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Perceived Stressors among College Students in an American and a Korean University

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Abstract

A sample of 268 students attending a private university in South Korea and 232 students attending a large public university in the U.S. responded to a measure of stressors used in other studies on college-level stress. The ratings of both samples yielded high internal consistency and similar factor structures. The ratings did not differ significantly according to the year in school but did yield a significant main effect according to nationality and there was a significant interaction between nationality and gender. The specific stressors that most differentiated the responses of the Korean and American students were finances, academic requirements, housing, planning, and feelings of being overwhelmed. The American students obtained significantly higher scores on the perceived frequency of these stressors than did the Korean students. Only the attainment of personal goals was reported as a more frequent stressor by Korean students than their American counterparts.

Key words: *stressors, academic matters, American students, Korean students*

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I. Introduction

1. Background

Given that some researchers (Adlaf et al., 2001) report higher stress levels for college students than for the general population, college personnel need to be aware of what types of experiences serve as primary stressors for their students. The elevation in college-level stressors may be precipitated by the transition from high school to college, which appears to be an especially challenging period for young adults (Welle & Graf, 2011). This transition falls within a period that Erikson (1959) labeled as Identity vs. Role Confusion: a stage having considerable potential to produce both growth and stress. From Erikson's theoretical conception of stage transitions, we can expect successful progression through transitional periods to lead to psychological growth, whereas becoming overwhelmed with the challenges of these periods may lead to psychological maladjustment.

Among the major challenges facing many college students in this transitional period are living away from home for the first time, maintaining an acceptable level of academic achievement, and making a place for themselves within a new social environment (Ross, Neibling, & Heckert, 1999). High levels of stress among college students at U.S. universities appear to contribute to a variety of difficulties. For example, Towbes and Cohen (1996) found chronic stress to be a significant predictor of psychological distress among undergraduate students. In another study of students at a large, mid-Atlantic university, Largo-Wight, Peterson, and Chen

(2005) reported that higher perceived stress predicted poorer physical health. These studies illustrate the potential effects of stressors on both the psychological and physical health of college students. Psychosocial variables likely to be affected by college-level stress include students' sense of competence, values, opportunities, and relationships. Overall, an abundance of research on college-level stress has been published in American journals.

2. College Stress in East Asian Institutions

Of special interest in this particular study is the comparative pattern and level of stress in East Asian versus American universities. Research publications related to student stress in colleges outside the U.S. have been relatively limited in American journals. Nonetheless, several studies have been published on student stress in Eastern Asia universities, especially in China. For example, Li et al., (2005) reported that the most frequently identified stressors in three universities in the Bejing area included exam pressure, academic competition and pressure, low grades in classes, and low rates of efficient learning. In comparing student stress in highly-regarded universities in China, Japan, and Korea, Kim et al., (1997) found Chinese students to experience the highest level of stress and report the greatest number of stressors, including financial difficulties, poor study skills, inadequate study environments, and interpersonal problems. Japanese students reported fewer academic stressors than the Chinese students, but still reported stress related to interpersonal relationships and study skills. Korean students' stress was mainly linked to limited physical space (e.g., crowded libraries, congested transportation) and the

social environment (e.g., compulsory military service and campus demonstrations).

The international study most directly related to the current investigation is Lee, Kang, and Yum's (2005) qualitative assessment of personal and academic stressors among Korean college students. College of Education students in a large regional university in Korea were asked to write down the two most frequent personal and academic stressors. In the personal area, the most frequently reported stressor was future career plans, followed by finances, interpersonal relationships, and personal appearance. In the academic area, the most frequently listed stressor was grades and competition, followed by future career success, excessive demands and deadlines established by professors, and interpersonal problems in school. Overall, the two most frequently mentioned stressors were finances and future career plans. With respect to concern over finance, it should be noted that the data were collected during a national financial crisis in Korea characterized by high unemployment and company bankruptcies.

Korea and the U.S. have several characteristics in common that might affect the stress patterns of their college students: both were experiencing major economic problems in the first decade of the 21st century, both have democratic systems of government, American troops have been stationed in Korea since the Korean War, and the two nations are regarded as allies. Nonetheless, the two nations are far removed from each other geographically and have a very different cultural heritage, with the American culture having a much heavier infusion of Christian thought than the Korean culture. Although Christianity is the most common religion in both cultures (51.3% in the U.S. and 26.3% in Korea), Buddhism is a close second to Christianity in the Korean culture (23.2% Buddhists). Additionally,

close to 50% of Koreans report no religion (Central Intelligence Agency, n.d.). Notwithstanding that a very small percentage of Koreans claim Confucianism as their religion, Confucian ethics are still widely respected in South Korea (Kim & Geistfeld, 2007). One of the pivotal Confucian ethics that might have some bearing on the results of this study is that "the family is the prototype of all social organizations" (Hofstede & Bond, 1988, p. 8).

