a member's degree of acculturation is related to demographic variables such as age, generation-status, the amount of time spent in a foreign country

(Phinney & Alipuria, 1990; Rosenthal & Feldman, 1992; Smith, 1991; Sodowsky, Kwan, et al., 1995; Sodowsky, Lai, & Plake, 1991; Sue & Sue, 1990; Suinn, Rickard-Figueroa, et al., 1987). Smith (1991) states that a member's degree of acculturation might be influenced by the quality of the member's interactions with other ethnic group members, the member's position in the social order, and the willingness of the member to be guided by the ethnic group's norms, standards and goals. Thus, in addition to demographic factors, cultural values and behaviors should also be accounted for when assessing a person's degree of acculturation.

Acculturation is a worthy variable that may help measure the heterogeneity that exists within racial/ethnic immigrant groups, and how this heterogeneity may lead to different levels of psychological adjustment (Ponterotto & Casas, 1991). For example, acculturating toward the host culture may produce cognitive dissonances, such as deciding to relinquish old and familiar cultural identities, values or orientations and adopt new ones, and such dissonances can be a source of stress, referred to as acculturation stress (U. Kim, 1991; Kuo, 1984; Palinkas, 1982). Past research that used demographic differences as a proxy for within-group differences left the question concerning the role of a member's degree of acculturation in predicting depression literally unanswered. There is limited evidence that shows a link between depression and traditional Korean cultural values, such as being submissive or fear of bringing shame to the family (Aldwin & Greenberger, 1987; Atkinson & Gim, 1989; Bae & Crittenden, 1989; Choi, Kim, & Choi, 1993; Crittenden et al., 1992; J. U. Kim, 1991; Leong, 1986; Tata & Leong, 1994). Aldwin and Greenberger (1987), for instance, found that Koreans who subscribed to traditional value orientations scored as depressed on a Western depression scale compared to Caucasians. Again such research failed to explore possible within-group differences among Koreans and Korean Americans, and

thus was unable to answer the question concerning the role of acculturation in predicting depression as defined and assessed by Western standards.

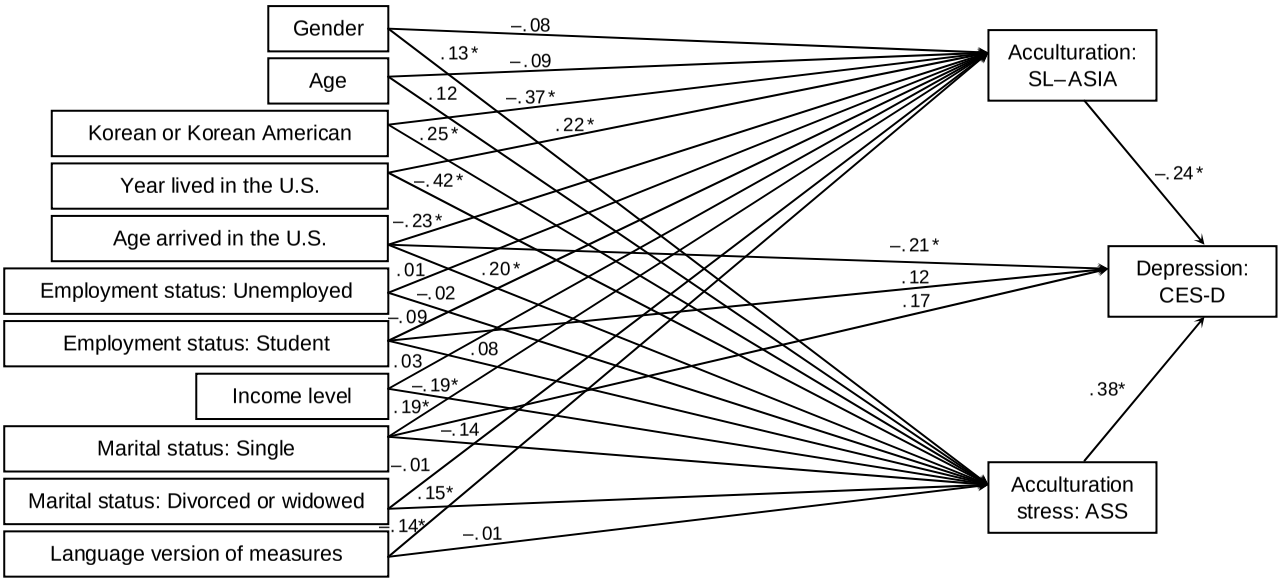
To improve our understanding of depression among Koreans living in the U.S, we examined the relationship among acculturation and acculturation stress with depression scale scores. To assess the multiple effects of demographic variables, acculturation, and acculturation stress on depression, we used a path analysis (Figure 1). In our path model, we first accounted for known demographic predictors, such as gender, employment, length of time spent in the U.S., on acculturation, acculturation stress, and depression scale scores (Kuo, 1984; Noh, Speechley, et al., 1992; Noh, Wu, Speechley, et al., 1992; Phinney & Alipuria, 1990; Rosenthal & Feldman, 1992; Smith, 1991; Sodowsky, Kwan, et al., 1995; Sodowsky, Lai, et al., 1991; Sue & Sue, 1990; Suinn, Rickard-Figueroa, et al., 1987). We then used acculturation and acculturation stress, as representations of cultural predictors, to predict scores obtained on a depression scale. We hypothesized that participants with high acculturation stress would have scores indicating the presence of depression. We also hypothesized that participants who were Asian-acculturated would have scores indicating the presence of depression.

Method

Participants

A total of 177 Koreans and Korean Americans residing in the U.S. participated in the study. Koreans were defined as those participants who were born in Korea and who were currently residing in the U.S. Koreans include international students who were originally from Korean and came to the U.S. to study at a college or university. Korean Americans were defined as those participants who were born in the U.S. and whose families of origin were originally from Korea.

Figure 1. Path Model



Notes: 1. Parameter estimates are displayed above its path.

2. Gender: 0 = Male, 1 = Female. Language version of measures: 0 = English, 1 = Korean. Marital status was dummy coded with married as the baseline. Employment status was dummy coded with employed as the baseline. SL–ASIA (Suinn–Lew Asian Self-Identity Acculturation Scale): Higher scores indicate that participant identifies with Western culture; lower scores indicate that participant identifies with Eastern culture. ASS (Acculturation Stress Scale): Higher scores indicate that participant experiences more acculturation stress. CES-D (Center for Epidemiologic Studies Depression Scale): Higher scores indicate that participant experiences depression.

3. * denotes parameter was significant at $p < .05$.

