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## A Comparison of International and U.S. Students in APA-Accredited Programs: Acculturation, Counseling Self-Efficacy and Role Difficulties in Supervision

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**A COMPARISON OF INTERNATIONAL AND U.S. STUDENTS IN  
APA-ACCREDITED PROGRAMS: ACCULTURATION,  
COUNSELING SELF-EFFICACY AND ROLE  
DIFFICULTIES IN SUPERVISION**

by

Johanna E. Nilsson

**A Dissertation  
Submitted to the  
Faculty of The Graduate College  
in partial fulfillment of the  
requirements for the  
Degree of Doctor of Philosophy  
Department of Counselor Education  
and Counseling Psychology**

**Western Michigan University  
Kalamazoo, Michigan  
December 1999**

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APA-ACCREDITED PROGRAMS: ACCULTURATION,  
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**Johanna E. Nilsson, Ph.D.**

**Western Michigan University, 1999**

**There has been a call in the multicultural supervision literature to enhance the understanding of minority students' unique training needs and develop appropriate theories and models of training for these students (Leong & Wagner, 1994; McNeill, Hom, & Perez, 1995). Although a few researchers have empirically examined differences between U.S. majority and minority students in multicultural supervision (Cook & Helms, 1988; Vander Kolk, 1974), virtually no empirical studies have been published on international students' training experiences.**

**The main purpose of the present study was to advance knowledge regarding the training needs of international students in APA-accredited programs in psychology. It was expected that due to issues associated with acculturation, international students' counseling self-efficacy and role difficulties in supervision would differ from U.S. students. The impact of multicultural supervision on these variables was also investigated. A secondary purpose of the study was to examine whether the present findings supported theory and previously obtained results on counseling self-efficacy and acculturation. Multivariate analyses of variance, hierarchical regression, and trend analyses were some of the statistical methods employed to answer these questions.**

One hundred and fifty-one training directors at APA-accredited programs and internship sites distributed surveys to doctoral students in their programs or sites. Three hundred and twenty-one students completed surveys, resulting in a response rate of 57%. Of the students, 83% identified as U.S. citizens, 14% as international students, and 3% as permanent residents.

The results demonstrated that international students differed from U.S. students in that they reported less counseling self-efficacy than U.S. majority students and less Role Ambiguity than U.S. minority students. Acculturation had an impact on international students' training experiences; students who were more acculturated reported more counseling self-efficacy and less role difficulties. Furthermore, a good supervisory working alliance was positively associated with international students' counseling self-efficacy and negatively associated with their role difficulties, whereas multicultural supervision, that included a discussion of issues unique to international students, did not have an impact on these variables. Finally, the present results also provided some support for previous findings on counseling self-efficacy and acculturation, but not for the theory of biculturalism.

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## CHAPTER I

### INTRODUCTION AND LITERATURE REVIEW

There has been a call in the multicultural supervision literature to enhance the understanding of minority students' unique training and supervision needs and develop appropriate theories and models of training for these students (Leong & Wagner, 1994; McNeill, Hom, & Perez, 1995). A few researchers have empirically examined differences between U.S. majority and minority students in multicultural supervision and found it to vary depending on students' ethnic and racial backgrounds (e.g., Cook & Helms, 1988; Vander Kolk, 1974). Although international students are estimated to make up approximately 5% of students in doctoral psychology programs (National Center for Educational Statistics, 1997), these students have virtually been ignored in the multicultural supervision literature.

Currently there is only one article, theoretical in nature, that has addressed the potential difficulties international students can experience while undertaking psychology or counseling training in the U.S. (Gutierrez, 1982). Gutierrez hypothesized that students whose native language is not English may present with language problems when conducting therapy, such as understanding and responding to clients. Difficulties due to language barriers, Gutierrez argued, can have a negative impact on these students' self-image as counselors.

Although there is a lack of research on international students in psychology and counseling programs, a vast amount of literature has been published on international students in general. For example, it has been proposed that international



students must “Americanize” or acculturate in order to succeed with their academic training (International Student Committee, 1982). It seems especially critical for international students who are in applied psychology and counseling programs to acculturate, because these training programs require students to provide counseling services to U.S. clients.

Cultural knowledge is proposed to be transmitted from generation to generation for the purpose of adjustment, adaptation, and development (Marsella & Kameoka, 1989). Yet, if international students are to acculturate to the U.S. culture, they must do this within the limited years of their academic training. Culture is also believed to have a vast impact on individuals, influencing among other variables communication patterns, expression of feelings, behaviors, interpersonal relationships, values, and social rules (Betancourt & Lopez, 1993; Sadowsky, Lai, & Plake, 1991). Many of these variables are also likely to play a critical role in the assessment and treatment of clients. Thus, it seems likely that international students who are less acculturated and lack an understanding of the U.S. culture would have lower counseling self-efficacy than students who are more acculturated to the U.S. culture.

Counseling self-efficacy, which has been defined as counselors’ beliefs in their own abilities to effectively conduct counseling with clients, influences how much effort students will expend on learning new counseling behaviors and the level of anxiety they will experience during training (Larson & Daniels, 1998). Counseling self-efficacy is also believed to increase with amount of training, clinical experience, and supervision (Johnson, Baker, Kopala, Kiselica, & Thompson, 1989; Larson, Suzuki, Gillespie, Potenza, Bechtel, & Toulouse, 1992; Melchert, Hays, Wiljanen, & Kolocek, 1996). Thus, the link between counseling self-efficacy and supervision

underscores the important role supervision plays in counselor development (Carroll, 1996; Holloway, 1992; Holloway & Neufeldt, 1995).

Multicultural supervision occurs when one or more of the members in the triadic supervisory relationship (the supervisor, supervisee, and clients) are ethnically, racially, or culturally different from the other members (Bernhard, 1994; Brown & Landrum-Brown, 1995). Supervision is likely to be multicultural supervision when the supervisee is an international student. The literature on multicultural supervision has highlighted the importance of supervisors discussing cultural, ethnic, and racial differences with their supervisees, because this type of discussion is believed to have a positive impact on the supervisory relationship as well as on trainees' multicultural development (Gopaul-McNicol & Brice-Baker, 1998; Harber, 1996; Kaiser, 1997). It seems likely that international students would present with lower counseling self-efficacy than U.S. students given the possibility of cultural difficulties. This expectation of international students' presenting with lower counseling self-efficacy also highlights the importance of good multicultural supervision for these students, that is, a multicultural supervision in which they can address their culturally related concerns, and obtain support and guidance on how to work with cultural issues. However, these same cultural differences may also lead to difficulties in supervision for international students.

The main purpose of the present study was to enhance the understanding of international students in American Psychological Association (APA) accredited doctoral programs in professional psychology, by examining whether international students, compared to U.S. students, report different degrees of counseling self-efficacy and role difficulties in supervision due to issues associated with acculturation. The impact of multicultural supervision on these variables (counseling

self-efficacy and role difficulties) will also be examined. The second purpose of the present study was to examine whether the present findings supported proposed theories and previously obtained results regarding acculturation (Sodowsky & Plake, 1992), biculturation (Sodowsky & Plake, 1992; Szapocznik, Kurtines, & Fernandez, 1981), and counseling self-efficacy (Larson et al., 1992).

The dissertation is divided into four chapters: (1) Introduction and Literature Review, (2) Methodology, (3) Results, and (4) Discussion. Since there is no specific body of literature on international students in APA-accredited psychology programs, the following review consisted of various literature considered applicable to the present study. The objective of Chapter I is to introduce the study and review the literature. This chapter is divided into four sections. The first section defines international students and addresses issues associated with this student group, such as academic difficulties and acculturation. The second section defines counseling self-efficacy and discusses the underlying theory as well as recent counseling self-efficacy findings. In this section, particular attention is focused on the applicability of findings to diverse populations in order to develop relevant hypotheses concerning international students. The third section provides information regarding supervision, especially regarding supervisees' role difficulties and issues related to multicultural supervision. The final section presents the purpose of the study.

### International Students and Acculturation

The following literature review on international students includes five subsections: (1) Definition, (2) Prevalence and Demographics, (3) Academic and Social Concerns, (4) Acculturation, and (5) Acculturation and International Students.

## Definition

A common definition of an international, or foreign, student is, “anyone who is enrolled in courses at institutions of higher education in the United States who is not a U.S. citizen, an immigrant (permanent resident) or a refugee” (Davis, 1994, p. 159). There has been some discussion in the literature concerning the usage of the term *foreign* versus *international* student. Because the term *foreign* student may entail a negative connotation (see Pedersen, 1991), the term *international* student will be used throughout the present study.

## Prevalence and Demographics

The number of international students in the U.S. has rapidly increased from 34,232 in the 1950s to 445,984 in 1996/1997. In 1997, international students made up approximately 3% of the total enrollment in U.S. colleges and universities, making the U.S. the host of more international students than any other country in the world (Davis, 1997). According to Davis, most of the international students (63%) come from Asia, followed by Europe (15%), Latin America (11%), North America (5%), Africa (5%), and Oceania, including Australia and New Zealand (1%). The large number of international students in the U.S. has had an impact on U.S. institutions of higher education. Mooney (1991) noted that U.S. universities and colleges have become increasingly dependent on international students for academic achievements, especially in the areas of mathematics and engineering. In 1990, more than one fourth of the total number of doctoral degree recipients were non-U.S. citizens.

About 5% of the 3,822 students who received a doctoral degree in psychology in 1995 were nonresident aliens, a category which includes international

students (National Center for Educational Statistics, 1997). About half, 48%, of these 3,822 doctoral recipients graduated from programs in professional psychology, including programs with and without APA-accreditation (clinical psychology,  $n = 1,413$ ; counseling psychology,  $n = 296$ ; and school psychology,  $n = 107$ ). According to a conversation with D. Cherry at the American Psychological Association, APA does not collect data on the number of international students in its programs and has no estimation of how many of the approximately 20,500 students currently enrolled in these programs are international students (D. Cherry, personal communication, May 12, 1997). However, based on 1995 data from the National Center for Education Statistics, I anticipate that 4.9% ( $n = 1,004$ ) of the 20,500 students in APA-accredited programs are international students. If this estimation were correct, this would make the group of international students in APA-accredited programs larger than the different groups of racial and ethnic minority students in the same programs. Currently there are about 4.5% African Americans, 3.4% Hispanics, and 2.7% Asian Americans, and .5% American Indian/Alaskan Native in APA-accredited programs (D. Cherry, personal communication, May 12, 1997).

### Academic and Social Concerns

Much of the existing literature on international students that has addressed international students' academic and social concerns are conceptual pieces. Some of these conceptual pieces have proposed that these students frequently experience language difficulties while studying in the U.S. (Greenfield, 1988; International Student Committee, 1982; Meyer, 1995). These language difficulties have been suggested to impact international students' academic performance, such as

understanding lectures, expressing opinions in class discussions, and answering essay questions (International Student Committee, 1982; Meyer, 1995).