3. College-level Measures of Stress

To make any cross-cultural comparisons of college-level stress requires an understandable and psychometrically-sound measure of stress. In that vein, several measures have been developed to assess college students' reactions to potential stressors (Crandall, Preisler, & Aussprung, 1992; Kohn & Frazer, 1986; Gadzella, 1994; Feldt, 2008). The *Undergraduate Stress Questionnaire* developed by Crandall, Preisler and Aussprung (1992) is among the more psychometrically-sound measures of student stress. This measure includes student ratings of the severity (4-point scale), commonness (5-point scale), and frequency (occurrences within the last week) of 83 potential stressors. Academic items receiving the highest severity ratings by students included tests, finals' week, application to graduate school, multiple assignments due the same day, numerous deadlines, inadequate preparation for tests, and poor test performance. The academic stressor that had the highest ratings across the severity, commonness, and frequency dimensions was frequent test-taking. The internal consistency of the Undergraduate Stress Questionnaire proved satisfactory as a research measure (KR-21 = .80). Scores on this instrument closely matched subjective reports of stress during

the course and final-exam week.

Another inventory that has been used to assess college students' academic stressors is Kohn and Frazer's (1986) *Academic Stress Scale*, composed of 35 items that are individually compared to the stress of taking an exam. If a particular stressor (e.g., term paper, excessive homework) was more stressful than taking an exam, the respondent assigned that stressor a rating between 501 and 1000. On the other hand, stressors viewed as less stressful than taking an exam were assigned ratings between 1 and 499. If a stressor represented the same degree of stress as taking an examination, a 500 rating was assigned. The Cronbach's alphas for student responses determined through the split-half method were .92 and .86. The strongest stressors proved to be final grades, excessive homework, term papers, exams, and exam preparation.

Feldt's (2008) *College Student Stress Scale* is among the briefest and most recent college-stress measures. The scale includes only 11 items, all of which constitute potential stressors for many college students. Scores on this scale have not differed significantly for students living on or off campus. Feldt claims that the total score on this instrument provides an indication of academic and personal adjustment of college students, especially those in the first-year of college. In Feldt's sample of 273 first-year students, most of whom were women, the top five stressors were academic matters, personal relationships, financial matters, feelings of being overwhelmed by difficulties, and events not going as planned.

Several other studies have also assessed the incidence of collegiate stressors (Archer & Lamnin, 1985; Murphy & Archer, 1996; Ross, Neibling, & Heckert, 1999; Ong & Cheong, 2009). Archer and Lamnin (1985) reported that common stressors for American students included tests, grade competition, time

demands, professors' behaviors, classroom environments, and future career success. Several years later, Murphy and Archer (1996) again identified examinations, grade competition, professor behaviors, class environments, time demands, and future career success as principal stressors for college students. In a Midwestern U.S. university, Ross, Neibling and Heckert (1999) reported the most frequent sources of stress as being changes in sleeping and eating habits, vacations, increased academic load, and new responsibilities. Ong and Cheong (2009) identified the types and nature of stressors for students enrolled in an American Degree Transfer Program at a private Malaysian college. The top five stressors were academic workload, excessive tests, hard courses, exam grades, and rapid lecture pace.

The prospect of academic evaluation (e.g., tests, grades) appears to be the over-riding theme of the most highly rated stressors of college students. Thus, primary stressors encountered in the collegiate setting appear linked more to the formal parts of the college experience (i.e., taking tests, being graded, or failing courses) than to the more informal parts (e.g., sleep patterns, interpersonal relationships). However, the formal and informal parts of being in college may be experienced quite differently by students from different backgrounds. In addition to differences in cultures, other demographic issues may be related to the pattern and magnitude of stressors in the formal and informal parts of college life. Two important demographic issues that are not frequently addressed in college-level research on stress are the relationship of year in college and gender to self-reported stress. Research findings on the relationship between year in school and stress level in American studies are mixed. Pettit and DeBarr (2011) found that self-reported stress levels did not differ

significantly from the freshmen through the senior year in college. On the other hand, Welle and Graf (2011) found that first-year students (75% of their sample) reported higher stress levels than older students. Overall, there was an inverse relationship between stressors and age in the Welle and Graf study.