Participants indicated their demographic status on the survey; however, due to missing data, the sums do not add up to 177, which is the total number of participants. Regarding the sample's sex, 42% (n = 73) were men and 58% (n = 101) were women. Regarding age, 13% (n = 23) were in the 18–21 age range, 38% (n = 67) were in the 21–30 age range, 15% (n = 27) were in the 31–40 age range, 19% (n = 34) were in the 41–50 age range, 12% (n = 22) were in the 51–60 age range, and 1% (n = 2) were in the 61 and older age range. Regarding marital status, 60% (n = 106) were married, 36% (n = 63) were single, with 4% (n = 7) indicating they were either divorced or widowed. Regarding employment status, 45% (n = 78) were employed, 19% (n = 33) were unemployed, and 36% (n = 62) indicated they were students. Regarding nationality, 86% (n = 152) stated they were born in Korea, whereas 14% (n = 24) stated they were born in the U.S. Regarding number of years spent in the U.S., 13% (n = 23) stated they were in the U.S. less than one year, whereas 31% (n = 54) stated they were in the U.S. more than 20 years. Of the 177 participants, 82 (46.3%) completed the English version of the measures and 95 (53.7%) completed the Korean version of the measures.

Instruments

Suinn–Lew Asian Self-Identity Acculturation Scale

The Suinn–Lew Asian Self-Identity Acculturation Scale (SL–ASIA) (Suinn, Khoo, et al., 1995; Suinn, Rickard-Figueroa, et al., 1987) assesses to what degree a person's values, behaviors, preferences, and attitudes reflect those of a person with an Asian or Western background. The scale is a 21-item measure and scores could range from 1.00 (indicative of low acculturation or high Asian identity) to 5.00 (indicative of high acculturation or high Western identity). Alpha coefficient was .88, indicating high reliability. Suinn, Ahuna, and Khoo (1992) established the concurrent validity of SL–ASIA using

correlations with a sample of Asian participants' demographic information, and participants' scores reflected their level of Asian–American identity. The validity of the scale's factor structure was supported when the factor structure was similar across different Asian groups (Suinn, Khoo, et al., 1995). Ponterotto, Baluch, and Carielli (1998) reviewed 16 studies that used the SL–ASIA and found evidence supporting the scale's construct validity.

The SL–ASIA was translated, by the first author, using the model as outlined by Noh, Avison, and Kaspar (1992). The instrument was first translated by a volunteer, who was Korean and proficient in the English language. The translated version was then back-translated to English by a second, independent bilingual Korean volunteer. The authors deemed the Korean and English versions to be equivalent when the item wording from the English back-translated version was similar to the item wording of the original English version. As there is a strong correspondence between the English and Korean versions, this translation and back-translation process needed to be repeated only once to establish the final Korean version of the SL–ASIA.

Acculturation Stress Index

The Acculturation Stress Index (ASI) measures the degree an Asian individual experiences difficulty in adjusting to life in the U.S. (Noh, Wu, & Avison, 1994). The scale consists of thirty-one items rated on a Likert Scale and participants indicate how often they have difficulty as they adjust to living in the U.S. Scores range from 25 (indicating that the participant does not experience acculturation stress) to 124 (indicating that the participant experiences high acculturation stress). The scale measures seven areas of acculturation stress: language difficulty, homesickness, social isolation, social discrimination, sense of cultural marginality, opportunity for occupational and financial mobility, and problems in the family. Alpha coefficient for the total scale was .91.

The discriminant validity of the ASI was demonstrated by low correlations between the ASI and measures that assess a person's level of ethnic group social support (Noh & Kaspar, 2003). Furthermore, the ASI produced factors that were distinct from ethnic group social support and depression constructs (Noh & Avison, 1996). The ASI was translated into Korean by the scale's authors.

The Center for Epidemiologic Studies Depression Scale

The Center for Epidemiologic Studies Depression Scale (CES-D) assesses depression symptoms in the general population and identifies individuals that may be at high risk for depression (Radloff, 1977). The CES-D scale is a 20-item questionnaire and participants indicate how often they have felt either positive or negative moods during the past week. Scores on the CES-D can range from 0 to 60 with scores of 16 or greater indicating a diagnosis of depression. The discriminant validity of the CES-D was supported using correlations with the Rosenberg Self-Esteem Scale and the State-Trait Anxiety Inventory (Orme, Reis, & Herz, 1986). Concurrent validity was supported by correlations between the CES-D and the Beck Depression Inventory (Skorikov & VanderVoort, 2003). The construct validity was supported by a confirmatory factor analysis (Knight, Williams, McGee, & Olaman, 1997). Radloff (1977) reports reliability coefficients of .84 to .90 for the CES-D; Hurh and Kim (1990) found a reliability coefficient of .87 when using the CES-D with a Korean sample.

A Korean version of the CES-D was translated by Noh, Avison, and Kaspar (1992). The translation and back-translation procedure was conducted by the authors and a bilingual Korean who had no familiarity with the CES-D. Content validity of the Korean-version CES-D was established through a direct comparison of the back-translated English items with the CES-D. Construct and concurrent validity of the Korean

CES-D was established via correlation analyses with the Symptom Checklist-90 (Noh, Kaspar, & Chen, 1998) and with the Beck Depression Inventory (Cho & Kim, 1998). Using the Korean CES-D, Cho and Kim (1998) found a reliability coefficient of .89 and the test-retest reliability was .68; Jho (2001) found a reliability coefficient of .87; Hurh and Kim (1990) found a reliability coefficient of .90.

Regarding the mean CES-D scores obtained from Korean samples, Hurh and Kim (1990) surveyed 622 Koreans in the Chicago area and the mean CES-D score for men was 12.3 and that for women was 12.9; S. Kim and Rew (1994) surveyed 76 Korean–American women in a southern U.S. city and obtained a mean CES-D score of 16.5 (*SD* = 9.3); Jho (2001) surveyed 474 women in Seoul, Korea and obtained a mean score of 18.5; Shin (1993) surveyed 262 Korean women in the New York city area and obtained a mean score of 17.4 (*SD* = 9.9); Kuo (1984) surveyed 105 Koreans in the Seattle area and obtained a mean score of 14.37 (*SD* = 7.84); Cho et al. (1998) in a probability sample of 3,711 Korean adults obtained a mean score of 10.57 (*SE* = .14) and 23.1% of males and 27.4% of females were screened as depressed; Noh, Speechley, et al. (1992) surveyed a sample of 1,039 adults in a Canadian city and 4.5% were screened as depressed.

Procedure

Participants were recruited from one university and one suburban community in the Midwest by visiting churches and community organizations (e.g., student academic clubs, Korean-sponsored community events) that were frequented by Koreans. Volunteer participants were given a choice to complete the surveys in English or Korean. Participants completed survey packets immediately or within a week's time and returned them directly to the first author.

Analysis

A path analysis was used to estimate the multiple effects of the demographic variables on acculturation, acculturation stress, and depression and the effects of acculturation and acculturation stress on depression. We used the M-Plus software package version 3.12 (Muthén & Muthén, 2004).

