AN EXAMINATION OF SOCIAL ANXIETY, SOCIAL SKILLS, SOCIAL ADJUSTMENT, AND SELF-CONSTRUAL IN CHINESE AND AMERICAN STUDENTS AT AN AMERICAN UNIVERSITY

by

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(ABSTRACT)

Research has shown that international students studying in the United States report significantly lower levels of social adjustment than American students. Cultural differences may contribute to this problem; however, social relationships between international students and American students lead to greater adjustment for the former group. In spite of this finding, many international students fail to develop significant interpersonal relationships with American students. In this study, self-construal, social anxiety, and social skills were investigated as possible mediating variables for international student social adjustment. During the first phase of the study, data were collected from 59 Chinese and 105 American graduate students at a large state university in the southeastern United States. Results indicated that Chinese students experience lower social adjustment, higher levels of social anxiety, and report higher interdependent self-construal than American students. Independent self-construal was inversely related to social anxiety for both groups. In addition, an inverse relationship between social anxiety and social adjustment was found for the American students only. For the second phase of the study, a subset of Chinese ($\underline{N}$ = 28) and American ($\underline{N}$ = 32) students from the first phase participated in four separate dyadic interactions with both Chinese and American confederates. The students were asked to rate their level of anxiety both before and after the interaction, and their behavior during the interaction was videotaped and later rated by independent observers. Analyses of these data revealed that American students experienced higher anxiety than Chinese students both before and after the interactions. Social adjustment appears to play a role in this difference since Chinese

subjects with low social adjustment reported lower post-interaction anxiety than those with high social adjustment. Self-construal is also discussed as a possible explanation for this finding. In addition, American students were rated as having better overall social skills (as defined by American norms) than Chinese students. Both groups of students reported lower anxiety after interacting with an American confederate, perhaps due to language difficulties during interactions with Chinese confederates. Finally, some interesting results were revealed when the effects of sex were explored in the analyses. Implications for student orientation programs and directions for future research are discussed.

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Introduction

The number of foreign students studying in colleges and universities in the United States has risen dramatically in the past two decades, with the current total number of international students estimated at over 450,000. Over half of these students come to the United States from Asia, particularly from the countries of China, Japan, Taiwan, India, and Korea (Davis, 1994). Because of their growing numbers and influence on campus and academic life, research that relates to these students has also risen. Of special interest to psychologists is the transition of these students from one culture to another.

The following literature review will serve as an introduction to the present research on social anxiety and social functioning of Chinese students studying in the United States. The literature regarding international student adjustment will be reviewed first, followed by an introduction to the concepts of self-construal and social anxiety and a review of cross-cultural differences in social anxiety.

International Student Adjustment

Research has shown that international students studying in the United States show significantly less social adjustment and institutional attachment (i.e., how the student feels about his or her university) than American students. They may experience more distress interpersonally due to the impact of cultural differences, and they may have more difficulty becoming involved in campus activities and leadership roles (Kaczmarek, Matlock, Merta, Ames, & Ross, 1994). Furthermore, it has been demonstrated that international students who spend more of their leisure time with American students are significantly better adapted than those who spend more leisure time with fellow international students (Surdam & Collins, 1984). These adjustment difficulties seem to be particularly problematic for international students from non-Western countries.

The finding that cross-cultural relationships facilitate adjustment for international students has also been explored by Alexander, Klein, Workneh, and Miller (1981). They found that most international students continued to express feelings of stress and vulnerability throughout their time of study in the United States. They described how students from non-Western cultures often turn to or create a co-national "subculture" in

order to build a support system similar to the ones they had in their home countries. Most international students come from extended family support systems and often experience great apprehension in making friends with Americans. The research of Alexander and colleagues has shown that most international students give highest priority to academic achievement and give secondary status to socializing with Americans. These students report that warm intimate international contacts are infrequent, and that those who are able to establish strong interpersonal relationships may be less strongly identified with home country values and may be relatively high in self-confidence and communication skills. Furthermore, those who remain estranged from Americans and who continue to be more oriented towards a home country subculture are both more traditional and more socially inhibited and shy.

Several researchers have attempted to uncover the reasons why international students have relatively few meaningful friendships with students from the host country. Penn and Durham (1978) studied social interactions between international and American students. Their results showed that interaction and friendship patterns between foreign and American students varied greatly and were related to several factors such as similarity of interests in academic fields, opportunity and willingness to participate in campus activities, extent of previous travel, and previous experience in a variety of different college settings. Barriers to interaction between American and international students were differing concepts of friendship, stereotypes, and preconceived attitudes related to other cultures.

In a similar study of Asian international students, Yang and colleagues found that almost half of their respondents reported having meaningful relationships with American students. Of those who did not, barriers to establishing these cross-cultural relationships were identified to be "different ways of living", a belief that Americans are not interested in establishing close relationships with Asian people, lack of time due to academic commitments, and lack of opportunities (Yang, Teraoka, Eichenfield, & Audas, 1994).

In addition, language difficulties may also hinder cross-cultural relationships. Barratt and Huba (1994) found that students' perceived oral language skills was the most

useful variable for predicting their interest and success in building relationships with Americans. They noted that developing cross-cultural personal relationships might appear difficult to international students who may not feel confident about their ability to communicate with Americans, or who may have had unpleasant or embarrassing encounters with Americans that resulted from miscommunication or poor communication.

Other researchers have explored whether length of time in the host country affects international student adjustment. In a multiple regression analysis that included numerous risk factors for feelings of alienation in international students, Schram and Lauver (1988) found that minimal social contact with Americans, undergraduate status, and non-European countries as region of origin were all significant predictors of alienation, and that together they accounted for 10% of the variance in social alienation. Interestingly, Schram and Lauver found that length of time in the United States and in the university community were not related to feelings of alienation. This is further confirmed by another study which showed that length of time in the United States was not related to international students' perceptions of adjustment or to satisfaction with communication in their new environment. In this study the most important factor in international students' adjustment to American culture was frequency of interaction with American students (Zimmerman, 1995).

Finally, the above findings seem to be true for international students from China. In a study of Taiwanese international students, Ying and Liese (1994) found that homesickness, friendship with Americans, preparation level, decline in level of control from pre- to post-arrival in the United States, age, cultural problems, and internal interpersonal orientation were significant predictors of adjustment in this population. In another study, Hsu and colleagues compared Chinese-descent international students studying in the United States with American students (studying in the U.S.) and Chinese-descent students studying in Taiwan. They found that the Chinese students studying in the United States reported significantly higher social alienation than Chinese students in

Taiwan or American students, and significantly higher social loneliness than Chinese students in Taiwan (Hsu, Hailey, & Range, 1987).

To summarize the above findings, it seems that social interaction with American students may be problematic for many international students, leaving them socially isolated in some cases and with greater maladjustment to their surroundings. Although a number of potential reasons for this relative lack of relationships between international students and American students have been explored, including perceived language difficulties, cultural differences, and lack of opportunities, the role of social anxiety and social skills differences has not yet been systematically evaluated. Because of a hypothesized link to social anxiety and social skills, the impact of self-construal must also be considered.

Self-Construal

Self-construal can be defined as a constellation of thoughts, feelings, and actions concerning the relationship of the self to others and the self as distinct from others (Singelis & Sharkey, 1995). Markus and Kitayama (1991) point out that Western and non-Western cultures differ in predominantly adhering to an independent and an interdependent self-construal. In the independent view, the individual is focused on his or her own independence and self-actualization. There is an emphasis on internal abilities, thoughts, and feelings; being unique and expressing the self; realizing internal attributes and promoting one's own goals; and being direct in communication. People and events are appraised primarily in terms of their individual achievements and properties, and a person with a highly developed independent self-construal is likely to use their inner attributes to regulate their own behavior. In general, individuals from Western cultures are characterized by an independent sense of self.

In contrast, individuals from Eastern cultures are best described as interdependent. The individual with an interdependent sense of self is focused predominantly on his or her relationship with in-group members or with the in-group as a whole. Interdependent self-construal emphasizes external, public features such as statuses, roles, and relationships; belonging and fitting in; occupying one's proper place and engaging in

appropriate action; and being indirect in communication (i.e., reading others' minds). People and events are appraised in terms of the effect they have on the in-group and interpersonal relationships. Furthermore, the interdependent self depends on his or her relationships with others and contextual factors, rather than internal factors, to regulate behavior.

These two views of the self are not mutually exclusive; any one person can have both independent and interdependent self-definitions that vary in strength of development and emphasis. Culture affects the relative development of these selves (Triandis, 1989). The development of many cognitions that refer to a group or collective are encouraged in collectivist (interdependent) cultures, thereby increasing the likelihood that these cognitions will be more frequently present in the individual. On the other hand, individualist (independent) cultures foster cognitions that refer to the individual's traits and states. There is some evidence that private and collective self-cognitions are encoded separately in memory (Trafimow, Triandis, & Goto, 1991).

The co-existence of well-developed independent and interdependent self-construals in the same individual is not necessarily problematic; it may be quite useful when the person moves between situations or cultures and needs to modify his or her behavior accordingly (Singelis, 1994). For example, a person from an individualistic culture who also has a well-developed interdependent sense of self will find it easier to make attributions that are similar to those made by members of a collectivist culture where a highly developed interdependent self is typical. In addition, being able to understand cultural assumptions behind behavior and focus on the features of situations that are culturally mandated to guide behavior will make it easier to respond with behaviors that are appropriate.

Self-construal and international student adjustment. East Asian graduate students studying in the United States were compared to their American counterparts in a recent study by Cross (1995). She found that the two groups did not differ on their level of independent self-construal; however, the East Asian students scored significantly higher on a measure of interdependent self-construal than the American students. She

speculated that international students who choose to study in the United States may be more individualistic than those who stay in their home countries, which would account for the equivalent levels of independent self-construal in the two groups. Cross also found that self-construal influenced cross-cultural adjustment for the East Asian group. East Asian students who scored high on the interdependent self-construal measure reported high levels of stress. Possible reasons for this finding include the fact that interdependent beliefs are often challenged by American society. In addition, American classrooms are very individualistic in nature and may be frustrating for students with highly developed interdependent self-views. East Asian students who placed more importance on independent self-construal reported reduced levels of perceived stress. This may be due to their use of direct coping strategies such as developing and implementing plans of action when addressing problems related to school. Of interest, Cross found that self-construal scores were not significant predictors of perceived stress for the American students in the study.

Self-construal and interpersonal relations. Triandis (1995) speculated about the consequences of individualism (independence) and collectivism (interdependence) for interpersonal relations. He indicated that collectivists have fewer in-groups but are closely linked to them. They tend to have few but intimate relationships, whereas individualists have many relationships of low intimacy. Individualists may have more in-groups than collectivists; however, they enter and exit them with greater frequency. Triandis (1995) also noted in his review that when compared to Americans, Chinese people in Hong Kong had more task interactions and fewer recreational interactions and their level of intimacy in these interactions was higher.

Other research has shown that people in individualist and collectivist cultures have different concerns when it comes to self-monitoring. Members of individualist cultures focus on how they can change their behavior to meet generalized expectations of others in a social situation (i.e., how a prototypic person is expected to behave in a situation). Members of collectivist cultures, in contrast, pay greater attention to others' status characteristics (Gudykunst, Gao, Nishida, Nadamitsu, & Sakai, 1992). They focus

on how they can behave appropriately given their relationship to specific people in the situation (Gudykunst, Gao, & Franklyn-Stokes, 1996).

Social Anxiety and Social Phobia

Definition. According to Leitenberg (1990), social anxiety involves feelings of apprehension, self-consciousness, and emotional distress in anticipated or actual social-evaluative situations. Such anxiety occurs in situations where people want to make a favorable impression but have doubts about their abilities to do so. They believe that such situations involve scrutiny or evaluation by others, and that negative evaluation is a possible and likely outcome. In addition, they fear harm and rejection from these negative consequences. Furthermore, Leitenberg points out that social anxiety has been studied under various forms. Among these are shyness, performance anxiety, social phobia, social withdrawal, public speaking anxiety, dating anxiety, and social inhibition. It is particularly important to note that the fears that characterize social anxiety are not necessarily realistic. In fact, the catastrophic consequences that are often imagined by socially anxious individuals are seldom accurate.

This array of different types of social anxiety can be categorized in various ways. One distinguishing characteristic is intensity (Leitenberg, 1990). Social anxiety exists on a continuum from very mild, nonclinical social anxiety (i.e., shyness) to severe, clinical levels of social phobia. Important discriminators might include the degree to which functioning is disrupted by the anxiety, the level of autonomic arousal or emotional distress experienced, and the extent of avoidance behavior. The fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV; American Psychiatric Association, 1994) defines social phobia as a marked and persistent fear of social and performance situations in which embarrassment may occur. The fear must be excessive and unreasonable, and the feared social situations are endured with great anxiety and distress or are avoided altogether. Alternatively, social anxiety can be categorized by the extent to which it is generalized across different social situations. Some social anxieties involve only one very limited type of social event, such as public speaking, whereas others involve a variety of social situations (Leitenberg, 1990). Finally, the types of

situations provoking anxiety can also be differentiated (Leitenberg, 1990). For example, one distinguishing characteristic might be the degree to which contingent interaction is involved. For some individuals, one-on-one interactive situations might provoke the greatest levels of anxiety, while other individuals might fear noninteractive situations such as performances in front of a group.

Phenomenology. Social anxiety can be expressed in several ways: physiologically, behaviorally, and cognitively (Leitenberg, 1990). Though it is possible for an individual to experience anxiety in a given situation without indication of all three of these types of symptoms, it is likely that the majority of individuals exhibit symptoms from each of these three realms. Physiological symptoms of social anxiety include excessive sweating, racing heart, blushing, trembling, stomach distress, numbness, and dizziness. Behavioral signs are also quite variable, and include avoidance or escape from the situation, and less extreme behaviors such as procrastination, minimal eye contact, stammering, fidgeting, and social inhibition. Leitenberg (1990) points out that while some of these behavioral symptoms may suggest poor social skills, it is often the case that the socially anxious individual possesses adequate skills but that these skills are inhibited by their anxiety. Finally, it is difficult to conceive of social anxiety without certain characteristic cognitions, such as self-consciousness, preoccupation with perceived scrutiny and evaluation, hypervigilance, and self-deprecating thoughts. In addition, socially anxious individuals tend to have a cognitive bias toward negative feedback.

Asian American students and social anxiety. Surprisingly, few studies of social anxiety have focused on an international student population. Several studies have, however, examined social anxiety in Asian American university students. Sue, Sue, and Ino (1990) examined the notion that Chinese American individuals are passive and nonassertive when compared to White American individuals. In a role-play exercise with female college students from both of these ethnic groups, it was found that the Chinese American female students were as assertive as the White American female students on all behavioral measures, and showed no significant differences from the White American

participants on a self-report measure of social avoidance and distress. It is interesting to note, however, that the Chinese American women reported more apprehension about this social situation than the White American women. Furthermore, although the ethnicity of the experimenter had little effect on the Chinese Americans' role-playing performance, the White American women hesitated longer when interacting with an Asian experimenter.

Leung and colleagues also examined social anxiety among American social phobics and American and Chinese/Chinese American volunteer samples. They found that both of the volunteer groups reported lower levels of anxiety than social phobics, and did not differ significantly from each other (Leung, Heimberg, Holt, & Bruch, 1994). Okazaki (1997), on the other hand, did find differences between Asian American and White American college students on measures of depression and social anxiety, with Asian Americans reporting significantly higher distress in both of these areas. Furthermore, Okazaki found that self-construal mediated this effect for social anxiety, with interdependent self-construal being significantly related to higher reports of social anxiety. In other words, those who were more concerned with asserting one's own judgment and emphasizing autonomy from others were less likely to be socially avoidant, distressed in social situations, and fearful of social evaluations. In addition, Okazaki found that those Asian Americans who were less acculturated to the social norms of American culture were more likely to report higher avoidance of, and distress in, social situations.