The relationship of gender to stress in college life has also been examined in both American and Korean studies, but again the findings are mixed. Pettit and DeBarr (2011) reported no main effect of gender or interaction effect between year in school and gender on the stress reported by college students. On the other hand, Crandall et al. (1992) indicated that college women in America reported greater stress than did college men, especially stress related to school issues. The findings on the relationship of gender to stress have been limited by the fact that several assessments of college-level stress were done primarily with women (e.g., Lee et al., 2005; Feldt, 2008). Otherwise, gender ratios and/or gender differences in self-reported stress appear not to have been evaluated in most studies on the stress of college students (e.g., Hong, et al., 2005; Lee et al., 2005; Feldt 2008).

Finally, the literature on measures of college-level stress raises the issue of the efficiency of those measures. Both the directness and the length of those measures affect the efficiency of their use as research instruments. Feldt's (2008) 11-item instrument has been found to generate internally consistent and relatively stable responses across time. Instructions for taking this scale are more direct than that of other measures such as Kohn and Frazer's (1986) instrument, which used exams as a comparative point for rating other potential stressors. While Kohn and Frazier's measure has the advantage of comparing the stressfulness of other events to exams (one of the most potent and common of all collegiate

stressors), it does not independently and directly measure the student's rating of the stressfulness of events common in the lives of college students.

4. Research Questions

Our study mainly compared the level and pattern of student ratings of potential stressors in an American University and a Korean University. These comparisons were directed toward both individual events that could serve as stressors and the collective ratings across individual stressors. Ancillary objectives were to determine how academic level and gender might affect stress ratings of students within and between the two universities. Thus, the principal question was whether students in a Korean and American University differed in the magnitude and pattern of their ratings of potential collegiate stressors. Secondary questions were whether year in college and gender interacted with nationality (Korean and American) in accounting for differences in the pattern and magnitude of stressful experiences in college. Finally, we determined the extent to which college students' ratings of stressors were internally consistent in the two cultures and whether the response clusters differed across those cultures.

II. Method

1. Sample

The sample for our study was partly driven by convenience. All

members of our research team were employed at one of the two universities where the data were collected. Most members of the team were employed at the American university and one member (the senior author) was affiliated with a university in South Korea. Also, the U.S. and Korean universities were both situated in democratic societies where the two countries were generally considered as international allies. Students in the teacher-education program of an American university (N = 232) and a Korean university (N= 268) responded to a measure of college-level stressors. The American university is a major state university (approximately 25,000 students) located in the Southeastern U.S., whereas the Korean university (approximately 13,000 students) is the oldest private university in the Daejeon region of Korea.

Demographically, both samples included more females than males. In the American university, 171 of the participants were women and 65 were males. In the Korean sample, 156 of the participants were females and 112 were males. Thus, the American sample had a higher percentage of females (74%) than the Korean sample (58%). With respect to academic classification, the distribution was as follows for the American students: 1st year (n = 18), 2nd year (n = 113), 3rd year (n = 65), 4th year (n = 27), and graduate students (n = 9). In contrast to the American sample, a relatively even number of participants in the Korean sample came from the 2nd through the 4th year of college, but no 1st year or graduate students were included in the Korean sample. The Korean sample consisted of the following academic levels: 2nd year (n = 90), 3rd year (n = 92), and 4th year (n = 86).

2. Procedures

This study was conducted as part of a larger research project exploring relationships among political ideology, parenting style, and adult stress in the Fall of 2009 and Spring of 2010. Students in both the American and Korean University responded to the same instrument, but the Korean students took a Korean translation of the instrument. The following steps were involved in translating the instrument from English into Korean: (1) a professional translator (the Director of the Language Education Center at his university with a doctoral degree from a U.S. university) translated the inventory into Korean; (2) a professor in Korea translated the Korean translation back into English; (3) three professionals (one with a doctorate and two with masters degrees from U.S. universities) compared the original English version with the translation from Korean into English. Both American and Korean students were given scan forms on which they indicated their answers to the items on a 1 to 5 scale. Item responses to the inventory were electronically scanned into a comprehensive data file.