In addition to possible language difficulties, cultural differences have also been proposed to interfere with international students' academic performance. For example, international students may be unfamiliar with the U.S. educational system (Charles & Stewart, 1991; International Student Committee, 1982). They may also be unaware of the competitive environment that can exist in many U.S. institutions of higher education, and because of their language difficulties and cultural differences, feel at a disadvantage to U.S. students (International Student Committee, 1982). Furthermore, cultural characteristics that are valued in the U.S., such as independence, competitiveness, and self-disclosure, can be viewed as inappropriate, offensive, and unacceptable in other cultures (Rhinesmith, 1985; Story, 1982). Cultural differences such as these can further interfere with international students' academic performance.

It has been empirically documented that international students experience a greater need for academic support and advice than U.S. students (Leong & Sedlacek, 1989). Parr, Bradley, and Bingi (1992) reported that some of the major concerns of international students were in relation to managing cultural differences and academic difficulties, such as finding a supportive advisor and understanding class lectures. It has also been demonstrated that international students' learning styles change while adapting to a new type of learning environment (Lee & Lodewijks, 1995). Lee and Lodewijks reported that international students in the Netherlands relied more on external regulation than the native students did, evidenced by international students preferring their professors (external regulation) rather than themselves (self-regulation) to direct the course of their learning. Self-regulation, compared to

external regulation, has been proposed as more beneficial for students, as it is positively associated with students' perceived level of ability and learning goals (Miller, Behrens, Greene, & Newman, 1993). Lee and Lodewijks also found that international students from non-English speaking countries engaged less in self-regulation as well as presented with lower levels of self-esteem and self-efficacy.

Cultural differences can also have an impact on international students' social adjustment. By leaving their native countries, many international students lose their support systems and culture. They may also experience culture shock (Hamboyan & Bryan, 1995; Oberg, 1979; Pedersen, 1991), which has been defined as "a reaction to change in cultural environment" (McKinlay, Pattison, & Gross, 1996, p. 379). Reactions due to culture shock vary, but can include feelings of helplessness, dependence, homesickness, anger, loneliness, mistrust, and ethnocentrism (Hamboyan & Bryan, 1995; Oberg, 1979). In addition, prejudice held by U.S. students can directly impact international students' social adjustment. Surdam and Collins (1984) found that 33% of the international students in their study had experienced discrimination in the U.S. and that these students were less adjusted than students who had not experienced discrimination.

Researchers have reported mixed findings regarding the impact of gender on international students' adjustment. Manese, Sedlacek, and Leong (1988) found in a group of incoming international undergraduate students, that international women *expected* to have a more difficult time adjusting than international men. However, Sodowsky and Plake (1992) who examined international students' actual experiences, found that international women tended to be more adjusted. In another study on international students at the graduate level, international women reported higher levels of depression and anxiety but experienced more support from their

families than international men. However, international men were found to have better relationships with faculty (Mallinckrodt & Leong, 1992).

Researchers have also identified variables that aid international students in their adjustment to the U.S. culture and educational system. Some of these variables include spending more leisure time with U.S. students, feeling more adequate in English, and having educated parents (Surdam & Collins, 1984). Higher levels of social and faculty support in the academic environment have been associated with less depression, anxiety, and stress among international graduate students (Mallinckrodt & Leong, 1992; Wan, Chapman, & Biggs, 1992). For undergraduates, self-confidence and availability of support persons have also been found to predict grade point average (Boyer & Sedlacek, 1988).

In general, international students' adjustment process to the U.S. is proposed to follow a U-curve. That is, the initial adjustment is easy and euphoric, followed by a crisis in which students feel unhappy and poorly adjusted. Over time, students' adjustment and mood improve (Church, 1982; Sewell & Davidsen, 1956). Surdam and Collins' (1984) findings demonstrated support for the U-curve phenomena, as international students who had been in the U.S. between 2 and 4 years were less adjusted than students who had just arrived or had been in the U.S. for more than 4 years. Recently researchers have applied acculturation theory to research on international students, using it as a model to better understand international students' social-psychological adjustment to the U.S. culture (Sodowsky et al., 1991).

### Acculturation Theory

Acculturation theory emerged in the field of anthropology, but has since been adapted and applied in many fields of study, including psychology. In anthropology,



acculturation was defined as a process of cultural change occurring at a group level (Redfield, Linton, & Herskovits, 1936; Social Science Research Council, 1954). In psychology, it became recognized as a process that also occurs at an individual level, and which results in attitudinal and behavioral changes (Berry, Kim, Minde, & Mok, 1987; Graves, 1967). The many approaches to acculturation have contributed to the richness of the theory, but have also added to its complexity and at times created confusion due to the vast number of methodologies and definitions employed (Olmedo, 1979). The following section will introduce the theory and two approaches to acculturation, as well as review two studies that examined acculturation among international students.

There are two general approaches to acculturation. Both approaches have many names: (1) the linear, monocultural, or unidirectional approach; and (2) the multicultural, multifaceted, multidimensional, bicultural, or bidirectional approach (e.g. Berry, 1980, 1983; Cuellar, Harris, & Jasso, 1980; Garcia & Lega, 1979; Mendoza, 1984, 1989). The linear, monocultural, or unidirectional model refers to acculturation as a linear process of giving up traditional values, beliefs, and customs for a new culture (Garcia & Lega, 1979). Researchers have documented that individuals who acculturate in this way tend to be maladjusted (Szapocznik et al., 1981; Szapocznik, Scopetta, Kurtines, & Aranalde, 1978) and vulnerable to psychopathology (Burman, Hough, Karno, Escobar, & Telles, 1987).

The other approach, the multicultural, multidimensional, multifaceted, bicultural, or bidirectional model, proposes that acculturation can be assessed in two dimensions: (1) the level of assimilation to the new culture, and (2) the level of retention of the native culture (Berry, 1983; Cuellar et al., 1980; Mendoza, 1984, 1989; Sadowsky et al., 1991). Biculturalism refers to the idea that individuals

develop two sets of behaviors, one for each culture, in order to function successfully in both cultures. Biculturalism is also considered to be the most adaptive form of acculturation (Szapocznik et al., 1981). However, few researchers have sought to validate this construct.

An example of bidirectional acculturation is Berry's (1983) model, which proposes that a minority person's psychological adaptation to a new culture can occur in four different ways: (1) assimilation, (2) rejection, (3) deculturation, and (4) integration. *Assimilation* indicates the extent to which individuals feel they have acculturated into the majority culture at the expense of their own culture, whereas *rejection* indicates the tendency to reject the majority culture to maintain one's native culture. *Deculturation* reflects the extent to which individuals feel they cannot identify with either their own or the majority culture. *Integration* refers to maintenance of one's original culture as well as a movement towards integration with the majority culture. Thus, integration appears to be related to biculturalism.

The multifaceted or multidimensional aspect of this approach emphasizes that acculturation consists of numerous cultural, cognitive, and behavioral dimensions and constructs, and that it cannot be measured by a single construct such as language proficiency (Cuellar et al., 1980; Mendoza, 1989). Another principle of this approach is that individuals can become acculturated in some dimensions but not in others (Sodowsky & Carey, 1988). Thus, it is viewed as important when measuring acculturation to provide "measures of multifaceted profiles rather than a single acculturative score" (Mendoza, 1989, p. 374).

The process of acculturation is proposed to be difficult, reactive, and conflictual, often involving a range of psychological reactions including anxiety, depression, identity confusion, feelings of alienation, increased psychosomatic

symptoms, and stress (Berry, 1983; Berry et al., 1987). Stress due to acculturation has also been associated with less personal self-efficacy (Tran, 1993). Tran's finding may be applicable to the present study in terms of international students' level of acculturation negatively impacting their counseling self-efficacy.

Berry et al. (1987) noted that, "acculturation sometimes enhances one's life chances and mental health, and sometimes virtually destroys one's ability to carry on; the eventual outcome for any particular individual is affected by other variables that govern the relationship between acculturation and stress" (p. 493). After reviewing the literature on acculturation, Sodowsky et al. (1991) proposed several variables that mediate the effect of acculturation, such as higher levels of education, higher income, years of residence in the U.S., type of job skills, type of religion, country of birth, generational status, and purpose of immigration. Several of these variables, such as years of residence in the U.S. and country of birth, will be applied in the present study.

### Acculturation and International Students

The literature on international students has to some degree demonstrated that these students experience academic and social difficulties while studying in the U.S., due to language and cultural differences. However, major criticisms of this literature have been the lack of empirically validated data and cohesive theory (Church, 1982; Pedersen, 1991; Sandhu & Asrabadi, 1994). The theory of acculturation, which offers a complex view of the process of human adjustment to a new culture, was recently incorporated into research on international students to enhance the adjustment process of international students as well as to empirically validate some of the proposed theories on international students (Sandhu & Asrabadi, 1994;

Sodowsky & Plake, 1991, 1992). This subsection will examine two acculturation scales (Sandhu & Asrabadi, 1994; Sodowsky & Plake, 1991, 1992), which were developed to examine the relationship between international students and acculturation. However, less attention is given to Sandhu and Asrabadi's acculturation scale, because at this point only scale development information has been published.

The first scale, the Acculturation Stress Scale for International Students, was developed by Sandhu and Asrabadi (1994) to examine acculturative stress among international students. After the initial development and some pilot testing, the 78 Likert-type item scale was completed by 128 international students at several different universities. Results of Meyer-Olkin measure sampling adequacy and factor analysis lead to the scale being reduced to 36 items as well as delineating six subscales: (1) Perceived Discrimination, which accounted for most of the variance, addresses issues related to discrimination and alienation; (2) Homesickness, which measures issues of sadness and longing for home; (3) Perceived Hate/Rejection, which measures perceptions of others being hateful and critical of cultural values; (4) Fear, which addresses feelings of fearfulness and insecurity due to living in a new environment; (5) Stress due to Change/Culture Shock which measures difficulties adjusting to new values and food; and (6) Guilt, which measures feelings of conflict about leaving one's family behind and living a new life style. Although Sandhu and Asrabadi did not report any validity or reliability statistics, the study provides some initial information regarding international students' concerns while studying in the U.S. The high variance on Perceived Discrimination can possibly be explained by 87% of the participants being from countries in Asia or South America. International individuals from Asia and South American have previously been found to perceive

more prejudice than international individuals from Europe (Sodowsky & Plake, 1992).

