LIFE STRESS, SOCIAL SUPPORT, AND PROBLEM-SOLVING SKILLS IN DEPRESSION, HOPELESSNESS, AND SUICIDE IDEATION FOR AN ASIAN STUDENT POPULATION: A TEST OF A MODEL

by

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Abstract

The present study tested a stress-problem-solving and stress-social support etiological model for depression, hopelessness, and suicide ideation for a group of Asian foreign students in the United States. Problem-solving skills and social support were hypothesized as two mediators between life stress and dependent variables, such as depression, hopelessness, and suicide ideation. The results from a series of stepwise regression analyses and a path analysis supported the hypothesis. The results were also compared with other significant studies in this area and similar findings from cross cultures were addressed. The important role of social support and problem-solving confidence in depression and hopelessness were discussed. The results also suggest that depression and hopelessness may be two separate and complementary pathways in the etiology of suicide ideation. In addition, two new measures for life stress and social support for this specific population were designed and employed in the study. Satisfactory psychometric properties of these two new scales were indicated, including test-retest reliability, internal consistency, concurrent validity, incremental validity, and construct validity. Results from factor analysis and regression analyses for factors of the new scales were also discussed in relation to depression, hopelessness, and suicide ideation. Given the correlational nature of the study, some precautions regarding how to interpret the results were discussed.

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The foreign student population in the United States has greatly increased during the past five decades. Before World War II, the United States had only about 10,000 foreign students (Pruitt, 1976). However, nearly 350,000 foreign students from more than 150 countries were studying in this country in 1986-1987 (Institute of International Education, 1987). Among the entire population of foreign students in the United States, approximately 50% come from South and East Asia (Thomas & Althen, 1989). There are very few studies, however, focusing on the cultural adjustment of this population. Specifically, studies are needed to address the following issues: What kinds of life stress are they experiencing? How do they evaluate their social contacts with other people? How do they handle their life problems? Assuming that these students will vary in their adjustment to these factors, how do differences on these factors relate to their mental functioning, such as levels of depression, hopelessness, and suicide ideation?

The present study was designed as a preliminary investigation regarding how these students' individual differences on stress, social support, and problem-solving skills relate to their levels of depression, hopelessness, and suicide ideation. Specifically, it applied two diathesis-stress models to this population, the first, a problem-solving stress model, the second, a social-support stress model. In addition, two new measures assessing aspects of life stress and social support thought to be unique to this population were developed

for the present study. The introductory section has been divided into five parts. In the first part, since losing the familiarity of one's cultural environment was the hypothesized main source for the life stress of these students, some basic differences between Asian culture and American culture were presented. Life stress and its possible negative impact for people living in a foreign country, especially for foreign students were also discussed in this section. Second, the general relationships between life stress and depression, hopelessness, and suicide ideation, that have been found in previous studies were reviewed. Third, the possible mediating effects of problem-solving deficits and social support for the relationship between life stress and suicidal ideation, depression, and hopelessness were discussed. Fourth, considering the special life setting for foreign students, the conceptual basis for two special scales designed for the present study was introduced. Finally, hypotheses were generated.

Living in a different culture

In a society, a culture always provides normative information to guide an individual's behaviors and thoughts. Consequently, living in a new cultural environment and losing one's familiar cultural environment would likely result in a good deal of life stress. The more different the two cultures, the more stressful one's life is likely to be. Therefore, in order to understand Asian students' unique life stress, it is important to provide a brief overview of basic differences between Asian culture and American culture.

Generally, cultural factors, such as logic style, time orientation, the role of the family and its individual members, value systems and social behavior, have different meanings in these two cultures. For example, Hall and Hall (1987) stated that American logic is linear (open, direct, and straightforward) and Asian logic is circular, subtle, and indirect. Consequently, Asian people may view Americans as over-direct and careless of saving faces for others. Also, Asians tend to stress the past and the future, while the present is seen as a transitory period. In contrast, Americans value the present and look forward to the future (Fernandez, 1988). For Asian families, the continuous affective and social bonds with immediate family members strongly validate individuals' self-esteem, and secures their future, which is not the case for American families (Fernandez, 1988). In Asian countries, educational achievement is highly emphasized and achievement level is believed to be related to a student's entire family and community (see Chen & Uttal, 1988). As noted by Chen and Uttal, for example, Chinese parents set higher achievement goals to their children and spend more time with them than their American counterparts. In addition, men and women's roles in families and societies may differ greatly in these two cultures (Ryan, 1985; Ghaffarian, 1987).

Empirical evidence has shown that life stress during individuals' cultural adjustment is related to their mental functioning. In studies of acculturation of migrants and refugees, failure to adapt to the new environment has been found to be an important factor in the development

of mental illness (Burnam et al., 1987; Shah, 1988; Westermeyer et al., 1989). Shah's study (1988) indicated that, while moving within a country was itself stressful, moving from one country to another was even more stressful. In that study, when comparing immigrants from Turkey, Pakistan, and South America who were living in West Berlin, with local German migrants, it was found that cross country migration had more profound effects on depression than within country migration. Westermeyer et al.'s study (1989) indicated that the length of time individuals were in a new country also affected their degree of adjustment. Examining longitudinally the psychological adjustment of Hmong Refugees during their first decade in the United States, it was found that self-reported psychosocial problems and psychiatric symptoms decreased over time (Westermeyer et al., 1989).

Based on these results, students who study in a foreign country should experience high life stress proportional to the recency of their entrance into the country. A few studies (Ghaffarian, 1987; Huang, 1977; Pruitt, 1976, 1977, 1978; Thomas & Althen, 1989) have indicated that adapting to the new culture is a difficult process for foreign students studying in the United States and that failure to adapt may result in mental illness.

In addition, having to use a totally different language (English) after many years of using one's own language would make the overall adjustment process harder, especially in an academic environment where proficiency with English is essential.

Although unavoidably every Asian student will face these life problems, different people may experience different levels of life stress, given the differences in their duration in the United States, knowledge about the new culture prior to their entrance, English proficiency, etc. Differences in life stress levels are in turn likely to affect mental functioning.

When judging an individual's mental functioning, levels of depression, hopelessness, and suicide ideation can be used as important clinical criteria. Previous research has explored many explanations on how life stress can affect one's level of depression, hopelessness, and suicide ideation. In addition, factors which mediate the effects of life stress, such as problem-solving deficits and levels of social support, have also been discussed.

Life stress and depression, hopelessness, and suicide ideation

Research has found a moderate relationship between life stress and depression (Bonner & Rich, 1988b; Friedrich, Reams, & Jacobs, 1982; Rich & Bonner, 1987; Rudd, 1990; Schotte & Clum, 1982,1987) and a moderate relationship between life stress and hopelessness (Bonner & Rich, 1988b; Rich & Bonner, 1987; Rudd, 1990; Schotte & Clum, 1982, 1987).

Life stress has also been found to be correlated to suicide phenomena. Early researchers have found that suicide attempters report four times as many negative life events in the six months preceding their attempts as do nonsuicidal individuals (Paykel, Prusoff, & Myers, 1975). This relationship has been shown to exist independently of age,

sex, and social class variables (Cochrane & Obertson, 1975). Recently, in attempting to develop etiological models of suicidal ideation and behavior, many studies have also found supportive data for the relation between life stress and suicidal ideation (Bonner & Rich 1987, 1988a, 1988b; Clum, Patsiokas & Luscomb, 1979; Dubow et al., 1989; Rich & Bonner, 1987; Rudd, 1990; Schotte & Clum, 1982, 1987).

A two-diathesis-stress model

Although life stress is correlated with suicide ideation and behavior, it is not the only factor contributing to these outcomes. Research has found that there are mediating factors, such as problem-solving deficits and lack of social support, between stress and suicide ideation and behavior (Bonner & Rich, 1987, 1988a, 1988b; Clum, Patsiokas, & Luscomb, 1979; Dubow et al., 1989; Friedrich, Reams, & Jacobs, 1982; Orbach, Bar-Joseph, & Dror, 1990; Schotte & Clum, 1982, 1987).

Regarding problem-solving ability, Schotte and Clum (1982) found that both life stress and problem-solving deficits combine to produce hopelessness and suicide ideation. That is, when under high life stress, suicide ideators were less able to generate relevant solutions to hypothetical problems than non-suicidal subjects. Subsequently, Schotte and Clum (1987) generalized this model to suicidal psychiatric patients who were found to generate fewer alternative solutions to interpersonal problems, compared to a group of hospitalized non-suicidal patients. Orbach et al. (1990) found that the solutions of suicidal

patients showed less versality, more avoidance, less relevance, more negative affect, and less reference to the future than the solutions of the non-suicidal patients.

Problem-solving deficits have also been found to be predisposing factors to depression (Nezu 1986; Nezu, et al., 1986a, 1986b) and hopelessness (Clum, Patsiokas & Luscomb, 1979; Schotte & Clum, 1982, 1987). For example, Nezu et al. (1986b) found that effective problem-solvers reported no differences in depressive mood regardless of being under high or low stress, while poor social problem-solvers more likely reported depressive mood when under high stress. Rich and Bonner (1987) also found a moderate correlation between dysfunctional cognition and both depression and hopelessness.

The relationship between lack of social support and suicidal ideation is also well documented in the literature. Braucht (1979) found that the relationship between life stress and suicidal ideation may interact with a lack of social support. In another study (Trout, 1980), social isolation was found to be related directly to suicidal behaviors. In a sample of early adolescents, Friedrich et al. (1982) found that a family environment characterized by low cohesion, low organization, low independence orientation, and high achievement orientation was related to high levels of suicidal ideation and that these family variables accounted for 34% of the variance in suicidal ideation. In a community sample of junior high and high school students, Dubow et al. (1989) found that suicidal ideation and attempts

were associated with lower levels of family support. Westefeld and Furr (1987, cf. Westefeld & Range, 1990) found that hopelessness and loneliness are the critical factors for college students' suicide attempts. Rosenkrantz (1978) concluded from a statistical analysis of suicide among middle to late adolescents (ages 15-24) that a felt loss of love and intimacy is a critical factor in predicting suicide risk. It has also been suggested that social isolation as a social risk factor should be targeted as a means to prevent suicidal behavior (Morgan, 1981). Other researchers also included social support as a factor in their etiological models of suicidal ideation and behavior (Bonner & Rich, 1987, 1988a, 1988b; Rich & Bonner, 1987; Rudd, 1990). Research has also found that loneliness and both depression and hopelessness are highly correlated (Bonner & Rich, 1987; Rich & Bonner, 1987; Flannery & Wieman, 1989). For example, Flannery & Wieman (1989) pointed out that social support had a significant buffering effect between life stress and depression.

It is likely that these relationships between independent variables (such as problem-solving deficits and life stress) and dependent variables (such as depression, hopelessness, and suicide ideation), and the relationships between social support and these dependent variables can also be found in a foreign student population. For the foreign student population, the above results suggest that, when under stress, students with poorer problem-solving skills and/or lower social support may have more difficulties adjusting the new environment,

which may consequently result in depression, hopelessness, and suicidal ideation.

The relationship between life stress and problem-solving deficits has been explored in a diathesis-stress model of suicidal ideation (Clum, Patsiokas, & Luscomb, 1979; Schotte & Clum, 1982, 1987), and the relationship between life stress and social support has been studied in a stress- vulnerability model (Bonner & Rich, 1987, 1988a, 1988b; Rich & Bonner, 1987) and an integrative model (Rudd, 1990). However, some additional issues need to be addressed: First, none of these studies has tested all three factors in one model, using problem-solving deficits and social support measures together. Second, no information exists regarding generalizing the etiological model to a foreign student population.

In addition, although some researchers (Bonner & Rich, 1987; Rudd, 1990) have presented their hypothetical models of variables leading to suicide ideation, none of their studies have treated the variables in the fashion undertaken in the present study. Bonner and Rich (1987) proposed that life stress interacts with cognitive rigidity and leads to depression and low suicide ideation; loneliness and social support variables further lead to hopelessness and high suicide ideation. Rudd (1990) predicted that depression, hopelessness, and perceived social support moderate the relationship between life stress and suicide ideation. In the present study, it was believed that problem-solving deficits and social support would mediate the relationship between life

stress and variables such as depression, hopelessness and suicide ideation, and that depression and hopelessness would have direct effects on suicide ideation while life stress, problem-solving deficits, and social support are more likely to have indirect effects on suicide ideation by directly affecting depression and hopelessness.

Two new measures

Considering foreign students' special life setting, existing scales designed for the general population, such as the Life Experiences Survey (LES; Sarason, Johnson & Siegel, 1978) and the UCLA Loneliness Scale (Russell, Peplau & Ferguson, 1980) may not be as sensitive as scales designed specially for this population. Thus, two new scales, "Index of Life Stress" and "Index of Social Support", were developed for the present study based on an intensive literature search in this area. Some investigators have found that foreign students have their own idiosyncratic problems. For example, Huang (1977) indicated that communication barriers, cultural maladjustment and lack of a support network are problems for foreign students that host students do not face as acutely. Other problems, such as academic difficulty, cross-cultural male-female relationships, and financial difficulties, have also been identified as specific problems for this group of students (Thomas & Althen, 1989). The Index of life Stress accordingly was developed to measure these areas.