Culture-specific forms of social anxiety. While the social anxiety reaction is elicited by some form of perceived threat to the person, it is likely that there are numerous cultural variations in its expression and in the situations and contexts in which it is elicited. Such cultural variation in social anxiety may be a function of how a given culture shapes the way in which its members define or construe the self as an object of social threat (Kirmayer, 1991; Takahashi, 1989). The construal of the self as primarily independent or interdependent is thought to underlie differences in the form of social anxiety found in individualist or collectivist cultures. To the extent that these two types

of self-construal relate to different forms of social anxiety, some of each should be identifiable in each culture, although one form should predominate in a given culture (Kleinknecht, Dinnel, Kleinknecht, Hiruma, & Harada, 1997).

Kleinknecht and colleagues (1997) examined cultural variations in two forms of social anxiety: social phobia as defined by DSM-IV and *taijin kyofusho* (TKS), a Japanese variant of social anxiety and phobia. TKS is a form of *shinkeishitsu*, or nervous character or temperament as initially described by Shoma Morita (Russell, 1989). TKS is characterized by an obsessive fear of shame, manifest in a morbid fear of embarrassing or offending others by blushing, omitting offensive odors or flatulence, staring inappropriately, improper facial expressions, a blemish, or physical deformity (Takahashi, 1989). This fear of offending or bringing shame on others in public results in social avoidance. The key factor in this social avoidance is the fear of disrupting group cohesiveness by making others uncomfortable (Kasahara, 1988). Social avoidance typically revolves around situations that may require an expression of familiarity. Thus, the Japanese social phobic suffers from an extreme fear of inappropriate social interaction or appearance with familiar people. The cultural basis of the fear and avoidance is that the behavior of one member of an in-group will bring shame or embarrassment upon the group as a whole. A key difference between TKS and social phobia then is that TKS sufferers fear that they will embarrass others, while social phobia sufferers fear that they will embarrass themselves (Kleinknecht et al., 1997).

As with social phobia in Western cultures, the typical age of onset for TKS is in adolescence or early adulthood. Clinical data from Japan suggest that more males than females suffer from TKS, and therefore the gender distribution appears to differ from that of social phobia in Western countries (Kirmayer, 1991; Takahashi, 1989).

Kleinknecht and colleagues (1997) sought to examine the relationship between TKS and social phobia by surveying both Japanese and American university students. They found that self-construal variables did differentially relate to the form of social anxiety. Specifically, independent self-construal was inversely related to all social anxiety variables in both samples. Thus, the more respondents defined themselves as

independent from others, the lower they scored on measures of social phobia and TKS. In addition, multiple regression analyses revealed that independent self-construal contributed significant independent variance only when predicting TKS scores in the Japanese sample. In the U.S. sample, independent self-construal shared most of its variance with social phobia variables. Thus, Kleinknecht and colleagues concluded that the social construction of one's self-definition is related to type of social anxiety (Kleinknecht et al., 1997).

Other researchers have also found a relationship between self-construal and social anxiety and embarrassability. Like Kleinknecht and colleagues, Sharkey and Singelis (1995) found a significant negative correlation between independent self-construal and social anxiety in a study of Asian American and White American university students. In a related study of embarrassability, findings showed that stronger independent self-construal was correlated to resistance to embarrassment, whereas stronger interdependent self-construal was correlated with susceptibility to embarrassment. The researchers suggested that the emphasis on in-group goals and harmony in collectivist cultures makes the sensitivity to embarrassment found in those cultures a positive characteristic. By attending to social context and the opinions of others, members of collectivist cultures are better able to protect themselves from social sanctions and possible ostracism. The researchers went on to hypothesize that a curvilinear relationship may exist between social distance and embarrassability. With close in-group members and socially distant others, embarrassability should be low. With moderately distant individuals, such as unknown members of the in-group, there may be greater potential for social embarrassment. The researchers also note that the relationship between social distance and embarrassability may be more linear in the case of empathic embarrassment (i.e., reaction to the embarrassment of another; Singelis & Sharkey, 1995).

Rationale of the Present Study

This study examined the role of social anxiety and culturally-influenced social interaction difficulties on adjustment in Chinese graduate students studying in the United States. Because it has been suggested that social relationships with American students

are an important predictor of international student adjustment and that many international students fail to develop such relationships, possible mediating variables were investigated, including self-construal, social anxiety, and social skills. In addition to providing self-report data on social anxiety and self-construal, both Chinese and American students were asked to participate in several role plays of social interactions with both Chinese and American confederates of the same and opposite sex. It was anticipated that analysis of such interactions would bring insight into cultural differences in social skills.

In addition, because a relationship between self-construal and TKS-type symptoms was previously found for Japanese individuals (Kleinknecht et al., 1997), whether or not TKS-like symptoms exist in Chinese students (who may also possess interdependent self-construals) was ascertained. Furthermore, this study used graduate students rather than undergraduate students, which allowed the findings concerning student adjustment that have mainly been based on research involving undergraduates to be tested for generalizability.

Hypotheses

Hypothesis 1: Self-report measures of social anxiety and TKS will reveal overall higher levels of anxiety and distress for Chinese students than for American students.

Hypothesis 2: Chinese students will score higher than American students on a measure of interdependent self-construal, while American students will score higher than Chinese students on a measure of independent self-construal.

Hypothesis 3: A measure of independent self-construal will be inversely related to measures of social anxiety and TKS, while a measure of interdependent self-construal will be positively related to measures of social anxiety and TKS. This latter effect will be greater for Chinese students.

Hypothesis 4: Level of social anxiety will be inversely related to level of adjustment; quality of social skills will be positively related to level of adjustment. These relationships will be particularly strong for Chinese students.

Hypothesis 5a: Chinese students will report greater social anxiety and exhibit poorer social competence during interactions with American confederates than during interactions with Chinese confederates. Similarly, American students will report greater social anxiety and exhibit poorer social competence during interactions with Chinese confederates than during interactions with American confederates.

Hypothesis 5b: The social skills of Chinese students will be qualitatively different when interacting with American confederates as opposed to Chinese confederates, particularly for those students who report better social adjustment on an adjustment to college questionnaire. Similarly, the social skills of American students will be qualitatively different when interacting with Chinese confederates as opposed to American confederates, particularly for those students who report better social adjustment. The impact of adjustment will be more pronounced for Chinese students than for American students. For both groups, social anxiety will be higher for those students who report poorer social adjustment.

Method

Participants

Participants in the first phase of this study were 59 Chinese graduate students (36 male, 23 female) and 105 White American graduate students (53 male, 52 female) between the ages of 21 and 47 who were enrolled at a large state university. For the second phase of the study, a subset of the first sample was selected that included 28 Chinese students (15 male, 13 female) and 32 White American students (15 male, 17 female). All of the Chinese students were born and raised in China, and all of the American students were born and raised in the United States. Students were recruited through campus mailings and received a modest financial compensation for participation in the study.

Measures

Social Phobia Scale (SPS; Mattick & Clarke, 1989) and *Social Interaction Anxiety Scale* (SIAS; Mattick & Clarke, 1989). The SPS and SIAS each contain 20 items. The SPS assesses anxiety in situations in which the individual may be observed by others (i.e., " I become anxious if I have to write in front of other people"), while the SIAS assesses anxiety in social situations (i.e., "I have difficulty talking with other people"). Respondents are asked to rate each statement on a 5-point scale as it applies to them. Scores on both measures range from 0 to 80, with higher scores indicating higher levels of social anxiety. These measures were validated on samples of diagnosed social phobics, college students, community volunteers, agoraphobics, and simple phobics. Cronbach's alphas ranged from .89 to .94 for the SPS and from .88 to .93 for the SIAS. Test-retest correlations for each scale exceeded .90 at intervals of up to 13 weeks. Construct validity was demonstrated by social phobics scoring higher on the SPS and SIAS than other groups. In addition, significant correlations were found between the SPS and SIAS and several measures of social interaction or performance anxiety (Mattick & Clarke, 1989).

Self-Construal Scale (SCS; Singelis, 1994). The SCS consists of two subscales: Independent Self-Construal and Interdependent Self-Construal, both of which consist of

12 items that measure the respondent's beliefs about the relationship between the self and others and the degree to which they see themselves as separate from others or connected with others. Items 1, 2, 7, 8, 10, 11, 14, 16, 18, 20, 22, and 24 make up the Independent subscale; the remaining items make up the Interdependent subscale. Respondents are asked to rate each statement on a 7-point Likert scale as it applies to them. Possible scores on each subscale range from 12 to 84, with higher scores representing higher reported levels of independent and interdependent self-construal, respectively. A confirmatory factor analysis from two different samples provided adequate support for the two-factor structure of the SCS (Singelis, 1994). Construct validity was demonstrated by comparing Asian Americans to White Americans on each subscale. Asian Americans were characterized as interdependent and White Americans were characterized as independent. In addition, Cronbach's alpha reliability estimates were found to be between .69 and .74 (Singelis, 1994).

Taijin Kyofusho Scale (TKS Scale; Kleinknecht et al., 1997). The TKS Scale consists of 31 items that were based on clinical experience and descriptions of TKS's definitional symptoms. Items reflect respondents' concerns that they would do something or present an appearance that would offend or embarrass others. Respondents are instructed to rate each item as it applies to them on a 7-point Likert scale. Possible scores range from 31 to 217, with higher scores representing greater anxiety. Cronbach's alphas were found to be .93 and .92 for American and Japanese samples, respectively (Kleinknecht et al., 1997).

Student Adaptation to College Questionnaire (SACQ; Baker & Siryk, 1989a). The SACQ is a 67-item self-report scale designed to assess the adjustment of students to higher education. Students rate each item as it applies to them on a 9-point rating scale. Item ratings are totaled to reflect a full scale score and four subscale scores: academic adjustment, social adjustment, personal and emotional adjustment, and institutional attachment and goal commitment. Although each participant completed the entire measure (to gain descriptive data about overall adjustment as well as the four subtypes of adjustment), only the social adjustment subscale was used to test the hypotheses in this

study. The social adjustment subscale measures the student's success in coping with the interpersonal-societal demands that are inherent in the university experience. This subscale is associated with the degree to which the student participates in social activities, is socially skilled, is able to establish social autonomy, experiences social avoidance and distress, is self-confident, and has an adequate social support system. The range of possible scores is 67 to 603 for the full scale, 24 to 216 for the academic adjustment subscale, 20 to 180 for the social adjustment subscale, and 15 to 135 for the personal-emotional adjustment and institutional attachment subscales. Higher scores represent greater adjustment. Baker and Siryk (1989b) reported moderate correlations between the subscales; however, they interpret the strength of these relationships as low enough to suggest that the subscales measure unique facets of college adjustment. Cronbach's alpha estimates of reliability range between .77 and .91 for the four subscales, and between .92 and .95 for the full scale. The validity of the scale has been established by correlation of the scale with various criteria including academic grade point average, social activities checklist, requests for services at a campus counseling center, and attrition from college. While the SACQ was normed on a broad group of undergraduate students, other researchers have found it to be a useful measure of adjustment in undergraduate and graduate international students (Kaczmarek et al., 1994).

Demographic Questionnaire. A demographic questionnaire was developed specifically for this study to gather descriptive data about the participants. In addition to basic demographic information, the questionnaire asks for ratings about social activities and social support systems.

Anxiety and Performance Competence Self-Rating Form. A rating form was developed for the second phase of this study to assess the participants' state anxiety and their perceived level of social competence (i.e., how well they thought they would/did perform during the interaction) both before and after each interaction. Participants were requested to rate their anxiety and perceived level of social competence on a scale of 1 to 10 (lowest to highest). In addition, the form includes space for participants to list their thoughts as they occurred before, during, and after the interaction. The participants

in this study completed the entire form; however, the competence ratings and thought listings were not used to test the hypotheses in this study.

Social Skills Rating Form (adapted from Trower, Bryant, & Argyle, 1978). This form was adapted from a more extensive rating form specifically for use in this study. It can be used by trained raters to code the participants' behavior during videotaped interactions. Individual items were selected for their hypothesized salience to both Chinese and American norms of behavior. The following items were included: vocal tone (i.e., vocal quality or resonance of the voice), speech disturbances (i.e., pause fillers, repetitions, stuttering, omissions, etc.), face (i.e., facial expression of emotion), gaze (i.e., eye contact), posture tonus (i.e., relaxation or tension of the body), head gesture (i.e., nodding, shaking, or other head movements), hand/arm gesture (i.e., movements that illustrate or emphasize speech), formality (i.e., intimacy or formality of speech content), humor (i.e., telling of jokes, general humorous tone), and meshing (i.e., presence of interruptions or speech latencies). Each item was rated on a scale of 0 to 4 with lower numbers corresponding to better social skills from an American cultural perspective. For example, on the item that measures speech disturbances, a rating of 0 is given to individuals who show no speech disturbances, and a rating of 4 is given to individuals who display extreme stuttering, repetition, pause fillers, and omissions, such that their speech is extremely embarrassing and very unpleasant. Ratings of 1, 2, or 3 are given to individuals whose behavior falls between those extremes. To test the hypotheses in this study, the sum of the ratings for the 10 individual items was used as a broad measure of social skills. Thus, the range of possible scores on this composite measure was 0 to 40, with lower scores representing better social skills (according to American norms for behavior). In addition to the 10 individual behavior-specific items, the rating form includes 5 additional items that represent the rater's global impressions of the subject's behavior. These items include English language speaking ability of the subject, overall likeability of the subject, dominance or submissiveness of the subject's behavior, observed anxiety of the subject, and overall performance of the subject. These latter

items were not used to test the hypotheses in this study, however they were used as a measure of confederate behavior.

Procedure

For the initial phase of the study, participants were recruited via campus mailings. Questionnaire packets which included the demographic questionnaire and all of the self-report measures of anxiety and adjustment were sent to all 225 Chinese graduate students (149 male, 76 female) on campus and a matching set of 383 American graduate students (219 male, 164 female). A cover letter and informed consent form were included with the questionnaire packet. The American students were selected at random from the same academic departments that the Chinese students were enrolled in so that an approximately equal proportion of Chinese and American students were contacted from each department. Students who elected to participate in the study completed the questionnaires at home and returned them via campus mail. All students who returned completed questionnaires received financial compensation in the form of coupons for free food and other items from local merchants (worth approximately $5.00). Completed questionnaires were received from 59 Chinese students (26% return rate) and 117 American students (31% return rate). Twelve of the American students were excluded from the study because they were non-White or were born and raised outside of the United States.

For the second phase of the study, a subset of the participants in the original sample were contacted by phone or e-mail and invited to participate. More specifically, Chinese students were chosen at random from the first sample, and once they agreed to participate in the second phase, an American student who matched the Chinese student as closely as possible on sex, age, years at Virginia Tech, marital status, number of children, and academic college was contacted. The result of this selection process was a sample of 15 matched pairs of males and 13 matched pairs of females. Four American female students remained unmatched because of difficulties with cancellations of Chinese female students. In total, there were 32 American participants (15 male, 17 female), and 28

Chinese participants (15 male, 13 female) who participated in this phase of the study. They were compensated for their time with a payment of $10.00 each.

Participation in the second phase of the study required each participant to come into the laboratory and engage in four role-play interactions with four different confederates. Informed consent was obtained from all students who participated. For the role-play interactions, participants were asked to pretend that the confederate was a fellow student on campus whom they had just met. They were told to introduce themselves and try to get to know the other student better. The confederates were trained to maintain a neutral stance during the interaction, and to respond to the participant in a matter-of-fact fashion. The confederates were instructed not to offer prompts or ask questions unless reciprocating a question previously asked by the participant, thus leaving the burden of conversation maintenance to the participant. The participants were told that they could end the role-play early if they wished by holding up a card. Only one participant, an American male, actually did this after a conversation of two minutes. Unless terminated prematurely by the participant, each role play lasted for four minutes. Similar procedures were found useful in the past to assess social anxiety and social skills (Beidel, Turner, & Dancu, 1985; Turner, Beidel, & Larkin, 1986; Turner, Beidel, & Townsley, 1992).