Results

Descriptive Analyses

The overall mean CES-D score for this sample was 16.10 (*SD* = 9.26), which indicated that on average, the participants experienced a mild level of depression and 49% of the participants had CES-D scores of 16 (the cut-off point for depression) or higher. The mean SL–ASIA score for this sample indicates that most participants were Asian acculturated (*M* = 2.24, *SD* = 0.65). The mean ASI score for this sample indicates that the level of acculturation stress was low for this sample (*M* = 99.57, *SD* = 19.83). The SL–ASIA and ASI were significantly correlated ($r = -.48$, $p < .01$). Participants who were more acculturated toward Western culture also experienced less acculturation stress. The SL–ASIA and ASI were significantly correlated with CES-D (SL–ASIA: $r = -.25$, $p < .01$; ASI: $r = .39$, $p < .01$). Participants who were more acculturated with Western culture and participants who experienced less acculturation stress obtained scores on the CES-D that indicated the participants were not depressed.

Table 1 presents the means of the SL–ASIA, ASI, and CES-D by the demographic variables. Mean scores of the SL–ASIA, ASI, and CES-D significantly varied with the language version of the measures, if the participant designated himself or herself as Korean or Korean American, how old the participant was when he or she arrived in the U.S., and the number of years spent in the U.S. The scores of the

SL–ASIA and ASI significantly varied with age and marital status. The scores of the ASI and CES-D significantly varied with income, and the scores of the CES-D significantly varied with employment status.

Main Analysis

To test the hypotheses, a path analysis was conducted (See Figure 1). All the demographic variables predicted the acculturation and acculturation stress variables. The acculturation and acculturation stress variables predicted the depression variable. Modification indices indicated that adding the following demographic variables as predictors of the depression variable would improve the model fit: Age arrived in the U.S., the employment status (student), and the marital status (single). The fit statistics indicated that the model was a good fit ($\chi^2 = 15.91$; $df = 9$, $p = .07$; Comparative Fit Index = .97; Tucker Fit Index = .89; Root mean square of approximation index = .07).

Table 2 lists the parameter estimates for the model's direct effects. Regarding the demographic variables, identifying as Korean or Korean American, the number of years the participant lived in the U.S., and the age the participant arrived in the U.S. were all significantly associated with acculturation and acculturation stress. Koreans were more likely to acculturate toward Asian cultural identities and were more likely to experience acculturation stress. The more years a participant lived in the U.S., the more likely the participant would acculturate toward Western cultural identities and experience less acculturation stress. Participants who arrived in the U.S. at a later age were more likely to acculturate toward Asian cultural identities and experience more acculturation stress. Marital status (single) and the language version of the measures were significantly associated with acculturation. Participants who were single were more likely to identify with Western cultural identities than participants who were married. Participants who completed the Korean version of the measures were more likely to identify with Asian

Table 1. Means and Standard Deviations by Demographic and Main Variables

Demographic variable	Category	SL–ASIA: Ethnic identity		F-test	ASS: Acculturation stress		F-test	CES-D: Depression scale		F-test
		M	*SD*		*M*	*SD*		*M*	*SD*	
Korean or Korean American	Korean American	2.21	0.39	63.46**	12.84	19.53	20.80**	11.42	9.90	5.57**
	Korean	1.13	0.58		33.66	18.72		16.66	9.05	
Gender	Male	1.29	0.66	0.52	29.18	19.14	1.16	15.23	9.01	0.74
	Female	1.21	0.65		32.46	20.25		16.46	9.42	
Age	18–21	1.55	0.71	7.05**	26.96	21.89	3.19**	17.96	10.75	0.77
	21–30	1.47	0.69		26.67	18.94		16.78	9.38	
	31–40	0.85	0.59		42.30	22.41		15.30	8.26	
	41–50	0.98	0.42		33.82	15.88		15.85	9.71	
	51–60	1.07	0.46		33.50	18.23		13.50	7.95	
	61 and over	1.36	0.08		16.00	12.73		11.00	1.41	
How old when arrived in the U.S.?	18 and under	1.55	0.64	19.05**	25.56	17.53	6.67**	18.31	10.71	2.35**
	19–30	1.01	0.47		33.76	17.05		16.07	8.04	
	30–60	0.89	0.42		40.94	18.25		13.84	6.53	
How many years spent in the U.S.?	less than 1 year	0.89	0.27	4.39**	45.04	20.53	3.67**	20.74	8.61	2.23*
	1–2 years	0.72	0.21		45.08	11.12		19.25	7.12	
	2–3 years	0.89	0.34		39.43	17.22		21.14	9.53	
	3–4 years	0.93	0.51		33.00	13.00		14.33	11.02	
	4–5 years	1.03	0.50		39.27	21.60		17.45	6.96	

	5–10 years	1.18	0.46		38.11	23.38		22.22	15.58	
	10–15 years	1.36	0.58		25.56	14.74		15.11	8.33	
	15–20 years	1.69	0.82		25.94	19.04		12.78	9.48	
	over 20 years	1.14	0.58		28.37	13.60		14.78	7.74	
Marital status	Married	0.99	0.50	30.69**	34.92	18.10	12.94**	14.95	8.63	2.54
	Single	1.69	0.67		22.90	18.75		17.21	10.11	
	Divorced or widowed	1.01	0.41		52.43	24.76		21.57	7.39	
Employment status	Employed	1.30	0.67	2.26	27.44	18.73	2.85	12.31	8.24	13.81**
	Unemployed	1.03	0.58		36.58	19.33		18.55	6.97	
	Student	1.29	0.66		32.77	20.99		19.50	9.71	
Income	Below 5,000	1.40	0.69	0.89	34.42	27.16	2.61*	17.25	9.25	2.27*
	5,000–9,999	1.31	0.71		29.78	16.04		18.11	13.46	
	10,000–19,999	1.01	0.43		43.52	20.10		18.35	7.61	
	20,000–24,999	1.38	0.82		32.53	24.86		21.18	13.34	
	25,000–29,999	1.29	0.50		28.38	16.70		16.00	10.92	
	30,000 and over	1.23	0.67		28.16	16.83		14.33	7.85	
Language version of measures	English	1.58	0.66	55.13**	25.18	19.19	16.49**	14.16	10.28	6.92**
	Korean	0.95	0.49		36.82	18.86		17.77	7.95	

Notes: 1. SL–ASIA (Suinn–Lew Asian Self-Identity Acculturation Scale): Higher scores indicate that participant identifies with Western culture; lower scores indicate that participant identifies with Eastern culture. ASS (Acculturation Stress Scale): Higher scores indicate that participant experiences more acculturation stress. CES-D (Center for Epidemiologic Studies Depression Scale): Higher scores indicate that participant experiences depression.

2. * denotes F-test was significant at $p < .05$.

3. ** denotes F-test was significant at $p < .01$.