The Index of Life Stress includes six areas: 1) language difficulty, 2) cultural adjustment, 3) perceived racial discrimination,

4) academic concern, 5) financial concern, and 6) outlook for the future. The rationale for sampling items representative of each of these areas is as follows: (1) English language is the second language for most students from Asia; meanwhile English language proficiency is essential for their daily lives and their academic success in the U.S. Previous research (Heath, 1970; Markham, 1967) has found that English language proficiency is a more important determinant of foreign student adjustment than their age, sex, marital status and education. Existing acculturation scales (Cuellar, Harris, & Jasso, 1980; Burnam, et al., 1987; Ghaffarian, 1987; Suinn et al., 1987; Westermeyer, et al., 1989) all regard language as a very important aspect of adaptation. (2) Cultural differences between Asia and America make cultural adjustment another area of the foreign students' stress. For example, difficulties in accommodating to American food, music, holidays, religions, entertainment, etc., can be stressful for these students. (3) Being in a society where one belongs to a minority group instead of a majority group likely leads to certain forms of racial discrimination. The ILS included racial discrimination subjects experienced in a variety of circumstances, such as studying in school, shopping in stores, and eating in restaurants, etc. (4) Academic concern is included because foreign students are in the new country for the major purpose of studying. Thus, they may have more academic pressure (Thomas & Althen, 1989) and may be more sensitive to their academic performance and relevant issues than the average American student. (5) Although

financial difficulty is an issue not unique to foreign students, it is still very special for these students because of immigration regulations which limits their applications for financial aid programs and employment opportunities. (6) Outlook for the future was included because concerns about returning home, not being able to find jobs in the United States, not being able to return home for some reason, etc., can be stressful for these students.

The Index of Social Support was developed based on the foreign students' special social contact patterns. Most of the foreign students' previous friends are not in the U.S.A., nor are their family members. While their long distance contact with these people is still important for them, contact with new friends and supportive organizations and activities is believed to be equally essential and may be more practical to them. Also, as some scholars (Brownell & Shumaker, 1984) have pointed out, social support is a complex phenomenon, which includes not only the quantity of social support, but also the quality. Therefore, the Index of Social Support for foreign students assessed both the quality and the quantity of contact with: 1) direct family, 2) secondary families, 3) old friends in the home country, 4) new friends in the U.S.A., 5) churches, 6) school organizations, 7) the international student center on campus, and 8) community activities. In order to obtain a comprehensive evaluation of social support, under each area of social support, respondents were to rate the meaning of the support to them, their level of trust and satisfaction toward the

support, and the availability of the support when it is needed.

Hypotheses

In the present study, stress and two mediating factors, problem solving deficits and lack of social support, were tested as factors of an etiological model of suicide ideation in a sample of foreign students from Asia. It was predicted that what has been found regarding the relationships between these factors and depression, hopelessness and suicidal ideation on samples of American individuals will also be found in this sample. Thus, it was hypothesized that subjects with higher levels of suicide ideation would, in relation to subjects with lower levels, report higher levels of depression and hopelessness. Further, subjects with higher levels of depression, hopelessness, and/or suicide ideation would: 1) report higher levels of negative life stress for the preceding year; 2) exhibit more problem-solving deficits; and 3) report higher levels of loneliness.

Further, in addition to the main effects, it was hypothesized that depression, hopelessness, and suicidal ideation, would be a function of the interaction between life stress and problem-solving deficits, and life stress and social support. That is, social support and problem-solving deficits were predicted to be mediators between life stress and depression, hopelessness, and suicidal ideation.

Also, subjects with higher levels of suicide ideation would obtain higher scores on the Index of Life Stress (ILS) and lower scores on the

Index of Social Support (ISS). Since the Index of Life Stress and the Index of Social Support were specially designed for this population, it was predicted that scores on these scales would contribute additional variance in the prediction of suicidal ideation beyond that provided by the Life Experiences Survey and UCLA Loneliness Scale (see "measures" in "method" section). In addition, it was also hypothesized that life stress measured by the Index of Life Stress would have a negative correlation with the duration of the subjects having been in the United States. Further, since culture differences have been emphasized as a factor causing adjustment difficulties, it was predicted that subjects' perceived knowledge about the United State prior to their entrance to this country would have negative correlations with the dependent measures, i.e. depression, hopelessness, and suicidal ideation.

Path analysis was used to test an etiological model of suicide ideation. In this analysis, it was predicted that 1) problem-solving deficits and social support mediate the relationship between life stress and variables such as depression, hopelessness and suicide ideation, and 2) that depression and hopelessness have direct effects on suicide ideation, while life stress, problem-solving deficits, and social support have indirect effects on suicide ideation by directly affecting depression and hopelessness.

Method

Subjects:

A total of 101 foreign students from Asia participated in this study. These subjects are students at Virginia Polytechnic Institute and State University. Twenty of these subjects were students enrolled in the Introductory Psychology course and the other 80 were not. The subjects ranged in age from 18 to 40, with a mean age of 23.49 and a SD of 4.48. Among this group, 73 are male and 28 are female. Regarding marital status, 18 are married and 83 are not. Their original countries included India (29), P.R. China (21), Indonesia (10), Viet Nam (9), South Korea (6), Taiwan (4), Malaysia (3), Philippines (3), Pakistan (3), Hong Kong (2), Thailand (2), Iran (2), Japan (1), Singapore (1), Bangladesh (1), Sri Lanka (1), Israel (1), Lebanon (1) and Turkey (1). Their academic majors included Engineering (51), Arts & Sciences (22), Business (9), Architecture and Urban Studies (5), Education (5), Agriculture (4), Human Resources (4), and Veterinary Medicine (1). The periods of time they have been in this country ranged from 1.23 to 216 months, with a mean of 39 months and a SD of 50.84. Twenty-four subjects have their parents living in the U.S. Half of the married students (9) have their spouses living with them.

Procedure:

In accord with the V.P.I. & S.U. procedure for experimentation with Introductory Psychology students, a folder containing a brief

explanation of the nature of the study and a sign-up sheet (see Appendix A) was placed on the fifth floor of Derring Hall on campus. Considering the comprehensive areas the investigation was going to cover and subjects' possible sensitivity to the term "Suicide Study," the project was titled "Cultural Adjustment Study for Foreign Students From Asia." Flyers were also sent to the Asian students via campus mail. All of the respondents were required to sign on the same sheet in Derring Hall. On the flyers, it was indicated that if the subjects were "Introductory Psychology" students, they would get one to two extra credits for participating in the project. Other subjects were paid $10 for their participation.

Before the actual assessment started, four subjects were used to run a pilot study in order to be sure that subjects would be able to understand all of the testing materials and report their feelings and thoughts relatively openly. It was found that those four subjects were able to follow the instructions smoothly. Thus, their data were included in the sample.

In the testing sessions, the subjects were arranged into small groups (about five subjects in each group). The nature of the study was explained to them. In the consent form (see Appendix B), they were also informed that, if their scores on suicidal ideation were elevated, they would be referred to some available counseling services, such as the Student Counseling Center on Campus, the Psychological Services Center, or a treatment study of suicide which is being conducted by Dr. G. A.

Clum at Virginia Tech.

Immediately following the explanation of the nature of the study, a packet containing the following measures were given to each of the subjects: the demographic sheet (see Appendix C), the Life Experiences Survey (Sarason, Johnson & Siegel, 1978); the Modified Scale for Suicide Ideation (MSSI) (Miller, et al., 1986); the Modified Means-End Problem-Solving Procedure (Schotte & Clum, 1987); the Hopelessness Scale (Beck, Weissman, Lester & Trexler, 1974); the UCLA Loneliness Scale (Russell, Peplau & Ferguson, 1978); and the Index of Life Stress and the Index of Social Support. On the demographic sheet, subjects were asked to report their age, sex, academic major, marital status, duration in this country, and previous knowledge about this country (on a 1-10 scale). The subjects were allowed to proceed through the packet at their own pace. It took approximately 1 hour to 1.5 hours to complete the assessment.

Upon completion of the test materials, subjects' scores on the self-report Scale for Suicidal Ideation were screened by this experimenter. There were 22 subjects who indicated suicidal ideation during the past two weeks (score of 4 or more on the MSSI). They were asked to participate in an interview to be held within one week of the original session. The interview assessed their level of current suicide ideation (SSI, see Appendix B) for the purpose of validating that self-report measure (MSSI, see Appendix C). There were 13 suicidal ideators who agreed to participate in the interview session and one

subject agreed to answer the interview questions on the phone. This interview lasted from 15 to 30 minutes. All of the 22 subjects were informed of and referred to available counseling services.

In order to obtain reliability data for some measures, additional procedures were conducted. First, a trained research assistant rated the interview audio tapes for the SSI. Due to equipment problems, there were only ten interview cassette tapes (for 10 ideators) available. Second, twenty-five subjects were also randomly selected from this sample and were asked to participate in an additional time-1 time-2 reliability assessment for the two new measures. Twenty of them agreed and completed the scales after a one-month-interval (with a mean of 29.7 days and a SD of 1.26). Third, answers on the MMEPS of 19 subjects were randomly chosen to be rated by a trained research assistant.

Measures:

Scale for suicide ideation (SSI) (Beck, Kovacs & Weissman, 1979). This 19-item scale was designed for assessing and quantifying the degree of suicide intent in sample of suicide ideators (see Appendix D). The scale is presented in an interview-rated format. Scores may range from 0 to 38; higher scores indicate increasing levels of suicide intent. This scale has high internal consistency (KR-20 = .89) and inter-rater reliability (.83) as well as satisfactory levels of concurrent, discriminant, and construct validity (Beck, Kovacs & Weissman, 1979). It is also sensitive to changes in suicidal intent with treatment (Beck, Kovacs & Weissman, 1979).

Modified Scale for Suicide Ideation (MSSI) (Miller et al., 1986). This 18-item instrument (see Appendix E) was modified from the Beck, Kovacs, and Weissman (1979) inventory (SSI), for use as a self-report instrument to assess the extent of suicidal ideation and intent. It has 13 items from the original SSI, and 5 new items. Based on Miler et al.'s (1986) report, the items on the MSSI showed a high level of internal consistency (KR-20=.94). Item-total correlations ranged from .41 to .83. Regarding validity, the MSSI total scores correlated significantly with the BDI suicide items (r=.60). Also, the correlation between the MSSI and the BDI total scores (r=.34) is similar to that reported by Beck et al. (1979) for the original SSI scale (r=.39).

Self-Rating Depression Scale (SDS). This 20-item scale developed by Zung (1965) incorporates the affective, somatic, psychological, and physiological symptoms that are typical of depression (see Appendix F). Each item is presented in a four-choice, anchored format, and half of the items are reverse scored. Based on the American college student norm, raw scores between 40 and 47 are in the "mild depression range;" between 48 and 55 are in the "moderate depression range;" and above 55 are in the "severe depression range." This scale possesses good discriminant validity, is sensitive to changes in level of depression as a result of treatment (Zung, 1965), and has been used extensively in the study of depression.

Hopelessness Scale. This 20-item, true-false scale was designed by Beck et al. (1974) as a measure of the degree to which an

individual's cognitive schemata are dominated by negative expectations toward the future (see Appendix G). One half of the items are reverse scored, and total scores can range from 0 to 20; higher scores indicate increasing levels of hopelessness. Beck et al. (1974) demonstrated high internal consistency (KR-20 = .93) and relatively high levels of concurrent and construct validity for this scale.

Life Experiences Survey (LES). This scale (Sarason et al., 1978) is a 57-item self-report measure of life stress that allows the respondent to indicate the occurrence of any of 57 experiences and three subject-specific experiences in the past 6 months or 1 year (see Appendix H). Respondents are also instructed to rate the desirability and impact of each of these events on a 7-point anchored scale ranging from -3 to 3. Summary scores can be computed for negative, positive, and total life change for the previous 6 months or 1 year. This scale has moderate test-retest reliability (.63, .64) over 5- and 6-week test-retest intervals, and negative life change scores have been found to correlate in the expected direction with a large number of variables (e.g., anxiety, academic achievement, social desirability, personal maladjustment, depression, locus of control, and patient status (Sarason et al., 1978). In the present study, subjects' report of negative impact from life change was used as their scores for the LES. The more negative the scores are, the higher level of life stress have been reported. That is, the "higher" the scores, the lower the level life stress.