The sex and ethnicity of the confederates was varied so that each participant interacted with a Chinese male, Chinese female, American male, and American female. The sex of the participants and the sex of the confederates were counterbalanced to control for any effect of sex on the interaction. In addition, the order of the role-plays was counterbalanced across participants to control for any rehearsal or habituation effects. The order of the role-plays was consistent across matched pairs of participants. All role-plays were videotaped. Participants were asked to rate their level of anxiety and their anticipated and perceived quality of performance on the Anxiety and Performance Competence Self-Rating Form both before and after each of the four role play interactions. In addition, each participant was asked to list all thoughts that occurred before, during, and after the role play. They were given three minutes to complete this

thought listing procedure. Similar thought listing procedures have been used widely to measure cognitions in social anxiety and social phobia research, and have generally been found to be both reliable and valid (Glass & Arnkoff, 1989). Results of the thought listing procedure were not considered in the present study and will not be discussed further.

The videotapes of each interaction were coded by a trained rater using the Social Skills Rating Form. Each interaction was rated separately, so that each participant's behavior was rated four times (once with each of the four confederates). The primary rater was blind to the measures of social anxiety and social adjustment. Interrater reliability was obtained for ratings on 20% of the participants by a rater who was trained by the primary rater.

Results

Sample Characteristics

Phase one participants. Descriptive statistics were computed on the Chinese and American groups to determine whether demographic characteristics differed for each group. T-tests revealed no significant differences between the groups on age, number of children, and grade point average. However, significant differences between the two groups were found for the number of years they had been enrolled in the university, their English language speaking ability, and their ratings of the effectiveness of their social supports in helping them deal with stress. Means, standard deviations, and t-tests for each of these variables are shown in Table 1.

Chi-square analyses were computed to examine group differences on sex, religion, academic college, academic degree being sought, marital status, income level, university funding, and language spoken at home. Results are shown in Figures 1 through 8. The results indicated that the two groups differed nonsignificantly on sex, academic college, degree being sought, and university funding. However, significant differences between the two groups were found on religion, marital status, income level, and language spoken in the home.

In addition, descriptive data showed that all Chinese students received their undergraduate degrees in China, while all American students received their undergraduate degrees in the United States. Thirty-four percent of the American students received their undergraduate degrees from the same university where they were currently pursuing graduate degrees, while the remaining 66% attended different undergraduate institutions. Of the graduate students from China, 55% reported that they planned to return to China after they finished their degree. However, 94% reported that they would choose to remain in the United States if it were an option.

Phase two participants. Identical analyses were performed on the subset of students who participated in the second phase of the study. T-tests revealed no significant differences between the Chinese and American students on age, number of children, years at the current university, and grade point average. However, significant

differences were found between the two groups on English language speaking ability, and the effectiveness of their social support system. Means, standard deviations, and t-tests are shown in Table 2.

Chi-square analyses revealed no significant differences between the two groups on sex, academic college, degree being sought, marital status, income level, and university funding. Significant differences were found, however, on religion and language spoken in the home. The results of these analyses are graphed in Figures 9 through 16. Five of the 32 American participants received their undergraduate degrees from the same university they were now attending; none of the Chinese participants did. Approximately half of the Chinese students reported that they planned to return to China after graduation (12 of 23 who responded). Almost all reported that they would choose to stay in the United States if it were an option (23 of 24 who responded).

Reliability

Social skills ratings. The sum of the 10 items on the Social Skills Rating Form was used as a global measure of social skills. The interrater reliability of this measure was assessed on 20% of the cases by using Pearson correlation coefficients. The results showed good reliability for social skills ratings while the participants were talking to a Chinese female confederate, $r = .82$, $p < .001$, Chinese male confederate, $r = .83$, $p < .001$, American female confederate, $r = .78$, $p < .005$, and American male confederate, $r = .72$, $p < .01$. An uncorrected percentage agreement index was used to measure interrater agreement on the 10 individual social skills items, while Pearson correlation coefficients were used to assess interrater reliability on the 5 global impression items (used to assess behavior differences between confederates only as described below; see Appendix).

Consistency of Confederate Behavior

Five different confederates were used in the second phase of the study. There were two Chinese female confederates, and one each of Chinese male, American female, and American male confederates. The Chinese male and two American confederates were used with all participants in the study. Two Chinese female confederates were used because the primary Chinese female confederate knew several of the participants socially.

Therefore, a secondary Chinese female confederate was used for those participants (N = 9 Chinese, N = 5 American). Samples of the confederates' behavior during interactions with the participants were videorecorded and later coded on the same social skills rating scale as was used for rating the participants' behavior. Fourteen samples of behavior from the Chinese male and two American confederates were rated; seven samples were rated from each of the Chinese female confederates.

Differences between the 5 confederates were tested using a one-way MANOVA with each of the 10 individual social skills items on the Social Skills Rating Form as dependent variables. The results revealed a main effect for confederate, Wilks' Λ = 0.02, F (9, 36) = 8.41, $p < .001$. Univariate analyses (ANOVA) revealed main confederate effects for the following items: vocal tone, F (4, 52) = 12.60, $p < .001$, speech disturbances, F (4, 52) = 140.95, $p < .001$, posture, F (4, 52) = 6.90, $p < .001$, and hand and arm gestures, F (4, 52) = 3.39, $p < .05$.

A post hoc Tukey HSD procedure was used to further describe the differences between the five confederates on specific social skills. The results showed that for vocal tone, the two Chinese female confederates differed significantly from the other confederates, but not from each other. For the measure of speech disturbances, the American male confederate showed significantly fewer speech disturbances than the other confederates, who did not differ from one another. For the measure of body posture, the Chinese male confederate differed significantly from the primary Chinese female confederate and the American confederates, but not from the secondary Chinese female confederate. On the measure of hand and arm gestures, the American male and American female confederate differed significantly from each other, but not from the other confederates. Means and standard deviations for each of these items are shown in Table 3.

A one-way MANOVA was also used to test for differences between the five confederates on the five global impression ratings on the Social Skills Rating Form (i.e., English language ability, likeability, dominance, anxiety, and overall performance). The results revealed a main effect for confederate, Wilks' $\Lambda = 0.10$, F (5, 20) = 7.88, $p < .001$.

Univariate analyses (ANOVA) revealed main confederate effects for all five global ratings: English language speaking ability, F (4, 51) = 31.10, $p < .001$, likeability, F (4, 51) = 5.97, $p < .001$, dominance and submissiveness, F (4, 51) = 8.99, $p < .001$, observed anxiety, F (4, 51) = 5.41, $p < .001$, and overall performance, F (4, 51) = 4.88, $p < .005$.

A post hoc Tukey HSD procedure revealed that for the measure of English language speaking ability, the two American confederates showed significantly better abilities than the three Chinese confederates. For the measure of likeability, the American female confederate was rated as significantly more likeable than the American male confederate and the two Chinese female confederates, but not the Chinese male confederate. For the measure of dominance, the two Chinese female confederates were rated as significantly less dominant than the other confederates, but did not differ from each other. On the measure of observable anxiety, the primary Chinese female confederate showed more anxiety behaviors than the Chinese male confederate and the two American confederates. Finally, on the measure of overall performance, the American female confederate received higher ratings than the two Chinese female confederates, but did not differ from the Chinese male or American male confederates. Means and standard deviations for each of these items are shown in Table 3.

In sum, the five confederates did differ somewhat on their behavior during the interaction tasks. These differences will therefore be taken into consideration when discussing the results of the following analyses. Differences between the Chinese and American students on the measure of adjustment will be described first, followed by results of the analyses that were used to test the hypotheses.

Measures of Adjustment

Differences between the Chinese and American students on level of adjustment were tested using independent samples t-tests on the full scale and four subscales of the SACQ. The results indicated that American students (N = 105) obtained significantly higher scores than Chinese students (N = 54) on the Full Scale, Social Adjustment subscale, and Goal Commitment/Institutional Attachment subscale. There were no significant differences between the two groups on either the Academic Adjustment or the

Personal/Emotional Adjustment subscales. Means, standard deviations, and t-tests are shown in Table 4. As noted earlier, the social adjustment subscale was used to test the hypotheses related to adjustment in this project.

Hypothesis 1

Differences between the two groups on anxiety were tested using a 2 (culture: China, U.S.) x 2 (sex: male, female) multivariate analysis of variance (MANOVA) with measures of social anxiety (SPS & SIAS) and TKS (TKS Scale) as dependent variables. This analysis revealed significant multivariate main effects for culture, Wilks' $\Lambda = 0.74$, F (3, 157) = 18.77, $p < .001$, but not sex, Wilks' $\Lambda = 0.99$, F (3, 157) = 0.69, $p = .56$. There was no significant interaction effect, Wilks' $\Lambda = 0.98$, F (3, 157) = 1.12, $p = .34$.

For the significant culture effect, univariate analyses (ANOVA) revealed significant effects for the SPS, F (1,159) = 30.29, $p < .001$, the SIAS, F (1, 159) = 4.99, $p < .05$, and the TKS Scale, F (1, 159) = 37.13, $p < .001$. In all cases, Chinese students reported higher levels of social anxiety than American students. Means and standard deviations are displayed in Table 5.

Hypothesis 2

Differences between the two groups on measures of self-construal were also tested using a 2 (culture: China, U.S.) x 2 (sex: male, female) multivariate analysis of variance (MANOVA) with the independent and interdependent subscales of the SCS as dependent variables. This analysis revealed significant multivariate main effects for culture (Wilks' $\Lambda = 0.82$, F (2, 158) = 17.95, $p < .001$) and sex (Wilks' $\Lambda = 0.95$, F (2, 158) = 4.03, $p < .05$). Although the interaction between culture and sex was not significant, Wilks' $\Lambda = 0.97$, F (2, 158) = 2.54, $p = .08$, a trend was present.

Univariate analyses (ANOVA) revealed a significant culture effect, F (1,159) = 29.46, $p < .001$, and a significant sex by culture interaction for the interdependent subscale only, F (1, 159) = 4.51, $p < .05$. The sex effect for the interdependent subscale, F (1, 159) = 3.40, $p = .07$, approached significance. Descriptive statistics revealed that Chinese students reported a higher level of interdependent self-construal than American students. There was an interaction between sex and culture such that Chinese women

reported higher interdependence than Chinese men, but American men reported higher interdependence than American women (see Figure 17). Means and standard deviations are displayed in Table 6.

Univariate analyses for the independent subscale revealed no main effect for culture, F (1, 159) = 2.20, p = .14, and no interaction effect, F (1, 159) = 0.12, p = .73. The sex effect for the independent subscale approached significance, F (1, 159) = 3.15, p = .08, with women reporting a somewhat lower level of independence than men. Means and standard deviations are displayed in Table 6.

Hypothesis 3

The relationship between self-construal as assessed by the SCS and social anxiety as measured by the SPS, SIAS, and TKS Scale was examined separately for Chinese and American students with Pearson correlations. The results are shown in Table 7. Since a Bonferroni approach was used to control for Type 1 error set at .05 across the six correlations, a p-value of less than .008 was required for significance. As can be seen, higher independent self-construal was significantly related to lower levels of social anxiety on all measures for the American students and on the SPS and TKS Scale for the Chinese students.

The differences between the correlations for the two groups were tested using Fisher's z transformation. Results showed significant differences between the two groups for the relationship between independent self-construal and SIAS score only, z = 2.66, $p < .005$. Thus, there was a significantly stronger relationship between social interaction anxiety and independent self-construal for the American students when compared to the Chinese students. Contrary to what was predicted in the hypothesis, there were no significant differences between the two groups on the degree of the relationship between social anxiety and interdependence. Moreover, none of the correlations between social anxiety and interdependence were significant.

Hypothesis 4

The relationship between adjustment and social anxiety and social skills was examined using Pearson correlations. Adjustment was assessed by the social adjustment

subscale of the SACQ; social anxiety was measured both by trait measures of anxiety (SPS, SIAS, and TKS Scale) and state measures of anxiety (means of the four pre- and post-interaction anxiety ratings); and social skills was measured by means of the four social skills ratings. Since a Bonferroni approach was used to control for Type 1 error set at .05 across the six correlations, a p-value of less than .008 was required for significance. These relationships were computed separately for Chinese and American students and are shown in Table 8. As can be seen, higher social adjustment was related to lower levels of trait social anxiety for American students only. Correlations for the Chinese students were in the same direction, albeit nonsignificantly so.

The differences between the correlations for the two groups were tested using Fisher's z transformation. Results showed a significant difference between the two groups for correlations between TKS Scale scores and social adjustment, $z = 2.63$, $p < .005$. Thus, contrary to what was predicted, the relationship between TKS and social adjustment was stronger for American students than Chinese students.

Hypotheses 5a and 5b

Hypotheses 5a and 5b were tested using a 2 (subject culture: Chinese, American) X 2 (social adjustment level: high, low) X 2 (confederate culture: Chinese, American) mixed MANOVA with pre-interaction anxiety, post-interaction anxiety, and social skills as dependent variables. Social adjustment level was determined by a median split on the social adjustment subscale of the SACQ for Chinese and American students separately. Inasmuch as one Chinese male student did not complete the SACQ, his data were left out of these analyses.

Hypothesis 5a. Multivariate analyses (MANOVA) revealed between subjects main effects for subject ethnicity, Wilks' $\Lambda = .69$, $F(3, 53) = 8.04$, $p < .001$. A near-significant within-subjects main effect for confederate ethnicity was also found, Wilks' $\Lambda = .87$, $F(3, 53) = 2.75$, $p = .052$. No significant subject ethnicity by confederate ethnicity interaction effect was found, Wilks' $\Lambda = .96$, $F(3, 53) = 0.78$, $p = .51$.

Univariate analyses (ANOVA) on subject ethnicity revealed a significant main effect on the pre-interaction anxiety measure, $F(1,55) = 4.92$, $p < .05$. American

students reported higher anxiety than Chinese students before the interaction began. Means and standard deviations are reported in Table 9. A main effect for subject ethnicity was also found for the post-interaction anxiety measure, F (1,55) = 4.73, p < .05, as was a significant main effect for confederate ethnicity, F (1,55) = 4.61, p < .05. American students reported greater anxiety after the interaction than Chinese students (see Table 9), and post-interaction anxiety ratings were lower for all participants after talking to an American confederate (M = 1.99, SD = 1.13) than a Chinese confederate (M = 2.25, SD = 1.29). Finally, a significant main effect for subject ethnicity was found on the measure of social skills, F (1,55) = 11.40, p < .001. Chinese students received higher scores on the social skills measure (i.e., showed less "American" behavior) than American students. Means and standard deviations are shown in Table 9.

Hypothesis 5b. In the above 2 (subject culture: Chinese, American) X 2 (social adjustment level: high, low) X 2 (confederate culture: Chinese, American) mixed MANOVA, a significant main effect was also found for social adjustment level, Wilks' Λ = .86, F (3, 53) = 2.82, p < .05. Univariate analyses (ANOVA) revealed a near-significant subject ethnicity by social adjustment interaction effect for the post-interaction anxiety measure, F (1,55) = 3.51, p = .066. Although non-significant, these effects were explored further in the interest of identifying trends in the data. Chinese students with low levels of social adjustment (M = 1.45, SD = 0.70) reported less anxiety than Chinese students with high social adjustment (M = 2.17, SD = 1.27). On the other hand, American students with high social adjustment (M = 2.25, SD = 0.99) reported lower levels of anxiety than American students with low social adjustment (M = 2.57, SD = 1.44; see Figure 18).