Table 2. Parameter Estimates for Path Model

Outcome variable	Predictor variable	Parameter estimate	Standard error	Estimate/*SE*	Standard estimate
Acculturation Stress (ASS)	Gender	5.29*	2.54	2.08	.13
	Age	1.83	1.56	1.17	.12
	Korean or Korean American	15.82*	4.88	3.24	.25
	Years lived in the U.S.	−2.68*	0.55	−4.88	−.42
	Age arrived in the U.S.	5.94*	2.59	2.30	.20
	Employment status (Unemployed)	−1.03	3.59	−0.29	−.02
	Employment status (Student)	3.17	3.66	0.87	.08
	Income level	−2.22*	0.75	−2.95	−.19
	Marital status (Single)	−5.77	3.88	−1.49	−.14
	Marital status (Divorced or widowed)	14.76*	6.20	2.38	.15
	Language version of measures	−0.17	2.88	−0.06	−.01
Acculturation (SL−ASIA)	Gender	−0.10	0.08	−1.25	−.08
	Age	−0.04	0.05	−0.80	−.09
	Korean or Korean American	−0.79*	0.14	−5.64	−.37
	Years lived in the U.S.	0.05*	0.02	2.50	.22
	Age arrived in the U.S.	−0.23*	0.08	−2.88	−.23

	Employment status (Unemployed)	0.01	0.11	0.09	.01
	Employment status (Student)	−0.13	0.11	−1.18	−.09
	Income level	0.01	0.02	0.50	.03
	Marital status (Single)	0.26*	0.12	2.17	.19
	Marital status (Divorced or widowed)	−0.04	0.19	−0.21	−.01
	Language version of measures	−0.19*	0.09	−2.11	−.14
Depression (CESD)	Acculturation	−3.35*	1.17	−2.87	−.24
	Acculturation stress	0.18*	0.04	4.50	.38
	Age arrived in the U.S.	−2.82*	1.17	−2.42	−.21
	Employment status (Student)	2.22	1.47	1.51	.12
	Marital status (Single)	3.32	1.75	1.90	.17

Notes: 1. Gender: 0 = Male, 1 = Female. Language version of measures: 0 = English, 1 = Korean. Marital status was dummy coded with “married” as the baseline. Employment status was dummy coded with “employed” as the baseline. SL–ASIA (Suinn–Lew Asian Self-Identity Acculturation Scale): Higher scores indicate that participant identifies with Western culture; lower scores indicate that participant identifies with Eastern culture. ASS (Acculturation Stress Scale): Higher scores indicate that participant experiences more acculturation stress. CES-D (Center for Epidemiologic Studies Depression Scale): Higher scores indicate that participant experiences depression.

2. * denotes parameter was significant at $p < .05$.

cultural identities than participants who completed the English version of the measures. Gender, income, and marital status (divorced) were significantly associated with acculturation stress. Females were more likely to experience acculturation stress than males. Participants who reported earning lower income levels were more likely to experience acculturation stress than those who reported earning higher income levels, and participants who were divorced or widowed experienced more acculturation stress than those who were married.

Our first hypothesis was that the acculturation stress would be significantly associated with scores on depression scales. This parameter estimate was significant. Participants who experienced more acculturation stress were more likely to have higher scores on the CES-D depression scale. Our second hypothesis was that acculturation would be significantly associated with scores on depression scales. This parameter estimate was also significant. Participants who were more acculturated toward Western cultural identities were more likely to have lower scores on the CES-D depression scale. In addition, the parameter estimate for the variable "Age arrived in the U.S." was significant. Participants who arrived in the U.S. at a later age were more likely to have lower scores on the CES-D depression scale.

The path model was examined for mediating effects of the demographic variables on the CES-D, but none were found. The addition of an interaction effect between acculturation and acculturation stress resulted in a poor fitting model. However, indirect effects were found (see Table 3) for gender (participants who identified as either Korean or Korean American), years a participant lived in the U.S., the age a participant arrived in the U.S., income, and marital status (single and divorced or widowed). Participants who were female were likely to have higher scores on the CES-D depression scale because of the indirect cumulative effects of gender on acculturation and acculturation

stress. Participants who identified as Korean were likely to have higher scores on the CES-D depression scale because of both the individual indirect and cumulative effects of acculturation and acculturation stress. Participants who lived in the U.S. longer had lower scores on the CES-D depression scale because of both the individual indirect and cumulative effects of both acculturation and acculturation stress. Participants who had higher income were more likely to have lower scores on the CES-D depression scale because of the individual indirect effect of acculturation stress. Participants who were single were likely to have lower scores on the CES-D depression scale because of the individual indirect effect of acculturation, and participants who were divorced or widowed were likely to have higher scores on the CES-D depression scale because of the individual effects of acculturation stress.

Discussion

Consistent with the results of previous studies (Aldwin & Greenberger, 1987; Cho & Kim, 1998; Cho et al., 1998; Crittenden et al., 1992; Flaskerud & Hu, 1992; Fugita & Crittenden, 1990; Hurh & Kim, 1990; Jho, 2001; K. I. Kim et al., 1999; L. S. Kim & Chun, 1993; Kuo, 1984; Mui, 2001; Nakane et al., 1991; Noh, Speechley, et al., 1992; Park et al., 1988; Shin, 1993), the overall mean CES-D score for this sample was high and the standard deviation indicated that some participants experienced no depression yet others did experience high levels of depression. Almost half of the participants obtained scores on the CES-D that met the criterion for being diagnosed as depressed. This percentage is much higher than the norm (21%) established for the general population (Radloff, 1977) and is similar to previous research that used a Korean sample. This finding is intriguing and disturbing, and warrants good explanations. The result of our hypotheses testing offers possible explanations for this phenomenon.

Table 3. Indirect Effect Estimates

Indirect effect	Special indirect effect	Parameter estimate	Standard error	Estimate/ *SE*	Standardized parameter estimate
Gender to depression	Acculturation	0.34	0.28	1.21	0.02
	Acculturation stress	0.93	0.49	1.89	0.05
	Sum of indirect effect	1.28*	0.55	2.32	0.07
Age to depression	Acculturation	0.15	0.16	0.94	0.02
	Acculturation stress	0.32	0.28	1.14	0.05
	Sum of indirect effect	0.47	0.33	1.42	0.07
Korean or Korean American to depression	Acculturation	2.64*	1.04	2.54	0.09
	Acculturation stress	2.79*	1.03	2.71	0.09
	Sum of indirect effect	5.43*	1.36	3.99	0.18
Years lived in the U.S. to depression	Acculturation	−0.16	0.08	−2.00	−0.05
	Acculturation stress	−0.47*	0.13	−3.62	−0.16
	Sum of indirect effect	−0.63*	0.14	−4.50	−0.21
Age arrived in the U.S. to depression	Acculturation	0.76*	0.37	2.05	0.06
	Acculturation stress	1.05*	0.51	2.06	0.08
	Sum of indirect effect	1.80*	0.59	3.05	0.13
Employment status (Unemployed) to depression	Acculturation	−0.02	0.36	−0.06	0.00
	Acculturation stress	−0.18	0.64	−0.28	−0.01
	Sum of indirect effect	−0.20	0.74	−0.27	−0.01