3. Targeted Measures

Our measure of adult stressors was the Feldt (2008) *College Student Stress Scale*. The scale included 11 items, all representing potential stressors for college students (e.g., personal relationships, family matters, financial matters, academic matters). Items were answered on a 5-point continuum (1 = *never*, 2 = *rarely*, 3 = *sometimes*, 4 = *often*, 5 = *very often*) indicating how frequently students felt distressed in each domain. Feldt reported that the internal consistency

(coefficient alpha) for the total scale was .87; whereas the test-retest reliability over a 5-week period ranged from .62 to .86 for individual items, with a mean of .73. Scores on the instrument were substantially correlated (.76) with scores on the widely-used Perceived Stress Scale (Cohen, Kamarck, & Mermelstein, 1983).

4. Data Collection and Analysis

The American data were collected by students' accessing the stress questionnaire from the course website and responding to the questionnaire on an out-of-class basis. Korean students took the questionnaire in class. Both samples indicated their responses on a scan form, from which the data were automatically entered into a computer database, precluding the need for manual entry of data. We first compared the overall ratings of stressors by nationality and academic classifications, using a two-way analysis of variance (ANOVA) to determine the interaction and main effects of these variables. We then compared the overall ratings of stressors by nationality and gender, again using a two-way ANOVA design. We also used Cronbach's alpha to compute the internal consistency of student responses to the potential stressors in the two national samples. As a follow-up to the internal consistency measures, we carried out a principal component factor analysis to determine possible response clusters in the ratings of students in the two universities. Finally, given that the study mainly compared stress ratings between two samples, independent-samples *t ratios* were used to compare the ratings on each of the 11 potential stressors across the two cultures.

III. Results

1. Academic Classification and Gender Differences Within and Across Nationalities

The American sample included two academic levels not included in the Korean sample (i.e., 1st year and graduate students). The overall stress means for these two groups in the American sample were 27.47 for 1st year students (n = 17) and 31.44 for graduate students (n = 9). The mean for the American 1st year students was substantially lower than the mean for any other American academic level, but the mean for the graduate level was commensurate to the means for 2nd, 3rd, and 4th year students. Because the Korean sample did not include either 1st year or graduate students, and owing also to the very small ns for these two groups in the American sample, we henceforth compared the mean ratings of the specific stressors and overall stress scores (11 items combined) for Americans and Koreans just at the academic levels included in both samples (e.g., 2nd year Americans compared to 2nd year Koreans, 3rd year Americans compared to 3rd year Koreans, 4th year Americans compared to 4th year Koreans).

Table 1 shows that the directional mean difference for the three academic levels included in both national samples was consistent with the directional difference for the total stress means for these samples. Table 1 reveals no interaction effect between year in school and nationality, as well as no main effect by year in school. The only significant main effect was by nationality, with the American stress ratings being higher than the Korean stress ratings.

Table 1. Differences in Mean Overall Ratings of Stressors by Academic Year and Nationality

	Year			
Nationality	2nd Year	3rd Year	4th Year	Total
American	32.96	31.95	31.22	32.41
Korean	30.04	28.97	30.98	29.97
Total	31.65	30.20	31.04	31/02

Note. Main effect by year: $df = 2$, $F = 8.96$, $p < .374$. Main effect by nationality: $df = 1$, $F = 8.35$, $p < .005$. Interaction effect by year and by nationality: $df = 2$, $F = 1.28$, $p = .280$.

We did obtain a significant interaction between nationality and gender for the total stress scores (Table 2). Korean females and males differed significantly on overall stress, with females scoring higher than males. On the other hand, American males and females did not differ in their overall rating of stressors. When males and females were compared across nationalities, American males obtained higher stress ratings than Korean males, but the two female subsamples did not differ across nationality. Thus, of the four gender/nationality combinations, Korean males scored the lowest on stress ratings of any subgroup.

Table 2. Differences in Mean Overall Ratings of Stressors by Gender and Nationality

		Gender		
		Males		Females
	Korean	27.90	<	31.46
Nationality		∧		‖
	American	31.79	=	32.62

Note. Interaction between gender and nationality: $df = 1$, $F = 3.94$, $p < .048$. Main effect by gender: $df = 3$, $F = 10.22$, $p < .001$. Main effect by nationality: $df = 1$, $F = 13.52$, $p < .001$.