Exploratory analyses. To explore the effect of subject sex and confederate sex on anxiety and social skills, the above MANOVA was repeated with subject sex and confederate sex added into the analyses. Thus, a 2 (subject culture: Chinese, American) X 2 (subject sex: male, female) X 2 (social adjustment level: high, low) X 2 (confederate culture: Chinese, American) X 2 (confederate sex: male, female) mixed MANOVA was undertaken. Because these analyses were post hoc and the number of subjects in certain

cells was relatively small (see Table 10), the following results should be interpreted with appropriate caution. With these precautions in mind, multivariate analyses revealed a significant main effect for subject sex, Wilks' $\Lambda = .83$, F (3, 49) = 3.30, $p < .05$, and a significant interaction effect between confederate sex and confederate ethnicity, Wilks' $\Lambda = .63$, F (3, 49) = 9.66, $p < .001$.

Inasmuch as these analyses were exploratory, only the effects that were significant in the MANOVA were examined further with univariate tests. Univariate analyses (ANOVA) failed to reveal any subject sex or confederate sex by confederate ethnicity effects for the pre-interaction anxiety measure. However, a significant main effect for subject sex was found on the post-interaction anxiety measure, F (1,51) = 6.20, $p < .05$. Females (M = 1.79, SD = 1.05) reported lower post-interaction anxiety than males (M = 2.47, SD = 1.54). A significant confederate sex by confederate ethnicity interaction effect was also found for the post-interaction anxiety measure, F (1,51) = 16.75, $p < .001$. Ratings for post-interaction anxiety were lowest after participants interacted with the American female confederate (M = 1.73, SD = 1.10), followed by the Chinese male confederate (M = 1.98, SD = 1.37), American male confederate (M = 2.25, SD = 1.47), and Chinese female confederate (M = 2.53, SD = 1.47).

For the social skills measure, univariate analyses (ANOVA) revealed a significant confederate sex by confederate ethnicity interaction, F (1,51) = 9.22, $p < .005$. Social skills ratings were lowest (i.e., more typically American social skills) for participants who interacted with the Chinese male confederate (M = 2.14, SD = 2.28), followed by the American female confederate (M = 2.34, SD = 2.29), Chinese female confederate (M = 2.69, SD = 2.41), and American male confederate (M = 2.76, SD = 2.23). No main effect for subject sex was found on the social skills measure.

Discussion

Adjustment

In general, many of the findings in this study are consistent with previous research. The results showed that American university students reported higher levels of social adjustment, institutional attachment, and overall adjustment than Chinese university students, which supports the findings of earlier studies with international students. For example, Kaczmarek and colleagues (1994) found that international undergraduate and graduate students reported lower adjustment than their American peers on the social adjustment and institutional attachment subscales of the SACQ.

Social Anxiety

While no previous studies have measured social anxiety in international students, a previous study that compared a group of Chinese and Chinese American participants with American participants found no difference between the groups on self-report measures of social anxiety (including the SPS and SIAS; Leung et al., 1994). A later study that compared Asian American and White American undergraduate students on measures of social avoidance and distress did find significant differences, with the Asian American group reporting higher distress (Okazaki, 1997). Therefore, results of this study offer the first direct evidence that international students from China do indeed report higher levels of social anxiety than their American counterparts.

The TKS Scale was used in this study to determine whether TKS, which has been found to be related to independent self-construal in a Japanese sample (Kleinknecht et al., 1997), was similarly present in a sample of Chinese international students. The results show that Chinese students do experience significantly more symptoms of TKS than American students, and the level of TKS in the Chinese students was similar to that found in the Japanese students.

The fact that there were no gender differences within the two groups on social anxiety is consistent with the Kleinknecht et al. (1997) findings, but are inconsistent with previous research that shows that more males than females suffer from TKS in Japan, while more females than males suffer from social phobia in the United States.

One possible explanation for this discrepancy is that gender differences exist for clinical levels of TKS and social anxiety only, and not for subclinical levels that are found in a non-clinical population (as in the current study and the Kleinknecht et al. study).

Self-Construal

As predicted, Chinese students in this study had a higher level of interdependent self-construal than Americans. The two groups did not differ on amount of independent self-construal, however. Cross (1995) found similar results in a study of Asian international students and concluded that the lack of a significant difference between the two groups on independent self-construal may be due to the fact that Asian students who elect to come to the United States to study may have a more highly developed independent self than those students who choose to remain in Asia. In addition, while China is widely regarded as having a more collectivist and less individualist culture, there is evidence that suggests that within Chinese culture both individualist and collectivist values are endorsed. In fact, Chinese collectivism may be specific to certain role relationships. For instance, Chinese people may act with a collectivist orientation when relating to close family and friends, but with an individualistic orientation when relating to distant friends and co-workers (Ho & Chiu, 1994).

A closer look at the non-significant sex by culture interaction trend for the interdependent self-construal measure reveals that although American men reported higher interdependent self-construal than American women, this difference was very small. The interaction trend is likely due to the relatively larger difference between Chinese men and Chinese women, as Chinese women reported higher interdependence than Chinese men. It is possible that while women of both cultures are generally assumed to be more relational (Kashima et al., 1995), and thereby more interdependent, Chinese women are particularly so due to the more restricted gender roles in Chinese culture (Irwin, 1996).

Relationship Between Social Anxiety and Self-Construal

The results of the current study also revealed that higher independent self-construal is related to lower social anxiety for both groups. Sharkey and Singelis (1995)

suggested that a weak sense of independent self may leave an individual inherently vulnerable to threats. This vulnerability may cause them to be overly-concerned with the evaluation of others, thereby leading to social anxiety. On the other hand, a high level of independent self would make the individual less affected by others' perceptions of them, and would consequently decrease social anxiety.

In addition, the inverse correlation between independent self-construal and social anxiety as measured by the SIAS was significantly greater for the American students than the Chinese students. In fact, this correlation did not reach significance for the Chinese students. This finding suggests that for American students, independent self-construal may be particularly important for decreasing anxiety in face to face social situations.

In contrast to what was predicted, interdependent self was not correlated with social anxiety. It is possible that while interdependent self alone makes an individual more sensitive to the evaluations of others, when it is combined with a highly developed independent self as it was in this sample, the independent self serves as enough of a buffer to eliminate the effect of the interdependent self on anxiety. In the future, regression analyses may be used to test whether independent self-construal acts as a moderator in the relationship between interdependent self-construal and social anxiety.

Relationships Between Social Anxiety, Social Skills, and Social Adjustment

As predicted, trait measures of anxiety were inversely correlated with social adjustment, but these correlations were significant for the American students only. Unexpectedly, the correlations between adjustment and state anxiety were not significant. It is possible that while American students with elevated levels of trait social anxiety have more difficulty with social relationships, they may be able to interact in certain individual situations without experiencing much anxiety. Since the role play task used in this study was laboratory directed and relatively structured in nature, it may be less anxiety provoking than what would occur in unstructured, real-life situations. It is also possible that the students under-reported their anxiety in the interaction task

because the face-to-face nature of the assessment created a desire for impression management.

The correlation between TKS social anxiety and social adjustment was stronger for the American students than for the Chinese students. This is in contrast to what was initially predicted. In addition, the correlations between social adjustment and social anxiety were not significant for the Chinese students. It is possible that while Chinese students report lower levels of social adjustment than American students, variables other than social anxiety are responsible for their poor social adjustment. For example, relocating to another country that is culturally different and physically distant from one's own country may contribute to poor social adjustment. Thus social anxiety by itself may not be related to poor social adjustment for the Chinese students.

Finally, there was a near zero correlation between social skills and adjustment for both groups. It is possible that the Social Skills Rating Form was not a sensitive enough measure of the participants' overall interaction styles. It may also be the case that social behavior is not as important a predictor of adjustment as is social anxiety.

The Effect of Ethnicity on Anxiety and Social Skills

Somewhat surprisingly, American participants reported higher anxiety than Chinese participants both before and after the dyadic interaction. This is in contrast to the higher levels of social anxiety that the Chinese participants reported on the questionnaire measures. It is possible that although Chinese students experience higher trait social anxiety, they may not experience as much state anxiety in this particular type of situation. Another possibility is that the higher level of interdependent self-construal that characterizes Chinese students could cause them to attend more to others' feelings and reactions in the dyadic situation than to their own. Thus they would be less attuned to their own physiological responses and anxiety.

Chinese and American participants also differed significantly on their social skills levels, with American students receiving lower scores than Chinese students. As mentioned earlier, lower scores correspond to behaviors that represent good social skills from an American perspective. Thus, these findings indicate that American students

performed better than Chinese students according to American norms of behavior. However, it is important to note that Chinese culture has its own norms for behavior that may differ considerably from American ones. For example, avoiding eye contact is perceived as a sign of respect for some Chinese people, and not a sign of avoidance or inattention as it is for many American people. In addition, Chinese language has a different tonal pattern than American language, and as a result Chinese people may not vary their vocal tone as much. Americans may use more exaggerated facial expression and hand gestures than Chinese people. Thus, although Chinese students behaved more poorly according to American standards of behavior, their behavior may be perfectly appropriate according to Chinese standards of behavior and simply different rather than deficient.

The finding that the American and Chinese students differed on the measure of social skills has important implications for previous research that suggests that international students have relatively fewer social relationships with American students than with other international students (Alexander et al., 1981; Schram & Lauver, 1988; Surdam & Collins, 1984; Ying & Liese, 1994). It seems possible that differences in norms for social behavior may act as a barrier to successful cross-cultural interactions.

Another possible explanation for the differences in social skills scores is the fact that the Chinese participants were required to speak in English, their non-native language, during the interactions. The fact that most of them were less proficient English speakers than their American counterparts likely caused them to have more speech disturbances (i.e., stuttering, repetitions, pause fillers, etc.) and more delayed responses than the American participants. Both of these factors would have contributed to their higher scores on the social skills measure. English language ability has previously been established as a predictor of international students' interest and success in building relationships with Americans (Barratt & Huba, 1994).

The fact that all participants reported lower anxiety after interacting with an American confederate than with a Chinese confederate can be explained in several ways. First, the fact that American participants were less anxious after talking to an American

confederate was expected and partially confirmed initial hypotheses. The fact that Chinese participants also reported less anxiety after talking to an American confederate was unexpected, however. One possibility for this finding is that given their higher level of interdependent self-construal, Chinese students feel more threatened when talking with a member of their own ethnic group (i.e., their in-group) rather than with someone from a different ethnic group. In other words, because of the importance their culture places on in-group goals and harmony, they may feel more pressure to perform well and more scrutiny when speaking to someone from their own ethnic group. Singelis and Sharkey (1995) theorized that with close in-group members and socially distant others, embarrassability would be low. With moderately distant individuals, such as the unknown confederates who were members of their in-group, there may be greater potential for social embarrassment. Another possible explanation is that since Chinese participants had to speak to the Chinese confederates in English, the interactions seemed unnatural and caused them to experience greater levels of anxiety.

Finally, it is possible that the Chinese students are accustomed to this type of social interaction and therefore do not feel anxious or uncomfortable. The Chinese students in this study had been studying in the United States for over one year, on average, and therefore had likely encountered numerous previous situations where they were required to interact with an American stranger. It is much less likely that this was the case with the American students, however, since in most cases they could pursue their studies without engaging in frequent cross-cultural interactions. Thus, rehearsal effects could account for the differences between the two groups on the post-interaction measure of anxiety.

The Effect of Social Adjustment on Anxiety and Social Skills

The finding that Chinese students with low social adjustment reported less post-interaction anxiety than Chinese students with high social adjustment was the opposite of what was predicted based on the Western literature. Once again, interdependent self-construal offers a potential explanation. Because sensitivity to the evaluation of the self by others can be viewed as an adaptive trait for individuals living in collectivist cultures

(Kasahara, 1988; Singelis & Sharkey, 1995), it seems likely that those individuals who experience less social anxiety would also have a lower level of social adjustment. In other words, in order for individuals from a collectivist culture to be socially accepted by their peers and have good social adjustment, they must possess a certain degree of social anxiety.

The opposite would be the case for American students who have lower levels of interdependence. Anxiety might serve to impair the individual's social skills and cause social avoidance, which would then lead to low social adjustment. The data in this study are consistent with this idea.

The Effect of Sex on Anxiety and Social Skills

When the effects of subject and confederate sex were analyzed, some interesting results were found. First, female participants reported less post-interaction anxiety than males. This contradicts the widely accepted idea that females report more anxiety than males in such settings. However, because females are regarded by some as more relational (Kashima et al., 1995), it is possible that such social interaction comes easier and therefore causes less anxiety. In fact, data from this study indicate that female participants' social skills were closer to the American ideal than were male participants' skills.

The results of the exploratory analyses also revealed interaction effects for confederate sex and confederate ethnicity. These effects may be due to the behavior of the confederates themselves. Since analyses revealed several subtle but significant behavior differences between the confederates, it is possible that the confederates unknowingly influenced the behavior and anxiety levels of the participants. For example, the participants' anxiety ratings were lowest after talking with the American female confederate. Since the American female confederate received higher likeability and performance scores than the other confederates, she may have somehow put the participants at ease. Similarly, because the primary Chinese female confederate showed more anxiety behaviors than the other confederates, her behavior may have prolonged or increased anxiety levels in the participants.

Limitations of the Study

The return rate of the questionnaires used in the first phase of this study was relatively low for both Chinese and American students. The reasons why so many students elected not to participate in the project are unknown. Therefore, it is possible that the group of students that did participate somehow differs on important characteristics from the group that did not. Thus, results found in this study may not be representative of a broader population of graduate students.

In addition, the sample of Chinese students may be a fairly heterogeneous one. The Chinese students came to the United States from different regions of China with different cultures and dialects. In addition, the Chinese students come to the United States at considerable financial cost to their families. Therefore, it is likely that the students come from fairly affluent backgrounds. Finally, as mentioned earlier, Chinese students who elect to study overseas may have a greater level of independent self-construal than Chinese students who remain in China for their education. Thus, the findings in this study may not be generalizable to the population of China as a whole. It is more likely that the sample represents the distinct yet heterogeneous population of Chinese graduate students studying in the United States. The heterogeneity of the sample also raises the possibility that the hypotheses of this study are true for some, but not all, of the sample. If this is the case, then hypotheses that may be valid for a more homogeneous subset of students were not supported by the data.

Another limitation of this study involves language differences between the Chinese and Americans students. The measures used in the first phase of the study were all written in English, and with the exception of the TKS Scale and Demographic Questionnaire, were all developed for use with Western samples. It is possible that some of the Chinese students may have had difficulty with reading and understanding some of the items on the questionnaires. In addition, it is possible that the measures were culturally biased and therefore not salient measures of adjustment and social anxiety in Chinese participants. Thus, results that were derived from these measures must be interpreted with caution.

As mentioned above, the confederates differed from each other on several behaviors. Thus the results that were based on measures of anxiety or social skills during the interactions must also be interpreted cautiously. It seems likely that any effects that were found for confederate sex or confederate ethnicity may be caused in part by differences in confederate behavior, and do not merely reflect the impact of confederate sex or ethnicity on the subject.

Another factor that may be influencing the results from the behavioral measures is the items that were included on the Social Skills Rating Form. While the items were selected because they were thought to represent salient aspects of social behavior for both cultural groups, they were adapted from a measure that was based on American norms of social behavior. Thus they may be culturally biased. In addition, it is important to emphasize that when Chinese students differ from the American norms, this is not necessarily a reflection of poorer social skills on the part of the Chinese students. It may be the case that the behavior of the Chinese students simply reflects adherence to Chinese, and not American, norms of behavior.

In addition, most of the participants received low ratings on the individual items of the Social Skills Rating Form. It is possible that this measure was not sensitive enough to detect the subtle differences that are found within nonclinical samples. Furthermore, while high interrater reliability was found for the composite score of social skills, some of the individual items on the Social Skills Rating Form received lower interrater agreement. This prevented any analyses of the effect of ethnicity on individual social behaviors. In addition, it highlights the fact that social skills behaviors are often subtle and therefore can be difficult to measure. Again, caution must be exercised in the interpretation of these results.