Employment Status (Student) to depression	Acculturation	0.43	0.40	1.08	0.02
	Acculturation stress	0.56	0.66	0.85	0.03
	Sum of indirect effect	0.99	0.77	1.29	0.05
Income to depression	Acculturation	–0.04	0.08	–0.50	–0.01
	Acculturation stress	–0.39*	0.15	–2.60	–0.07
	Sum of indirect effect	–0.44*	0.17	–2.59	–0.08
Marital status (Single) to depression	Acculturation	–0.86	0.49	–1.76	–0.05
	Acculturation stress	–1.02	0.71	–1.44	–0.05
	Sum of indirect effect	–1.88*	0.85	–2.21	–0.10
Marital status (Divorced or widowed) to depression	Acculturation	0.12	0.62	0.19	0.00
	Acculturation stress	2.61*	1.21	2.16	0.06
	Sum of indirect effect	2.73*	1.37	1.99	0.06
Language version of measures to Depression	Acculturation	0.62	0.36	1.72	0.03
	Acculturation stress	–0.03	0.51	–0.06	0.00
	Sum of indirect effect	0.59	0.63	0.94	0.03

Notes: 1. Gender: 0 = Male, 1 = Female. Language version of measures: 0 = English, 1 = Korean. Marital status was dummy coded with “married” as the baseline. Employment status was dummy coded with “employed” as the baseline. SL–ASIA (Suinn–Lew Asian Self-Identity Acculturation Scale): Higher scores indicate that participant identifies with Western culture; lower scores indicate that participant identifies with Eastern culture. ASS (Acculturation Stress Scale): Higher scores indicate that participant experiences more acculturation stress. CES-D (Center for Epidemiologic Studies Depression Scale): Higher scores indicate that participant experiences depression.

2. * denotes parameter was significant at $p < .05$.

It is interesting that not only acculturation stress, which seems to be a logical predictor of depression, but that acculturation also predicted a Korean's score on a depression scale. For Koreans and Korean Americans, being acculturated toward Asian culture seems to predispose them to being vulnerable for depression, as assessed by Western scales. This finding is contrary to the literature that has established that identifying with the values, behaviors, and preferences of one's own ethnic group tends to be associated positively with psychological well-being (Yasuda & Duan, 2002) and coping (for a review, see Phinney, 1990). Perhaps, the expression of certain Korean cultural values and practices can be mistaken as "depressive" (e.g., Aldwin & Greenberger, 1987; Crittenden et al., 1992).

An argument can be made that using Western definitions and measures of depression for diagnosing Koreans and Korean Americans may produce biased results. As stated by Leong (1986), aspects of the Asian personality, such as cultural-bound values and cultural-specific expression of symptoms, could dictate how Koreans may respond on assessment scales. For example, if an individual is acculturated toward the Korean culture, and in turn tends to subdue his or her expression of emotional conflicts, a depression scale may assess the individual as depressed (Sue, 1994; Tata & Leong, 1994). Obviously, it is a disservice to Koreans and Korean Americans to indiscriminately use Western measures to assess their level of depression. Practionners should use measures to assess depression only if the measures have established their validity with Korean populations. Furthermore, practionners should avoid interpreting the assessment results according to a Western perspective. Our study has shown that additional factors, such as acculturation stress, may be a factor that accounts for the results obtained by a Korean on a depression assessment.

However, in this study it should be noted that participants' level of acculturation stress also predicted their scores on the CES-D. It is true that Koreans who are adjusting to living in the U.S. often encounter difficulties that result in psychological stress (e.g., Berry et al., 1987; Noh, Wu, & Avison, 1994; Sodowsky, Kwan, et al., 1995). Our findings support the notion that Koreans and Korean Americans who experience acculturation stress also experience depression. From existing literature, Western or non-Western, plenty of evidence can be gathered to support the relationship between stress and depression. With this perspective, using Western measures of depression to understand Koreans and Korean Americans needs examination. There are two possible scenarios that can be used to understand this phenomenon. One is related to the definition of depression and one is related to its measurement. For Koreans and Korean Americans, perhaps the Western definition of depression encompasses (a) cultural adjustment difficulties, such as acculturation stress, that are directly related to depression, and (b) cultural expressions, such as acculturation, that are indirectly related to, or have no direct relationship with, depression. Western scales do not discriminate between these two elements and when both elements are measured, they could be erroneously assessed as overall indicators of depression.

It should be noted that there was no interaction between acculturation stress and acculturation in predicting depression. This finding further supports the idea that these two factors may be accounting for two separate elements of depression, namely acculturation stress and acculturation. The implication of this finding is that the interpretation of the etiology of depression for Koreans and Korean Americans should be based on the awareness that part of their depression may be due to stress and to the degree they have acculturated to Korean culture.

No mediating effects between the demographic variables and the depression scales, using acculturation and acculturation stress as mediators, were found in our path model. This non-finding suggests that perhaps demographic variables cannot be used as proxies for acculturation or acculturation stress because the demographic variables were too simplistic to capture the complexities of cultural identity. For example, participants who arrived in the U.S. at a later age were more likely to experience acculturation stress and acculturate toward Asian culture. This finding is expected. However, participants who arrived in the U.S. at a later age were also more likely to have lower scores on the CES-D depression scale. This finding is unexpected. One scenario is that perhaps these participants were elderly individuals who were coming to the U.S., only because they had family and other sources of support already in place when they arrived. In turn, the family support helped buffer the potential negative adjustment experience that these elderly individuals might have experienced. In other words, simply assessing demographic variables of an ethnic individual is not enough; a full assessment of an ethnic individual's history is needed to understand exactly how demographic variables, acculturation, and acculturation stress might predict psychological adjustment.

The indirect effects serve as further evidence of the complex relationships between demographic variables and depression scores. For example, gender makes its effects known on depression scale scores by having a cumulative effect on acculturation and acculturation stress. This finding suggests that females who acculturated toward Western culture and experience acculturation stress might have higher scores on depression scales. This finding is intriguing. Our main finding is that acculturation toward Western culture leads to lower scores on depression scales. However, if females acculturate toward Western culture, this effect combined with the indirect effect of acculturation stress suggests that they will have higher scores on depression scales.

Perhaps this finding might indicate the presence of a generational conflict or a marital conflict in which the married partners have different degrees of acculturation. The indirect effects serve as further evidence that cultural variables should be assessed in addition to demographic variables to fully understand potential sources of acculturation stress and depression.