The second scale, the American-International Relations Scale (AIRS; Sodowsky & Plake, 1991) was created to investigate international individuals' relationships with White Americans and their adjustment to the U.S. majority culture. In contrast to Sandhu and Asrabadi's (1994) scale, Sodowsky and Plake's scale was designed for a variety of international individuals, including international students, nonimmigrant scholars (postdoctoral researchers), and international individuals who had become permanent residents or naturalized citizens in the U.S. The first step in the scale development entailed creating 92 items derived from the literature on international students and new immigrants as well as information from other acculturation scales. The scale was piloted on a sample of 123 Asian Indians (including students, faculty, and staff) at a large university. A factor analysis resulted in the number of items being reduced to 40. Next, the scale was mailed to 925 international individuals at another large university. Six hundred and six participants responded, resulting in a 67% response rate. However, only 491 of the surveys were completed and could be used for analysis. The sample consisted of 342 Asians, 73 Europeans, 41 South Americans, and 34 Africans. Most of the participants, 380, were international students, followed by 45 nonimmigrant residents, and 63 permanent residents (Sodowsky & Plake, 1991).

A factor analysis yielded three subscales: (1) Perceived Prejudice, which assesses the respondent's perceived degree of rejection by Americans; (2) Acculturation, which measures the participant's degree of acceptance of Americans and the U.S. culture; and (3) Language Use, which measures language use, proficiency, and preference by the participants. Sodowsky and Plake (1992)

conducted several one-factor multivariate analyses with subsequent univariate analyses to examine their data. Conducting several one-factor multivariate analyses on the same dependent measures, instead of one or a few multifactor multivariate analyses, could potentially have inflated the experimentwise alpha, thus increased the risk for Type I error. The results revealed that international individuals from Asia, Africa, and South America were less acculturated and perceived more prejudice than international people from Europe. International individuals from Asia and South America also spoke less English than Africans and Europeans. In addition, Muslims were found to perceive more prejudice than Protestants and Catholics. The results further documented that international students and non-immigrant scholars were less acculturated and used less English than permanent residents. In addition, individuals who had resided in the U.S. for 5 or more years were more acculturated and used more English than individuals who had resided in the U.S. for less than 5 years. Although a multivariate effect was obtained for gender, the univariate analyses revealed no further explanation of the differences. An examination of the means indicated a trend towards international men being less acculturated, using less English, and perceiving more prejudice than international women. In addition, Mehta (1998), who used a slightly revised form of AIRS, revealed that higher levels of perceived prejudice and lower levels of acculturation predicted lower levels of mental health among Indian immigrants.

Sodowsky and Plake (1991) stated in their article that AIRS was created to measure biculturalism, as well as high and low acculturation. However, these authors did not provide any results regarding biculturalism in their study, which constitutes a limitation of their findings. Other limitations include a lack of effect size information,

which could have clarified the magnitude of effect between the groups as well as the limited use of this scale in other studies.

Another revised form of AIRS is the Majority-Minority Relations Survey (MMRS; Sadowsky et al., 1991). This scale was used to compare Hispanics and Asian Americans' level of acculturation. In this study, a sample of 282 individuals (149 Asian Americans and 132 Hispanics) was obtained from a Midwestern university, including faculty, staff, and students. The results showed that Asian Americans, compared to Hispanics, perceive more prejudice. First generation immigrants were also found to perceive more prejudice, be less acculturated, and use less English than individuals of other generational statuses. Furthermore, political refugees were found to experience more prejudice, were less acculturated, and used less English compared to individuals who immigrated voluntarily. No gender differences were obtained in this study.

In sum, the present review of international students and acculturation revealed that there is a lack of knowledge concerning international students in APA-accredited programs in professional psychology. Many international students experience language and cultural difficulties while studying in the U.S. (e.g., Hamboyan & Bryan, 1995; International Student Committee, 1982; Parr et al., 1992), which are likely to impact international professional psychology students' experiences conducting therapy. Gutierrez (1982) also proposed that verbal communication barriers on the part of therapists could have a negative impact on their ability to understand and respond to clients

It has been suggested that international students need to acculturate to some degree to succeed with their academic training (International Student Committee, 1982) and that stress due to acculturation can have a negative impact on self-efficacy

(Tran, 1993). Thus, it seems likely that international students' level of acculturation will impact their counseling self-efficacy such that students who are less acculturated will feel less competent as counselors than students who are more acculturated.

### Counseling Self-Efficacy

There has been an increasing focus in the counseling literature on the application of social cognitive theory variables, such as self-efficacy and outcome expectations (Bandura, 1982, 1997), in the area of counselor development, training, and supervision (e.g., Johnson et al., 1989; Larson, 1998; Larson & Daniels, 1998; Larson et al., 1992; Melchert et al., 1996). Although counseling self-efficacy is a relatively new area of research (Larson & Daniels, 1998), the results of several studies support the relationship between counselor self-efficacy and counselor development, training, and supervision (e.g., Friedlander & Snyder, 1983; Larson et al., 1992; Melchert et al., 1996; Munson, Stadulis, & Munson, 1986; Munson, Zoerink, & Stadulis, 1986; Sipps, Sugden, & Faiver, 1988). The following sections will address: (a) self-efficacy theory; (b) counseling self-efficacy; and (c) counseling self-efficacy and diversity issues.

### Self-Efficacy Theory

The theory of self-efficacy refers to individuals' beliefs in their capabilities to organize and carry out courses of action required to produce specified attainments (Bandura, 1991). These beliefs, defined as judgments about one's abilities to perform in given situations (Bandura, 1982; Larson et al., 1992), are hypothesized to be the most significant determinant of human behavior because they exert control over choice of behavior, persistence, affective states, and thought processes (Bandura,



1997). Bandura (1977, 1982, 1997) proposed that perceived self-efficacy influences whether or not a given task is attempted, how much effort is expended on the task, and how long a response is sustained in the face of challenging obstacles (Bandura, 1977, 1982, 1997). “The stronger the perceived self-efficacy, the more active the efforts” (Bandura, 1977, p. 194).

According to the theory, self-efficacy is acquired through four sources: (1) performance experiences, such as previous successes and failures; (2) vicarious experiences, which include observational learning and imitation; (3) verbal persuasion, such as feedback; and (4) emotional arousal, with positive affect leading to more self-efficacious beliefs than negative affect. The first two sources are considered to be most influential (Bandura, 1977; Maddux, 1995). Successes tend to increase self-efficacy whereas failures decrease it; however, individuals who have experienced only easy and quick successes may become easily discouraged by failures. A resilient self-efficacy is developed by overcoming barriers through enduring effort, allowing for a learning in which difficulties/failures may be turned into successes by a sharpening of one’s capabilities to exert better control over events (Bandura, 1997). Self-efficacy has been empirically associated with various human behaviors, including academic performance and persistence (Lent, Brown, & Larkin, 1984, 1986; Multon, Brown, & Lent, 1991), treatment of phobia (Bandura & Adams, 1977), and occupational preference (Betz & Hackett, 1981; Clement, 1987).

### Counseling Self-Efficacy

Counseling self-efficacy has been defined as, “counselor’s beliefs or judgments about her or his capabilities to effectively counsel a client in the near future” (Larson & Daniels, 1998, p. 180). Counselors and psychologists who are

efficacious as clinicians are able to integrate and spontaneously apply various counseling skills to ever-changing circumstances with clients. Trainees' level of counseling self-efficacy is believed to influence how much anxiety they experience in practicum courses and the degree to which they engage in self-affirming or self-negating thinking. Consistent with self-efficacy theory, these beliefs are also believed to impact how much effort they will expend on learning difficult and complex counseling behaviors (Larson & Daniels, 1998).

Counseling self-efficacy is a new area of research in which a variety of contradictory findings have been obtained. In a 1998 literature review, Larson and Daniels (1998) reported that 32 studies had been conducted on counseling self-efficacy since 1983, but that only 15 of these have been published. Larson and Daniels further pointed out that in these 32 studies, 10 different counseling self-efficacy instruments have been used. The variety of instruments and the lack of psychometric evaluation and validity on some of the instruments may be one of the reasons for the amount of conflicting findings on counseling self-efficacy (Larson & Daniels, 1998; Larson et al., 1992; O'Brien, Heppner, Flores, & Bikos, 1997). The Counseling Self-Estimate (COSE; Larson et al., 1992) is the counseling self-efficacy instrument that has to date been most frequently used in the literature and which appears to have the most adequate psychometric properties of the current instruments (Larson & Daniels, 1998).

Counseling self-efficacy has been examined for its effect on various counselor variables, including outcome expectancy, amount of training and experience, supervision environment, affective arousal, and counselor characteristics (Larson & Daniels, 1998). For the purpose of the present study, I will focus on counseling self-

efficacy and level of training, supervision environment, and diversity because these variables are the most applicable.

Counseling self-efficacy has been tested across all levels of counselor development, from undergraduates to licensed psychologists. Although the literature is not in complete agreement, several researchers have found counseling self-efficacy to increase with amount of training, counseling experiences, and supervision (e.g., Johnson et al., 1989; Ladany, Ellis, & Friedlander, 1999; Larson et al., 1992; Melchert et al., 1996; Munson, Stadulis, & Munson, 1986; Munson, Zoerink, & Stadulis, 1986; Sipps et al., 1988). For example, Melchert et al. (1996) investigated whether counseling self-efficacy increased with amount of supervision and training, by comparing changes in counseling self-efficacy from first-year master students to professional psychologists. These authors found that both more training and more clinical experience predicted counseling self-efficacy. In contrast, Johnson et al. (1989) examined the increase of counseling self-efficacy within a graduate, prepracticum, course. These authors found that the development of self-efficacy among students who began the course with low self-efficacy continued to increase across the course, whereas the counseling self-efficacy leveled off after the first 4 weeks of training for trainees who began the course with high levels of counseling self-efficacy.

Sipps et al. (1988) also examined counseling self-efficacy among graduate students, by investigating differences associated with number of years of graduate training. These authors found that counseling self-efficacy of second-year graduate students was lower than that of first-, third-, and fourth-year students. The observed dip in the second year students' counseling self-efficacy was hypothesized by Sipps et al. to be due to perceived failures as counselors in early training (Blum & Rosenberg,

1968, cited in Sipps et al., 1988). In addition, Sipps et al. discovered that students' self-efficacy regarding their perceived ability to perform a certain counseling response was statistically significantly higher than their expectancies of their response resulting in a desired outcome with clients.

The relationship between counseling self-efficacy and supervision environment has not been studied extensively. Efstation, Patton, and Kardash (1990) found that the supervisory working alliance as rated by trainees predicted their counseling self-efficacy. However, supervisors' ratings of the supervisory working alliance was not related to trainees' counseling self-efficacy. In addition, Friedlander and Snyder (1983) found that trainees with more counseling self-efficacy expected more from their supervisors, in terms of establishing goals, assessing weakness, and supervisor expertise. On the other hand, more counseling self-efficacy among trainees was not related to expectations of supervisors' trustworthiness, support, and rapport. Furthermore, Larson et al. (1992) found that more counseling self-efficacy was associated with more self-esteem, better self-perceived problem solving abilities, and less anxiety. Friedlander and Snyder's and Larson et al.'s findings may indicate that more counseling self-efficacy in trainees is not only related to openness regarding constructive feedback and readiness to improve counseling skills, but also with confidence to pursue more advanced training skills. In addition, Larson et al. found that more counseling self-efficacy among trainees was associated with more satisfaction with prepracticum performance.