Finally, it is possible that the interaction task itself is not a good measure of anxiety and social skills for both American and Chinese students who participated in this study. As mentioned previously, the relatively structured, artificial nature of the interaction may evoke a different response from what would occur in a more natural, spontaneous interaction between and within university students from different cultures.

In addition, the interaction task may be particularly problematic for the assessment of anxiety and social skills in the Chinese students. The interactions between the Chinese students and the American confederates may be ones that the Chinese students feel comfortable with since they are required to interact with English speaking individuals from another culture on a regular basis. In contrast, Chinese students may be less comfortable when interacting with the Chinese confederates in English since they would most often speak to other Chinese students in their native language. Therefore, it is possible that the hypotheses were not supported because the interaction task used in this study did not evoke the same responses that would occur in a more natural setting between Chinese and American students who are not accustomed to cross-cultural interactions or between two Chinese students speaking with each other in Chinese. Future research that assesses behavior and anxiety in a more natural setting (i.e., a social function) and uses Chinese students who have recently arrived in the United States from China may shed light on this possibility.

Clinical Implications

The results of this study suggest that university administrators, counselors, and other personnel should be aware of several important issues when dealing with a diverse student body. First, international students may be at greater risk than American students for adjustment and anxiety problems. Therefore, extra effort should be made to reach out to these students and ensure that the appropriate resources (i.e., counselors and other social supports) are available to facilitate their emotional well-being.

Second, Chinese international students differ from their American counterparts on level of interdependent self-construal. As was seen in this study, interdependence may have important implications for social anxiety and social skills. The healthy adjustment of international students may be facilitated if information about self-construal differences were included in international student orientation programs. For example, education about the two types of self-construal and their implications for differences in social behavior may help international students understand any acculturation stress that they

experience. In addition, they may be better able to understand the social behavior of Americans and consequently may have more positive interpersonal experiences.

Third, Chinese students may possess qualitatively different social skills than American students. If this difference hinders cross-cultural relationships, then there may be a detrimental effect on international student adjustment. Therefore, education about American norms for behavior, along with opportunities to interact with American students, might be a useful component of international student orientation programs.

Finally, it should be stressed that orienting American students to a diverse campus is equally important. If American students have a better understanding of cultural differences, they may be more interested in interacting with international students and may be more likely to tolerate any language or social skills differences in international students' interaction styles.

In addition to having clinical implications for students studying in the United States, the cultural differences highlighted in this study may have implications for American students who study overseas. It is likely that the adjustment of such students would be impacted by cultural differences in self-construal and social behavior. For example, if attention to others' comfort and behavior during an interaction is important, then American students who are accustomed to focusing more attention on their own experiences may be perceived as rude and self-centered. To avoid such misunderstandings, American students who plan to study overseas should undergo an orientation program that increases their awareness of these issues.

Conclusion

The results of this study confirmed that Chinese graduate students report lower levels of adjustment than American graduate students. In addition, the Chinese students reported higher levels of social anxiety and interdependent self-construal than the American students. This difference may be limited to trait social anxiety, since Chinese students reported lower state anxiety than American students. High independent self-construal may act as a buffer to social anxiety, and low levels of social anxiety were related to healthier adjustment for both groups.

The two groups also differed on measures of social skills, with the American students behaving in a way that was more typically "American" than Chinese students. In addition the results of this study suggested that interdependent self-construal may have important implications for social anxiety. More specifically, for the Chinese students, speaking with someone of their own ethnicity or in-group may be more anxiety provoking than speaking with someone from the out-group. Thus, a low level of social anxiety may be adaptive to individuals with a high degree of interdependent self-construal.

Future research may uncover further evidence for these findings. Research that uncovers more specific information about subtle differences in social behavior may lead to more effective skills training modules in student orientation sessions. In addition, research that examines the utility of social anxiety in collectivist cultures would have implications for the diagnosis and treatment of social anxiety and social phobia in diverse populations. Finally, more culturally sensitive measures should be developed to adequately measure the concepts of adjustment, anxiety, self-construal, and social skills in cross-cultural samples.

Overall, this research highlights long-standing and current differences between the cultures of China and the United States. Chinese society has been influenced by Communism for many years, and as a result a collectivist ideal has been emphasized. Furthermore, the relative lack of economic and other resources in China (as compared to the United States) has made harmony and cooperation with others an essential skill for survival. In contrast, the United States is largely made up of immigrants who value freedom and independence. The relative wealth and abundance of resources, including technological ones, has made it possible for individuals in the United States to thrive without much assistance from others.

As can be seen in this study, the different histories of individualism and collectivism in the United States and China have important implications for relationships between individuals from these two cultures. Of course, cultural differences are not limited to the groups examined in this research, and similar findings may apply to

relationships between other cultural groups as well. Such cultural differences will become increasingly important as technological and political changes greaten the need for individuals to interact with others from around the world. This impact is not limited to students, but affects a rapidly expanding portion of the population who travel, including businesspeople and tourists. In addition, the effect of cultural differences on individuals within the United States is equally important. Because the population of the United States is largely made up of immigrants from around the world, greater understanding of how culture affects our interactions with others is critical for successful communication within a multicultural society.

References

Alexander, A. A., Klein, M. H., Workneh, F., & Miller, M. H. (1981). Psychotherapy and the foreign student. In P. B. Pedersen, J. G. Draguns, W. J. Lonner, & J. E. Trimble (Eds.), Counseling across cultures (pp. 227-243). Honolulu: East-West Center.

American Psychiatric Association. (1994). Diagnostic and statistical manual of mental disorders (4th ed.). Washington, DC: Author.

Baker, R. W., & Siryk, B. (1989a). Student adaptation to college questionnaire (SACQ). Los Angeles, CA: Western Psychological Services.

Baker, R. W., & Siryk, B. (1989b). Student adaptation to college questionnaire (SACQ) manual. Los Angeles, CA: Western Psychological Services.

Barratt, M. F., & Huba, M. E. (1994). Factors related to international undergraduate student adjustment in an American community. College Student Journal, 28, 422-436.

Beidel, D. C., Turner, S. M., & Dancu, C. V. (1985). Physiological, cognitive, and behavioral aspects of social anxiety. Behaviour Research and Therapy, 23, 109-117.

Cross, S. E. (1995). Self-construals, coping, and stress in cross-cultural adaptation. Journal of Cross-Cultural Psychology, 26, 673-697.

Davis, T. M. (Ed.). (1994). Open doors 1993/1994: Report on international educational exchange. New York: Institute of International Education.

Glass, C. R., & Arnkoff, D. B. (1989). Behavioral assessment of social anxiety and social phobia. Clinical Psychology Review, 9, 75-90.

Gudykunst, W. B., Gao, G., & Franklyn-Stokes, A. (1996). Self-monitoring and concern for social appropriateness in China and England. In J. Pandey, D. Sinha, & D. P. S. Bhawak (Eds.), Asian contributions to cross-cultural psychology (pp. 255-267). Thousand Oaks, CA: Sage Publications.

Gudykunst, W. B., Gao, G., Nishida, T., Nadamitsu, Y., & Sakai, J. (1992). Self-monitoring in Japan and the United States. In S. Iwaki, Y. Kashima, & K. Leung (Eds.), Innovations in cross-cultural psychology (pp. 185-198). Amsterdam: Swets & Zeitlinger.

Ho, D. Y., & Chiu, C. (1994). Component ideas of individualism, collectivism, and social organization: An application in the study of Chinese culture. In U. Kim, H. C. Triandis, C. Kagitcibasi, S. Choi, & G. Yoon (Eds.), Individualism and collectivism: Theory, method, and applications (pp.137-156). Thousand Oaks, CA: Sage Publications.

Hsu, L. R., Hailey, B. J., & Range, L. M. (1987). Cultural and emotional components of loneliness and depression. Journal of Psychology, 121, 61-70.

Irwin, H. (1996). Communicating with Asia: Understanding people and customs. St. Leonards, NSW, Australia: Allen & Unwin.

Kaczmarek, P. G., Matlock, G., Merta, R., Ames, M. H. & Ross, M. (1994). An assessment of international college student adjustment. International Journal for the Advancement of Counselling, 17, 241-247.

Kasahara, Y. (1988). Social phobia in Japan. Transcultural Psychiatric Research Review, 25, 145-150.

Kashima, Y., Yamaguchi, S., Kim, U., Choi, S., Gelfand, M. J., & Yuki, M. (1995). Culture, gender, and self: A perspective from individualism-collectivism research. Journal of Personality and Social Psychology, 69, 925-937.

Kirmayer, L. J. (1991). The place of culture in psychiatric nosology: Taijin kyofusho and DSM-III-R. Journal of Nervous and Mental Disease, 179, 19-28.

Kleinknecht, R. A., Dinnel, D. L., Kleinknecht, E. E., Hiruma, N., & Harada, N. (1997). Cultural factors in social anxiety: A comparison of social phobia symptoms and taijin kyofusho. Journal of Anxiety Disorders, 11, 157-177.

Leitenberg, H. (Ed.). (1990). Handbook of social and evaluation anxiety. New York: Plenum.

Leung, A. W., Heimberg, R. G., Holt, C. S., & Bruch, M. A. (1994). Social anxiety and perception of early parenting among American, Chinese American, and social phobic samples. Anxiety, 1, 80-89.

Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. Psychological Review, 98, 224-253.

Mattick, R. P., & Clarke, J. C. (1989). Development and validation of measures of social phobia scrutiny fear and social interaction anxiety. Unpublished manuscript.

Okazaki, S. (1997). Sources of ethnic differences between Asian American and White American college students on measures of depression and social anxiety. Journal of Abnormal Psychology, 106, 52-60.

Penn, R. J., & Durham, M. L. (1978). Dimensions of cross-cultural interaction. Journal of College Student Personnel, 19, 264-267.

Russell, J. G. (1989). Anxiety disorders in Japan: A review of the Japanese literature on shinkeishitsu and taijinkyofusho. Culture, Medicine, and Psychiatry, 13, 391-403.

Schram, J. L., & Lauver, P. J. (1988). Alienation in international students. Journal of College Student Development, 29, 146-150.

Sharkey, W. F., & Singelis, T. M. (1995). Embarrassability and self-construal: A theoretical integration. Personality and Individual Differences, 19, 919-926.

Singelis, T. M. (1994). The measurement of independent and interdependent self-construals. Personality and Social Psychology Bulletin, 20, 580-591.

Singelis, T. M., & Sharkey, W. F. (1995). Culture, self-construal, and embarrassability. Journal of Cross-Cultural Psychology, 26, 622-644.

Sue, D., Sue, D. M., & Ino, S. (1990). Assertiveness and social anxiety in Chinese American women. Journal of Psychology, 124, 155-163.

Surdam, J. C., & Collins, J. R. (1984). Adaptation of international students: A cause for concern. Journal of College Student Personnel, 25, 240-241.

Takahashi, T. (1989). Social phobia syndrome in Japan. Comprehensive Psychiatry, 30, 45-52.

Trafimow, D., Triandis, H. C., & Goto, S. G. (1991). Some tests of distinction between the private self and the collective self. Journal of Personality and Social Psychology, 60, 649-655.

Triandis, H. C. (1989). The self and social behavior in differing cultural contexts. Psychological Review, 96, 506-520.

Triandis, H. C. (1995). Individualism and collectivism. Boulder, CO: Westview Press.

Trower, P., Bryant, B., & Argyle, M. (1978). Social skills and mental health. Pittsburgh, PA: University of Pittsburgh Press.

Turner, S. M., Beidel, D. C., & Larkin, K. T. (1986). Situational determinants of social anxiety in clinic and nonclinic samples: Physiological and cognitive correlates. Journal of Consulting and Clinical Psychology, 54, 523-527.

Turner, S. M., Beidel, D. C., & Townsley, R. M. (1992). Social phobia: A comparison of specific and generalized subtypes and avoidant personality disorder. Journal of Abnormal Psychology, 101, 326-331.

Yang, B., Teraoka, M., Eichenfield, G. A ., & Audas, M. C. (1994). Meaningful relationships between Asian international and U.S. college students: A descriptive study. College Student Journal, 28, 108-115.

Ying, Y. W., & Liese, L. H. (1994). Initial adjustment of Taiwanese students to the United States: The impact of postarrival variables. Journal of Cross-Cultural Psychology, 25, 466-477.

Zimmerman, S. (1995). Perceptions of intercultural communication competence and international student adaptation to an American campus. Communication Education, 44, 321-335.

Table 1

Demographic Characteristics of Phase One Chinese and American Participants

Characteristic	M	SD	df	t
Age				
Chinese	28.98	4.79	162	1.68
American	27.55	5.47		
Number of children				
Chinese	0.29	0.56	162	-0.27
American	0.32	0.93		
Years at the current university				
Chinese	1.64	1.13	160.99	-3.39**
American	2.47	1.99		
Grade point average				
Chinese	3.73	0.26	157	1.81
American	3.65	0.28		
English language speaking ability				
Chinese	6.88	1.90	71.85	-10.71**
American	9.69	0.87		
Effectiveness of social supports				
Chinese	6.54	1.86	158	-4.44**
American	7.96	1.97		

Note. English language speaking ability and effectiveness of social support system were rated by the subjects on a 1 to 10 scale, with 1 being very poor/ineffective and 10 being very good/effective.

** $p < .001$

Table 2

Demographic Characteristics of Phase Two Chinese and American Participants

Characteristic	M	SD	df	t
Age				
Chinese	28.86	5.02	58	0.92
American	27.72	4.51		
Number of children				
Chinese	0.29	0.54	58	0.39
American	0.22	0.75		
Years at the current university				
Chinese	1.66	1.33	58	-1.38
American	2.25	1.91		
Grade point average				
Chinese	3.71	0.30	55	0.29
American	3.68	0.27		
English language speaking ability				
Chinese	7.04	1.99	31.61	-6.93**
American	9.75	0.62		
Effectiveness of social supports				
Chinese	6.46	2.05	58	-2.97*
American	8.00	1.95		

Note. English language speaking ability and effectiveness of social support system were rated by the subjects on a 1 to 10 scale, with 1 being very poor/ineffective and 10 being very good/effective.

* $p < .005$

** $p < .001$

Table 3

Social Skills Ratings Across Confederates

	1º Chinese Female		2º Chinese Female		Chinese Male		American Female		American Male	
Skill	M	SD	M	SD	M	SD	M	SD	M	SD
1. Tone	0.71	0.49	1.14	0.38	0.14	0.36	0.13	0.35	0.14	0.36
2. Speech Disturbances	1.00	0.00	1.00	0.00	1.00	0.00	0.93	0.26	0.00	0.00
3. Facial Expression	0.00	0.00	0.43	0.79	0.07	0.27	0.00	0.00	0.14	0.36
4. Gaze	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5. Posture	0.86	0.38	0.29	0.49	0.07	0.27	0.53	0.52	0.79	0.43
6. Head Gestures	0.14	0.38	0.29	0.49	0.00	0.00	0.07	0.26	0.21	0.43
7. Hand/Arm Gestures	1.29	0.49	1.43	1.27	0.93	1.21	0.60	0.74	1.86	0.95
8. Formality	0.43	0.53	0.71	0.49	0.50	0.52	0.47	0.64	0.93	1.00
9. Humor	0.86	0.38	1.00	0.58	0.43	0.51	0.53	0.52	0.86	0.86
10. Meshing	0.00	0.00	0.29	0.76	0.29	0.47	0.20	0.41	0.07	0.27
11. English Language	7.14	0.69	6.43	1.99	7.14	0.95	9.21	0.43	9.93	0.27
12. Like/Dislike	3.86	0.38	3.86	0.38	3.36	0.84	2.50	0.76	3.71	1.07
13. Dominance	5.29	0.49	5.43	0.79	3.71	0.99	3.79	0.58	3.71	1.14
14. Anxiety	3.71	1.25	3.14	1.21	2.14	0.66	2.21	0.89	2.21	0.70
15. Performance	6.86	1.07	6.14	1.77	7.57	1.16	8.64	0.84	7.71	1.68

Note. On items 1 through 10, lower scores are indicative of behavior that is closer to American norms. On item 11, higher numbers indicate better language abilities. On items 12 and 13, lower numbers reflect greater likeability and dominance, respectively. On items 14 and 15, higher numbers reflect greater anxiety and overall performance, respectively.