The finding that both acculturation stress and acculturation predicted depression for Koreans and Korean Americans poses challenge for future research to fully explain both the relationship between depression and acculturation stress and that between depression and acculturation. We need to know how depression is experienced and perceived by Koreans and Korean Americans and how it can be assessed without cultural biases. Exclusively using the Western conceptualization and measurement of psychological distress and depression for non-Western populations will result in biases and inaccuracy (Leong, 1986; Sue, 1994). The specific challenges we face include defining depression specifically for Koreans and Korean Americans and differentiating those depressive symptoms that are due to true predictors, such as acculturation stress, from those that are due to cultural factors. Considering the steady increase in the size of Korean and Korean–American population residing in the U.S., this need becomes ever pressing.

If acculturation toward Asian norms and behaviors is related with scores on depression scales for Koreans, what is it about the Korean culture that places its members at a higher risk for being assessed as depressed according to Western-based instruments? Although we provide initial evidence that acculturation and acculturation stress predicts scores on depression scales for our Korean sample, this finding is just the first step in explaining if and why Koreans exhibit higher rates of depression than other Asian ethnic groups and other racial groups. In

other words, are there unique Korean cultural norms, behaviors, or values that can explain this phenomenon? Some authors have speculated that there are cultural norms that are indigenous for Koreans. For example, some reports state that Koreans tend to internalize their reactions, are secretive about their problems, do not want to admit weaknesses, present somatic complaints, and view psychological difficulties as a stigmatizing and threatening experience (S. Kim & Rew, 1994; U. Kim, 1991). Bae and Crittenden (1989) demonstrated that an internal and a self-effacing attribution style is a typical Korean personality trait. Aldwin and Greenberger (1987) suggested that implicit modes of communication may lead to sources of strain between Korean parents and their children. Further research can isolate what culture-specific values, behaviors, or attitudes are unique to Korean culture relative to other Asian groups or other racial groups. Then these aspects of Korean culture would be used to predict scores on Western depression scales.

However, further analysis would be needed to determine if indeed Korean-culture-specific norms and behaviors are considered to be culturally sanctioned and normative within a Korean context. In turn, we would have to determine if those Korean cultural norms would be regarded as pathological on depression assessments that were developed according to a Western perspective (Lin et al., 1992). If this were the case, then interpreting Korean cultural norms as indicators of depression would have to be re-evaluated and a new process of diagnosing depression among Koreans must be developed.

Limitations of the Study

The study was conducted in a Midwestern University site and in a Midwestern suburban area. The sample representation of Koreans and Korean Americans is limited to this geographic region. Future research can attempt to replicate these results with additional and larger samples.

It is likely that the nature of the acculturation stress would differ between Koreans and Korean Americans. The acculturation stress measure includes some items, such as homesickness, that likely would not pertain to Koreans who were born in the U.S. and lived their entire lives there (i.e., the Korean–American participants). As such, the variance of the acculturation stress variable would be affected because such items would not pertain to the Korean–American participants. However, the impact of this limitation on the results was inconclusive and models that included the Korean–American sample did not differ from models that did include this sample. Therefore we included both samples in the model. Future studies could develop scales that distinguish between the types of acculturation stress (e.g., intergenerational conflicts, daily-life stressors) that are experienced by different generations of Koreans and Korean Americans. In turn, researchers can establish how these types of acculturation stress are related to scores on depression scales.

We acknowledge that recent literature has argued that a multi-dimensional approach is needed to measure the fluidity of acculturation (Abe-Kim, Okazaki, & Goto, 2001). The Suinn–Lew scale used a linear model perspective to measure acculturation and this perspective matched our hypothesis regarding the relationship between acculturation and depression scores. With the advent of new measures of acculturation that assess the multi-dimensionality of within-group ethnic differences (e.g., Gim Chung, Kim, & Abreu, 2004; B. S. K. Kim, Li, & Ng, 2005), future research could attempt to replicate these results with these measures. We hope this article will serve as a foundation for future research that uses multi-dimensional approaches for measuring acculturation and its relationship with psychological assessments.

The study's results do not directly address if Western-normed depression instruments are culturally biased and if this bias affects

how the relationship between acculturation, acculturation stress, and depression should be interpreted. We attempted to use acculturation and acculturation stress indicators to account for why Koreans and Korean Americans have high scores on depression scales. The results say nothing about if the scores obtained from Western-normed instruments are by themselves a valid indicator of depression among Koreans and Korean Americans. For example, a depression assessment instrument could be biased because it does not account for how Koreans perceive the helping process (Grieger & Ponterotto, 1995), the manner in which depression symptoms are manifested and expressed according to Korean cultural values (Leong, 1986; Sue, 1994), or why the instrument does not incorporate the Korean culture's perspective of what behaviors are considered to be normal (Leong, 1986). In response, numerous studies have created culture-specific versions of depressions instruments for use with Korean populations to incorporate the cultural meanings of phrases and terms that are used to diagnose depression (e.g., Han, Kim, & Weinert, 2002; Noh, Avison, & Kaspar, 1992). Future research could use two depression scales, one developed using Western-cultural norms and samples and another using Korean-cultural norms and samples and determine if the scores are equivalent and valid. In addition, the relationship between our predictor variables and depression scores might vary if we assessed depression with a Western- versus a Korean-normed scale. Until such research is established, practionners are cautioned to keep cultural variables in mind when using Western-normed instruments.

Clinical Implications

It is always a challenge to consider cultural variables when accurately diagnosing depression. The finding that acculturation stress predicts level of depression for Koreans has clinical implications. Rather than focusing on individual factors of depression, it would behoove clinicians to assess the level of an individual's acculturation stress as a

contributing factor to depression (Leong, 1986; Sue, 1994; Sue & Sue, 1990). The findings of the present study support the notion that psychological symptoms can only be understood within the person's cultural context. It is imperative to consider how Korean cultural values and practices are involved when understanding Koreans' and Korean Americans' experience with depression. Specifically, it is advisable that clinicians be cautious in using Western diagnosis criteria and instruments to assess depression among Koreans and Korean Americans. Perhaps for this cultural group, depression should have different definitions and measurements. Otherwise, it is likely that a person's normative Korean ethnic behaviors and cultural expressions would be mistaken as an expression of depression. Western-based depression measures should be used only after the validity of the diagnosis that is obtained from such measures is established with Korean populations.

Conclusion

This study demonstrated that a high proportion of Koreans and Korean Americans obtained scores on Western scales that indicate depression. This study helped establish the possibility that both acculturation stress and acculturation are predictors of scores on depression scales. The study adds to the growing need to incorporate cultural contexts when understanding the nature of depression within the Korean and Korean–American population.

References

Abe-Kim, J., Okazaki, S., & Goto, S. G. (2001). Unidimensional versus multidimensional approaches to the assessment of acculturation for Asian American populations. *Cultural Diversity and Ethnic Minority Psychology*, *7*(3), 232–246

Aldwin, C., & Greenberger, E. (1987). Cultural differences in the predictors of depression. *American Journal of Community Psychology*, *15*(6), 789–813.