Modified Means-End Problem-Solving Procedure (MMEPS). This scale was designed by Schotte and Clum (1987; see Appendix I) based on the Means-End Problem-Solving Procedure (MEPS; Platt, Spivack & Bloom, 1971). The MEPS scale, developed by Platt et al. (1971), provides the respondent with 10 situations for which he or she is presented with a stated need and a desired outcome. The respondent is instructed to provide the middle portion of the story in which the protagonist is to achieve the stated goal. Studies conducted with the MEPS support the construct, discriminant, content, predictive, and concurrent validity of this measure (Platt, Scura & Hannon, 1973; Platt & Siegel, 1975; Platt & Spivack, 1972, 1973). This inventory has also been shown to have satisfactory levels of test-retest reliability for 2 1/2 weeks (.59), 5 weeks (.64), and 8 months (.43), and high levels of internal consistency (KR-20 = .80 to .82; odd-even = .82 to .84). The MMEPS scale, developed by Schotte and Clum (1987), is a variant of the MEPS procedure, and allows for closer scrutiny of the problem-solving process. Schotte and Clum (1987) report that scores on their version of the modified MEPS were found to correlate significantly with scores on the original MEPS. During the administration of the MMEPS in the present study, the subjects were first required to identify as many as ten of their life problems. Second, they were required to choose as many as two interpersonal problems from them to work on. Third, they were required to define their desired goals for these two problems and to identify as many as 6 different alternative solutions for each problem. Fourth,

they were required to indicate their confidence on how likely each alternative would solve the problem, on a 0-10-point scale. Fifth, as many as 4 pros and 4 cons about the alternatives were required to be generated. Scoring for this scale included total number of alternatives for self-identified life problems, relevant alternatives, irrelevant alternatives, pros, cons, and confidence levels indicated by the subjects regarding the alternative solutions they generated.

UCLA Loneliness Scale. This scale was designed by Russell et al. (1980) for assessing social support network and degree of social integration. It is comprised of 20 statements, which the individual rates from "1" (never) to "4" (often) according to how often the individual 'feels the way described in each statement' (see Appendix J). The internal consistency ranges from 0.91 to 0.94. Concurrent validity has been established by showing that lonely people report emotions theoretically tied to loneliness (i.e., depression, emptiness, hopelessness, and isolation), whereas emotions such as embarrassment, surprise, and creativity are not correlated to loneliness. Discriminant validity has shown that the scale is not confounded by social desirability ($r = -0.203$), but is related to affiliative motivation, social risk taking, and negative affect.

Index of Life Stress (ILS). This scale was designed in this study for assessing the levels of stressful life events experienced by foreign students from Asia. This 31-statement scale requested individuals to rate each statement from "0" (never) to "3" (often) according to how

often the individual 'feels the way described in each statement' (see Appendix K). The statements covered five major areas that had been found common in this population, including language difficulty, cultural adjustment, academic concern, financial concern, and outlook for the future. Higher scores reflect higher levels of life stress. Internal consistency reliability was obtained from the present study. Factor analysis was applied to explore the construct validity. Correlations with the LES scale were used to establish the concurrent validity. Incremental validity over the LES in predicting depression, hopelessness, and suicide ideation was also determined. These psychometric properties are reported in the result section.

Index of Social Support (ISS). This scale was designed in this study for assessing the degree of social support network for the foreign students from Asia. This 40-statement scale requested an individual to rate from "0" (never) to "3" (often) according to how often the individual 'feels the way described in each statement' (see Appendix L). Higher scores reflect higher levels of social support. The statements covered eight areas: contacts with direct family, secondary family, old friends in the home country, new friends in the U.S.A., churches, school organizations, the international student center on campus, and community activities. Moreover, under each area of social support, the respondent rated the meaning of the support to them, their trust and satisfaction toward the support, and the availability of the support when it was needed. Internal consistency reliability was obtained from this present

study. Factor analysis was applied to explore the construct validity. Correlations with the UCLA Loneliness Scale were used to establish the concurrent validity. Incremental validity over the UCLA in predicting depression, hopelessness, and suicide ideation was also determined. These psychometric properties are reported in the result section.

Since subjects' levels of depression, hopelessness, and suicide ideation were measured as results of other factors such as their life changes, these variables have been classified as dependent variables. Life stress, problem-solving ability, and social support were identified as independent variables.

After the test sessions, subjects were informed about the rationale for this study.

Results

Subjects' self-rating of previous knowledge about the United States was analyzed by conducting correlations between the reported knowledge and other measures and was found to correlate moderately with scores on the Index of Life Stress ($r=-.20$; $p<.05$) and on the Life Experiences Survey ($r=.21$; $p<.05$). It also correlated moderately with depression scores ($r=-.36$; $p<.001$), hopelessness scores ($r=-.30$; $p<.01$), and suicide ideation scores ($r=-.35$; $p<.001$). Time for the subjects being in this country did not correlate with any of those variables.

Canonical correlation analysis was conducted between independent and dependent variables. Wilk's Lambda value was found to be .37, with $F=3.31$, $df=27$, and $p<.0001$. Therefore, no Bonferroni correlation was used in later regression analyses.

Reliability of measures

Inter-rater reliability of the SSI was found to be .95 ($N=10$; $p<.0001$) which indicates that the rating on this scale was highly reliable. The correlation between the self-report and interview form of the Scale for Suicide Ideators was found to be .89 ($N=14$; $p<.0001$) which suggests that the self-report scores on the MSSI were valid.

The inter-rater reliability for the MMEPS ranged from .52 to 1.00 ($N=19$). Specifically, the inter-rater reliability of total number of life problems is 1.0 ($p<.0001$), total alternatives .91 ($p<.0001$), relevant alternatives .91 ($p<.0001$), irrelevant alternatives .52

($p<.05$), pros .94 ($p<.0001$), cons .95 ($p<.0001$), and confidence .84 ($p<.0001$).

Main and interactional effects of all measures from Regression analyses

A summary of correlations, means, and standard deviations of all independent and dependent measures is listed in table 1. On the Life Experiences Survey (LES), a total score of the negative events for each subject was used to represent LES score.

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insert table 1 about here

A series of regression analyses were conducted in order to test: 1) the main effects from the LES, UCLA, and the problem-solving measures on depression, hopelessness, and suicide ideation; 2) additional interactional effects among these measures; and 3) the independence of the two new measures (the ILS and ISS) from the LES and UCLA, respectively. The third analysis will be discussed in the "psychometric properties of the two new measures" section.

The prediction of depression, hopelessness, and suicide ideation from life stress, social support, and problem-solving measures is shown in table 2a. For all of the regression analyses, problem-solving measures included six variables: total alternatives for life problems, relevant alternatives, pros, cons, (cons - pros), and confidence levels indicated by the subjects regarding the alternative solutions they generated. Loneliness, problem-solving confidence, and life stress were

able to effectively predict depression. Problem-solving confidence and loneliness were able to effectively predict hopelessness. Life stress and differences between numbers of cons and pros (cons-pros) were able to effectively predict suicide ideation.

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insert table 2a about here

The additional interactional effects between life stress and social support, and between life stress and problem-solving, were tested in the regression models, after entering the main effects from these measures. As shown in table 2b, none of the interactional effects was significant on depression or hopelessness. On suicide ideation, the interaction between life stress and number of cons, and between life stress and loneliness showed significant effects.

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insert table 2b about here

Path analysis on suicide ideation model

In the present study, path analysis was employed for testing an etiological model of suicide ideation. As the above results have shown, the ILS and the ISS had significant additional effects predicting depression and hopelessness over the lES and UCLA L Scale, respectively. In addition, as will be shown in the next section, the correlations between the LES and the ILS, and between the UCLA L Scale and the ISS

were moderate (-.46 and -.39, respectively). Therefore, both the original and the new measures were included in the etiological model. That is, the model included seven predictors (see Figure 1): 1) life stress assessed by the LES, 2) life stress assessed by the ILS, 3) loneliness assessed by the UCLA Loneliness scale, 4) problem-solving confidence assessed by the MMEPS, 5) social support assessed by the ISS, 6) depression assessed by Zung's D scale, and 7) hopelessness assessed by Beck's H scale. The means, standard deviations, and correlations used in the path analysis were included in table 1. Some problem-solving measures from the MMEPS were dropped from the model because of not having any significant effects on any of the dependent variables in the path analysis. These measures included: total number of alternatives, number of relevant alternatives, pros, cons and (cons-pros).

Based on the hypotheses, problem-solving deficits and social support would mediate the relationship between life stress and variables such as depression, hopelessness and suicide ideation, and depression and hopelessness would have direct effects on suicide ideation, while life stress, problem-solving deficits, and social support have indirect effects on suicide ideation by directly affecting depression and hopelessness. Therefore, the above seven predictors and suicide ideation were arranged at four different levels in the model: 1) life stress (measured by the LES and ILS) was listed on the left as the initial level, then social support (by the UCLA L Scale and ISS),

problem-solving confidence, and loneliness as the mediating level, then depression and hopelessness as the primary reaction level, and then suicide ideation on the right, as final reaction level (see figure 1).

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insert figure 1 about here

By using a statistical package ("GEMINI," see Wolfle & Ethington, 1985), it was found that depression and hopelessness showed significant direct effects on suicidal ideation (table 3a). Loneliness (measured by the UCLA L Scale), problem-solving confidence, and life stress (by the LES) showed significant direct effects on depression. Problem-solving confidence, social support (by the ISS), and life stress (by the ILS) showed significant direct effects on hopelessness. In addition, life stress (by the ILS) also showed significant direct effect on loneliness (by the UCLA L Scale; see table 3a).

Confidence in problem-solving skills, life stress (by both the LES and the ILS), loneliness (by UCLA L Scale), and social support (by the ISS) showed significant indirect effects on suicidal ideation (table 3b). Life stress (by both the LES and the ILS) showed significant indirect effects on depression. Life stress (by the LES) also showed a significant indirect effect on hopelessness (see table 3b).

Direct effects are also shown in figure 1. Regression beta weights are provided. P-values for the T tests on these beta weights

are shown in the parentheses.

insert table 3a & 3b about here

Psychometric properties of the two new measures

1. Reliability

The time 1 - time 2 stability within a one-month interval (mean=29.7 days, SD=1.26) for the Index of Life Stress (ILS) was .87 (N=20; $p<.001$) and for the Index of Social Support was .81 (N=20). The split-half reliability (between even and odd items) for the Index of Life Stress is .68 (N=100; $p<.01$) and for the Index of Social Support is .75 (N=100; $p<.001$).

The internal consistency estimate (KR-20) was .86 (N=101) for the Index of Life Stress, and .81 (N=100) for the Index of Social Support.

2. Validity

The concurrent validity of the ILS measured by the correlation between the ILS and the LES is -.46 (N=100; $p<.0001$). The concurrent validity of the ISS measured by the correlation between the ISS and the UCLA loneliness Scale is -.39 (N=100; $p<.0001$).

Regarding incremental validity of the two new measures, separate stepwise regression results indicated that both the ILS and the ISS had significant additional utilities predicting depression and hopelessness, but not suicide ideation, beyond the LES and the UCLA L Scale, respectively (table 4a and 4b).

insert table 4a & 4b about here

3. Factor analyses

The principle components method and varimax rotation were employed in a series of factor analyses on the ILS. A factor loading level of .40 was used as the criterion to identify factor items. Based on the eigenvalues, variances explained by each factor, and interpretabilty of each factor, it was found that a five-factor solution appeared to be most meaningful for the ILS (see table 5a). The first factor can be labeled as "concern about finance and desire to stay in the U.S." The second factor can be labeled "language difficulties." The third factor can be called "interpersonal stress." The fourth factor can be named "stress from cultural adjustment and desire to return to one's own country." The fifth factor seemed to assess "academic pressure." Item 8 ("language difficulties"; loading on factor 2) may be understood in that developing opposite-sex relationship is highly related to language difficulty. Although item 12 ("I owe money to others") was dropped based on the .40 criterion, all 31 items were included when conducting all prior data analyses. Internal consistency estimates (KR-20) for each factor are as follows: .80, .79, .82, .70, and .75, respectively. Means and standard deviations of these five factors are: X=8.58, SD=4.64 (factor 1); X=5.26, SD=3.80 (factor 2); X=7.13, SD=4.14 (factor 3); X=6.97, SD=4.09 (factor 4); X=9.06, SD=3.63 (factor 5).

insert table 5a about here

The correlation between the five factor scores and the dependent variables showed that almost all factors, especially "language difficulties," "interpersonal stress," and "academic pressure" mildly or moderately correlated with depression, hopelessness, and suicidal ideation scores. The correlation coefficients between the five factor scores and the dependent measures are listed in table 5b.

A series of stepwise regression analyses were conducted in order to find the increment contribution of each factor in predicting depression, hopelessness, and suicide ideation. As shown in table 5c, "academic pressure" and "interpersonal stress" contribute independently to predict depression; and "interpersonal stress" significantly predicts hopelessness and suicide ideation.

insert table 5b & 5c about here

In a similar vein, the principle components method and varimax rotation were employed in a series of factor analyses on the ISS. Factor loading level of .40 was used as the criterion to identify factor items. Based on the eigenvalues, variances explained by each factor, and interpretabilty of each factor, it was found that a four-factor solution appeared to be most meaningful for the ILS (see table 6a).