Table 4

SACQ Scores for Phase One Chinese and American Participants

SACQ Scale	M	SD	df	t
Full Scale				
Chinese	420.57	57.56	157	-2.95*
American	452.90	69.26		
Academic Adjustment				
Chinese	153.28	23.29	157	-1.58
American	159.93	26.04		
Social Adjustment				
Chinese	119.52	20.09	157	-4.10**
American	135.30	24.35		
Personal/Emotional Adjustment				
Chinese	91.83	20.00	157	-1.63
American	97.57	21.54		
Goal Commitment/Institutional Attachment				
Chinese	95.96	14.50	157	-3.91**
American	106.99	17.92		

* $p < .005$
** $p < .001$

Table 5

Cultural Differences on Measures of Social Anxiety

Measure	M	SD
SPS		
Chinese	20.00	13.37
American	10.29	9.57
SIAS		
Chinese	24.81	11.85
American	20.21	13.42
TKS Scale		
Chinese	94.10	32.07
American	66.01	24.80

Table 6

Cultural Differences on Measures of Self-Construal

Measure	M	SD
Independent Self-Construal		
Chinese		
Male	57.89	8.95
Female	54.78	8.80
Total	56.68	8.94
American		
Male	59.56	9.54
Female	57.46	8.07
Total	58.51	8.85
Interdependent Self-Construal		
Chinese		
Male	58.11	8.77
Female	63.00	5.99
Total	60.02	8.11
American		
Male	54.04	6.43
Female	53.69	7.94
Total	53.87	7.19

Table 7

Correlations Between Social Anxiety and Independent and Interdependent Self-Construal

	Independent		Interdependent	
	Chinese	American	Chinese	American
SPS	-.50**	-.47**	.17	.06
SIAS	-.27	-.61**	.28	.09
TKS Scale	-.49 **	-.58**	-.13	.05

** $p < .001$

Table 8

Correlations Between Social Anxiety, Social Skills, and Social Adjustment

	Chinese SACQ - Social	American SACQ - Social
Anxiety Pre	-.16	-.35
Anxiety Post	.08	-.20
SPS	-.33	-.47**
SIAS	-.35	-.46**
TKS	-.17	-.55**
Skills	-.18	-.16

** $p < .001$

Table 9

Cultural Differences on Pre- and Post-Interaction Anxiety and Social Skills

Measure	M	SD
Pre-Interaction Anxiety		
Chinese	2.12	1.17
American	2.82	1.40
Post-Interaction Anxiety		
Chinese	1.77	1.06
American	2.42	1.26
Social Skills		
Chinese	3.41	2.48
American	1.70	1.42

Note. For the pre- and post-interaction anxiety measures, higher numbers indicate higher anxiety. For the social skills measure, lower numbers indicate closer adherence to American norms for ideal social behavior.

Table 10

Cell Sample Sizes for the Subject Ethnicity X Subject Sex X Subject Adjustment X Confederate Ethnicity X Confederate Sex Mixed MANOVA

Subject Ethnicity	Subject Sex	Adjustment	N
Chinese	Male	Low	5
		High	9
	Female	Low	10
		High	3
American	Male	Low	7
		High	8
	Female	Low	10
		High	7

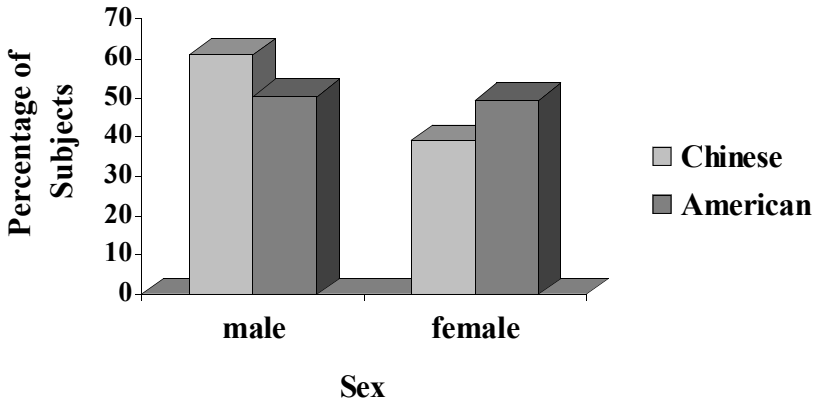

Figure 1. Distribution of sex for Chinese (N = 59) and American (N = 105) subjects in Phase One. Differences between the two groups were not significant, c^2 (1, N = 164) = 1.69, p = .19.

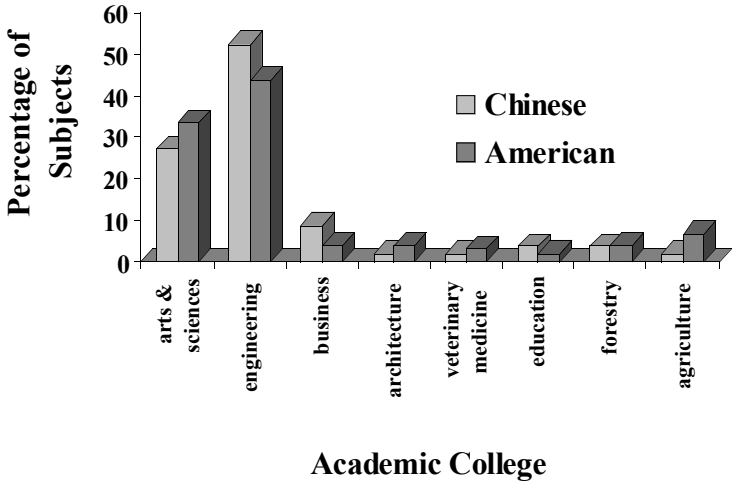

Figure 2. Distribution of academic college for Chinese (N = 59) and American (N = 105) subjects in Phase One. Differences between the two groups were not significant, c^2 (7, N = 164) = 5.62, p = .59.

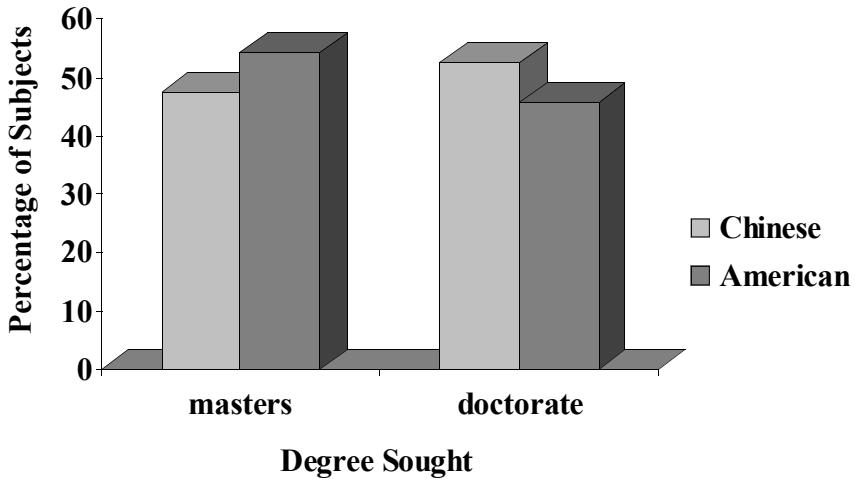

Figure 3. Distribution of degree sought for Chinese (N = 59) and American (N = 105) subjects in Phase One. Differences between the two groups were not significant, c^2 (1, N = 164) = 0.71, p = .40.

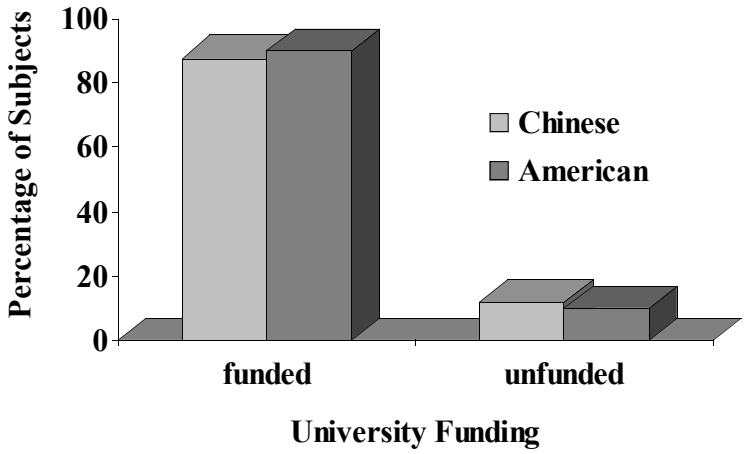

Figure 4. Distribution of university funding for Chinese (N = 58) and American (N = 103) subjects in Phase One. Differences between the two groups were not significant, c^2 (1, N = 161) = 0.22, p = .64.

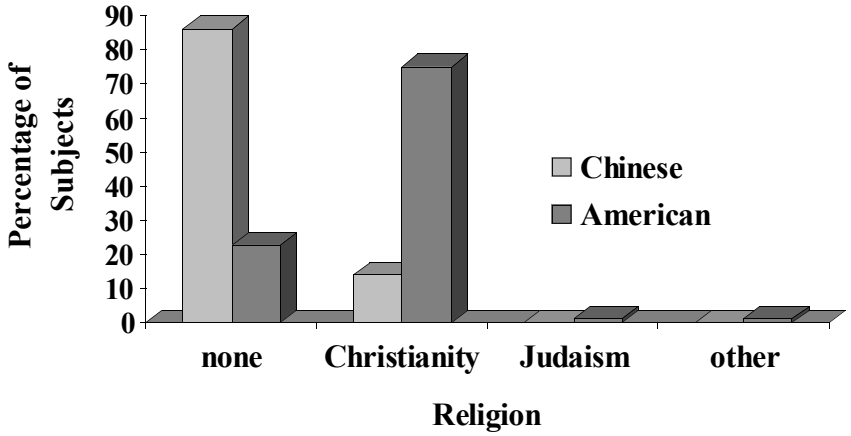

Figure 5. Distribution of religion for Chinese (N = 58) and American (N = 101) subjects in Phase One. Differences between the two groups were significant, c^2 (3, N = 159) = 59.78, p < .0001.

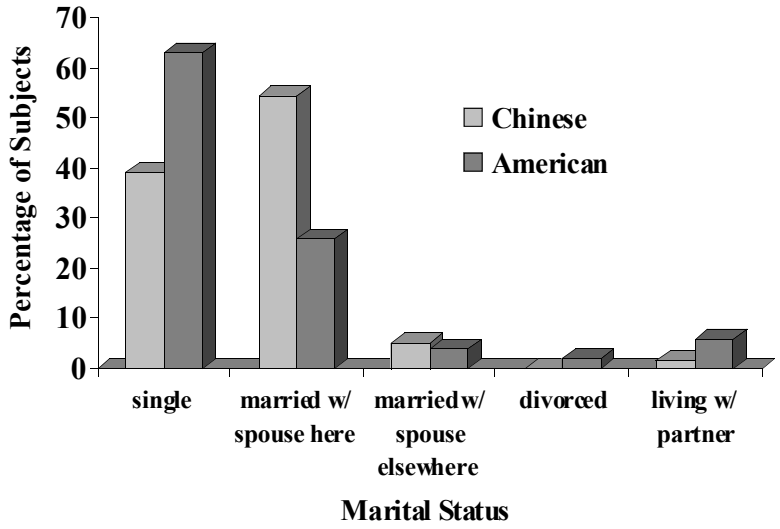

Figure 6. Distribution of marital status for Chinese (N = 59) and American (N = 105) subjects in Phase One. Differences between the two groups were significant, c^2 (4, N = 164) = 15.21, p < .005.

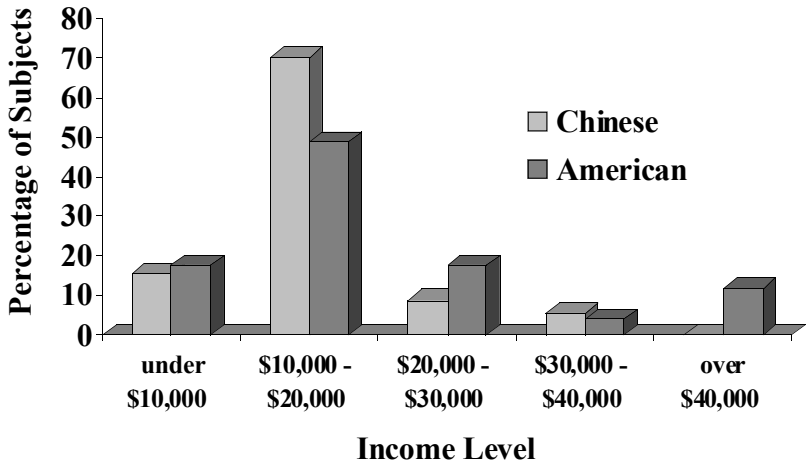

Figure 7. Distribution of income level for Chinese (N = 57) and American (N = 102) subjects in Phase One. Differences between the two groups were significant, c^2 (4, N = 159) = 11.81, p < .05.

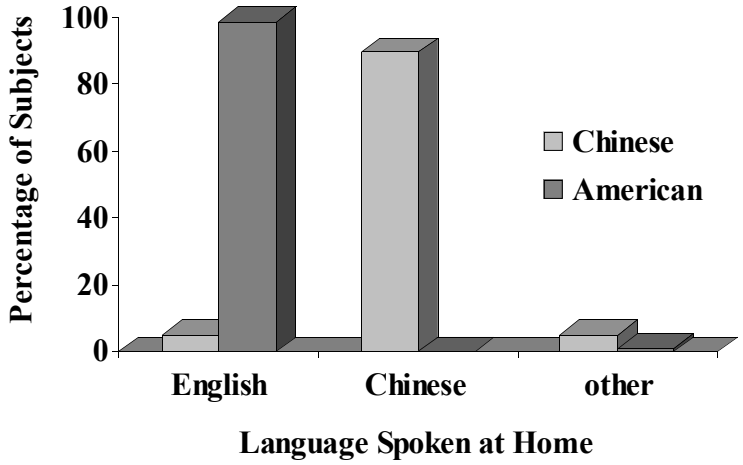

Figure 8. Distribution of language spoken at home for Chinese (N = 58) and American (N = 104) subjects in Phase One. Differences between the two groups were significant, c^2 (2, N = 162) = 146.05, p < .0001.

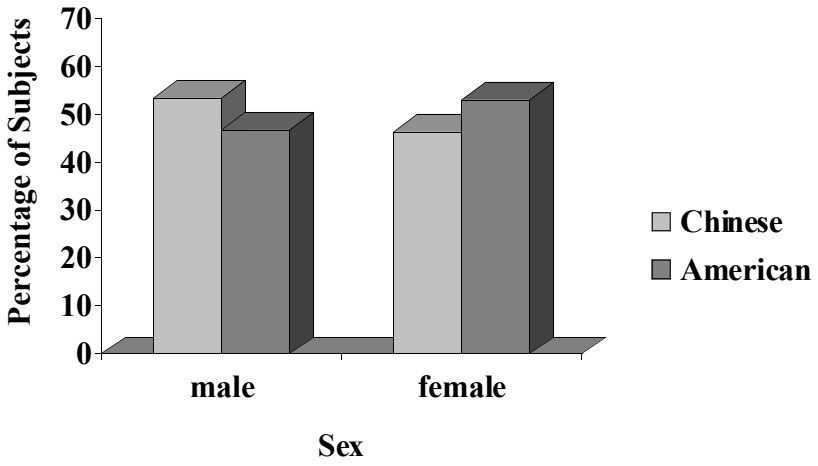

Figure 9. Distribution of sex for Chinese (N = 28) and American (N = 32) subjects in Phase Two. Differences between the two groups were not significant, c^2 (1, N = 60) = 0.27, p = .60.