At this point, hardly any research has been published on the relationship between counseling self-efficacy and students' ethnic or racial background. One of Larson et al.'s (1992) substudies in the scale development of the COSE, included a sufficient number of Asian students (14%) to be compared with Caucasian students

on counseling self-efficacy. The results revealed no statistically significant differences between the groups. Overall, the lack of research on counseling self-efficacy and diversity constitutes a serious limitation in this body of research.

### Counseling Self-Efficacy and Diversity

The present review of the counseling self-efficacy literature revealed that most studies have used restricted samples in terms of race and ethnicity, or neglected to report the sample's racial and ethnic representation. According to social cognitive theory, self-efficacy is an essential human agency whether a person grows up in an individualistic culture, such as the U.S., or a collective culture, such as East Asian countries. In all cultures, accomplishment is fostered through individuals' beliefs in their capabilities to produce desired outcomes; however, variations in cultural values and practices do influence how self-efficacy beliefs are developed and expressed (Bandura, 1997).

Although counseling self-efficacy has not been investigated in terms of cross-national applicability, Hackett and Betz (1995) concluded that career and academic self-efficacy are applicable both cross-nationally (Clement, 1987; Matsui, Ikeda, & Ohnishi, 1989) and cross-culturally (Church, Teresa, Rosebrook, & Szendre, 1992; Hackett, Betz, Casas, & Rocha-Singh, 1992). For example, in a study on academic self-efficacy among engineering students, Hackett et al. (1992) found that ethnicity predicted academic self-efficacy. Mexican American students were found to report lower levels of self-efficacy than Euro American students. Faculty encouragement was also found to be positively associated with academic self-efficacy. Hackett et al.'s findings indicate two possibilities for the present study: (1) ethnic minority students will report lower counseling self-efficacy scores, and (2) a good supervisor

working alliance, related to faculty encouragement, will enhance counseling self-efficacy.

Regarding international student counselors, Gutierrez (1982) argued that minority students whose native language is not English may face various verbal difficulties as counselors, such as presenting thoughts and ideas verbally to clients. Because of these difficulties, Gutierrez suggested that these students might come across as less skilled in terms of smoothness and clarity of verbal reflections, which in turn could negatively influence these students' view of themselves as counselors (Gutierrez, 1982). Because of the importance of language in the therapeutic relationship, I anticipate that difficulties in the English language will also negatively impact international students' counseling self-efficacy.

Despite the mixed findings concerning counseling self-efficacy, the bulk of these studies have suggested that counseling self-efficacy increases with amount of training, clinical experience, and supervision (e.g., Larson et al., 1992; Melchert et al., 1996; Sipps et al., 1988). According to social cognitive theory, the four sources that increase self-efficacy are performance feedback, vicarious learning, emotional arousal, and verbal persuasion (Bandura, 1977, 1997). "People who are persuaded verbally that they possess the capabilities to master given tasks are likely to mobilize greater effort and sustain it . . ." (Bandura, 1997, p. 101). Ladany et al. (1999) proposed that when the supervisory working alliance is strong, Bandura's (1997) four sources of self-efficacy are included in supervision. For example, supervisors' feedback and role-plays regarding therapy can increase supervisees' counseling self-efficacy.

Although the relationship between supervisor persuasion and feedback and trainee counseling self-efficacy has not been examined in-depth, some research

supports this relationship. As already stated, more counseling self-efficacy has been linked with amount of supervision (Johnson et al., 1989; Larson et al., 1992) and trainees' rating of the supervisor working alliance has been found to predict their counseling self-efficacy (Efstation et al., 1990). Both these findings underscore the importance of supervision. The next section will address supervision and its applicability to the present study.

## Supervision

As already stated, supervision plays a critical role in counselor development. The following section includes two subsections: (1) Developmental Aspects of Supervision, and (2) Cross-Cultural and Multicultural Supervision.

### Developmental Aspects of Supervision

Supervision is thought of as a critical element of training and counselor development (Carroll, 1996; Holloway & Neufeldt, 1995; Stoltenberg & Delworth, 1987). Supervision has been defined as, "literally, to 'oversee,' to view another's work with the eyes of the experienced clinician, the sensitive teacher, the discriminating professional" (Holloway, 1992, p. 177). Other supervisory responsibilities include enhancing supervisees' growth as a professional and evaluating their clinical work, as well as monitoring clients' welfare (Loganbill, Hardy, & Delworth, 1982).

Researchers have proposed that the supervisory relationship undergoes changes or develops as supervisees become more experienced (Heppner & Roehlke, 1984; Krause & Allen, 1988; McNeill, Stoltenberg, & Pierce, 1985; Skovholt & Ronnestadt, 1992; Stoltenberg, McNeill, & Crethar, 1994; Tracey, Ellickson, &

Sherry, 1989; Tyron, 1996). Beginning trainees tend to prefer more structured and skill-oriented supervision than advanced trainees (Heppner & Roehlke, 1984). As supervisees gain more counseling experience, supervisees are encouraged to move from a dependent to an increasingly autonomous role as counselors (McNeill et al., 1985). It has also been proposed that, depending on supervisees' level of development, they tend to experience different kinds of role difficulties in the supervisory relationship (Friedlander, Keller, Peca-Baker, & Olk, 1986; Olk & Friedlander, 1992). These role difficulties are believed to partly occur because supervisees simultaneously have to perform multiple roles, such as being a student, supervisee, therapist, client, and colleague (Holloway, 1984; Olk & Friedlander, 1992). It has also been proposed that high levels of role difficulties may interfere with counselor development (Ladany & Friedlander, 1995).

In order to explore different types and levels of role difficulty experienced by supervisees in supervision, Olk and Friedlander (1992) developed the Role Conflict and Role Ambiguity Inventory (RCRAI). Based on previous theory and research, Olk and Friedlander hypothesized that two types of role difficulties could occur for supervisees, Role Ambiguity and Role Conflict. Role Ambiguity was anticipated to occur among beginning supervisees because at this level of training supervisees may lack a clear understanding of what is expected of them and of how to meet these expectancies. They may also be uncertain of possible consequences of their ineffective behavior. Role Conflict was expected to occur more frequently among advanced supervisees, because with more training and expertise the role of being a student and its inherent expectations may oppose those of being a counselor and/or a colleague. "Role conflict can arise because the trainee is expected to simultaneously



reveal areas of weakness and present competencies and strengths” (Olk & Friedlander, 1992, p. 389).

The RCRAI was developed through semistructured interviews with supervisors and graduate students in psychology. From these interviews, 75 items were constructed. Next, a panel of 10 experts, including both supervisors and doctoral counseling psychology trainees, rated the items regarding content, resulting in a final set of 19 Role Ambiguity and 10 Role Conflict items. Next, surveys, including RCRAI, and validity instruments were mailed to a random sample of 112 training directors of doctoral programs in psychology, predoctoral, and postdoctoral internship sites. The training directors were requested to distribute surveys to students in their programs or sites. Two hundred and forty students completed surveys, resulting in a 38% response rate. The RCRAI items were then subjected to a confirmatory factor analysis. Based on factor loadings (.40 and above), the final version of RCRAI consisted of 16 Role Conflict items and 13 Role Ambiguity items. The results revealed that RCRAI was internally consistent (Role Ambiguity,  $\alpha = .91$ ; Role Conflict,  $\alpha = .89$ ). Construct validity was supported by higher scores on both role ambiguity and role conflict and dissatisfaction with clinical work and supervision, as well as with increased work-related anxiety. Beginning trainees were also found to experience more role ambiguity than advanced trainees. However, the results showed that only low to moderate levels of Role Ambiguity and low levels of Role Conflict were detected among doctoral trainees, and Role Ambiguity was more common among trainees than Role Conflict. Regarding trainee diversity, Olk and Friedlander (1992) did not report the ethnic or racial representation of their sample.

More recent research has been found to contradict some of Olk and Friedlander’s (1992) initial findings. Ladany and Friedlander (1995) did not detect a

statistically significant relationship between level of training and Role Ambiguity or Role Conflict. One of the major differences between these two studies (Ladany & Friedlander, 1995; Olk & Friedlander, 1992), which could account for the results, was that in Olk and Friedlander's study the RCRAI was given to participants after about 4 weeks of supervision, whereas the participants in Ladany and Friedlander's study completed the RCRAI after an average of 14 weeks. This may indicate that role difficulties, regardless of training level, are more salient in the beginning of a supervisory relationship. In this study, 14% of the participants were people of color; however, no statistical differences were found in terms of race and ethnicity. No gender differences were reported in either study.

Even though Ladany and Friedlander's (1995) results did not support Olk and Friedlander's (1992) findings, these authors did find a link between trainees' perception of the supervisory working alliance (strength of emotional bond and agreement about goals and tasks between supervisee and supervisor) and Role Ambiguity and Role Conflict. Specifically, when supervisees perceived a supervisory agreement on tasks and goals, they experienced less Role Conflict and Role Ambiguity. The perception of a strong emotional bond was only predictive of less Role Conflict.

I expect that international students who pursue graduate training in psychology in the U.S. may experience more role difficulties in supervision than U.S. students due to cultural differences. The literature on cross-cultural and multicultural supervision is also applicable to the present study, because of the influence of culture on the supervisory relationship between international students and their supervisors. The next section will briefly review the literature on cross-cultural and multicultural supervision.

### Cross-Cultural and Multicultural Supervision

The role of culture is even more obvious when clients and counselors of different cultural backgrounds encounter one another. Expectations, meanings, and unspoken assumptions have to be considered lest misunderstandings lead to disappointment, frustration, and failure. If the role of culture is overlooked, the flow of communication can become obstructed, and the development of a relationship may be aborted. (Draguns, 1989, p. 6).

Even though Draguns (1989) referred to the counselor-client relationship when writing the above paragraph, the same truth may hold for the supervisor-supervisee relationship. Discussion of cross-cultural or multicultural supervision is a recent occurrence in the supervision literature. These terms describe a supervisory relationship in which either the supervisor, the supervisee, or the client are from different cultural, ethnic, or racial groups (Bernhard, 1994; Brown & Landrum-Brown, 1995; D'Andrea & Daniels, 1997). To date, the multicultural supervision literature has included: (a) discussion of the uniqueness of the multicultural supervisory relationship (e.g., Brown & Landrum-Brown, 1995; D'Andrea & Daniels, 1997; Fong & Lease, 1997; Gopaul-McNicol & Brice-Baker, 1998; Harber, 1996; Kaiser, 1997; Leong & Wanger; McRoy, Freeman, Logan & Blackmon, 1986); and (b) proposals of theoretical models and recommendations concerning how to conduct multicultural supervision (e.g., Bernard & Goodyear, 1992; Remington & DaCosta, 1989; Tyler, Brome, & Williams, 1991). In most of these models and recommendations, the responsibility to provide competent multicultural supervision lies with the supervisor.