Factor analysis of the Index of Social Support showed that 36 of 40 items loaded on four factors: 1) contact with old friends in home countries, secondary family, and the international center on campus ("contact with one's own culture in general"); 2) contact with community activity and student organizations; 3) contact with the new friends in the U.S. and direct family; 4) contact with religious places (e.g. churches). There were four items (item 1 "I have contact with my family," item 7 "I have contact with my secondary families," item 11 "my family means a lot to me," and item 15 "I am satisfied with my family") which did not load on any of the those four factors. These four items have been dropped from the final scale, although all 40 items were included when conducting all data analyses presented in this report except the following reports on factor means, standard deviations, and correlations with dependent variables. Internal consistency estimates (KR-20) for each factor as follows: .9, .87, .83, and .86, respectively. Means and standard deviations of these three factors are: X=23.40, SD=9.78 (factor 1); X=13.01, SD=6.70 (factor 2); X=15.81, SD=3.97 (factor 3); and X = 6.49, SD = 4.71.

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insert table 6a about here

The correlation between the four factor scores and the dependent variables showed that "general contact with one's own culture," "contact with local community and student organizations," and "contact with new

friends in the U.S. and direct family" mildly or moderately correlated with depression, hopelessness, and suicidal ideation scores. The correlation coefficients between the four factor scores and the dependent measures are listed in table 6b.

A series of stepwise regression analyses were conducted in order to find the increment contribution of each factor in predicting depression, hopelessness, and suicide ideation. As shown in table 6c, "general contact with one's own culture" and "contact with new friends in the U.S. and direct family" have significant independent contribution in predicting depression and hopelessness; and "contact with new friends in the U.S. and direct family" has significant independent contribution in predicting suicide ideation.

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insert table 6b & 6c about here

Discussion

Correlation coefficients (Table 1) between suicide ideation and depression/hopelessness supported the hypotheses that more severe suicide ideation is related to higher levels of depression and hopelessness. Correlation coefficients also supported the hypotheses that people with higher levels of depression, hopelessness, and/or suicide ideation are more likely to report higher levels of negative life stress and loneliness, and exhibit more problem-solving deficits. Regarding problem-solving deficits, for example, depressed, hopeless, and/or suicidal people are more likely to report lower subjective probability of efficacy of alternatives generated, less relevant alternatives, and more cons than pros for their alternatives.

An examination of the independent contributions of these predictors using stepwise regression analyses supported the findings of Schotte and Clum (1982, 1987) and of Priester and Clum (a; in press) that life stress and problem-solving deficits are both important predictors for suicide ideation. In the present study, it was found that negative life stress and difference between cons and pros are both independent predictors for suicide ideation. That is, suicidal people: 1) experience more negative life stress, and 2) are more likely to see more potential negative side effects of their alternatives than potential positive side effects. Further analyses on interactional effects also indicated that the interaction of life stress and number of

cons add incrementally to the prediction of suicide ideation. These findings are consistent with Schotte and Clum's (1982, 1987) diathesis-stress model of suicide behavior in which problem-solving deficits were found to mediate the relation between stress and suicide. By replicating such findings in an Asian student population, the present study also provided additional support on cross-cultural generalizability of the stress-problem solving model.

While generally supportive of findings from previous studies, the problem solving deficits found in the present study to predict adjustment are somewhat different from those found in previous studies. Unlike Schotte and Clum's (1982) results, for example, number of relevant alternatives was not found to independently predict suicide ideation in the present study. One possible explanation for this difference is that different problem-solving variables were used in these two studies. For example, Schotte and Clum (1982) did not use pros and cons as measures of problem-solving skills while the present study did. In the present study, both relevant alternatives and cons minus pros predicted adjustment with the later variable yielding a higher relationship to the criteria than the former. It is possible that number of cons or the difference between cons and pros is a relatively more significant predictor of suicide ideation than is number of relevant alternatives. Schotte and Clum (1987) did use pros and cons as predictors of suicide ideation, but the population studied (hospitalized psychiatric patients) had more severe ideation than did

the present sample of college students. It is possible that the number of relevant alternatives better predicts more severe levels of suicide ideation while the relative number of pros and cons is a better predictor of low levels of suicide ideation. The most likely explanation, however, is that these differences in relative strength of problem solving variables in predicting suicide ideation are simply random fluctuations.

The present study has its unique characteristics. By adding a social support variable, using two new measures of life stress and social support, employing path analysis on a hypothesized etiological model for suicide ideation, and targeting not only suicide ideation, but also depression and hopelessness, the present study obtained some additional and interesting findings involving: 1) the role of social support in depression, hopelessness, and suicide ideation; 2) the role of problem-solving confidence in depression, hopelessness, and suicide ideation; and 3) the role of depression and hopelessness in suicide ideation.

Although many researchers (Bonner & Rich, 1987, 1988a, 1988b; Braucht 1979; Dubow et al. 1989; Friedrich et al. 1982; Rich & Bonner, 1987) conducted simple correlations between social support and depression, hopelessness, and suicide ideation, few studies have tested how social support may serve as a "buffer" between life stress and depression, hopelessness, and suicide ideation. In Rudd's (1990) study, evidence supportive of the mediating role of social support between life

stress and suicide ideation was found. In addition, Rudd's theory placed perceived social support as a cognitive-emotional factor parallel to depression and hopelessness.

In the present study, social support was found to interact with life stress when predicting suicide ideation, but was not found to predict suicide ideation directly. This provides supportive evidence for Rudd's (1990) view of social support as a mediator between life stress and suicide ideation. When acting as a mediator, social support serves as a "buffer" between life stress and suicide ideation. That is, when under high life stress, individuals with weak social support are more likely to experiences higher levels of suicide ideation. Also, perceiving higher level of social support itself may enable individuals to keep more positive attitudes toward life problems and increase confidence in dealing with them instead of feeling ineffective and vulnerable. In addition, as Rudd (1990) suggested, it is possible that 1) stressful life situations may enable individuals more likely to evaluate their social support and, under such conditions, individuals with poor support may pay more attention to the weakness of their support leading to increases in their suicide ideation; and 2) individuals with poor support may be more sensitive to life stress and therefore, for the same negative events, they may experience higher level of distress.

The present study also found that social support as measured by the UCLA L Scale directly predicted depression, and that social support

as measured by the Index of Social Support directly predicted hopelessness. In addition to predicting suicide ideation when interacting with life stress, it is possible that social support impacts suicide ideation indirectly through its effects on depression and hopelessness. This notion was supported by the results of the path analysis. As shown in Figure 1, while depression and hopelessness were directly predictors of suicide ideation, social support and the other independent variables (problem-solving deficits and life stress) all showed significant indirect relationships with suicide ideation. Given the strong relationship between social support as measured by the UCLA L Scale and depression, and between social support as measured by the Index of Social Support and hopelessness, it is not surprising that social support can have significant relationship with suicide ideation through influencing depression and hopelessness.

Therefore, the above findings not only provide support for the hypothesized stress-social support model for suicide ideation, but also on the hypothesized role of social support in depression and hopelessness.

Problem-solving confidence is another critical factor for predicting depression and hopelessness, but not suicide ideation in foreign students. Problem-solving confidence (or "subjective probabilities of efficacy;" see Schotte & Clum, 1987, p. 52), in this study, is operationally defined as individuals' ratings on the likelihood their alternatives will solve their interpersonal life

problems and reach their desired outcome. Although the MMEPS overall was designed to measure individuals' problem-solving skills, problem-solving confidence is more likely to be a measure of self-efficacy in problem-solving, which is similar to the "confidence factor" derived from the problem-solving appraisal measure--the Problem-solving Inventory (PSI; Heppner & Petersen, 1982), a measure previously shown to be predictive of suicide ideation. The difference between these two concepts may be that the "confidence factor" of the PSI is more general, while "problem-solving confidence" used in this study is specific to the probability of success of specific solutions.

Problem-solving confidence has previously been shown to predict hopelessness and suicide ideation. In their study, Bonner and Rich (1988b) tested the role of problem-solving appraisal in predicting hopelessness, using the total score of the PSI, and found that the interaction between problem-solving appraisal and life stress are independent predictors of hopelessness beyond that effect produced by depression. Dixon, Heppner, and Anderson (1991) found that, of three factors of the PSI (problem-solving confidence, approach-avoidance style, and personal control), only problem-solving confidence predicted both hopelessness and suicide ideation. Differences between the present study, which did not find a direct effect of problem-solving confidence when predicting suicide ideation, and Dixon et. al.'s (1991) can be understood in terms of methodological differences. In Dixon et. al.'s (1991) study, problem-solving factors were entered first into the

regression analysis while in the present study variables were entered stepwise. From the correlation table (table 1), given the moderate correlation between problem-solving confidence and suicide ideation, it is likely that if the same procedure by Dixon et al. was followed, similar results would have been obtained. In fact, Priester and Clum (b; in press), using data analyses similar to those of the present study, found that problem-solving confidence is a good predictor for depression and hopelessness, but not for suicide ideation.

Similar to the Priester and Clum (b; in press) study, the present study also found that problem-solving confidence directly predicts both depression and hopelessness, but not suicide ideation. This finding suggests that, although it may not directly predict suicide ideation, problem-solving confidence may be another critical factor responsible for the development of depression and hopelessness and thus indirectly relates to suicide ideation. This conclusion is supported by results of the path analysis. As shown in Figure 1, although only depression and hopelessness appeared to have significant direct relationships with suicide ideation, problem-solving confidence directly influences both depression and hopelessness and indirectly influences suicide ideation.

Although researchers (Bonner & Rich, 1987, 1988b; Rudd, 1990) have studied the roles of depression and hopelessness in suicide ideation, different models have been applied. In their studies, Bonner and Rich (1987, 1988b) assumed that depression is related to lower-levels of

suicide ideation, while hopelessness is related to more server suicide ideation. In contrast, Rudd (1990) assumed that depression and hopelessness are independent and parallel predictors of suicide ideation. In the present study, depression and hopelessness were assumed to influence suicide ideation independently. The results from the path analysis provided some support for this hypothesis. As shown in Figure 1, direct relationships exist between suicide ideation and both depression and hopelessness. In addition, depression was significantly directly related to one set of variables: life stress (by LES), social support (by UCLA), and problem-solving confidence; while hopelessness was significantly directly related to another set of variables: life stress (by ILS), social support (by ISS), and problem-solving confidence. Although there are significant indirect relationships across variables, the LES and UCLA seemed to directly affect depression, and the two new measures (ILS and ISS) to directly affect hopelessness. Therefore, for foreign students, the present study supports the idea that there are two separate but complementary path ways in the etiology of suicide ideation: one through depression, the other through hopelessness.

As far as path analysis is concerned (see Figure 1), it is apparent that other measures of problem-solving, such as number of alternatives, pros, and cons, were not included in the path model. During the preliminary trials for the model, only problem-solving confidence showed significant relationships (direct or indirect) with

depression, hopelessness, and/or suicide ideation. How can one reconcile the results of the regression analyses in which the number of cons and differences between cons and pros significantly predicted suicide ideation and the path analysis where no such effects were found? One possibility is that because depression and hopelessness showed very strong direct relation in the path analysis with suicide ideation, the problem-solving variable, "cons-pros" could not add significantly more direct variance in predicting suicide ideation.

About foreign students' adjustment

Cultural adjustment is a difficult process. This notion can be shown by how an individual's previous knowledge about the U.S.A. before they came to this country can affect his/her adjustment. In the present study, it was found that subjects' previous knowledge about the U.S.A. moderately but significantly correlated with their stress levels. Moreover, their previous knowledge about this country moderately but significantly correlated with their depression, hopelessness, and suicide ideation scores. Regarding the time spent in this country, unlike what was predicted, time did not correlate with any of the dependent variables, nor with the Index of Life Stress. Such a finding may suggest that life stress resulting from cultural adjustment may not change significantly over time, at least not within a few years.

Results from the present study also suggest that the Index of life Stress and the Index of Social support are valid measures with satisfying psychometric properties. In addition, since the two new

measures significantly added incremental validity in predicting depression and hopelessness beyond that provided by the LES and the UCLA L Scale, it suggests that these two measures assess aspects of stress and social support not measured by these latter instruments.

For the Index of Life Stress, the five factors found to comprise this measure are similar to the six areas initially conceptualized as defining this measure. The structure identified in the factor analysis combined some items of "financial difficulty" and "concern about future" ("concern about being able to stay in the United States") into one factor (Factor 1). Also, items of "racial discrimination" and some items of "cultural adjustment" were found to comprise the factor of "interpersonal stress" (Factor 3). In addition, some items of "cultural adjustment" and of "concerns about future" were combined into the factor of "stress from new culture and desire to return to one's own country" (Factor 4).

The correlations between these factors and the dependent variables suggest that all five factors all mildly or moderately related to these students' daily functioning, including their levels of depression, hopelessness, and suicide ideation. Results from the regression analyses further indicated that the most important factor for adjustment is life stress from interpersonal problems, which predicted depression, hopelessness, and suicide ideation. Stress from academic pressure also contributed incrementally to the prediction of depression.

For the Index of Social support, the four factors found to comprise this measure simply combined eight areas into four. Specifically, contact with secondary family, old friends in one's home country, and international centers were combined into factor 1 ("general contact with one's own culture"); contact with local community and student organizations were combined into factor 2; contact with new friends in the U.S. and direct family were combined into factor 3; and contact with religious places (e.g., churches) was identified as factor 4.