2. Item Loadings on Stressor Components

Assessment of the internal consistency of student ratings showed that both Korean and American students responded in a generally consistent fashion across stressor items. The Cronbach's Alpha for total scores on the stress measure was .80 for the American sample and .84 for the Korean sample. A principal-component analysis with Varimax rotation was used to extract item clusters in student ratings of specific stressors (see Table 3). Six items loaded more strongly on the primary factor than on the two secondary factors in the American sample. These six items (personal relationships, handling difficulties, trying to attain personal goals, events not going as planned, feeling no longer in control, and feeling overwhelmed by difficulties) seemed to reflect personal issues. The mean stress rating for these six items was 3.07 (on a 1- to 5-point scale), with an *SD* of .68. A second factor, loading heavily on family matters, financial matters, and housing matters, appeared to reflect external stressors. The mean stress rating for the three items in this factor was 2.80, with an *SD* of .75. A third factor related to "college life," loaded strongly on academic matters and being away from home. The mean stress rating for the items in this factor was 2.82, with an *SD* of .70. The primary factor accounted for 27% of the variance in student ratings, and the two secondary factors accounted for an additional 30% of the variance (total variance explained = 57%).

The primary component in the Korean database consisted of heavy loadings by virtually the same items as those loading on the American primary factor, with the addition of the item related to "being away from home" loading on the Korean factor. Again, the

"personal issues" theme seems to fit the items loading on the primary Korean factor. The mean stress rating for the seven items loading on this factor was 2.79 (*SD* = .70).

Table 3. Item Loadings on Principal Components of American and Korean College Student Stress Ratings

	American			Korean	
Items	1	2	3	1	2
Relationships	**.678**	.281	-.198	**.548**	.343
Family	.438	**.610**	-.312	.210	**.668**
Finances	-.109	**.821**	.181	.122	**.849**
Academic	.183	.384	**.652**	.447	**.559**
Housing	.246	**.574**	.240	.112	**.740**
Away from home	.127	.012	**.665**	**.464**	.090
Handling difficulties	**.592**	.047	.443	**.706**	.273
Personal goals	**.549**	.206	.366	**.703**	.050
Planning problems	**.775**	-.059	.215	**.714**	.132
Lack of control	**.705**	.054	.112	**.687**	.178
Too many difficulties	**.627**	.210	.255	**.677**	.267

Note. Items in bold designate those primarily loading on each factor.

A substantial second factor for the Korean sample consisted of strong loadings by items related to family, financial, academic, and housing matters, all of which could reflect the impact of being in college. The mean stress rating for the four items making up this secondary factor was 2.60, with an *SD* of .85. The primary Korean factor accounted for 39% of the variance in student ratings, and the second factor accounted for an additional 12% of the variance (total 51% of the variance). Thus, the factor configurations for the American and Korean samples were relatively similar, with the secondary factor(s) being more differentiated for the American than

the Korean sample. Also, the stress ratings for the items making up the American factors were generally stronger than for those comprising the Korean factors.

3. National Differences in Ratings of Stressors

Finally, we compared the national differences for the specific stressors included in the *College Student Stress Scale*. Table 4 provides the individual item means, standard deviations, ranges, and *t-scores* for differences between the American and Korean samples. Top stressors for the American sample included academic issues (M = 3.40), feeling overwhelmed (M = 3.31), and financial matters (M = 3.33), while top stressors reported by the Korean students included personal goal attainment (M = 3.34), personal relationships (M = 3.09), and financial matters (M = 2.90). Both groups reported less frequent stress regarding housing matters and separation from home than on the other issues.

Additionally, the scores for each item were combined to yield a Total Stressor score. Within the scale range of 11-55, the mean Total Stressor score for Americans, 32.41, was significantly larger (p < .001) than the mean score for the Korean student population (29.97), $t(499)$ = 3.43 (Table 4). As to student ratings on the 11 individual stressor items, six of the calculated means were significantly different (p < .001) across nationalities, with Korean students reporting less frequent distress from five of these potential stressors than the American students. Compared to the American sample, the Korean sample reported significantly (p < .001) fewer instances of financial [$t(467)$ = 3.52], academic [$t(468)$ = 4.78], and housing distress [$t(497)$ = 3.72], as well as significantly

less occurrence of events not going as planned [$t(468) = 3.56$].