In order to provide competent multicultural supervision, scholars have proposed that supervisors must assess their own multicultural competence and level of racial identity (D'Andrea & Daniels, 1997), as well as develop an understanding of different worldviews (Gopaul-McNicol & Brice-Baker, 1998). When working with

supervisees from other cultures, supervisors must also acknowledge the assumptions inherent in the Euro American culture and be aware that many theories of therapy are heavily influenced by the Euro American culture (Kaiser, 1997).

Scholars have also proposed the importance of discussing cultural differences among the supervisor, supervisee, and client in multicultural supervision (e.g., Fong & Lease, 1997; Gopaul-McNicol & Brice-Baker, 1998; Harber, 1996; Kaiser, 1997; Tyler et al., 1991). Tyler et al. pointed out that supervisors are responsible for communicating to supervisees that it is acceptable and beneficial to discuss issues regarding race, ethnicity, and culture. Open communication of these issues is believed to create mutual respect and understanding, as well as support the development of trainees' multicultural competencies (Harber, 1996; Kaiser, 1997). A disregard of cultural differences is thought to have serious consequences on the supervisory relationship. "A lack of understanding on the part of the supervisor of the worldview and value system of the supervisee can lead to gross misunderstandings about what is supposed to go on in the supervision hour" (Gopaul-McNicol & Brice-Baker, 1998, p. 128).

Although there is a general lack of empirical data on minority students' training and supervision needs (Leong & Wagner, 1994; McNeill et al., 1995), the research that has been conducted in this area has documented differences among supervisees of different ethnic and racial backgrounds. For example Vander Kolk (1974), who examined what graduate students' anticipated from their relationship with supervisors, found that African-American students anticipated their supervisor to be less empathic and less respectful of them than White students. Cook and Helms' (1988) study of minority supervisees further revealed that African Americans, Latinos, and Native Americans reported lower levels of feeling liked by their

supervisors than Asian American supervisees. Furthermore, Ladany, Brittan-Powell, and Pannu (1997) found that supervisees reported stronger supervisory working alliance when they perceived themselves and their supervisor as both being same and/or higher levels of racial identity development.

In summary, the present review of supervision discussed various difficulties supervisees can have in supervision. Olk and Friedlander (1992) suggested that depending on supervisees' developmental level, they can experience different kinds of role difficulties in supervision; beginning supervisees tend to have issues with Role Ambiguity and advanced supervisees with Role Conflict. Although some conflictual findings have been obtained regarding role difficulties in supervision (Ladany & Friedlander, 1995; Olk & Friedlander, 1992), these studies do suggest that when role difficulties are present, whether in the form of Role Ambiguity or Role Conflict, they are associated with weaker supervisory working alliance.

It seems likely that international students' level of acculturation will influence their level of role difficulties in supervision, and that students who are less acculturated will experience more difficulties. It also seems possible that international students compared to U.S. students will experience more Role Ambiguity but less Role Conflict. Role Conflict seems to require a certain level of trainee autonomy, which may be difficult for international students who are not highly acculturated to attain. This expectation regarding Role Conflict, is based on Lee and Lodewijks' (1995) findings, demonstrating that international students, compared to native students, preferred their professors rather than themselves to direct the course of their learning.

The present review also included a discussion of multicultural supervision, which is likely to occur when the supervisee is an international student. According to

the multicultural supervision literature, supervisors are responsible for providing competent multicultural supervision, such as exploring cultural issues with their supervisees (Gopaul-McNicol & Brice-Baker, 1998; Harber, 1996; Kaiser, 1997; Tyler et al., 1991). Based on this literature, I anticipate that if supervisors discussed issues that are unique to international students in supervision, this would have a positive impact on these students' counseling self-efficacy and role difficulties in supervision.

### Purpose of Study

The present literature review examined the literature on international students, acculturation, counseling self-efficacy, supervision, and multicultural supervision that are applicable to the present study. Several important pieces of information can be extracted from this review. First there is a lack of knowledge regarding international students in APA-accredited programs and these students' training experiences and needs. Second scholars have proposed that international students must acculturate to a certain degree in order to succeed with their academic programs (International Student Committee, 1982). Due to the nature of counseling, being acculturated seems especially important for international students in applied psychology and counseling programs. It seems likely that international students' level of acculturation will impact both their counseling and supervision experiences. In comparison to U.S. students, it also seems likely that international students will experience less counseling self-efficacy and more role difficulties in supervision.

Several scholars have also highlighted the importance for supervisors to discuss cultural, racial, and ethnic differences in supervision, in order to create mutual respect and promote supervisees' multicultural development (Harber, 1996; Kaiser,

1997). For international students, it seems not only critical that supervisors discuss multicultural issues because it will improve the supervisory relationship and promote these students' multicultural competencies, but more importantly it will assist these students in managing cultural and language differences. In addition, it also seems possible that multicultural discussions with international supervisees will enhance these students' counseling self-efficacy and decrease their level of role difficulties in supervision.

In response to the call in the literature to increase the knowledge regarding minority students' experience and training needs (Leong & Wagner, 1994; McNeill et al., 1995), the purpose of the present study was to advance the understanding of international students' training needs by examining the relationships among counseling self-efficacy, role difficulties in supervision, acculturation, and multicultural supervision.

### Research Questions and Hypotheses

The research questions and hypotheses were divided into two general areas. The first research area involved questions and hypotheses concerning international students' possible unique training needs in comparison with U.S. students. The second research area focused on whether the present findings support previously obtained results regarding acculturation, biculturation, and counseling self-efficacy.

#### Research Area One

Research area one consisted of three research questions that addressed various aspects of international students' training experiences.

### International Students Compared to U.S. Students

Do international students' counseling self-efficacy and role difficulties in supervision differ from U.S. majority and U.S. minority students? This research question was answered by testing the following hypotheses:

*Hypothesis 1A:* International students in the first, second, and third level of training will score lower on counseling self-efficacy and Role Conflict, but higher on Role Ambiguity than U.S. majority and minority students in the first, second, and third level of training.

*Hypothesis 1B:* International students in the fourth level of training will score lower on Role Conflict than U.S. majority and minority students, but similar to U.S. majority and minority students on counseling self-efficacy and Role Ambiguity. Thus an interaction effect on student identity (international students, U.S. majority and U.S. minority students) across level of training was expected.

Level of training was incorporated as one of the independent variables in this analysis, because the theory of role difficulties in supervision proposes that Role Ambiguity will be more common among beginning trainees and Role Conflict more common among advanced trainees (Olk & Friedlander, 1992).

### The Impact of Acculturation

What are the relationships among acculturation, counseling self-efficacy, role difficulties in supervision and level of training? This research question was answered by testing the following hypothesis:



***Hypothesis IC:*** Higher levels of acculturation, more advanced levels of training, and lower levels of Role Conflict and Role Ambiguity will predict higher counseling self-efficacy for both international students and U.S. minority students.

### **The Impact of Multicultural Supervision**

What is the relationship between multicultural supervision, that includes a discussion of issues unique to international students, and international students' level of counseling self-efficacy and role difficulties in supervision? This question was answered by testing the following hypotheses:

***Hypothesis ID:*** There will be a positive linear relationship between multicultural supervision and acculturation, and between multicultural supervision and counseling self-efficacy. There will be a negative linear relationship between multicultural supervision and Role Ambiguity in supervision and between The International Student Supervision Scale (ISSS) total (this is a measure of multicultural supervision) and Role Conflict in supervision for international students.

***Hypothesis IE:*** It is expected that multicultural supervision will mediate the affect of acculturation on counseling self-efficacy, Role Ambiguity, and Role Conflict. More specifically, it is expected that a discussion of issues unique to international students in supervision, such as language and cultural differences, will lessen the impact of acculturation on counseling self-efficacy, Role Ambiguity, and Role Conflict, thus creating higher levels of counseling self-efficacy and lower levels of role difficulties in supervision.

## Research Area Two

Research area two was concerned with whether the results from the present study supported previously obtained results regarding acculturation (Sodowsky & Plake, 1992), theories of biculturalism (Sodowsky & Plake, 1992; Szapocznik et al., 1981), and counseling self-efficacy (Larson et al., 1992). This research area is divided into three parts: (1) acculturation, (2) biculturalism, and (3) counseling self-efficacy.

### Acculturation

To determine whether the present findings supported previously obtained results regarding acculturation in Sodowsky and Plake's (1992) study, the following hypotheses were tested:

*Hypothesis IIA, Continent-of-Origin:* International students and permanent residents from Asia, Africa, and South America will perceive more prejudice and be less acculturated than Europeans. Asians and South Americans will also use less English than Europeans.

*Hypothesis IIB, Years of Residence in the U.S.:* International students and permanent residents who have been in the U.S. for fewer than 5 years will be less acculturated and use less English than international students and permanent residents who have been in the U.S. for more than 5 years. There will be no difference between the two groups on perceived prejudice.

*Hypothesis IIC, Gender:* There will be a statistically significant multivariate effect associated with gender; however, there will be no differences at the univariate level, as suggested by previous research. Examination of the means will show a trend

for international men to report more prejudice, less acculturation, and less English use than international women.

*Hypothesis IID, Visa Status:* International students will perceive more prejudice, be less acculturated, and use less English than students with permanent resident status.

### **Biculturalism**

Do students who are bicultural report more counseling self-efficacy and less role difficulties compared to students who are less acculturated or more acculturated? As already stated, biculturalism refers to the idea that individuals develop two sets of behaviors, one set for the native culture and one set for the new culture.

Biculturalism is also considered to be the most adaptive form of acculturation (Szapocznik et al., 1981). This question was answered by testing the following hypothesis:

*Hypothesis IIE:* International students who are bicultural, will have higher levels of counseling self-efficacy and lower levels of Role Ambiguity and Role Conflict compared to students who are less acculturated (rejected majority culture) or overly acculturated (assimilated into majority culture).

### **Counseling Self-Efficacy**

To examine whether the present findings supported previously obtained results regarding counseling self-efficacy (Larson et al., 1992), the following hypotheses were tested.

*Hypothesis IIF, Level of Training:* Beginning counseling/psychology students without a master's degree will have lower scores on counseling self-efficacy than beginning counseling/psychology students with a master's degree.

*Hypothesis IIG, Gender:* There will be no differences between female and male students' scores on counseling self-efficacy.

*Hypothesis IIH, Ethnicity/Race:* There will be no differences between Caucasian and Asian students' scores on counseling self-efficacy.