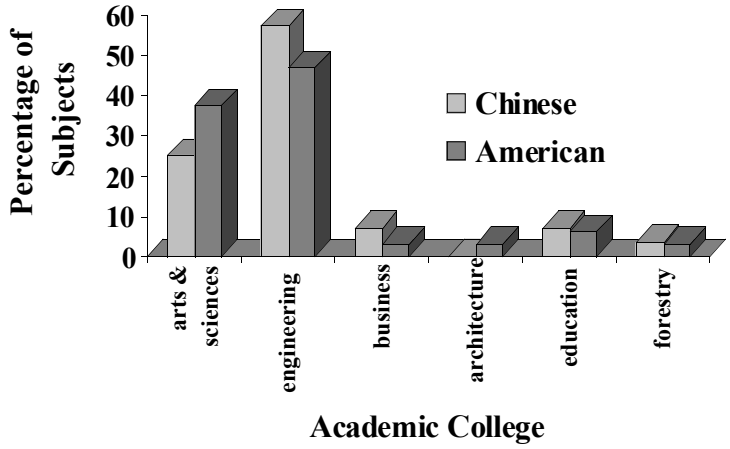

Figure 10. Distribution of academic college for Chinese (N = 28) and American (N = 32) subjects in Phase Two. Differences between the two groups were not significant, c^2 (5, N = 60) = 2.43, p = .79.

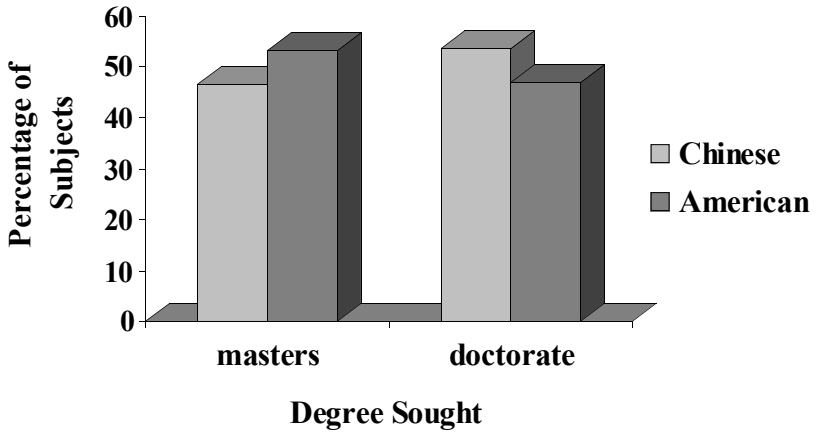

Figure 11. Distribution of degree sought for Chinese (N = 28) and American (N = 32) subjects in Phase Two. Differences between the two groups were not significant, c^2 (1, N = 60) = 0.27, p = .60.

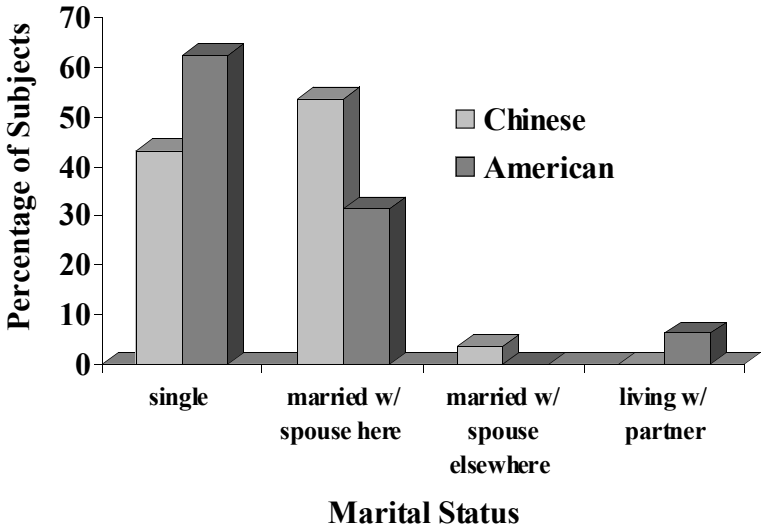

Figure 12. Distribution of marital status for Chinese (N = 28) and American (N = 32) subjects in Phase Two. Differences between the two groups were not significant, c^2 (3, N = 60) = 5.76, p = .12.

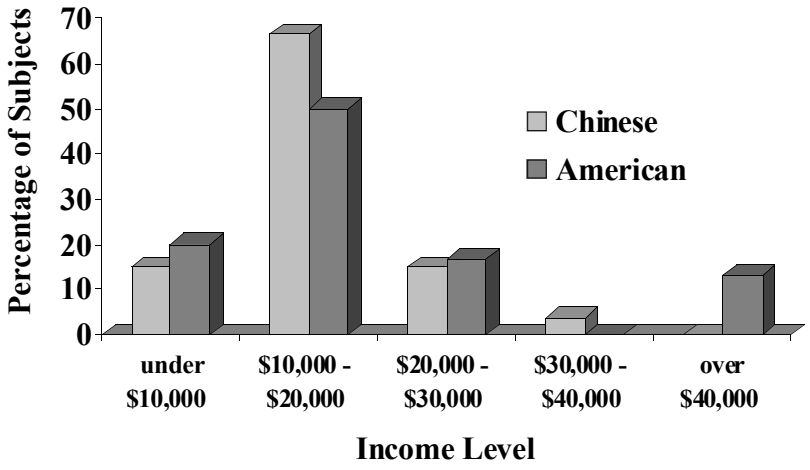

Figure 13. Distribution of income level for Chinese (N = 27) and American (N = 30) subjects in Phase Two. Differences between the two groups were not significant, c^2 (4, N = 57) = 5.64, p = .23.

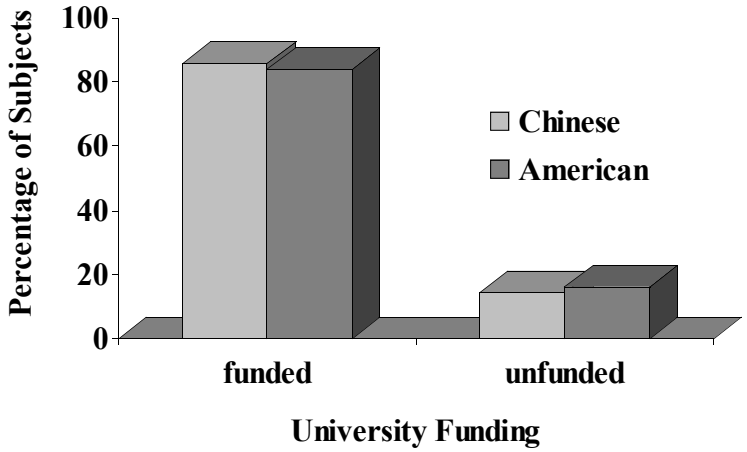

Figure 14. Distribution of university funding for Chinese (N = 28) and American (N = 31) subjects in Phase Two. Differences between the two groups were not significant, c^2 (1, N = 59) = 0.04, p = .84.

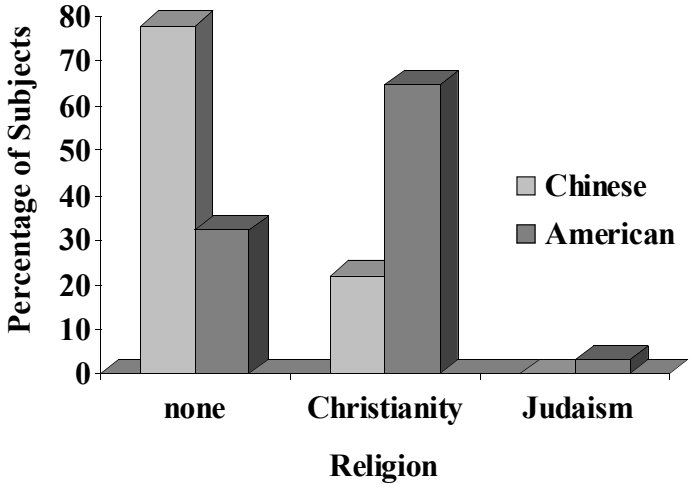

Figure 15. Distribution of religion for Chinese (N = 27) and American (N = 31) subjects in Phase Two. Differences between the two groups were significant, c^2 (2, N = 58) = 12.22, p < .005.

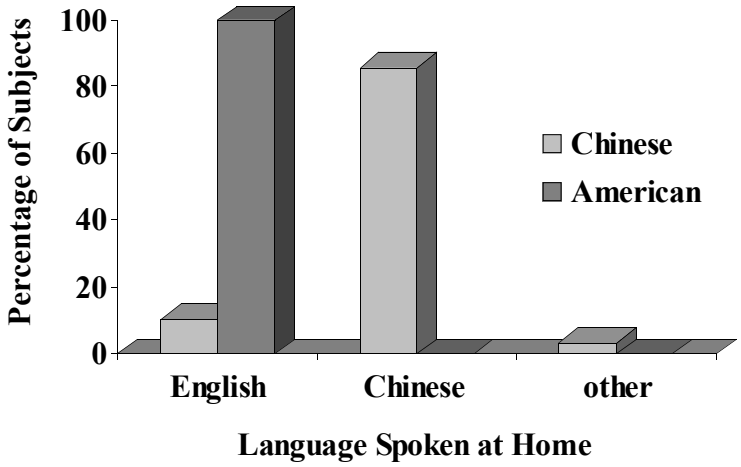

Figure 16. Distribution of language spoken at home for Chinese (N = 28) and American (N = 31) subjects in Phase Two. Differences between the two groups were significant, c^2 (2, N = 59) = 48.03, p < .0001.

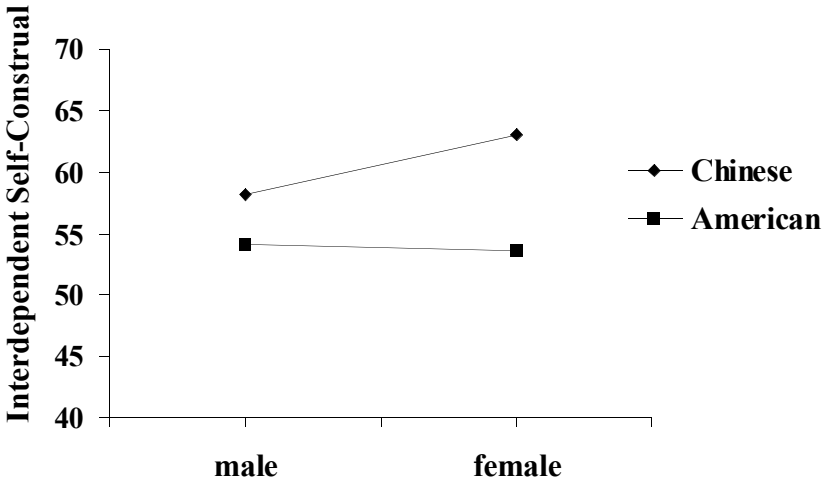

Figure 17. Sex differences on raw scores of the interdependent subscale of the SCS for Chinese (N = 59) and American (N = 104) subjects.

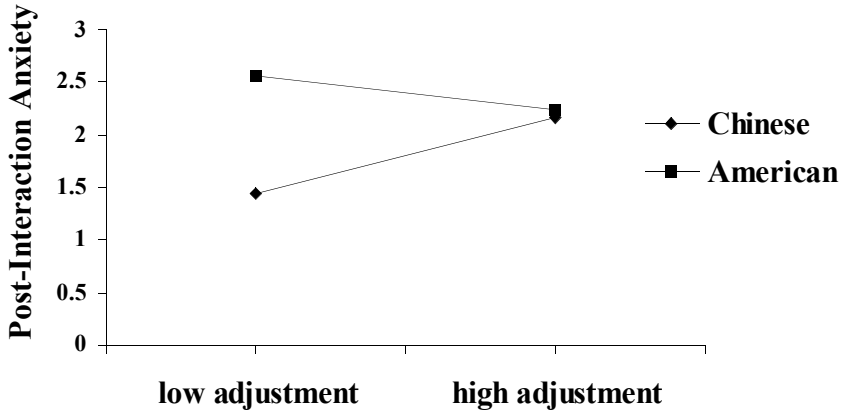

Figure 18. Adjustment level differences on post-interaction anxiety ratings for Chinese (N = 27) and American (N = 32) subjects.

Appendix

Percentage Agreement Between Raters on Individual Items of Social Skills Rating Form

Item	% Agreement
Tone	68.30
Speech Disturbances	67.88
Face	76.65
Gaze	76.68
Posture Tonus	75.00
Head Gesture	93.23
Hand/Arm Gesture	61.68
Formality	71.68
Humor	64.43
Meshing	70.85

Note. Numbers represent average of uncorrected percentage agreement estimates across four administrations of measure (four behavior samples per subject, N = 15).

Correlations Between Raters on Global Impression Items of Social Skills Rating Form

Item	r
English Language Ability	.85
Likeability	.24
Dominance/Submissiveness	.29
Anxiety	.19
Overall Performance	.37

Note. Numbers represent average of Pearson correlation coefficients across four administrations of measure (four behavior samples per subject, N = 15).

CURRICULUM VITAE

Kathleen A. Ingman
315 Hunt Club Road, Apt. 6100K
Blacksburg, VA 24060
(540) 953-1972

Personal Data:

Birthplace: Stanford, California
Birthdate: June 25, 1971

Education:

Virginia Polytechnic Institute and State University, Blacksburg, VA
Dates in attendance: August, 1993 - present
Degree received: Master of Science; May, 1996
Degree expected: Doctor of Philosophy
Date expected: May, 2000
Program: Clinical Psychology, Clinical-Child Psychology specialization
Cumulative GPA: 3.66
Awards: Graduate assistantship/Tuition waiver (all years)
Graduate Diversity Research/Mentoring Grant; January, 1998

State University of New York at Albany, Albany, New York
Dates in attendance: September, 1990 - December, 1992
Degree: Bachelor of Arts, Summa Cum Laude
December, 1992
Major: Psychology
Minors: Sociology and Spanish
Cumulative GPA: 3.75 GPA in major: 3.78
Awards and Honors: Presidential Award for Undergraduate Research, May, 1992
Phi Beta Kappa - member
Psi Chi - member
Presidential Honor Society - advisory board member
Dean's List, September, 1990 - December, 1992

Santa Clara University, Santa Clara, California
Dates in attendance: September, 1989 - June, 1990
Major: Undeclared
Cumulative GPA: 3.60
Honors: Dean's List, September, 1989 - June, 1990

Clinical Practicum Experience:

Psychological Services Center, Blacksburg, VA: Practicum Supervisor

May, 1998 – August, 1998
Supervisor: Thomas H. Ollendick, Ph.D.
Total clinical hours: 338

Served as primary supervisor for five graduate student clinicians. Supervised over 30 individual therapy cases including child, adult, and family therapy. Diagnoses of supervisee's clients included anxiety, depression, antisocial personality disorder, substance abuse, marital distress, sexual abuse, medical issues, and childhood behavior problems. Performed minor administrative duties. Served as primary therapist for a depressed adolescent, a distressed couple, and a dysfunctional family.

Psychological Services Center, Blacksburg, VA: Graduate Student Clinician

January, 1998 – May, 1998
Supervisor: George Clum, Ph.D.
Total clinical hours: 111

Served as primary therapist for a male adolescent with behavior problems. Served as co-therapist for adult panic disorder treatment group. Supervised junior clinicians whose cases include marital therapy and adult individual therapy. Active participant during group supervision meetings, which included development of clinical research projects.