Table 4. Differences in the Stressor Ratings of Korean and American College Students on the College Student Stress Scale

Item	Nationality	*N*	Item Means	Std. Dev.	Possible Range	*t*-ratios	Sig.
Personal Relationships	Korean American	268 202	3.09 3.07	1.12 1.09	1-5	-0.15	.881
Family Matters	Korean American	268 201	2.65 2.67	1.07 1.22	1-5	0.21	.833
Financial Matters	Korean American	268 201	2.90 3.33	1.19 1.03	1-5	4 .17	.000
Academic Matters	Korean American	268 202	2.85 3.40	1.13 1.03	1-5	5.50	.000
Housing Matters	Korean American	268 201	2.03 2.41	1.04 1.03	1-5	3.98	.000
Being away from Home	Korean American	268 202	2.21 2.26	1.12 1.08	1-5	0.47	.636
Handling Difficulties	Korean American	268 202	2.82 2.86	1.00 0.87	1-5	0.45	.668
Attaining Personal Goals	Korean American	268 202	3.34 3.01	1.11 0.96	1-5	-3.36	.000
Events not going as Planned	Korean American	268 202	2.84 3.17	0.95 0.94	1-5	3.36	.000
No Longer being in Control	Korean American	268 202	2.82 2.97	1.02 0.98	1-5	1.64	.101
Feeling Overwhelmed by Difficulties	Korean American	268 201	2.44 3.31	0.98 0.97	1-5	9.58	.000
Stressors Combined	Korean American	268 202	29.97 32.41	7.33 6.31	11-55	3.17	.001

Among the 11 individual items, the stressor that yielded the greatest difference across nationalities was that of feeling overwhelmed by difficulties, with the American sample reporting

more frequent distress from this occurrence than the Korean sample, $t(468) = 9.53$. The only stressor Koreans reported significantly more than the Americans was that of personal goal attainment, $t(468) = -3.58$.

Ⅳ. Discussion and Conclusions

1. Implications of Major Findings

Results of this study indicated that the self-reported frequency of distressful ratings of potential stressors was significantly different between the two university samples. Overall, students in the Korean university reported potential stressors as being less frequently distressful than students in the American university. Additionally, the Korean students reported less frequent distress from five individual stressors. The significant differences in the responses across the two universities suggest the possibility that different cultural values may be driving reactions to stressors for college students in the targeted universities. The one most frequently reported stressor by either group was the Korean students' concern about attaining personal goals, perhaps suggesting that Korean students may be more goal oriented than American students. Research findings reported by Kim and Geistfeld (2007) indicated that students in selected Korean universities are very goal oriented and expect college graduation to lead to career success. Although not specified in the stress item on attaining personal goals (Feldt, 2008), the notion of personal goals likely includes not only personal issues related to family,

friendship, and personal ethics, but also concerns about obtaining a college degree and getting a job.

The study investigated possible interactions between nationality (American versus Korean) and both academic classification and gender. No significant main or interaction effects involving academic classification were obtained, meaning that stress ratings did not differ by academic classification for 2nd through 4th year students in the combined samples or differentially in either national sample. However, gender did make a difference both within and across samples, with females assigning higher stress ratings than males in the Korean sample but not in the American sample. Also, American males gave higher ratings to potential stressors than did Korean males, but American and Korean females did not differ in their ratings of potential stressors. Consequently, it appears that gender made a greater difference in the stress ratings of students in the Korean than the American university. The failure to find gender differences in the American sample is counter to the occasional report of gender differences in perceiving and experiencing stress (e.g., Crandall et al., 1992; Roxburgh, 1996; Misra, et al., 2000; Day & Livingstone, 2003) but is consistent with the absence of gender effects in the Pettit and DeBarr (2011) study .

The factor structures representing item clusters for both the American and Korean stress ratings approximated those reported by Feldt (2008) in the original psychometric development of the *College Student Stress Scale*, the instrument used in the current study. Feldt's primary factor also included the item on academic matters, an item included in a secondary factor for both Korean and American samples in this study. A majority of the items included in Feldt's second factor were also included in the secondary factor(s) of this study. The similarity in the factor structures reported by Feldt

and those found in this study suggests considerable stability in the item clusters across independent samples. Although this study included no comparison variables with which the stress factors were correlated, Feldt reported that both of his factors were negatively correlated with academic and personal-emotional adjustment. These correlations were statistically significant but small (-.14 to -.28).

2. Possible Explanations for Cultural Differences on Stress Ratings

The pattern of stressors for the two college groups suggests a more comfortable college experience for the Korean than the American students, with the latter having more pressing and tangible concerns than the former (e.g., financial, academic, housing, and planning issues). One possibility is that a substantial amount of part-time work for the American students increased the frequency of academic stressors (e.g., "events not going as planned"). On average, American students in the second through the fourth year of college were taking an academic load of 15.43 semester hours (a full load) and also working 10.79 hours per week. Negative outcomes of part-time work documented in U.S. and U.K.studies include reduced time for academic study and missed classes, increased feelings of stress and overload, reduced social activities, and poorer performance on academic work (Morrison, 2009; Hornak Farrell, & Jackson, 2010). We could identify no findings in professional literature regarding the extent and effects of part-time work among Korean students.