## CHAPTER II

### METHODOLOGY

#### Sample

In August of 1998, I requested mailing labels from APA for all 320 training directors (Appendix B) of APA-accredited programs in professional psychology (clinical psychology,  $n = 188$ ; counseling psychology,  $n = 68$ ; school psychology,  $n = 49$ ; and professional-scientific psychology,  $n = 15$ ) and all training directors of APA-accredited predoctoral internship programs ( $n = 455$ ). Out of the 320 training directors of professional psychology programs, a random sample of 150 was selected (clinical psychology,  $n = 50$ ; counseling psychology,  $n = 50$ ; school psychology,  $n = 40$ ; and professional-scientific psychology,  $n = 10$ ). Of the 455 training directors of internship sites, a random sample of 100 training directors was selected. Later in the data collection process, because of the low number of international student participants, 11 additional training directors of programs in professional psychology were randomly selected to increase the sample size (clinical,  $n = 4$ ; and counseling,  $n = 7$ ).

A total of 261 training directors were invited to participate in the present study during the 1998–1999 school year. Of these 261 training directors, 204 (78%) responded to either the initial mailing or to the follow up phone calls that preceded the mailing to nonrespondents. Of these 204 training directors, 74% ( $n = 151$ ) agreed to distribute surveys to students in their training program or internship site, resulting

in a 58% (151/261) response rate (clinical,  $n = 34$ ; counseling,  $n = 40$ ; school,  $n = 17$ ; professional-scientific,  $n = 5$ ; and internship,  $n = 55$ ). Nine percent of the training directors reported that they did not want to participate ( $n = 19$ ), and the remaining 17%, all of whom were reached by phone after not responding to initial mailing, were excluded due to the lack of international students in their program or internship site ( $n = 34$ ). Exclusion of these programs was due to the need to keep mailing and copying costs down (see Appendix N for responses from training directors and student participants).

In total, 566 surveys were distributed to students in 151 APA-accredited training programs and internship sites by their training directors. Three hundred and twenty-one students returned surveys, resulting in a student participant response rate of 57% (321/566). Of these 321 returned surveys, 3 respondents were excluded due to excessive missing data, and 8 respondents were excluded due to not being appropriate for the study (3 respondents were not enrolled in APA-accredited programs, 3 respondents had not seen clients or participated in supervision, 1 respondent had completed the predoctoral internship, and 1 had already received a doctoral degree). The final sample consisted of 310 participants. The majority of the participants, 70%, were women ( $n = 218$ ; men,  $n = 92$ ). The participants' ages ranged from 22 to 52 ( $M = 30$ ,  $SD = 6.06$ ). Most of the student participants were enrolled in clinical ( $n = 141$ , 46%) and counseling ( $n = 120$ , 39%) psychology programs. The remainder were enrolled in school ( $n = 41$ , 13%) and professional-scientific ( $n = 8$ , 2%) psychology programs. Eighty-seven percent of these students were in training to receive a Ph.D. degree ( $n = 269$ ), 13% in training to receive a Psy.D. degree ( $n = 40$ ), and less than 1% in training to receive an Ed.D degree ( $n = 1$ ). Twelve percent of the participants were in their first or second year of their

doctoral training with their previous highest degree being a bachelor's degree ( $n = 37$ ); 16% were in their first or second year of their doctoral training with their previous highest degree being a master's degree ( $n = 51$ ); 40% were in their third, fourth, or fifth year of their doctoral training ( $n = 124$ ); and 32% were on their predoctoral internship ( $n = 98$ ).

Of the 310 student participants, 83% identified as U.S. citizens ( $n = 257$ ) and 17% as non-U.S. citizens ( $n = 53$ ). The ethnic and racial breakdown of the U.S. participants were: 66% Caucasian/White ( $n = 170$ ), 10% African American/Black ( $n = 26$ ), 10% Hispanic/Latino(a) ( $n = 25$ ), 5% Asian American/Pacific Islander ( $n = 14$ ), 5% Multiracial ( $n = 14$ ), 2% American Indian/Alaskan Native (4), and 2% "Other" ( $n = 4$ ). All of the participants who marked "Other" identified as Arab Americans. Information regarding the non-U.S. citizens' ethnic and racial background was not collected.

Of the non-U.S. students, 79% identified as international students ( $n = 42$ ), 19% as permanent residents ( $n = 10$ ), and 2% as other nonimmigrant visa ( $n = 1$ ). The international students represented 20 countries from all continents: 40% came from Asia ( $n = 17$ ), 21% from Europe ( $n = 9$ ), 19% from South America ( $n = 8$ ), 14% from North America ( $n = 6$ ), 2% from Africa ( $n = 1$ ), and 2% from Australia ( $n = 1$ ). Sixty-two percent of the international students were women ( $n = 26$ ). (Regarding international students' program of study, 62% of the international students were enrolled in clinical psychology programs ( $n = 26$ ), 31% in counseling psychology programs ( $n = 13$ ), and 7% in school psychology programs ( $n = 3$ ).) The majority, 76%, of the international students had obtained a master's degree ( $n = 32$ ), and most of these degrees were earned in the U.S. ( $n = 25$ ). Of the 8 students who had only obtained a bachelor's degree, all except 1 had obtained this degree in the

U.S. Furthermore, the demographic data revealed that 20% of the international students had been in the U.S. for less than 3 years ( $n = 8$ ), 29% between 3 and 5 years ( $n = 12$ ), 31% between 5 and 8 years ( $n = 13$ ), and 17% for 8 or more years ( $n = 7$ ). Information from two students regarding years of residence was missing (see Appendix O for results of demographic data unique to international students and demographic data in comparison to permanent resident students, U.S. minority and U.S. majority students).

Even though international students and permanent residents can both be defined as non-U.S. citizens, their rights while residing in the U.S. differ greatly. Permanent residents have the same rights as U.S. citizens except for voting, whereas international students' visas only allow them to study in the U.S. To determine whether international students and permanent residents could be treated as one group of non-U.S. students, they were compared on several demographic variables (age, gender, degree program, level of training, and years residing in the U.S.) and dependent measures (COSE, Role Ambiguity, Role Conflict, AIRS, and SWAI) in order to detect any group differences. The results revealed statistically significant differences between the groups on three instruments (Role Ambiguity, Role Conflict, and SWAI). Based on these results, permanent residents and international students were treated as two distinct groups of non-U.S. students.

### Instruments

*The International Student Demographic Form* (ISDF; Appendix K) was created for this study to gather demographic information regarding international students in APA-accredited programs. ISDF consists of 18 items requesting information about various demographic variables, including age, gender, religion,



country-of-origin, native language, relationship status, highest degree completed, degree program, type of program, country where highest degree was obtained, year of training, visa-status, years of residence in the U.S., plans after graduation (three questions), number of international faculty in program, and number of international students in program.

*The U.S. Student Demographic Form (USDF; Appendix L)* was created for this study to gather demographic information about students in APA-accredited programs. USDF consists of 13 items requesting information about various demographic variables including: age, gender, religion, race/ethnicity, country-of-origin, native language, relationship status, highest degree completed, country where highest degree was obtained, current degree program, type of program, year of training, and visa-status.

*Role Conflict and Role Ambiguity Inventory (RCRAI; Olk & Friedlander, 1992)* is a 29-item, self-report inventory which measures supervisees' perception of role difficulties in supervision. RCRAI yields two subscales: Role Conflict consists of 13 items (range of scores: 13 to 65); and Role Ambiguity consists of 16 items (range of scores: 16 to 80). Both scales utilize a Likert-type scale with higher scores indicating greater perception of role difficulties (1 = not at all; 5 = very much so). Role Ambiguity is defined as supervisees' uncertainty about supervisory expectations and performance in accordance with these expectations, as well as uncertainty regarding supervisors' evaluation criteria. Role Conflict is defined as supervisees' experiences of opposing expectations of their behavior, because they are required to perform multiple roles simultaneously, such as being a supervisee, student, therapist, and colleague.

Olk and Friedlander (1992) reported Cronbach's alphas as .91 for Role Ambiguity and .89 for Role Conflict. No additional information regarding reliability has been reported. Internal consistency (Cronbach's alpha) for the present sample was .91 for Role Ambiguity and .89 for Role Conflict. Validity of RCRAI has been supported by higher scores on Role Ambiguity and Role Conflict being associated with more dissatisfaction with supervision and more anxiety (Olk & Friedlander, 1992). In addition, higher scores on Role Ambiguity and Role Conflict have been associated with poorer supervisory working alliances as rated by supervisees (Ladany & Friedlander, 1995).

*The Counseling Self-Estimate Inventory* (COSE; Larson et al., 1992) is a 37-item self-report measure, which assesses counselors' perceptions of their self-efficacy in counseling situations. The development of this measure began with the creation of 67 items, written to be understood by graduate students in beginning counseling courses. The items were later tested on a sample consisting of 159 women and 53 men. Of these, 83% were White, 14% were Asian American, and 3% were from other ethnic groups. The 67 items were reduced to 53 because 14 of the items showed little or no variance (all items means were above 5 on the 6-point scale). A factor analysis was conducted on the 53 items, yielding a 37-item, five-factor scale. COSE utilizes a Likert-type scale, with higher scores indicating greater degrees of self-perceived counseling self-efficacy (1 = strongly disagree; 6 = strongly agree). The COSE yields a total score as well as five subscales: (1) Microskills, which measures basic and intermediate counseling skills such as probing, clarification, and conceptualization (12 items); (2) Counseling Process, which assesses counselor's sense of ability to manage the therapeutic process (10 items); (3) Dealing with Difficult Client Behaviors, which measures counselor's ability to work with difficult

client behaviors (7 items); (4) Cultural Competence, which assesses counselor's ability to respond to diversity in clients (4 items); and (5) Awareness of Values, which assesses issues related to counselor's biases and values (4 items).

A 3-week test-retest reliability has been reported using the COSE-Short Form, which consists of 30 of COSE's 37 items: COSE-Short Form-total scale score,  $r = .87$ ; Microskills,  $r = .68$ ; Process,  $r = .74$ ; Difficult Client Behaviors,  $r = .80$ ; Cultural Competence,  $r = .71$ ; and Awareness of Values,  $r = .83$ . The correlation between the total scale score of the COSE and the COSE-Short Form is high,  $r = .99$ , as well as between the subscales of the two instruments: Microskills,  $r = .98$ ; Process,  $r = .99$ ; Difficult Client Behaviors,  $r = .97$ , Cultural Competence,  $r = 1.00$ , and Awareness of Values  $r = .94$ . Because of the high correlations between the COSE-Short Form and the COSE, test-retest reliability of the COSE-Short Form can be regarded as indicative of the test-retest reliability for the COSE. Cronbach's alphas have been reported as .93 for the total scale score of COSE, .88 for Microskills, .87 for Process, .80 for Dealing with Difficult Client Behaviors, .62 for Cultural Competence, and .62 for Awareness of Values (Larson et al., 1992). Internal consistency (Cronbach's alpha) for the present sample was .91 for COSE, .79 for Microskills, .81 for Process, .78 for Difficult Client Behaviors, .77 for Cultural Competence, and .47 for Awareness of Values. The low reliability on Awareness of Values in the present sample may be due to few items in this subscale. Validity of the COSE has been supported by higher scores on COSE being associated with better problem solving skills, higher self-esteem, and less anxiety (Larson et al., 1992)

*The American-International Relations Scale (AIRS; Sadowsky & Plake, 1991)* is a 34-item instrument, which was created to investigate international peoples' levels of acculturation to the U.S. majority culture. The AIRS consists of both

multiple choice items and Likert-type scale items (1 = disagree strongly; 6 = agree strongly) with higher scores indicating lower levels of acculturation. Middle scores are intended to measure biculturalism or integration; however, the validity of interpreting middle scores as indicative of biculturation has not been established. The AIRS produces a total score and three subscale scores: (1) Perceived Prejudice, which assesses the perceived degree of acceptance of international people by Americans (20 items); (2) Acculturation, which measures degree of acceptance of international people by Americans and the U.S. culture (11 items); and (3) Language Use, which measures language use, proficiency, and preference of international people (3 items).