Psychological Services Center, Blacksburg, VA: Graduate Student Clinician

August, 1996 - May, 1997
Supervisor: Richard Eisler, Ph.D.
Total clinical hours: 196

Served as primary therapist for adult female with depression, and for a couple with marital problems and depression. Supervised three junior clinicians whose cases included treatment of a female child with conduct disorder, a family with marital and child-parent relational problems, and an adult with depression and borderline personality disorder. Active participant during group supervision meetings, which included formal case presentations.

Southwestern Virginia Mental Health Institute, Marion, VA: Psychology Practicum Student

August, 1995 - August, 1996
Supervisor: Richard Mears, Ph.D.
Total clinical hours: 664

Responsibilities included conducting diagnostic, intellectual, and personality evaluations, including 65 general psychological assessments (31 adolescent, 34 adult); and serving as therapist for individual (26 sessions) and group (32 sessions) treatment for adolescent and adult psychiatric inpatients. Received group and individual supervision, and participated in daily staffing and intake meetings. The hospital primarily serves a lower class, rural Appalachian patient population with severe psychopathology.

Psychological Services Center, Blacksburg, VA: Graduate Student Clinician

August, 1994 - May, 1995
Supervisor: Thomas H. Ollendick, Ph.D.
Total clinical hours: 434

Served as primary therapist for depressed female adolescent, male child with ADHD and anxiety, female child with adjustment difficulties, female child with ADHD and social skills difficulties, adult female with depression, adult male with adjustment difficulties, adult female with anxiety, and two couples with marital difficulties. Conducted five comprehensive psychological evaluations, one for a college student with ADHD symptoms, one for an applicant to the local police department, two on male children with attentional and behavioral problems, and one on a female adolescent with depression and parent-child relational problems. Supervised two fellow clinicians in the group treatment of college students with social phobia. Active participant during group supervision meetings, which included formal case presentations.

Psychological Services Center, Blacksburg, VA: Graduate Student Clinician

August, 1993 - May, 1994
Supervisor: Jack W. Finney, Ph.D., & Robert Stephens, Ph.D.
Total clinical hours: 290

Served as primary therapist for phobic male child, female child with ADHD and social skills deficits, adult female with adjustment difficulties, adult female with depression, and an adult female with chronic pain. Conducted four comprehensive psychological evaluations, one for a college student with ADHD and anxiety symptoms, and three on male children with attentional problems. Active participant during group supervision meetings, which included formal case presentations

Christiansburg Middle School, Christiansburg, VA: Graduate Student Clinician

August, 1993 - May, 1994
Supervisor: Thomas H. Ollendick, Ph.D.
Total clinical hours: 90

Served as primary therapist for three male children: one with Tourette's syndrome, one with autism, and one with social skills difficulties. Served as co-therapist for social skills training group. Worked closely with school personnel and received individual and group supervision.

Clinical Research Experience:

Center for Research in Health Behavior, Blacksburg, VA: Field Staff

September, 1998 – present
Supervisors: Eileen Anderson, Ed.D., & Richard Winett, Ph.D.

Research assistant/field staff for NIMH funded project: "Community AIDS Risk Reduction Project". Responsibilities include recruiting teenagers from Roanoke, Virginia low-income housing developments and administering computerized assessments. Future responsibilities may include leading psychoeducational workshops focusing on HIV prevention and education and conducting follow-up assessments.

Virginia Polytechnic Institute and State University, Blacksburg, VA: Graduate Student

November, 1994 - April, 1996
Supervisor: Thomas H. Ollendick, Ph.D.
Total clinical hours: 184

Conducted assessment study of children with both internalizing and externalizing disorders using semi-structured interviews (ADIS-IV-C/P), self-report, and observational data. Completed psychological assessments, wrote reports, and provided feedback for a total of 34 children. Coordinated, trained, and supervised team of undergraduate research assistants.

Virginia Polytechnic Institute and State University, Blacksburg, VA: Group Leader

September, 1995 - November, 1995
Supervisor: Thomas H. Ollendick, Ph.D.
Total clinical hours: 20

Served as co-therapist for a study evaluating a protocol for group treatment of subclinical panic attacks in late adolescents.

Teaching Experience:

Virginia Polytechnic Institute and State University, Blacksburg, VA: Graduate Teaching Assistant

August, 1997 – December, 1997

Instructor for undergraduate level Psychology of Personality class. Activities include planning course syllabus, preparing and delivering lectures, preparing, administering, and grading examinations and class assignments, and maintaining office hours.

Virginia Polytechnic Institute and State University, Blacksburg, VA: Graduate Teaching Assistant

August, 1996 - May, 1997

Instructed undergraduate level Advanced Social Psychology Lab (2 sections each semester). Activities include planning course syllabus, preparing and delivering lectures, preparing and grading class assignments, supervising research activities, and maintaining office hours.

Virginia Polytechnic Institute and State University, Blacksburg, VA: Graduate Teaching Assistant

January, 1996 - May, 1996

Assisted Dr. Cynthia Lease in the administration of an undergraduate Personality Research course. Duties included teaching occasional classes and administering and grading tests and grading class assignments.

Virginia Polytechnic Institute and State University, Blacksburg, VA: Graduate Teaching Assistant

January, 1995 - May, 1995

Assisted Dr. Robert Stephens in the administration of an undergraduate Personality Research course. Duties included attending classes and taking notes, preparing, administering, and grading tests and class assignments, and maintaining office hours.

Virginia Polytechnic Institute and State University, Blacksburg, VA: Graduate Teaching Assistant

August, 1993 - May, 1994

Instructor for undergraduate Introductory Psychology lab (2 sections each semester). Responsible for preparing and delivering lecture, leading discussion, and preparing and grading weekly exams and writing assignments. Also assisted in the administration of major examinations and instructor evaluations.

Other Professional Experience:

Virginia Polytechnic Institute and State University, Blacksburg, VA: Clinic Assistant

August, 1995 - December, 1995
August, 1994 - December, 1994

Performed administrative and secretarial duties at the psychology department's Psychological Services Center.

Virginia Polytechnic Institute and State University, Blacksburg, VA: Clinical Student Representative

August, 1994 - May, 1995

Was elected by peers to student representative position. Responsibilities included representing student interests at clinical faculty meetings and acting as a liaison between students and faculty.

Macquarie University, Sydney, Australia: Research Assistant

June, 1994 - July, 1994
Supervisor: Ronald M. Rapee, Ph.D.

Responsibilities included observing and coding interactions between anxious children and their parents, observing and coding socially phobic adults in public speaking and interaction tasks, interviewing anxious children and their parents, and conducting literature reviews for manuscripts.

Center for Stress and Anxiety Disorders, Albany, NY: Research Assistant

Part-time: September, 1991 - May, 1992
September, 1992 - December, 1992
Full-time: June, 1992 - August, 1992
January, 1993 - July, 1993
Supervisors: David H. Barlow, Ph. D., Director
Anne Marie Albano, Ph. D., Assistant Director

Research Experience

Adult: Responsibilities included data collection, management, and computer analysis using SPSS-X. Also conducted literature reviews for manuscripts and attended research meetings. Relevant diagnoses include: panic disorder, obsessive-compulsive disorder, simple phobia, and generalized anxiety disorder.

Child: Regular responsibilities included data collection and management, and conducting literature reviews for manuscripts. Relevant diagnoses include: overanxious disorder, social phobia, eating disorders, elective mutism, attention deficit hyperactivity disorder, and panic disorder. Special assignments include: Research assistant for NIMH funded project: "Psychosocial Treatments for Adolescent Social Phobia". Responsible for organization, administration, and scoring of questionnaire measures (parent and child), and data collection and analysis of behavior tests.

Clinical Work

Adult: Attended weekly diagnostic conference and undergraduate seminar. Served as co-therapist of treatment group for panic disorder patients.

Child: General duties included therapist for individual and group treatment of children and adolescents, questionnaire administration, and role play exposure participant. Presenting problems of clients include anxiety, depression, hyperactivity, and eating disorders. Served as co-therapist of treatment group for pre-adolescents with social phobia.

Albany Rape Crisis Center, Albany, NY: Volunteer Counselor

May, 1992 - June, 1993.
Supervisors: Judith V. Condo, Director
Debra Schramek, Deputy Director

Offered psychological, medical, and legal counseling to victims of rape, sexual abuse, and incest as well as their families on a crisis hotline. Escorted rape victims to emergency room and police station. Attended monthly staff meeting following 25 hours of training as counselor.

Stanford University Medical Center Pain Management Clinic, Stanford, CA: Research Assistant

Part-time: Summer, 1991.
Supervisor: William Brose, M.D., Director

Research assistant in adult outpatient clinic for patients with medically and psychologically based chronic pain conditions. Research involved examining the effects of medications on cognitive functioning. Research responsibilities included literature reviews and data management. Clinical work involved administration of neuropsychological tests including the Trail Making Test, Digit Span, and Serial Digit Learning.

Professional Affiliations:

American Psychological Association (APA), student affiliate
Association for the Advancement of Behavior Therapy (AABT), student member
AABT Special Interest Group for Phobia and Related Anxiety Disorders, student member

Journal Reviewer:

Journal of Clinical Child Psychology: April, 1996 - present
Journal of Gender, Culture, and Health: October, 1998 - present

Publications:

Papers

Ingman, K. A., Ollendick, T. H., & Akande, A. (1999). Cross-cultural aspects of fears in African children and adolescents. Behaviour Research and Therapy, 37, 337-345.

Ollendick, T. H., & Ingman, K. A. (in press). Social Phobia. In H. Orvaschel, J. Faust, and M. Hersen (Eds.), Handbook of Conceptualization and Treatment of Child Psychopathology. Oxford, England: Elsevier.

Abstracts

Ollendick, T. H., Goza, A. B., Ingman, K. A., & Seligman, L. D. (1997). Anxiety disorders in youth: Interventions for children and families. In G. M. Mills, C. S. Al-Mateen, & E. B. Freeman (Eds.), Children and Adolescents with Emotional and Behavioral Disorders: Proceedings of the Seventh Annual Virginia Beach Conference (p. 5). Richmond, VA: Commonwealth Institute for Child and Family Studies, Medical College of Virginia, Virginia Commonwealth University.

Ingman, K. A. & Ollendick, T. H. (1996). Family environment in internalizing and externalizing children. In C. R. Ellis & N. N. Singh (Eds.), Children and Adolescents with Emotional and Behavioral Disorders: Proceedings of the Sixth Annual Virginia Beach Conference (p. 68). Richmond, VA: Commonwealth Institute for Child and Family Studies, Medical College of Virginia, Virginia Commonwealth University.

Ingman, K. A. & Ollendick, T. H. (1996). Cross-cultural aspects of fears in African children and adolescents. In C. R. Ellis & N. N. Singh (Eds.), Children and Adolescents with Emotional and Behavioral Disorders: Proceedings of the Sixth Annual Virginia Beach Conference (p. 67). Richmond, VA: Commonwealth Institute for Child and Family Studies, Medical College of Virginia, Virginia Commonwealth University.

Ingman, K. A., & Ollendick, T. H. (1995). Family environment in internalizing and externalizing children. In C. R. Ellis & N. N. Singh (Eds.), Children and Adolescents with Emotional and Behavioral Disorders: Proceedings of the Fifth Annual Virginia Beach Conference (p. 78). Richmond, VA: Commonwealth Institute for Child and Family Studies, Medical College of Virginia, Virginia Commonwealth University.

Conference Papers and Presentations:

Ingman, K. A., Wang, Y., & Ollendick, T. H. (1998, November). An Examination of Social Skills, Social Anxiety, and Adjustment in Chinese and American Students. Poster presentation at the meeting of the Association for the Advancement of Behavior Therapy, Washington, DC.

Ingman, K. A. (1998, November). Variations in the Nature and Etiology of Panic: Lessons from Cross-Cultural Research. Poster presentation at the meeting of the Association for the Advancement of Behavior Therapy, Washington, DC.

Mattis, S. G., Ollendick, T. H., Rock, C. M., Butcher, T. A., Seligman, L. D., Ingman, K. A., Curtin, L., Febbraro, G. A. R., Gulotta, C. S. (1998, March). Group Treatment of Nonclinical Panic Attacks in Late Adolescence. Poster presentation at the meeting of the Anxiety Disorders Association of America, Boston, MA.

Ollendick, T. H., Goza, A. B., Ingman, K. A., & Seligman, L. D. (1997, September). Anxiety disorders in youth: Interventions for children and families. Workshop presented at the Seventh Annual Virginia Beach Conference, Virginia Beach, VA.

Vera, R. M., Albano, A. M., Stanton, C., Ingman, K. A., & Barlow, D. H. (1996, November). Quantification of Behavioral Avoidance in Adolescents Using the Fear Survey Schedule for Children - Revised. Poster presentation at the meeting of the Association for the Advancement of Behavior Therapy, New York, NY.

Ingman, K. A., & Ollendick, T. H. (1996, October). Family Environment in Internalizing and Externalizing Children. In T. H. Ollendick (Chair), Families and Caregivers. Symposium conducted at the Sixth Annual Virginia Beach Conference, Virginia Beach, VA.

Ingman, K. A., Ollendick, T. H., & Akande, D. (1996, October). Cross-Cultural Aspects of Fears in African Children and Adolescents. Poster presentation at the Sixth Annual Virginia Beach Conference, Virginia Beach, VA.

Ingman, K. A., & Ollendick, T. H. (1995, September). Family environment in internalizing and externalizing children. In T. H. Ollendick (Chair), Anxiety and Depression in Children and Adolescents. Symposium conducted at the Fifth Annual Virginia Beach Conference, Virginia Beach, VA.

Ingman, K. A., Seligman, L. D., Ollendick, T. H., & Akande, D. (1994, November). Cross-cultural aspects of fear in African children and adolescents. Poster presentation at the meeting of the Association for Advancement of Behavior Therapy, San Diego, CA.

Albano, A. M., Chorpita, B. F., Ingman, K. A., & Barlow, D. H. (1993, November). Use of the fear and avoidance hierarchy in the prescriptive treatment of school refusal. Poster presentation at the meeting of the Association for Advancement of Behavior Therapy, Atlanta, GA.

Chorpita, B. F., Albano, A. M., Ingman, K. A., Cornish, P., & Barlow, D. H. (1993, November). The Childhood Anxiety Sensitivity Index: Psychometric examinations in a sample of children with anxiety disorders. Poster presentation at the meeting of the Association for the Advancement of Behavior Therapy, Atlanta, GA.

Griegel, L. E., Lilienfeld, S., Barlow, D. H., & Ingman, K. A., (1992, November). Magical thinking, religiosity, and obsessive-compulsive traits. Poster presentation at the meeting of the Association for the Advancement of Behavior Therapy, Boston, MA.

Griegel, L. E., Brown, T. A., Barlow, D. H., & Ingman, K. A. (1992, May). The effects of depersonalization and derealization on treatment outcome in individuals with panic disorder. In D. H. Barlow (chair), Recent advances in panic disorder research: Assessment and Treatment Implications. Symposium conducted at the meeting of the New York State Psychological Association, Bolton Landing, NY.

Other Manuscripts:

Ingman, K. A. (1997). Variations in the Nature and Etiology of Panic: Lessons from Cross-Cultural Research. Unpublished manuscript. Virginia Tech, Blacksburg, VA.

Ingman, K. A. (1996). The Relationship Between Family Environment and Internalizing and Externalizing Childhood Behavior Problems. Unpublished manuscript. Virginia Tech, Blacksburg, VA.

Griegel, L. E., Albano, A. M., Barlow, D. H., & Ingman, K. A. (1992). Developmental Differences in Overanxious Disorder and Generalized Anxiety Disorder Diagnostic Criteria. Unpublished manuscript. Center for Stress and Anxiety Disorders, State University of New York at Albany.

Kathleen A. Ingman