Results from the regression analyses of the Index of Social Support suggests that the students' contact with new friends in the U.S. and direct family, and contact with old friends in home countries, secondary family, and the international center on campus, are very important for their daily life. These sources of support were consistently related to their levels of depression and hopelessness. Contact with new friends and direct family is also marginally related to suicide ideation.

The results of the present study have implications for helping Asian foreign students to smooth their adjustment to foreign countries. For example, since the foreign students' previous knowledge about the new country is related to their daily functioning, educational programs related to contacting, recruiting and training individuals from such populations are recommended to provide sufficient information regarding the new country. Also, since difficulties understanding and using the

English language has been shown to be an important source of their life stress, it is recommended that foreign students become more proficient in English in order to adjust to the new environment smoothly. Further, language difficulties may also affect foreign students' ability to develop new friendships in their adopted country since such friendship is highly correlated with their daily functioning. Moveover, since being able to contact one's own culture in general is another important source of social support, related educational facilities (e.g. international student center, international club, etc.) may serve to enhance such contact, by providing opportunities for these students to build friendships with fellows from one's own culture.

There are certain precautions to mention when interpreting the results of the data analyses presented in this study (mainly path analysis). First, the sample size (101) may not be large enough to generate stable conclusions through path analysis. Second, given the correlational nature of the present study, conclusions regarding causal relationships (both direct and indirect effects) are only suggestive. Third, in the path analysis etiological model, the relations among all variables were assumed to be unidirectional as opposed to bidirectional, and such an assumption has some potential problems. For example, there is a possibility that for the Asian student population, losing their previous social support after the entrance into the U.S.A. may elevate their problems of adjustment. It is also possible that being depressed, hopeless and withdrawn may worsen one's social contact and weaken one's

social support. Finally, in order to obtain a better working knowledge about the etiology of suicide ideation, longitudinal and intervention studies are strongly needed.

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Table 1. Correlations, means and standard deviations of all independent and dependent variables

	LES	ILS	UCLA	ISS	Confid	Tot.Alt	Rel.Alt.	Pros	Cons	Cons-Pros	ZDS	BHS	MSSI
LES	1.00												
ILS	-.46***	1.00											
UCLA	-.38***	.51***	1.00										
ISS	.16	-.16	-.39***	1.00									
Confidence	.17	-.06	-.13	.33**	1.00								
Tot. Alt.	.11	-.14	-.21	.11	.10	1.00							
Rel. Alt.	.14	-.12	-.20	.09	.17	.93***	1.00						
Pros	-.04	.03	-.13	.04	.14	.06	.07	1.00					
Cons	-.13	.10	.03	-.01	.13	-.06	-.06	.61***	1.00				
Cons-Pros	.11	-.09	-.18	.05	.30**	.13	.15	.42***	-.46***	1.00			
Depression	-.52***	.41***	.58***	-.39***	.43***	-.26*	-.27*	- .07	.16	-.26*	1.00		
Hopelessness	-.30**	.37***	.42***	-.46***	.42***	-.22*	-.24*	- .07	.12	-.22*	.60***	1.00	
MSSI	-.40***	.21*	.33***	-.14	.25*	-.209	-.21*	.01	.23*	-.25*	.62***	.46***	1.00
Means	-9.63	36.63	42.68	67.91	6.49	3.33	3.12	2.12	1.74	.39	37.89	4.35	2.50
Stand. Dev.	8.72	13.49	11.77	18.40	1.61	1.29	1.32	.90	.93	.80	9.04	3.77	6.07

* p<.05
** p<.01
*** p<.001

Table 2a.

Stepwise regression summary table of previous measures of life stress and social support (LES and UCLA L Scale) and problem-solving to criteria of depression, hopelessness, and suicide ideation

Criterion = Depression

Dependent measures	Partial R*R	F	df	p-value
UCLA Loneliness Scale	.29	35.77	87	.0001
Problem-solving Confidence	.14	20.33	87	.0001
Life Experiences Survey	.08	13.87	87	.0004

Criterion = Hopelessness

Dependent measures	Partial R*R	F	df	p-value
Problem-solving Confidence	.18	18.42	86	.0001
UCLA Loneliness Scale	.12	14.67	86	.0002

Criterion = Suicide Ideation

Dependent measures	Partial R*R	F	df	p-value
Life Experiences Survey	.16	16.40	87	.0001
Cons - Pros	.04	4.71	87	.033

Table 2b.

Stepwise regression summary table of interaction between life stress (LES) and problem-solving, and between life stress (LES) and social support (UCLA), to criteria depression, hopelessness, and suicide ideation, after all main effects were force into the model.*

Criterion = Depression

Dependent measures	Partial R*R	F	df	p-value
UCLA Loneliness Scale	.29	35.77	87	.0001
Problem-solving Confidence	.14	20.33	87	.0001
Life Experiences Survey	.08	13.87	87	.0004
Total # of Alternatives	.01	2.32	87	.1319
Cons	.003	.55	87	.4615
Relavent Alternatives	.001	.24	87	.6283
Pros	.0006	.11	87	.7433

None of the interactions were significant at .05 level.

Criterion = Hopelessness

Dependent measures	Partial R*R	F	df	p-value
Problem-solving Confidence	.18	18.42	86	.0001
UCLA Loneliness Scale	.12	14.67	86	.0002
Life Experiences Survey	.02	2.16	86	.1456
Relavent Alternatives	.01	1.44	86	.2334
Cons	.002	.19	86	.6612
Total # of Alternatives	.0002	.02	86	.8780
Pros	.0001	.01	86	.9064

None of the interactions were significant at .05 level.

Criterion = Suicide Ideation

Dependent measures	Partial R*R	F	df	p-value
Life Experiences Survey	.16	16.40	87	.0001
Cons - Pros	.04	4.71	87	.033
UCLA Loneliness Scale	.03	2.76	87	.1006
Problem-solving Confidence	.02	1.71	87	.1945
Cons	.0137	1.52	87	.2218
Total # of Alternatives	.0123	1.37	87	.2451
Relavent Alternatives	.0006	0.07	87	.7981
LES * Cons	.07	8.59	87	.0044
LES * UCLA	.07	9.02	87	.0036

* note: Eight main effects were entered, although "pros," "cons," and "cons-pros" are actually two variables. Therefore, only two of these three could be chosen by regression analysis depending on their significance levels in the model.

Table 3a. T-values for direct effects (metric)

To: From:	MSSI	Hopelessness	Depression	ISS	Confidence	UCLA
Hopelessness		2.14(.03)				
Depression		4.37(.001)				
ISS	1.83(.07)	-2.85(.004)	-1.11(.27)			
Confidence	.47(.64)	-3.44(.001)	-4.17(.001)			
UCLA L	.07(.95)	1.58(.11)	4.19(.001)			
ILS	-1.41(.16)	2.04(.04)	.70(.49)	-.97(.33)	.21(.83)	4.47(.001)
LES	-1.51(.13)	-.67(.50)	-3.64(.001)	.99(.32)	1.58(.11)	-1.86(.63)

Note: Two-tailed probabilities of T-values for direct effects (metric) are shown in parentheses

Table 3b. T-values for indirect effects (metric)

To: From:	Suicide Ideation	Hopelessness	Depression
Index of Social Support	-1.97(.049)		
Confidence	-3.88(.001)		
UCLA Loneliness Scale	3.46(.001)		
Index of Life Stress	2.35(.019)	1.44(.149)	2.59(.01)
Life Experience Survey	-3.46(.001)	-2.14(.033)	-2.42(.015)

Note: Two-tailed probabilities of T-values for indirect effects (metric) are shown in parentheses

Table 4a.
Regression summary table of new measure of life stress (ILS) to criteria of depression, hopelessness, and suicide ideation, after the LES was forced into the model.

Criterion = Depression

Dependent measures	Partial R*R	F	df	p-value
Life Experiences Survey	.27	36.43	99	.0001
Index of Life Stress	.04	5.95	99	.0165

Criterion = Hopelessness

Dependent measures	Partial R*R	F	df	p-value
Life Experiences Survey	.09	9.91	99	.0022
Index of Life Stress	.07	7.68	99	.0067

Criterion = Suicide Ideation

Dependent measures	Partial R*R	F	df	p-value
Life Experiences Survey	.16	18.86	99	.0001

The new measure (ILS) had no additional contribution significant at .05 level in predicting suicide ideation.

Table 4b.

Regression summary table of the new measure of social support (ISS) to criteria of depression, hopelessness, and suicide ideation, after the UCLA was forced into the model.

Criterion = Depression

Dependent measures	Partial R*R	F	df	p-value
UCLA Loneliness Scale	.33	49.82	100	.0001
Index of Social Support	.03	4.84		.0301

Criterion = Hopelessness

Dependent measures	Partial R*R	F	df	p-value
UCLA Loneliness Scale	.18	21.56	99	.0001
Index of Social Support	.11	14.27	99	.0003

Criterion = Suicide Ideation

Dependent measures	Partial R*R	F	df	p-value
UCLA Loneliness Scale	.11	12.03	100	.0008

The new measure (ISS) had no additional contribution significant at .05 level in predicting suicide ideation.

TABLE 5a. ITEMS LOADING ON EACH FACTORS ON THE INDEX OF LIFE STRESS

	Factor Loading	Correlations Item/ Factor	Item/ Total
Factor 1. Concern about finance and desire to stay in the U.S.			.64
16. I worry about whether I will have my future career in the U.S.A.	.59	.74	.50
22. I worry about my financial situation.	.73	.73	.51
25. My financial situation influences my academic study.	.76	.70	.44
26. I worry about my future: will I return to my home country or stay in the U.S.A.	.62	.77	.50
28. I don't want to return to my home country, but I may have to do so.	.46	.55	.21
31. My financial situation makes my life here very hard.	.76	.73	.52
Factor 2. Language difficulties			.70
1. My English embarrasses me when I talk to people.	.79	.81	.49
7. My English makes it hard for me to read articles, books, etc.	.78	.77	.40
8. It's hard for me to develop opposite-sex relationships here.	.49	.62	.47
20. I can't express myself well in English.	.87	.88	.44
29. My English makes it hard for me to understand lectures.	.82	.79	.39
Factor 3. Interpersonal stress			.57
5. I can feel racial discrimination toward me from other students.	.70	.70	.47
11. People treat me badly just because I am a foreigner.	.67	.69	.47
13. I think that people are very selfish here.	.51	.73	.54
15. I can feel racial discrimination toward me in stores.	.69	.60	.28
19. I can feel racial discrimination toward me from professors.	.62	.57	.51
24. I can feel racial discrimination toward me in restaurants.	.72	.70	.46

Factor 4. Stress from new culture and desire to return to one's own country			.77
2. I don't like the religions in the U.S.A.	.62	.53	.31
4. I worry about whether I will have my future career in my own country.	.51	.56	.43
10. I don't like American food.	.45	.70	.46
14. I don't like the things people do for their entertainment here.	.63	.70	.49
17. Americans' way of being too direct is uncomfortable to me.	.50	.33	.49
23. I don't like American music.	.45	.67	.46
27. I haven't become used to enjoying the American holidays.	.40	.68	.53
30. I want to go back to my home country in the future, but I may not be able to do so.	.45	.47	.43
Factor 5. Academic pressure			.64
3. I worry about my academic performance.	.75	.80	.46
6. I'm not doing as good as I want to in school.	.70	.65	.19
9. I don't like the ways people treat each other here.	.52	.59	.41
18. I study very hard in order not to disappoint my family.	.51	.74	.64
21. It would be the biggest shame for me if I fail in school.	.58	.82	.55

Table 5b: Correlations between the ILS factors and the dependent measures.