Cronbach's alpha for the AIRS has been reported as .89 for AIRS-total, .88 for Perceived Prejudice, .79 for Acculturation, and .82 for Language Use (Sodowsky & Plake, 1991). Internal consistency (Cronbach's alpha) for the present sample of international students was .88 for AIRS-total, .87 for Perceived Prejudice, .71 for Acculturation, and .92 for Language Use. Validity for the AIRS has been supported by lower scores on Acculturation and higher scores on Perceived Prejudice reported by individuals with Christian religions and from European countries compared to individuals with non-Christian religions and from Asian and African countries. Being more acculturated and using more English as measured by AIRS have also been associated with more years of residence in the U.S. (Sodowsky & Plake, 1992). In addition, lower levels of acculturation and higher levels of perceived prejudice have also been associated with lower levels of mental health (Metha, 1998).

*The Majority-Minority Relations Survey* (MMRS; Sodowsky et al., 1991) is a 43-item instrument created to assess acculturation attitudes among Hispanic and Asian Americans. The MMRS consists of both multiple choice items and Likert-type

scale items (1 = disagree strongly; 6 = agree strongly), with higher scores indicating lower levels of acculturation. Middle scores are intended to, but have not yet been demonstrated to indicate biculturalism or integration. The MMRS, similar to the AIRS, produces a total score and three subscale scores: (1) Perceived Prejudice, which assesses the perceived degree of acceptance of minority people by majority people (21 items); (2) Acculturation/Social Customs, which measures minority people's degree of acceptance by majority Americans and the majority U.S. culture (16 items); and (3) Language Use, which measures language use, proficiency, and preference of language (6 items). The MMRS consists of all of the AIRS' items plus nine additional items. The one additional item on Perceived Prejudice assesses respondents' perceptions of the majority group's willingness to eat the respondents' ethnic food. The five additional items on Acculturation/Social Customs measure respondents' pride in their ethnic group, their level of acceptance of their own ethnic values and the majority group's values, their belief in the importance of helping relatives immigrate to the U.S., and their level of preference for ethnic food. Three new Language Usage items assess language preference when expressing strong feelings or when dreaming, writing, and reading.

Correlations between the AIRS and the MMRS subscales have been reported as: Perceived Prejudice,  $r = .86$ ; Acculturation,  $r = .54$ ; and Language Usage,  $r = .80$ . The low correlation between the two acculturation subscales could be due to the additional five acculturation items on the MMRS or it may indicate that international individuals and U.S. Asian and Hispanic minority students perceive and express acculturation differently.

Cronbach's alphas on the MMRS have been reported as .95 for MMRS-total, .92 for Perceived Prejudice, .89 for Social Customs, and .94 for Language Use

(Sodowsky et al., 1991). Internal consistency (Cronbach's Alpha) for the present sample of U.S. ethnic and racial minority participants was .92 for the MMRS, .89 for Perceived Prejudice, .87 for Acculturation, and .94 for Language Use. Validity for the MMRS has been supported by relationships between generation status and Perceived Prejudice, Acculturation, and use of English. First generation immigrants were found to perceive more prejudice, be less acculturated and use less English than second, third and fourth generation of immigrants (Sodowsky et al., 1991).

*The Supervisory Working Alliance Inventory-Trainee Form* (SWAI-Trainee Form; Efstation et al., 1990) is a 19-item instrument, which assesses trainees' perception of the working alliance with their supervisors. The SWAI utilizes a Likert-type scale, with higher scores suggesting higher levels of working alliance (1 = almost never; 7 = almost always). The scale consists of two subscales: (1) Rapport, which assesses supervisees' perceptions of supervisors' efforts to support, encourage, and build rapport (12 items); and (2) Client Focus, which assesses supervisees' perceptions of supervisors' efforts to increase the supervisees' understanding of clients (7 items).

Cronbach's alpha has been reported as .90 for Rapport and .77 for Client Focus (Efstation et al., 1990). Internal consistency (Cronbach's alphas) for the present sample was .87 for Rapport and .71 for Client Focus. Although Efstation et al. did not combine the two subscales for a total score, Patton and Kivlighan (1997) combined the scales to provide a total score, because of the high inter-correlation between the scales. Patton and Kivlighan reported no reliability information for the total scale score. For the present sample, Cronbach's alpha on the total score was .88. Validity for the SWAI-Trainee Form has been supported by statistically significant, positive, correlations between Rapport and Client Focus and

supervisory style (Attractive and Interpersonally Sensitive) and self-efficacy (Efstation et al., 1990). In addition, the Rapport subscale has also been found to be positively associated with satisfaction of supervision (Jackson, 1993), and Client Focus with supervisors' being task oriented (Efstation et al., 1990).

*The International Student Supervision Scale (ISSS; Appendix J)* total was created for the current study. The present researcher developed a 21-item supervision scale to measure the degree to which issues unique to international student supervisees are discussed in supervision. The 21 items were based on the literature concerning international students and multicultural supervision. For example, scholars have suggested that many international students have difficulties with the English language (Greenfield, 1988; International Student Committee, 1982) and with cultural differences while studying in the U.S. (Charles & Stewart, 1991; Parr et al., 1992; Story, 1982). Scholars have also documented that international students have a greater need for academic support and advice than U.S. students (Leong & Sedlacek, 1989) and that a supportive academic environment is related to less stress and anxiety among international graduate students (Mallinckrodt & Leong, 1992). The multicultural supervision literature has addressed the importance of discussing cultural differences in supervision (e.g., Fong & Lease, 1997; Gopaul-McNicol & Brice-Baker, 1998), because this type of discussion is suggested to increase the respect and mutual understanding between supervisors and supervisees and aid in the development of supervisees' multicultural knowledge (Harber, 1996; Kaiser, 1997).

The rationale behind the scale was the assumption that if supervisors discussed cultural differences and other issues unique to international supervisees, this would increase these students' counseling self-efficacy and decrease their role difficulties in supervision. For example, a discussion regarding international

supervisees' difficulties, due to language barriers and the impact of these language barriers on their clinical work, would not only validate these students' experiences but also provide them with support and encouragement to work on these difficulties. Thus, a recognition and validation of international students' unique issues in conjunction with supervisory encouragement is expected to enhance these students' counseling self-efficacy. According to the social cognitive theory, self-efficacy partly develops through verbal persuasion (Bandura, 1977; Maddux, 1995).

After the development of the initial scale items, the scale was forwarded to experts for rating item appropriateness for discussion in supervision with international students. The experts consisted of six doctoral level supervisors and/or faculty and three international students and two U.S. minority students born outside of the U.S. The students' experts were doctoral students in counseling psychology or counselor education. The experts were asked to examine the applicability of the items and point out possible problem areas. More specifically, experts were asked to examine each item individually and then rate the item's level of applicability for discussion in supervision with international students (Appendix I). In accordance with experts' advice, I excluded one item and modified several other items. Most of these modifications were regarding word choice and grammar.

It was expected that the scale, after factor analysis, would consist of three factors/subscales: (1) Supervisory Cultural Content Discussion, which would assess the degree to which cultural issues are discussed in supervision (items: 2, 3, 6, 7, 10, 16 19, 20, and 21); (2) Supervisory Cultural Process Discussion, which would measure the degree to which cultural differences between supervisor and supervisee are discussed in supervision (items: 1, 4, 5, 9, 11, 13, and 15); and (3) Supervisee-



Supervisor Dynamics, which would assess the supervisee's perception of the dynamics between the supervisee and the supervisor (items: 8, 12, 14, 17, and 18).

Factor analysis, specifically principal component analysis with an oblique rotation method, was planned to be used for the development of ISSS-scale. A principal component analysis is considered an appropriate analysis when the goal for the analysis is to establish the fewest number of factors to explain the maximum variance represented in an original set of variables. An oblique rotation was chosen, because this type of rotation allows factors to correlate, rather than creating independence between rotated factors (Hair, Anderson, Tatham, & Black, 1998). Allowing the factors to correlate seemed appropriate, given the theoretical foundation of ISSS and the assumption that the factors, although measuring different aspects of multicultural supervision, would be able to be summed up creating a total scale score. However, a factor analysis requires a large sample size. Hair et al. recommended having a minimum of at least five times as many observations as variables. According to Hair et al.'s suggestion, a sample size of 105 would have been needed for a principal component analysis of the 21 ISSS items. The present sample of 42 international students was therefore too small to allow for the use of a factor analysis.

Although a factor analysis could not be carried out, several tests were employed to examine the data. First, the presence of interitem correlations in the correlation matrix was analyzed using Bartlett's Test of Sphericity. Second, the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (MSA) was used to assess the interitem correlations as a whole, as well as each individual item's appropriateness for a factor analysis. A MSA value of at least .50 is recommended for the overall scale and for each individual item (Hair et al., 1998).

Initial construct validity of ISSS-total was tested against SWAI-Trainee Form-total score, SWAI-Rapport, SWAI-Client Focus, Role Ambiguity, Role Conflict, and some additional questions regarding supervision (see Appendix H). Positive correlations were expected between ISSS-total and SWAI-total, between ISSS-total and Rapport, between ISSS-total and Client Focus, and between ISSS-total and more advanced levels of training. It was expected that ISSS-total would increase as supervisees became more advanced in their training, because advanced supervisees tend to prefer less structure and skill orientated supervision than beginning supervisees (Heppner & Roehlke, 1984). ISSS-total was created to be more process oriented regarding supervisees' cultural experiences and perceptions compared to their supervisors and clients. Positive correlations were also expected between ISSS-total and supervisors' sensitivity to diversity issues, and between ISSS-total and overall quality of supervision as rated by supervisees. Negative correlations were expected between ISSS-total and Role Ambiguity, and between ISSS-total and Role Conflict. It was also expected that supervisees with supervisors who were of ethnic or racial minorities would rate their supervisors as more sensitive to diversity issues than supervisees with White supervisors.