Religious and philosophical thought may be another contributor to the differences in the stress ratings of the Korean and American students. Buddhism and Confucianism are much more significant

influences in the Korean than the American culture. Presumably, meditation is a normal part of Buddhist practice that involves letting go of self and external concerns, which should contribute to a less stressful approach to many life experiences (Buddhist Meditation, n.d.). Although the Christian tradition of prayer may be somewhat parallel to the Buddhist practice of meditation, prayer is often more focused on satisfying one's desires than would be the case with meditation. Also, the theology of Christianity relates more to a continuing struggle to be acceptable rather than to defusing preoccupation with oneself and one's desires (Buddhist Meditation).

Another issue that may contribute to stress ratings across the two cultures is the role of family and friends in one's life. Some evidence suggests that Korean students may have more stable ties with their families and friends than do American students (Hofstede & Bond, 1988; Bae, 2003; Kim & Geistfeld, 2007). Bae (2003) reported that friendships among Korean college students are more stable and exclusive than friendships among American students, with a high-level of inter-dependence and intimate self-disclosure in the Korean friendships. Cultures such as Korea that are traditionally oriented toward collectivism have an increased emphasis on inter-dependence within their primary social group than individualistic cultures (Chun, Moos, & Cronkite, 2006). Compared to American college students, Korean college students have reported a greater need for affiliation, nurturance, and sensitivity to social rejections (Yamaguchi, Kuhlman, & Sugimori, 1995). Contrary to this finding, however, Taylor et al. (2004) found that Korean college students reported using social support less frequently and substance use more frequently than American students when coping with stress. These mixed results suggest the need for research that directly addresses the stability of

social networks for Korean and American students, as well as the relationship between social networks and patterns of stress.

There is also the possibility that the college culture in universities in the U.S. is inherently more stressful than that in Korean universities. Although the current study appears to be among the first to directly compare stressors between American and Korean students, a previous study (Kim et al., 1997) reported that students at a Korean University in Seoul scored lower on the stressfulness of study/work and interpersonal relations in school than did Chinese and Japanese students. Kim et al. (1997) commented that "the nature of stress in Korean students seems relatively simple and mild" (p. 92). Thus, college cultures in the U.S., China, and Japan may be more driven and demanding than the Korean college culture, but evidence for this speculation is currently limited in professional literature.

The results regarding specific stressors of the Korean students bear some similarity to those reported in previous research with Korean students (Lee et al., 2005), with career plans and financial issues among the top personal stressors in the Lee et al.(2005) study and concern about grades and competition also rated as a high academic stressor. Likewise, in our study, financial and academic matters were among the top stressors reported by Korean students. Lee et al. (2005) claimed a similarity between the stressors reported by Korean students and those reported in previous research with American students. Consistent with the Lee et al. (2005) claim, our study found that financial and academic matters were also among the most frequently reported stressors of the American students. However, our results also indicated that American students scored significantly higher than Korean students on both stressors. Furthermore, the current findings

revealed that American students reported being stressed more frequently by housing matters, events not going as planned, and feeling overwhelmed by difficulties than the Korean students.

The one area in which Korean students reported more frequent stress than the American students was in attaining personal goals. As previously noted, Kim and Geistfeld (2007) noted that Korean students are quite goal-oriented with respect to graduating from college and beginning their careers. The Lee et al. (2005) study reported that future career success was among the most stress-producing academic issues of Korean students. Feldt's (2008) stressor item *Attaining Personal Goals* would appear to be consistent with Lee et al.'s *Future Career Success* variable. Although attaining personal goals could subsume personal dimensions unrelated to academic or career issues (e.g., spending more time with friends, helping one's family), one would expect that graduating from college and starting one's career to be an important goal for most college students.

The findings for the American students bear considerable similarity to stressors highlighted in previous U.S. university research studies. The American students in our study most frequently reported academic matters as being stressful. Virtually all the American studies cited in the current article have found academic issues to be among the most powerful and frequent stressors reported by college students. For example, Crandall et al. (1992) highlighted tests, finals, excessive class assignments, deadlines, test preparation, and poor test performance to be among American college students' most severe stressors. Similarly, Kohn and Frazer (1986) included final grades, excessive homework, term papers, examinations, and preparation for exams as the most significant stressors of their college sample. Two studies conducted a decade apart both

underscored examinations, grade competition, time demands, and professors' behaviors as principal stressors of college students (Archer & Lamnin, 1985; Murphy & Archer, 1996). These past studies all point to academic issues as major sources of stress for American college students, a pattern consistent with our findings.