	Depression	Hopelessness	MSSI
1. Finance & desire to stay	.11	.22*	.10
2. Language difficulty	.31**	.26*	.20*
3. Interpersonal stress	.44***	.33**	.25*
4. New culture & desire to return	.21*	.22*	-.01
5. Academic pressure	.47***	.22*	.24*

* p<.05
** p<.01
*** p<.001

Table 5c.
Regression summary table of the five factors in the Index of Life Stress to criteria of depression, hopelessness, and suicide ideation

Criterion = Depression

Dependent measures	Partial R*R	F	df	p-value
Factor 5 "Academic pressure"	.22	27.58	98	.0001
Factor 3 "Interpersonal stress"	.06	8.33	98	.0048

Criterion = Hopelessness

Dependent measures	Partial R*R	F	df	p-value
Factor 3 "Interpersonal stress"	.11	11.63	98	.0009

Criterion = Suicide Ideation

Dependent measures	Partial R*R	F	df	p-value
Factor 3 "Interpersonal stress"	.06	6.71	99	.0124

TABLE 6a: ITEMS LOADING ON EACH FACTORS ON THE INDEX OF SOCIAL SUPPORT

	Factor Loading	Correlations Item/ Factor	Item/ Total
Factor 1. General contact with one's own culture			.72
3. I have contact with my old friends in my home country.	.71	.69	.29
9. I trust my secondary families (uncles, aunts, etc.).	.44	.54	.47
10. I trust the international student center on campus.	.72	.72	.46
13. My secondary families (uncles, aunts, etc.) are available when I need them.	.59	.67	.60
14. I am satisfied with my old friends in my home country.	.75	.71	.32
16. I have contact with the international student center on campus.	.64	.60	.40
17. My old friends in my home country are available when I need them.	.73	.72	.41
22. I trust my old friends in my home country.	.69	.67	.33
24. My secondary families (uncles, aunts, etc.) mean a lot to me.	.41	.54	.61
28. I am satisfied with the international student center on campus.	.77	.78	.61
29. I am satisfied with me secondary families (uncles, aunts, etc.).	.45	.59	.62
36. The international center on campus is available when I need it.	.67	.66	.57
37. My old friends in my home country mean a lot to me.	.73	.73	.44
38. The international student center on campus means a lot to me.	.67	.67	.62
Factor 2. Contact with local community and student organizations			.66
4. Community activities here mean a lot to me.	.64	.69	.50
5. I am satisfied with student organizations on campus.	.62	.65	.43
18. I have contact with student organizations on campus.	.71	.69	.42
20. I participate in community activities here.	.68	.68	.35
25. I trust the people I meet in community activities.	.46	.54	.31
32. The student organizations on campus are available when I need them.	.72	.70	.45
34. People I meet in community activities are available when I need them.	.65	.67	.46
35. Student organizations on campus mean a lot to me.	.77	.78	.53
39. I am satisfied with community activities here.	.71	.75	.46
40. I trust student organizations on campus.	.64	.67	.48

Factor 3. Contact with new friends in the U.S. and direct family			.53
2. My new friends in the U.S.A. are available when I need them.	.69	.76	.41
6. I trust my family.	.51	.47	.34
8. I trust my new friends in the U.S.A.	.68	.77	.37
19. My family is available when I need it.	.55	.59	.33
21. I am satisfied with my new friends in the U.S.A.	.71	.74	.41
26. My new friends in the U.S.A. mean a lot to me.	.79	.82	.39
31. I have contact with my new friends in the U.S.A.	.76	.78	.39
Factor 4. Contact with the religious places (e.g. churches)			.46
12. I trust my church (or any religious place) here.	.77	.81	.41
23. I have contact with my church (or any religious place) here.	.86	.89	.37
27. My church (or any religious place) here means a lot to me.	.88	.91	.50
30. I am satisfied with my church (or any religious place) here.	.89	.91	.34
33. My church (or any religious place) here is available when I need it.	.81	.32	.40

Table 6b: Correlations between the ISS factors and the dependent measures.

	Depression	Hopelessness	MSSI
1. General contact with one's own culture	-.36***	-.43***	-.15
2. Contact with community activity and student organizations	-.21*	-.26*	-.07
3. Contact with new friends in the USA and direct family	-.43***	-.38***	-.19(p=.056)
4. Contact with religious places	-.07	-.05	.002

* p<.05
** p<.01
*** p<.001

Table 6c.

Regression summary table of the four factors in the Index of Social Support to criteria of depression, hopelessness, and suicide ideation

Criterion = Depression

Dependent measures	Partial R*R	F	df	p-value
Factor 3 "Family & New Friends"	.18	21.56	98	.0001
Factor 1 "General Contact w/ own Culture"	.08	10.15	98	.0019

Criterion = Hopelessness

Dependent measures	Partial R*R	F	df	p-value
Factor 1 "General Contact w/ own Culture"	.18	21.44	97	.0001
Factor 3 "Family & New Friends"	.09	11.80	97	.0009

Criterion = Suicide Ideation

Dependent measures	Partial R*R	F	df	p-value
Factor 3 "Family & New Friends"	.04	3.7	98	>.05*

* p=.056

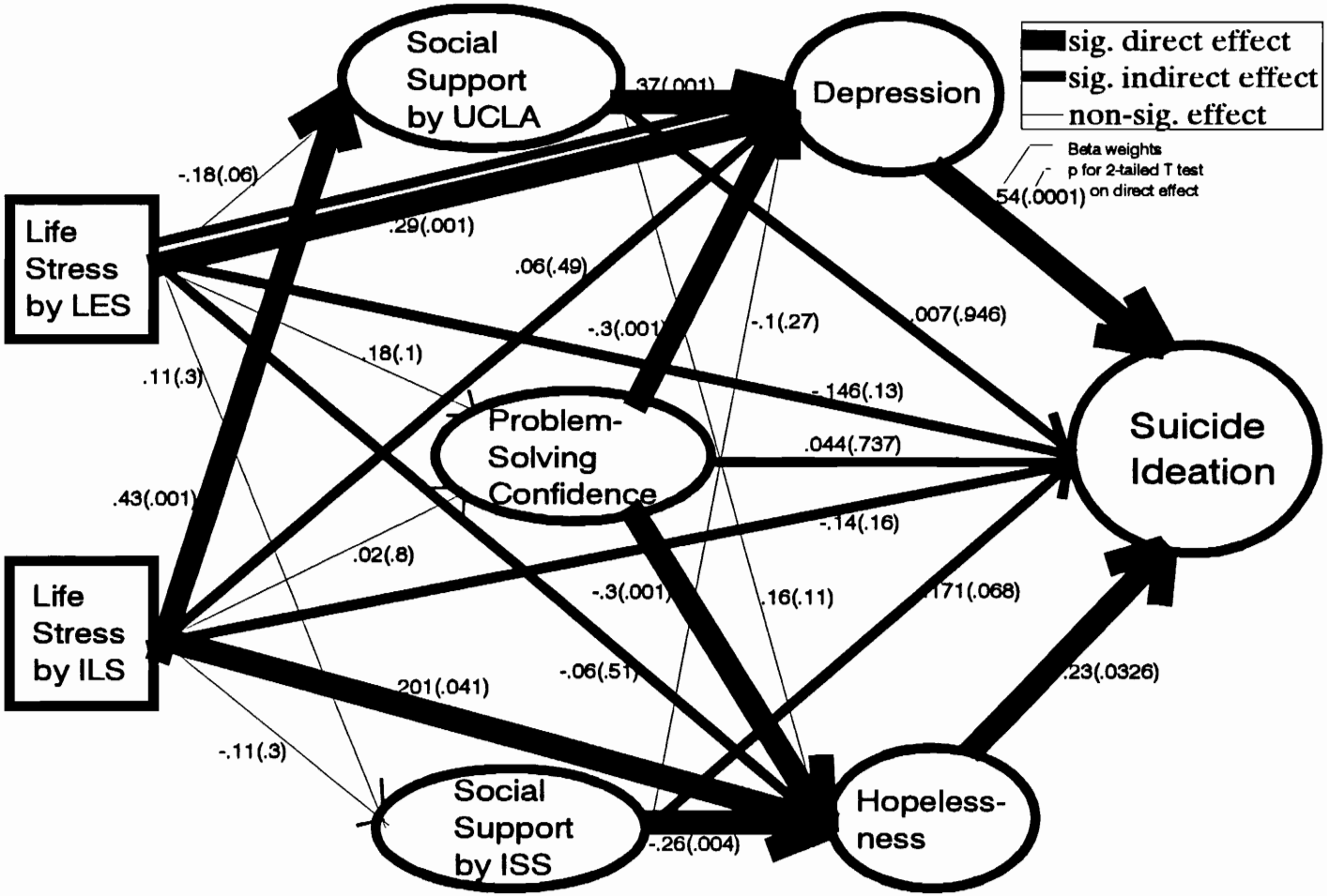

Figure 1. Path analysis on an etiological model of suicide ideation

Appendix A.

Cultural Adjustment Study for Foreign Students from Asian

Project Director: Bin Yang, originally from P.R. China
Project Supervisor: Dr. George Clum, licensed clinical psychologist

The purpose of this study is to investigate the adjustment of Asian students to American college life. Participation in this study will require the completion of several pencil-and paper tasks, and will take approximately 1 to 1-1/2 hours to complete.

In return, students in "Introduction to Psychology" will be given 1 extra credit point for each hour, or part of an hour, required. Students who are not enrooled in "introduction to Psychology" will be paid a Cash stipend of $10.00.

Specifically, we are looking for students from Asia, who have been in this country for less than 7 years. Confidentiality is guaranteed for all participants.

If you are interested in helping us learn more about cultural adjustment, please call: 552-3914 or leave a message in the envelope at 4098 Derring Hall.

Your interest is sincerely appreciated.

Name:

Telephone Number:

Best time to be reached:

Appendix B: Consent Form

The purpose of this study is to investigate adjustment of Asian students to American college life. It is being conducted by Bin Yang, a Clinical Psychology master degree student who was originally from P. R. China. It is under the directing of George Clum, Ph.D.

The study I am agreeing to participate in will involve the assessment of the life change I have had recently, my problem-solving ability on some interpersonal problems, and my social contact with other people. Also, I understand that I will complete several questionnaires relating to such things as depression, hopelessness and suicide ideation. I understand that those individuals who score high on these scales may be referred for counseling.

The personal data collected in the study will remain confidential and will not be used for any other purposes other than those described herein. My name will not be attached to the questionnaires and I will be assigned a subject number. If the data is reported for scientific purposes, then no names or other identifying data will be included in such a report.

The assessment will take approximately one and half hours. If I am a student enrolled in the "Introduction to Psychology," I understand that I will receive one (1) to two (2) extra credit points based on how many hours I participate in the study.

I have read the above conditions and I realize I an\m free to withdraw my consent and discontinue participation in the study at any time without prejudice or penalty. I realize that I do not have to answer any question that I do not want to.

I hereby agree to voluntarily participate in the research project described above and under the conditions described above.

Student's signature date	Local phone #
Student ID #	Witness date

This project has been approved by the Human Subjects Research Committee and the Institute Review Board. Any questions that the individual might have about the project should be directed to:

Principle Investigators:

Bin Yang, B.S.	4098 Derring Hall	231-8148
George A. Clum, Ph.D.	4092C Derring Hall	231-5701

Human Subject Research Committee:

Richard M. Eisler	Psychological Services Center	231-7001
Helen J. Crawford	5070C Derring Hall	231-6520

Institute Review Board:

Ernest R. Stout	306 Burruss Hall	231-9359

Appendix C. Information sheet

Name: _____
(last) (first) (middle)

Date of birth: _____

Age: _____

Sex: _____male _____female

Marital status: _____single _____married _____divorced

Are you with any of your family members?
_____yes _____no

if yes, who are they? _____spouse _____children
_____siblings _____parents

Country of origin_____

Academic major_____

How long have you been in this country(duration)?_____

How much did you know about this country before you came? Please circle the number that apply to you. If you rate "0," that means that you did not know anything at all about this country; If you rate "10," that means that you knew exactly how it would be.

0 1 2 3 4 5 6 7 8 9 10

Appendix D. Scale for Suicide Ideation

Beck, A., Kovacs, M., & Weissman, A. (1979). Assessment of suicide ideation: The scale for suicide ideators. Journal of Consulting and Clinical Psychology, 47, 343- 352.

_____ 1. Wish to live:
- (0) moderate to strong
- (1) weak
- (2) none

_____ 2. Wish to die:
- (0) none
- (1) weak
- (2) moderate to strong

_____ 3. Reasons for living/dying:
- (0) for living outweigh for dying
- (1) about equal
- (2) for dying outweigh for living

_____ 4. Desire to make active suicide attempt:
- (0) none
- (1) weak
- (2) moderate to strong

_____ 5. Passive suicide desire:
- (0) would take precautions to save life
- (1) would leave life/death to chance
- (2) would avoid steps necessary to save or maintain life

(for ideators only)

_____ 6. Time dimension: duration of suicide ideation/wish
- (0) brief, fleeting periods
- (1) longer periods
- (2) continuous (chronic) or almost continuous

_____ 7. Time dimension: frequency of suicide ideation/wish
- (0) rare, occasional
- (1) intermittent
- (2) persistent, or continuous

_____ 8. Attitude toward ideation/wish
- (0) rejecting
- (1) ambivalent, indifferent
- (2) accepting

_____ 9. Control over suicidal action/acting out wish
- (0) has sense of control
- (1) unsure of control
- (2) has no sense of control

_____ 10. Deterrents to active attempt (e.g., family, religion, irreversibility, etc.)
(0) would not attempt because of a deterrent
(1) some concern about deterrents
(2) minimal or no concern about deterrents

_____ 11. Reason for contemplating attempt
(0) to manipulate environment, get attention, revenge
(1) combination of 0 and 2
(2) escape, solve problems

_____ 12. Method: specificity/planning of contemplated attempt
(0) not considered
(1) considered, but details not worked out
(2) details worked out, well formulated

_____ 13. Method: Availability/opportunity for contemplated attempt
(0) method not available, no opportunity
(1) method would require effort; opportunity not readily available
(2a) method and opportunity available
(2b) future opportunity/availability of method anticipated

_____ 14. Sense of "capability" to carry out attempt
(0) no courage, too weak, afraid, incompetent
(1) unsure of competence, courage
(2) sure of competence, courage

_____ 15. Expectation/anticipation of actual attempt
(0) no
(1) uncertain, not sure
(2) yes

_____ 16. Actual preparation for contemplated attempt
(0) none
(1) partial (e.g., started to collect pills)
(2) complete (e.g., had pills, loaded gun)

_____ 17. Suicide note
(0) none
(1) started but not completed, only thought about
(2) completed

_____ 18. Final acts in anticipation of death (e.g., insurance, will, etc.)
(0) none
(1) thought about or made some arrangements
(2) made definite plans or completed arrangements

_____ 19. Deception/concealment of contemplated suicide
(0) reveal ideas openly
(1) held back on revealing
(2) attempted to deceive, conceal, lie

Appendix E: The Modified Scale for Suicidal Ideation

Instructions: The purpcse of this scale is to assess the presence or absence of suicidal thought and the degree of severity of this thought. The time frame of this is how you have been feeling over the PAST TWO WEEKS.