Atkinson, D. R., & Gim, R. H. (1989). Asian–American cultural identity and attitudes toward mental health services. *Journal of Counseling Psychology*, *36*(2), 209–212.

Bae, H., & Crittenden, K. S. (1989). From attributions to dispositional inferences: Patterns of Korean students. *The Journal of Social Psychology*, *129*(4), 481–489.

Berry, J. W. (1980). Acculturation as varieties of adaptation. In A. M. Padilla (Ed.), *Acculturation: Theory, models and some new findings* (pp. 9–26). Boulder, CO: Westview Press.

Berry, J. W., Kim, U., Minde, T., & Mok, D. (1987). Comparative studies of acculturative stress. *International Migration Review*, *21*(3), 491–511.

Cho, M. J., & Kim, K. H. (1998). Use of the Center for Epidemiologic Studies Depression (CES-D) Scale in Korea. *The Journal of Nervous and Mental Disease*, *186*(5), 304–310.

Cho, M. J., Nam, J. J., & Suh, G. H. (1998). Prevalence of symptoms of depression in a nationwide sample of Korean adults. *Psychiatry Research*, *81*(3), 341–352.

Choi, S., Kim, U., & Choi, S. H. (1993). Indigenous analysis of collective representations: A Korean perspective. In U. Kim & J. W. Berry (Eds.), *Indigenous psychologies: Research and experience in cultural context* (pp. 193–210). Newbury Park, CA: Sage.

Crittenden, K. S., Fugita, S. S., Bae, H., Lamug, C. B., & Un, C. (1992). A cross-cultural study of self-report depressive symptoms among college students. *Journal of Cross-Cultural Psychology*, *23*(2), 163–178.

Flaskerud, J. H., & Hu, L. T. (1992). Relationship of ethnicity to psychiatric diagnosis. *The Journal of Nervous and Mental Disease*, *180*(5), 296–303.

Fugita, S. S., & Crittenden, K. S. (1990). Towards culture- and population-specific norms for self-reported depressive symptomatology. *International Journal of Social Psychiatry*, *36*(2), 83–92.

Gim Chung, R. H., Kim, B. S. K., & Abreu, J. M. (2004). Asian American Multidimensional Acculturation Scale: Development, factor analysis,

reliability, and validity. *Cultural Diversity and Ethnic Minority Psychology*, *10*(1), 66–80.

Grieger, I., & Ponterotto, J. G. (1995). A framework for assessment in multicultural counseling. In J. G. Ponterotto, J. M. Casas, L. A. Suzuki, & C. M. Alexander (Eds.), *Handbook of multicultural counseling* (pp. 357–374). Thousand Oaks, CA: Sage.

Han, H. R., Kim, M. T., & Weinert, C. (2002). The psychometric evaluation of Korean translation of the Personal Resource Questionnaire 85-Part 2. *Nursing Research*, *51*(5), 309–316.

Hirayama, H., & Cetingok, M. (1988). Empowerment: A social work approach for Asian immigrants. *Social Casework: The Journal of Contemporary Social Work*, *69*(1), 41–47.

Hurh, W. M., & Kim, K. C. (1990). Correlates of Korean immigrants' mental health. *The Journal of Nervous and Mental Disease*, *178*(11), 703–711.

Jho, M. Y. (2001). Study on the correlation between depression and quality of life for Korean women. *Nursing and Health Sciences*, *3*(3), 131–137.

Kim, B. S. K., Brenner, B. R., Liang, C., & Asay, P. A. (2003). A qualitative study of adaptation experiences of 1.5-generation Asian Americans. *Cultural Diversity and Ethnic Minority Psychology*, *9*(2), 156–170.

Kim, B. S. K., Li, L. C., & Ng, G. F. (2005). The Asian American Values Scale — Multidimensional: Development, reliability, and validity. *Cultural Diversity and Ethnic Minority Psychology*, *11*(3), 187–201.

Kim, J. U. (1991). *The Koreans: Their mind and behavior*. Seoul, Korea: Kyobo Book Centre.

Kim, K. I., Li, D., & Kim, D. H. (1999). Depressive symptoms in Koreans, Korean–Chinese and Chinese: A transcultural study. *Transcultural Psychiatry*, *36*(3), 303–316.

Kim, L. S., & Chun, C. A. (1993). Ethnic differences in psychiatric diagnosis among Asian American adolescents. *The Journal of Nervous and Mental Disease*, *181*(10), 612–617.

Kim, O. (2001). Sex differences in social support, loneliness, and depression among Korean college students. *Psychological Reports*, *88*(2), 521–526.

Kim, S., & Rew, L. (1994). Ethnic identity, role integration, quality of life, and depression in Korean–American women. *Archives of Psychiatric Nursing*, *8*(6), 348–356.

Kim, U. (1991). Acculturation of Korean immigrants: What are the hidden costs? *Korea Observer*, *20*(4), 431–454.

Knight, R. G., Williams, S., McGee, R., & Olaman, S. (1997). Psychometric properties of the Centre for Epidemiologic Studies Depression Scale (CES-D) in a sample of women in middle life. *Behaviour Research and Therapy*, *35*(4), 373–380.

Kuo, W. H. (1984). Prevalence of depression among Asian–Americans. *The Journal of Nervous and Mental Disease*, *172*(8), 449–457.

Leong, F T. L. (1986). Counseling and psychotherapy with Asian–Americans: Review of the literature. *Journal of Counseling Psychology*, *33*(2), 196–206.

Lin, K. M., Lau, J. K., Yamamoto, J., Zheng, Y. P., Kim, H. S., Cho, K. H., & Nakasaki, G. (1992). Hwa-Byung: A community study of Korean Americans. *The Journal of Nervous and Mental Disease*, *180*(6), 386–391.

Mui, A. C. (2001). Stress, coping, and depression among elderly Korean immigrants. *Journal of Human Behavior in the Social Environment*, *3*(3/4), 281–299.

Muthén, L. K., & Muthén, B. O. (2004). *M-Plus user's guide*. Los Angeles: Muthén & Muthén.

Nah, K. H. (1993). Perceived problems and service delivery for Korean immigrants. *Social Work*, *38*(3), 289–296.

Nakane, Y., Ohta, Y., Radford, M., Yan, H., Wang, X., Lee, H. Y., Min, S. K., Michitsuji, S., & Ohtsuka, T. (1991). Comparative study of affective disorders in three Asian countries. II. Differences in prevalence rates and symptom presentation. *Acta Psychiatrica Scandinavica*, *84*(4), 313–319.

Noh, S., & Avison, W. R. (1996). Asian immigrants and the stress process: A study of Koreans in Canada. *Journal of Health and Social Behavior*, *37*(2), 192–206.