3. Limitations of the Research

One procedural limitation of this study was the self-reporting nature of our data, which makes the findings vulnerable to the effects of social desirability. However, a measure of social desirability was not included in the data collection at either university. It may be that the cultures in which the two universities were situated had somewhat different norms about reporting stressful life experiences. As noted in earlier research (Haskins, 1981), Korean students have been found to be less expressive and assertive than Caucasian students attending American universities. In explaining their findings on the effects of assertion training with Korean students, Hong and Cooker (1984) speculated that Korean males in particular may need more permission to express their feelings than Korean females. Seol (2007) reported that the tendency to respond in a socially desirable fashion was stronger for Korean male students than female students, which is consistent with our finding that Korean males reported less stress than Korean females. Admitting stress may be more acceptable in the American than the Korean culture, but this possibility would need to be directly confirmed by empirical research.

The extent to which the findings can be generalized to a larger population represents the greatest limitation of this study. The

samples represented students from only two universities, which may not reflect trends that could be found in a broad sampling of university students throughout the U.S. and Korea. Also, the significant differences between the magnitude of stressors reported by American and Korean students were not great in raw-score terms, making the practical implications of the finding somewhat limited. In addition to the cultural differences between the two universities, they also differed in their funding base: the American university was publically funded and the Korean university privately funded. The American university was almost three times the size of the Korean university. The size and funding base of the two institutions may have affected the type of students enrolled in the two universities.

There were also some limitations related to the sampling procedures. Both samples included more women than men, especially the American sample. Another sampling difference was that the Korean university included more upper-division students than the American sample. However, our findings showed academic classification to be unrelated to student ratings of potential stressors when 2nd through 4th year students were compared across nationalities. Finally, the samples were convenience samples, not broadly-based random samples. However, in this respect, our sampling procedure is not different from that used in several other studies cited in the current article (e.g., Hong & Cooker, 1984; Bae, 2003; Kim & Geisfeld, 2007; Seol, 2007; Feldt, 2008; Pettit, & DeBarr, 2011). In addition, approval for Human Subjects research in American education precludes a strict random selection of research participants. Virtually all contemporary studies reported in educational and psychological literature are likely done with students who volunteer to participate rather than

with strict randomly selected samples.

4. Suggestions for Future Research

Apparently, there is minimal research comparing the level and nature of student stress in Korean and U.S. universities. Consequently, the current research can contribute to this limited body of research. The study showed that American students scored higher than Korean students on 5 of 11 potential stressors, as well as on overall stress levels. The only issue on which the Korean students scored higher than the American students was on attainment of personal goals. Academic classification from the 2nd through the 4th year of college did not make a difference in stress scores in either college sample. However, gender did interact with nationality in affecting stress ratings. Korean males reported less stress than either Korean females or American males. However, American males and females, as well as Korean and American females, did not differ in their overall stress ratings.

Obviously, the results obtained in the current study would need to be extended by comparing other universities across the two cultures. The main effect for nationality and the simple effects for nationality and gender would need to be confirmed across colleges in the two countries. What might be ideal would be to select a sample consisting of several universities in the two countries. However, the logistics of doing such surveying would involve building an extensive network of researchers at various universities who could manage the sampling procedures at their universities. The current study may be considered only a first step in that direction.

What accounts for the difference in the way American and

Korean students responded to potential stressors cannot be conclusively determined from the findings of the current study. It may be that American students bring greater stress with them to college than Korean students. Researchers would need to assess stress at the outset of the college experience to determine if American students come to college more stressed than Korean students. Or, perhaps the nature of the college experience in America and Korea accounts for the differential stress levels reported by college students in the two countries. The latter possibility could be assessed by comparing differences in entry and exit stress levels of college students in the two cultures. If American students come to college with greater stress levels than do Korean students, the highly stressed students should be identified upon entry into college and given special guidance and support as they attempt to adjust to the demands of college.

On the other hand, if the nature of the college culture produces considerably more stress for American than Korean students, then American educators should thoroughly examine how the curriculum, class schedule, instructional system, and assessment of learning could be modified to make the college experience more comfortable for students without compromising the collegiate standards of learning. Obviously, the current study raises a number of important questions about cross-cultural differences in the stress patterns of college students and the principal contributors to those differences.

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