1. Over the past two weeks, have you had the desire to die? If so, how strong has the desire been?
   0 None - I had no wish to die.
   1 Weak - I was unsure about whether I wanted to die.
   2 Moderate - I was preoccupied with ideas about death.
   3 Strong - I had a strong desire to die.

2. Over the past two weeks, have you had the desire to live? If so, how strong has the desire been?
   0 Strong - I had a strong desire to live.
   1 Moderate - I thought about wanting to live quite often, and if I thought about wanting to die, I could easily turn my thoughts away from it.
   2 Weak - I was unsure about wanting to live.
   3 None - I had no wish to live.

3. Over the past two weeks, when you had thought about suicide, how strong was the desire to act on that thought?
   0 None - If I was thinking of suicide, I definitely did not want to act on these thoughts.
   1 Weak - When I thought of suicide, I was unsure of whether or not I wished to make an attempt.
   2 Moderate - When I thought of suicide, I had the desire to act on my thoughts at least once.
   3 Strong - I wanted to act on my thoughts of suicide several times - I was almost certain I wished to kill myself.

4. Over the past two weeks, have you had the desire to die by not taking care of your health, eating or drinking too much (or eating too little), or leaving your life or death to chance? (i.e. carelessly crossing a busy street)
   0 None - I had taken precautions to maintain my life.
   1 Weak - I was not sure whether I would leave my life or death to chance.
   2 Moderate - I would definitely leave my life or death to chance, if given the opportunity to do so.
   3 Strong - I had avoided steps necessary to maintain or save my life.

5. Over the past two weeks, when you have had thoughts about suicide, how long did these thoughts last?

0 Brief periods or nonexistant.
1 Short duration, several minutes.
2 Longer, an hour or more.
3 Almost continuous, I couldn't get them off my mind.

6. Over the past two weeks, how often have these thoughts of suicide come?
0 Rarely - only once in the past two weeks (or nonexistant).
1 Twice or more in the past two weeks.
2 About once every day.
3 Several times per day.

7. Over the past two weeks, how intense or vivid have the thoughts been?
0 Not vivid or intense (or nonexistant) at all.
1 Slightly vivid or intense.
2 Moderately vivid or intense.
3 Very vivid or intense.

8. Could you think of anything that would keep you from killing yourself?
0 I could think of at least one definite deterrent.
1 I could think of at least one deterrent, but it would not keep me from killing myself under all circumstances.
2 I was unsure if there were any deterrents that would prevent my suicide.
3 I could not think of anything at all that would keep me from killing myself.

9. Over the past two weeks, when you thought about your reasons for living vs. your reasons for dying, which of the two were stronger?
0 I could not think of any reasons for dying.
1 My reasons for living were stronger than my reasons for dying.
2 I was unsure which were stronger, or they were about equal in strength.
3 My reasons for dying were much stronger than my reasons for living (or I had no reason to live).

10. Over the past two weeks, have you been thinking of a way in which you might kill yourself? That is, have you thought about the method you might choose?
0 I have not considered a method of suicide.
1 I have given it some consideration, but I was unsure of the method.
2 I knew the method I wished to use, but the details of exactly how I wished to kill myself are unclear.

3 I knew the method I wished to kill myself precisely.

11. Over the past two weeks, have you thought about how much effort or time is involved in the method chosen to kill yourself? Did you forsee this opportunity being present in the near future?

0 I did not have a method, or it is not currently available to me now or in the near future.

1 I had a method, but it is not readily available, it would take time and opportunity.

2 I had a method, but it would not take a great deal of effort to make it available.

3 I had a method that is readily available at almost anytime.

12. Over the past two weeks, have you felt like you had the courage to commit suicide?

0 I did not have the courage to kill myself.

1 I was unsure that I had the courage to kill myself.

2 I was quite sure I had the courage to kill myself.

3 I was very sure or certain I had the courage to kill myself.

13. Over the past two weeks, did you have the ability to carry out a suicide plan? Would you be effective in ending your life?

0 I did not feel competent to kill myself.

1 I was unsure if I would be competent to kill myself.

2 I was somewhat sure I would be competent to kill myself.

3 I was convinced that I would be competent in killing myself.

14. Over the past two weeks, how sure were you that suicide is something you might actually do sometime, if left to your own devices?

0 I was certain I would not make an attempt.

1 I was unsure I would make an attempt one day, or the chances were about equal.

2 I was almost certain I would make an attempt one day.

3 I was certain I would make an attempt one day.

15. Over the past two weeks, have you noticed yourself talking about death more than usual, even jokingly?

0 I have not referred to death in the past two weeks.

1 I have talked about death, no specific mention was made about wanting to die.
2 I have specifically said I wanted to die.
3 I have confided with someone that I wanted to commit suicide.

16. Over the past two weeks, have you written about suicide or death (i.e., in poetry or in a dairy)?
0 I have not written about suicide or death in the past two weeks.
1 I have written general comments regarding death in the past two weeks.
2 I have written specific comments about wanting to die.
3 I have written a specific reference about planning my suicide.

17. Over the past two weeks, have you thought about leaving a note or writing a letter to somebody about your suicide?
0 None - hasn't thought about a suicide note.
1 "Mental note" - has thought about a suicide note, possibly worked out general themes which would be put in the note.
2 Started - suicide note partially written, might have misplaced it.
3 Completed note - written out, definite plans about contents, addressee.

18. Over the past two weeks, have you actually done anything to prepare for your suicide, e.g., collected material, pills, guns, etc.?
0 None - no preparation.
1 Probable preparation - might have started to collect materials.
2 Partial perparation - definitely started to organize method of suicide.
3 Complete - has pills, guns, or other devices.

Appendix F. Zung Depression Scale

	None or a Little of the Time	Some of the Time	Good Part of the Time	Most or All of the time
I feel down-hearted, blue, and sad.				
Morning is when I feel feel best.				
I have crying spells or feel like it.				
I have trouble sleeping through the night.				
I eat as much as I used to.				
I enjoy looking at, talking to, and being with attractive men/women.				
I notice that I am losing weight.				
I have trouble with constipation				
My heart beats faster than usual.				
I get tired for no reason				
My mind is as clear as it used to be.				
I find it easy to do the things I used to do.				
I am restless and can't keep still.				

I feel hopeful about the future.				
I am more irritable than usual.				
I find it easy to make decisions.				
I feel that I am useful and needed.				
My life is pretty full				
I feel that others would be better off if I were dead.				
I still enjoy the things I used to do.				

Appendix G. Beck H Scale

INSTRUCTIONS: On this questionnaire are a number of statements. Please read each statement carefully. If the statement is true, or mostly true, circle the T in front of the statement. If the statement is false, i.e., you do not believe it, circle the F. We are interested in how you feel today, that's right now.

T F 1. I look forward to the future with hope and enthusiasm.
T F 2. I might as well give up because I can't make things go better for myself.
T F 3. When things are going badly, I am helped by knowing they can't stay that way forever.
T F 4. I can't imagine what my life would be like in 10 years.
T F 5. I have enough time to accomplish the things I most want to do.
T F 6. In the future, I expect to succeed in what concerns me most.
T F 7. My future seems dark to me.
T F 8. I expect to get more of the good things in life than the average person.
T F 9. I just don't get the breaks, and there's no reason to believe I will in the future.
T F 10. My past experiences have prepared me well for my future.
T F 11. All I can see ahead of me is unpleasantness rather than pleasantness.
T F 12. I don't expect to get what I really want.
T F 13. When I look ahead to the future, I expect I will be happier than I am now.
T F 14. Things just won't work out the way I want them to.
T F 15. I have great faith in the future.
T F 16. I never get what I want so it's foolish to want anything.
T F 17. It is very unlikely that I will get real satisfaction in the future.
T F 18. The future seems vague and uncertain to me.
T F 19. I can look forward to more gook times than bad times.
T F 20. There's no use in really trying to get something I want because I probably won't get it.

Appendix H. Life Experiences Survey

Listed below are a number of events which sometimes bring about change in the lives of those who experience them and which necessitate social readjustment. Please check those events which you have experienced in the recent past and indicate the time period during which you have experienced each event. Be sure that all checkmarks ate directly across from the items to which they correspond.

Also, for each of the items listed below, please indicate the extent to which you viewed the event as having either a positive or a negative impact on your life at the time the event occured. That is, indicate the type and extent of impact the event had. A rating of -3 would indicate that the event had an extremely negative impact, a rating of 0 a neutral impact, and a +3 would indicate an extremely positive impact.

Section 1		Rating
1.	Marriage	-3 -2 -1 0 1 2 3
2.	Detention in jail or comparable instruction.	-3 -2 -1 0 1 2 3
3.	Death of spouse	-3 -2 -1 0 1 2 3
4.	Major change in sleeping habits.	-3 -2 -1 0 1 2 3
5.	Deach of a close family member:	
	a. mother	-3 -2 -1 0 1 2 3
	b. father	-3 -2 -1 0 1 2 3
	c. brother	-3 -2 -1 0 1 2 3
	d. sister	-3 -2 -1 0 1 2 3
	e. grandmother	-3 -2 -1 0 1 2 3
	f. grandfather	-3 -2 -1 0 1 2 3
	g. other	-3 -2 -1 0 1 2 3
6.	Major change in eating habits	-3 -2 -1 0 1 2 3
7.	Foreclosure on mortage or loan	-3 -2 -1 0 1 2 3
8.	Death of close friend	-3 -2 -1 0 1 2 3
9.	Outstanding personal achievement	-3 -2 -1 0 1 2 3
10.	Minor law violation	-3 -2 -1 0 1 2 3
11.	Male: wife/girlfriend's pregnancy	-3 -2 -1 0 1 2 3
12.	Female: pregnancy	-3 -2 -1 0 1 2 3
13.	Changed work situation	-3 -2 -1 0 1 2 3
14.	new job	-3 -2 -1 0 1 2 3
15.	Serious illness or injury of close family member:	
	a. mother	-3 -2 -1 0 1 2 3
	b. father	-3 -2 -1 0 1 2 3
	c. brother	-3 -2 -1 0 1 2 3
	d. sister	-3 -2 -1 0 1 2 3
	e. grandmother	-3 -2 -1 0 1 2 3
	f. grandfather	-3 -2 -1 0 1 2 3

	g. spouse	-3 -2 -1 0 1 2 3
	h. other	-3 -2 -1 0 1 2 3
16.	Sexual difficulties	-3 -2 -1 0 1 2 3
17.	Trouble with employer	-3 -2 -1 0 1 2 3
18.	Trouble with inlaws	-3 -2 -1 0 1 2 3
19.	Major change in financial status	-3 -2 -1 0 1 2 3
20.	Major change in closeness of family member	-3 -2 -1 0 1 2 3
21.	Gaining a new family member	-3 -2 -1 0 1 2 3
22.	Change of residence	-3 -2 -1 0 1 2 3
23.	Marital separation	-3 -2 -1 0 1 2 3
24.	Major change in church activities	-3 -2 -1 0 1 2 3
25.	Marital reconciliation	-3 -2 -1 0 1 2 3
26.	Major change in number of arguments with spouse	-3 -2 -1 0 1 2 3
27.	Married male: change in wife's work outside home	-3 -2 -1 0 1 2 3
28.	Married female: change in husband's work	-3 -2 -1 0 1 2 3
29.	Major change in recreation	-3 -2 -1 0 1 2 3
30.	Borrowing more than $10,000	-3 -2 -1 0 1 2 3
31.	Borrowing less than $10,000	-3 -2 -1 0 1 2 3
32.	Being fired from a job	-3 -2 -1 0 1 2 3
33.	Male: wife/girlfriend having an abortion	-3 -2 -1 0 1 2 3
34.	Female: having an abortion	-3 -2 -1 0 1 2 3
35.	Major personal illness or injury	-3 -2 -1 0 1 2 3
36.	Major change in social activities	-3 -2 -1 0 1 2 3
37.	Major change in living conditions of family	-3 -2 -1 0 1 2 3
38.	Divorce	-3 -2 -1 0 1 2 3
39.	Serious injury or illness of a close friend	-3 -2 -1 0 1 2 3
40.	Retirement	-3 -2 -1 0 1 2 3
41.	Son or daughter leaving home	-3 -2 -1 0 1 2 3
42.	Ending of formal spouse	-3 -2 -1 0 1 2 3
43.	Separation from spouse	-3 -2 -1 0 1 2 3
44.	Engagement	-3 -2 -1 0 1 2 3
45.	Breaking up with boyfriend/girlfriend	-3 -2 -1 0 1 2 3
46.	Leaving home for the first time	-3 -2 -1 0 1 2 3
47.	Reconciliation with boyfriend/girlfriend	-3 -2 -1 0 1 2 3

List other recent experiences which have had an impact on your life:

48.	_____	-3 -2 -1 0 1 2 3
49.	_____	-3 -2 -1 0 1 2 3
50.	_____	-3 -2 -1 0 1 2 3

Appendix I.