Noh, S., Avison, W. R., & Kaspar, V. (1992). Depressive symptoms among Korean immigrants: Assessment of a translation of the Center for Epidemiologic Studies-Depression Scale. *Psychological Assessment*, *4*(1), 84–91.

Noh, S., & Kaspar, V. (2003). Perceived discrimination and depression: Moderating effects of coping, acculturation, and ethnic support. *American Journal of Public Health*, *93*(2), 232–238.

Noh, S., Kaspar, V., & Chen, X. (1998). Measuring depression in Korean immigrants: Assessing validity of the translated Korean version of the CES-D scale. *Cross-Cultural Research: The Journal of Comparative Social Science*, *32*(4), 358–377.

Noh, S., Speechley, M., Kaspar, V., & Wu, Z. (1992). Depression in Korean immigrants in Canada: I. Method of the study and prevalence of depression. *The Journal of Nervous and Mental Disease*, *180*(9), 573–577.

Noh, S., Wu, Z., & Avison, W. R. (1994). Social support and quality of life: Sociocultural similarity and effective social support among Korean immigrants. *Advances in Medical Sociology*, *5*, 115–137.

Noh, S., Wu, Z., Speechley, M., & Kaspar, V. (1992). Depression in Korean immigrants in Canada: II. Correlates of gender, work, and marriage. *The Journal of Nervous and Mental Disease*, *180*(9), 578–582.

Orme, J. G., Reis, J., & Herz, E. (1986). Factorial and discriminant validity of the Center for Epidemiological Studies Depression (CESD) scale. *Journal of Clinical Psychology*, *42*(1), 28–33.

Palinkas, L. A. (1982). Ethnicity, identity and mental health: The use of rhetoric in an immigrant Chinese church. *The Journal of Psychoanalytic Anthropology*, *5*(3), 235–238.

Park, K. B., Upshaw, H. S., & Koh, S. D. (1988). East Asian's responses to Western health items. *Journal of Cross-Cultural Psychology*, *19*(1), 51–64.

Phinney, J. S. (1990). Ethnic identity in adolescents and adults: Review of research. *Psychological Bulletin*, *108*(3), 499–514

Phinney, J. S. (1992). The Multigroup Ethnic Identity Measure: A new scale for use with diverse groups. *Journal of Adolescent Research*, *7*(2), 156–176.

Phinney, J. S. (1996). When we talk about American ethnic groups, what do we mean? *American Psychologist*, *51*(9), 918–927.

Phinney, J. S., & Alipuria, L. L. (1990). Ethnic identity in college students from four ethnic groups. *Journal of Adolescence*, *13*(2), 171–183.

Ponterotto, J. G., Baluch, S., & Carielli, D. (1998). The Suinn–Lew Asian Self-Identity Acculturation Scale (SL–ASIA): Critique and research recommendations. *Measurement and Evaluation in Counseling and Development*, *31*(2), 109–124.

Ponterotto, J. G., & Casas, J. M. (1991). *Handbook of racial/ethnic minority counseling research*. Springfield, IL: C. C. Thomas.

Radloff, L. S. (1977). The CES-D Scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement*, *1*(3), 385–401.

Rosenthal, D. A., & Feldman, S. S. (1992). The nature and stability of ethnic identity in Chinese youth: Effects of length of residence in two cultural contexts. *Journal of Cross-Cultural Psychology*, *23*(2), 214–227.

Shin, K. R. (1993). Factors predicting depression among Korean–American women in New York. *International Journal of Nursing Studies*, *30*(5), 415–423.

Skorikov, V. B., & VanderVoort, D. (2003). Relationships between the underlying constructs of the Beck Depression Inventory and the Center for Epidemiological Studies Depression Scale. *Educational and Psychological Measurement*, *63*(2), 319–335

Smith, E. J. (1991). Ethnic identity development: Toward the development of a theory within the context of majority/minority status. *Journal of Counseling and Development*, *70*(1), 181–188.

Sodowsky, G. R., Kwan, K. L. K., & Pannu, R. (1995). Ethnic identity of Asians in the United States. In J. G. Ponterotto, J. M. Casas, L. A. Suzuki, & C. M. Alexander (Eds.), *Handbook of multicultural counseling* (pp. 123–154). Thousand Oaks, CA: Sage.

Sodowsky, G. R., Lai, E. W., & Plake, B. S. (1991). Moderating effects of sociocultural variables on acculturation attitudes of Hispanics and Asian Americans. *Journal of Counseling and Development*, *70*(1), 194–204.

Sue, D. W. (1994). Asian–American mental health and help-seeking behavior: Comment on Solberg et al. (1994), Tata and Leong (1994), and Lin (1994). *Journal of Counseling Psychology*, *41*(3), 292–295.

Sue, D. W., & Sue, D. (1990). *Counseling the culturally different: Theory and practice* (2nd ed.). New York: John Wiley & Sons.

Suinn, R. M., Ahuna, C., & Khoo, G. (1992). The Suinn–Lew Asian Self-Identity Acculturation Scale: Concurrent and factorial validation. *Educational and Psychological Measurement*, *52*(4), 1041–1046.

Suinn, R. M., Khoo, G., & Ahuna, C. (1995). The Suinn–Lew Asian Self-Identify Acculturation Scale: Cross-cultural information. *Journal of Multicultural Counseling and Development*, *23*(3), 139–148.

Suinn, R. M., Rickard-Figueroa, K., Lew, S., & Vigil, P. (1987). The Suinn–Lew Asian Self-Identity Acculturation Scale: An initial report. *Educational and Psychological Measurement*, *47*(2), 401–407.

Sung, H., Lubin, B., & Yi, J. (1992). Reliability and validity of the Korean Youth Depression Adjective Check List (Y-DACL). *Adolescence*, *27*(107), 527–533.

Tata, S. P., & Leong, F. T. L. (1994). Individualism-collectivism, social-network orientation, and acculturation as predictors of attitudes toward seeking professional psychological help among Chinese Americans. *Journal of Counseling Psychology*, *41*(3), 280–287.

Yasuda, T., & Duan, C. (2002). Ethnic identity, acculturation, and emotional well-being among Asian American and Asian international students. *Asian Journal of Counseling*, *9*(1&2), 1–26.

從韓國人和韓裔美國人樣本分析
文化適應、文化適應導致的壓力和抑鬱之間的關係

本文報道了一項以 177 名韓國人和韓裔美國人為對象的研究，探討文化適應、文化適應導致的壓力和抑鬱之間的關係。研究結果表明，49%的參與者所得的抑鬱評分值可被診斷為患有抑鬱。路徑分析顯示，文化適應和文化適應導致的壓力都是抑鬱評分值的預測因素。本文集中討論如何在韓國文化的前提和氛圍下闡釋以上結果，亦會探討西方量度抑鬱的方法可能有文化偏差而對韓國人和韓裔美國人不利。