MODIFIED MEANS-END PROBLEM-SOLVING PROCEDURE

Instructions: please follow the sub-instructions carefully and work on the task STEP-BY-STEP.

Step one: please list as many as ten different problems from your own life that are currently bothering you most.

1. _____;
2. _____;
3. _____;
4. _____;
5. _____;
6. _____;
7. _____;
8. _____;
9. _____;
10. _____;

Step two: please copy the first INTERPERSONAL problem you have identified at step one. "Interpersonal problem" here means the problem of interaction with other people. Then, please indicate your desired outcome for this problem. After you indicate your desired outcome, please go to step three.

The 1st interpersonal problem:

_____

Your desired outcome:_____.

(for step 3) Solution 1._____

_____.

(step 4)0 1 2 3 4 5 6 7 8 9 10

(for step 5) Pros: 1._____;

2._____;

3._____;

4._____;

Cons: 1._____;

2._____;

3._____;

4._____.

(for step 3) Solution 2._____

_____.

(step 4)0 1 2 3 4 5 6 7 8 9 10

(for step 5) Pros: 1._____;

2._____;

3._____;

4._____;

Cons: 1._____;

2._____;

3._____;

4._____.

(for step 3) Solution 3._____

_____.

(step 4)0 1 2 3 4 5 6 7 8 9 10

(for step 5) Pros: 1._____;

2._____;

3._____;

4._____;

Cons: 1._____;

2._____;

3._____;

4._____.

(for step 3) Solution 4._____

_____.

(step 4)0 1 2 3 4 5 6 7 8 9 10

(for step 5) Pros: 1._____;

2._____;

3._____;

4._____;

Cons: 1._____;

2._____;

3._____;

4._____.

(for step 3) Solution 5._____

_____.

(step 4)0 1 2 3 4 5 6 7 8 9 10

(for step 5) Pros: 1._____;

2._____;

3._____;

4._____;

Cons: 1._____;

2._____;

3._____;

4._____.

(for step 3) Solution 6._____

_____.

(step 4)0 1 2 3 4 5 6 7 8 9 10

(for step 5) Pros: 1._____;

2._____;

3._____;

4._____;

Cons: 1._____;

2._____;

3._____;

4._____.

Step three: for the 1st interpersonal problem you have identified at step two, please list as many different solutions as you can that you could use in that problem situation which you believe will help you reach your desired outcome. It is important that you identify as many different alternative solutions as you can. Please do not start step 4 before you finish step 3.

Step four: please go over each solution you have identified at step 3 and indicate how confident you are that each of those solutions would solve that problem by selecting a number from "0" to "10." If you think that a particular solution would definitely not be successful, you would give it a rating of "0." If you think that a particular solution would be moderately successful, you would give it a rating of "5." If you think that a particular solution would definitely be successful, you would give it a rating of "10." In other words, the more successful you believe a particular solution would be, the higher the rating you would give to that solution. Please do not start step 5 before you finish step 4.

Step five: please go over each of the solutions you have identified at step 4 and indicate as many as four "Pros" and Cons" for each solutions. "Pros" here mean the good things and benefits that might happen as a result of trying that solution. "Cons" here mean the bad things and

costs that might happen as a result of trying that solution. For example, you might think that one of your solutions might make someone mad; this would be a Con (bad thing). Or you might think that your solution might make someone happy; this would be a Pro (good thing).

Step six: please copy the second INTERPERSONAL problem you have identified at step one. "Interpersonal problem" here means the problem of interaction with other people. Then, please indicate your desired outcome for this problem. After you indicate your desired outcome, please go to step seven.

The 2nd interpersonal problem:_____

_____.

Your desired outcome:_____.

(for step 7) Solution 1._____

_____.

(step 8)0 1 2 3 4 5 6 7 8 9 10

(for step 9) Pros: 1._____;

2._____;

3._____;

4._____;

Cons: 1._____;

2._____;

3._____;

4._____.

(for step 7) Solution 2._____

_____.

(step 8)0 1 2 3 4 5 6 7 8 9 10

(for step 9) Pros: 1._____;

2._____;

3._____;

4._____;

Cons: 1._____;

2._____;

3._____;

4._____.

(for step 7) Solution 3._____

_____.

(step 8)0 1 2 3 4 5 6 7 8 9 10

(for step 9) Pros: 1._____;

2._____;

3._____;

4._____;

Cons: 1._____;

2._____;

3._____;

4._____.

(for step 7) Solution 4._____

_____.

(step 8)0 1 2 3 4 5 6 7 8 9 10

(for step 9) Pros: 1._____;

2._____;

3._____;

4._____;

Cons: 1._____;

2._____;

3._____;

4._____.

(for step 7) Solution 5._____

_____.

(step 8)0 1 2 3 4 5 6 7 8 9 10

(for step 9) Pros: 1._____;

2._____;

3._____;

4._____;

Cons: 1._____;

2._____;

3._____;

4._____.

(for step 7) Solution 6._____

_____.

(step 8)0 1 2 3 4 5 6 7 8 9 10

(for step 9) Pros: 1._____;

2._____;

3._____;

4._____;

Cons: 1._____;

2._____;

3._____;

4._____.

Step seven: for the 2nd interpersonal problem you have identified at step 6, please list as many different solutions as you can that you could use in that problem situation which you believe will help you reach your desired outcome. It is important that you identify as many different alternative solutions as you can. Please do not start step 8 before you finish step 7.

Step eight: please go over each solution you have identified at step 7 and indicate how confident you are that each of those solutions would solve that problem by selecting a number from "0" to "10." If you think that a particular solution would definitely not be successful, you would give it a rating of "0." If you think that a particular solution would be moderately successful, you would give it a rating of "5." If you think that a particular solution would definitely be successful, you would give it a rating of "10." In other words, the more successful you believe a particular solution would be, the

higher the rating you would give to that solution. Please do not start step 9 before you finish step 8.

Step nine: please go over each of the solutions you have identified at step 8 and indicate as many as four "Pros" and Cons" for each solutions. "Pros" here mean the good things and benefits that might happen as a result of trying that solution. "Cons" here mean the bad things and costs that might happen as a result of trying that solution. For example, you might think that one of your solutions might make someone mad; this would be a Con (bad thing). Or you might think that your solution might make someone happy; this would be a Pro (good thing).

Appendix J. UCLA Loneliness Scale

Statement	Never	Rarely	Sometimes	Often
1. I feel in tune with the people around me	1	2	3	4
2. I lack companionship	1	2	3	4
3. There is no one I can turn to	1	2	3	4
4. I do not feel alone	1	2	3	4
5. I feel part of a group of friends	1	2	3	4
6. I have a lot in common with people around me	1	2	3	4
7. I am no longer close to anyone	1	2	3	4
8. My interests and ideas are not shared by those aroud me	1	2	3	4
9. I am an outgoing person	1	2	3	4
10. There are people I feel close to	1	2	3	4
11. I feel left out	1	2	3	4
12. My social relationships are superficial	1	2	3	4
13. No one really knows me well	1	2	3	4
14. I feel isolated from others	1	2	3	4
15. I can find companionship when I want it	1	2	3	4
16. There are people who really understand me	1	2	3	4
17. I am unhappy being so withdrawn	1	2	3	4
18. People are around me but not with me	1	2	3	4
19. There are people I can talk to	1	2	3	4
20. There are people I can turn to	1	2	3	4

Appendix K. Index of Life Stress

Direction: Please indicate how often you feel the way described in each of the following statement. Circle one number for each statement.

Statement	Never	Rarely	Sometimes	Often
1. My English embarrasses me when I talk to people.	0	1	2	3
2. I don't like the religions in the U.S.A.	0	1	2	3
3. I worry about my academic performance.	0	1	2	3
4. I worry about my future career in my home country.	0	1	2	3
5. I can feel racial discrimination toward me from other students.	0	1	2	3
6. I'm not doing as good as I want to in school.	0	1	2	3
7. My English makes it hard for me to read articles, books, etc.	0	1	2	3
8. It's hard for me to develop opposite-sex relationships here.	0	1	2	3
9. I don't like the ways people treat each other here.	0	1	2	3
10. I don't like American food.	0	1	2	3
11. People treat me badly just because I am a foreigner.	0	1	2	3
12. I owe money to others.	0	1	2	3
13. I think that people are very selfish here.	0	1	2	3
14. I don't like the things people do for their entertainment here.	0	1	2	3
15. I can feel racial discrimination toward me in stores.	0	1	2	3
16. I worry about whether I will have my future career in the U.S.A.	0	1	2	3
17. Americans' way of being too direct is uncomfortable to me.	0	1	2	3
18. I study very hard in order not to disappoint my family.	0	1	2	3
19. I can feel racial discrimination toward me from professors.	0	1	2	3
20. I can't express myself well in English.	0	1	2	3
21. It would be the biggest shame for me if I fail in school.	0	1	2	3
22. I worry about my financial situation.	0	1	2	3
23. I don't like American music.	0	1	2	3
24. I can feel racial discrimination toward me in restaurants.	0	1	2	3

Statement	Never	Rarely	Sometimes	Often
25. My financial situation influences my academic study.	0	1	2	3
26. I worry about my future: will I return to my home country or stay in the U.S.A.?	0	1	2	3
27. I haven't become used to enjoying the American holidays.	0	1	2	3
28. I don't want to return to my home country, but I may have to do so.	0	1	2	3
29. My English makes it hard for me to understand lectures.	0	1	2	3
30. I want to go back to my home country in the future, but I may not be able to do so.	0	1	2	3
31. My financial situation makes my life here very hard.	0	1	2	3

Appendix L. The index of Social Support

Direction: Please indicate how much you feel or how often you act the way described in each of the following statement. Circle one number for each statement. Please indicate "N/A" if the item does not apply to you.

Statement	Never	Rarely	Sometimes	Often
1. I have contact with my family.	0	1	2	3
2. My new friends in the U.S.A. are available when I need them.	0	1	2	3
3. I have contact with my old friends in my home country.	0	1	2	3
4. Community activities here mean a lot to me.	0	1	2	3
5. I am satisfied with student organizations on campus.	0	1	2	3
6. I trust my family.	0	1	2	3
7. I have contact with my secondary families (uncles, aunts, etc.).	0	1	2	3
8. I trust my new friends in the U.S.A.	0	1	2	3
9. I trust my secondary families (uncles, aunts, etc.).	0	1	2	3
10. I trust the international student center on campus.	0	1	2	3
11. My family means a lot to me.	0	1	2	3
12. I trust my church (or any religious place) here.	0	1	2	3
13. My secondary families (uncles, aunts, etc.) are available when I need them.	0	1	2	3
14. I am satisfied with my old friends in my home country.	0	1	2	3
15. I am satisfied with my family.	0	1	2	3
16. I have contact with the international student center on campus.	0	1	2	3
17. My old friends in my home country are available when I need them.	0	1	2	3
18. I have contact with student organizations on campus.	0	1	2	3
19. My family is available when I need it.	0	1	2	3
20. I participate in community activities here.	0	1	2	3

21. I am satisfied with my new friends in the U.S.A.	0	1	2	3
22. I trust my old friends in my home country.	0	1	2	3
23. I have contact with my church (or any religious place) here.	0	1	2	3

Statement	Never	Rarely	Sometimes	Often
24. My secondary families mean a lot to me.	0	1	2	3
25. I trust the people I meet in community activities.	0	1	2	3
26. My new friends in the U.S.A. mean a lot to me.	0	1	2	3
27. My church (or any religious place) here means a lot to me.	0	1	2	3
28. I am satisfied with the international student center on campus.	0	1	2	3
29. I am satisfied with me secondary families.	0	1	2	3
30. I am satisfied with my church (or any religious place) here.	0	1	2	3
31. I have contact with my new friends in the U.S.A.	0	1	2	3
32. The student organizations on campus are available when I need them.	0	1	2	3
33. My church (or any religious place) here is available when I need it.	0	1	2	3
34. People I meet in community activities are available when I need them.	0	1	2	3
35. Student organizations on campus mean a lot to me.	0	1	2	3
36. The international center on campus is available when I need it.	0	1	2	3
37. My old friends in my home country mean a lot to me.	0	1	2	3
38. The international student center on campus means a lot to me.	0	1	2	3
39. I am satisfied with community activities here.	0	1	2	3
40. I trust student organizations on campus.	0	1	2	3