*Additional Supervision Questions* (Appendix M). Six additional questions were requested regarding student participants' perception of their supervisor and supervision. For example, one question requested participants to rate (1 = strongly disagree; 6 = strongly agree) their supervisor's level of sensitivity to diversity issues. Another question inquired about participants' perception of the overall quality (1 = strongly disagree; 6 = strongly agree) of supervision. Participants also provided information regarding the race of their supervisor, where the supervision took place,

and whether they were currently in supervision. These questions were used to provide validity data for ISSS-total.

### Procedures

Packages consisting of a cover letter and a postcard for training directors as well as six postcards for students and six student surveys (two surveys for international students, two surveys for U.S. ethnic and/or racial minority students, and two surveys for U.S. majority/Caucasian students) were mailed to 150 training directors of APA-accredited programs in professional psychology. In addition, a cover letter and three student surveys (one for each student group) were mailed to 100 training directors of APA-accredited internship sites. The cover letter to the training directors outlined the study and requested training directors to randomly distribute the surveys to students in their programs (see Appendix C). All training directors were asked to fill out and return the enclosed self-addressed and stamped postcard. The postcard requested information on whether the training directors wanted to participate or not in the study, and if they participated the number of surveys they distributed to students (see Appendix D). The purpose of the postcard was to track response rate and to follow up with nonresponding training directors.

The student surveys were color-coded, one color for each student group, in order to aid the training directors in the distribution of surveys. The 100 training directors of internship sites were sent a similar package; however, this package only included one survey per student group. Between three to six surveys were mailed to the training directors of the additional 11 training programs, depending upon the number of international students in their program. An equal number of surveys were

forwarded for international students, U.S. majority students, and U.S. minority students in the additional programs.

The number of instruments included in the total survey differed among the student groups, because some information was only applicable to certain student groups. For example, acculturation scales were only included for international students and U.S. minority students. The international students' survey packets consisted of six instruments described previously (ISDF, RCRAI, COSE, AIRS, SWAI-Trainee Form, and ISSS); the U.S. ethnic and racial minority students' survey packets consisted of four instruments (USDF, RCRAI, COSE, and MMRS); and the U.S. majority students' survey packets consisted of three instruments (USDF, RCRAI, and COSE). The instruments were randomly ordered within each questionnaire to control for order effect. A cover letter including informed consent information was also included in the material distributed to students (see Appendix E for cover letter and informed consent to minority students; see Appendix F for cover letter and informed consent for majority students). A self-addressed and stamped postcard with information regarding two \$50 cash prizes was also included in the material to students. In order to enter the drawing for cash prizes, the students had to return the postcard to the present researcher.

If training directors did not respond to the initial mailing by returning the included postcard, at least one follow-up phone call was made to remind them about the surveys and again request their participation (see Appendix H). When training directors could not be reached, other departmental persons were sometimes asked to distribute the surveys. Usually a new package of surveys was mailed after the follow up phone call. In 34 instances when follow up contact was made with training directors, no new packages were mailed because the training directors reported that

they did not have any international students in their programs. The focus on international students and the subsequent exclusion of programs without international students was due to: (a) the low response rate of international students, and (b) the need to keep mailing and copying costs down. In 12 instances of follow up contacts to training directors at internship sites, more than one survey for each student group was mailed in order to increase the number of respondents at the internship training level.

### Hypotheses Testing and Analyses of the Data

This section is divided into two parts corresponding to the previous presentation of research areas and hypotheses in Chapter I. Research area one involved questions and hypotheses concerning international students' possible unique training needs in comparison with U.S. students. Research area two focused on whether the present findings supported previously obtained data regarding acculturation, biculturation, and counseling self-efficacy.

#### Research Area One

Research area one consisted of three research questions with hypotheses. These research questions concerned possible differences between international students, U.S. minority, and majority students on counseling self-efficacy and role difficulties in supervision, as well as the impact of acculturation and multicultural supervision on those same variables.

### International Students Compared to U.S. Students

Hypotheses IA and IB were concerned with possible differences on counseling self-efficacy and role difficulties in supervision between international students and U.S. minority and majority students. It was expected that international students in the first, second, and third training level would report less counseling self-efficacy and Role Conflict, but more Role Ambiguity than U.S. students in the same training levels. In the fourth level of training, international students were expected to score similar to U.S. students on counseling self-efficacy and Role Ambiguity, but less on Role Conflict. Furthermore, an interaction effect of student identity across levels of training was expected.

Hypotheses IA and IB were tested by a 3 (student identity)  $\times$  4 (level of training) multivariate analysis of variance (MANOVA). A MANOVA is used as a statistical method in situations where there is more than one dependent variable to examine, when the dependent variables are correlated, and when an interaction effect is of interest (Weinfurt, 1995). In the present study when a multivariate effect was obtained, univariate analyses followed. The dependent variables for Hypotheses IA and IB were COSE (counseling self-efficacy), Role Ambiguity, and Role Conflict. The three levels of student identity were international students, U.S. minority, and U.S. majority students. The four levels of training were: (1) first and second year of doctoral training with their most recent degree being a bachelor's degree; (2) first and second year of doctoral training with the most recent degree being a master's degree; (3) third, fourth, and fifth year of doctoral training; and (4) predoctoral internship. Level of training was incorporated as one of the independent variables, because the theory of role difficulties in supervision proposes that Role Ambiguity will be more

common among beginning trainees and Role Conflict more common among advanced trainees (Olk & Friedlander, 1992).

Prior to data collection, a power estimate for a  $3 \times 4$  MANOVA was conducted. Power around .80 has been recommended as an acceptable level to detect differences at the .05 alpha level (Cohen, 1977). Bratcher, Moran, and Zimmer (1970, as cited in Kirk, 1982) recommended a sample cell size of 36 for a  $3 \times 4$  MANOVA with alpha set at .05, and power of .80. The present design included 12 cells and thus the present sample of 42 international students resulted in few international students in certain cells, which consequently decreased power to obtain statistically significant results and increased the possibility of Type II error (see Appendix P for summary of sample cell sizes). Following data collection, the data were also examined to determine whether they violated any of the assumptions underlying MANOVA, including: (a) independence among observations; (b) univariate and multivariate normality (because multivariate normality is difficult to assess, obtaining univariate normality is often considered sufficient for MANOVA); and (c) homogeneity of variance-covariance matrices (Hair et al. 1998; Weinfurt, 1995).

### The Impact of Acculturation

Hypothesis IC was concerned with whether acculturation, together with other study variables (Role Ambiguity, Role Conflict, and level of training), predicted counseling self-efficacy for international students and U.S. minority students. It was expected that higher levels of acculturation together with lower Role Ambiguity, lower Role Conflict and higher level of training would predict higher levels of

counseling self-efficacy among both international students and U.S. minority students.

Two hierarchical regression analyses were conducted, one for international students and one for U.S. minority students, to test Hypothesis IC. This type of regression analysis is chosen when the order of entered variables are predetermined based on some rationale such as theory (Wampold & Freund, 1987). In both analyses, the dependent variable was COSE (counseling self-efficacy).

Prior to conducting the regression analysis, a power estimate was conducted. Hair et al. (1998) recommended a minimum of 15–20 observations per independent variable to obtain appropriate power, which in the present analyses would require a sample size between 60 and 80. However, more specifically Hair et al. recommended a sample size of about 100 to detect small effects at an alpha of .05, using a power of .80, for a five-variable regression analyses. In the present analysis, only four predictor variables were used. Thus, the present sample of U.S. minority students ( $n = 75$ ) seemed likely to be large enough to detect small to medium effects at an alpha level .05. However, the present sample of international students seemed likely to be too small ( $n = 40$ ) to achieve sufficient power to detect small to medium effects. In addition, the data were examined to determine whether they violated any of the assumptions underlying multiple regression, including: (a) linearity between independent and dependent variables, (b) constant variance of error term, (c) independence of the error terms, and (d) normality of the error term distribution (Hair et al., 1998).



### The Impact of Multicultural Supervision

Hypothesis ID was concerned with the relationship between ISSS and four other study variables (AIRS, COSE, Role Ambiguity, and Role Conflict) while Hypothesis IE was concerned with whether ISSS-total mediated the effect of acculturation on counseling self-efficacy, Role Ambiguity, and Role Conflict. More specifically, it was expected that a discussion of issues unique to international students in supervision, such as language and cultural differences, would lessen the impact of acculturation on COSE, Role Ambiguity, and Role Conflict, thus creating higher levels of counseling self-efficacy and lower levels of role difficulties in supervision among international students.

Correlation analyses were conducted to test Hypothesis ID. In order to test the three different three-variable-mediation models proposed in Hypothesis IE, several regression analyses were conducted. (See Appendix Q for the three proposed mediation models.) Baron and Kenny (1986) described a mediator variable as a variable that intervenes between stimulus and response. More specifically a variable functions as a mediator variable when: (a) variations in the independent variable account for variations in the mediator variable; (b) variations in the mediator variable account for variations in the dependent variable; and (c) the relationships between the mediator variable and dependent variable and between mediator and independent variable are controlled, the relationship between the independent and dependent variable which was statistically significant becomes nonsignificant (Baron & Kenny, 1986). The ISSS-total was the mediator variable and acculturation the independent variable in all three regression analyses. Counseling self-efficacy, Role Ambiguity, and Role Conflict were the dependent variables, one for each regression analysis.

To test for mediation in a three-variable mediation model, three regression analyses must be conducted and four conditions must be met. In the first regression analysis, the mediator variable is regressed on the independent variable. The condition in the first regression that must be met is that the independent variable affects the mediator variable. In the second regression analysis, the dependent variable is regressed on the independent variable. The condition in the second regression analysis is that the independent variable must affect the dependent variable. In the third regression analysis, the dependent variable is regressed on both the independent variable and the mediator variable, and in this regression analysis the mediator variable must affect the dependent variable. If the above three conditions are met, the fourth condition requires that the affect of the independent variable on the dependent variable is larger in the second regression than in the third regression (Baron & Kenny, 1986). Beta weights from the regression analyses were used to examine direct and indirect effects. Prior to the data analysis, a power estimate was conducted.

Hair et al. (1998) recommended a minimum of 15–20 observations per independent variable to obtain appropriate power, which in the present analyses would require a sample size between 30–40 participants. However, more specifically Hair et al. recommended a sample size of about 50 to detect small effects, at an alpha level of .05, with a power of .80, for a two-independent variable regression analysis. The present sample of international students was likely to be large enough ( $n = 40$ ) to detect medium effects at .05 alpha level. Furthermore, the data were also examined to determine whether they violated any of the assumptions underlying multiple regression, including: (a) linearity between independent and dependent variables,

- (b) constant variance of error term, (c) independence of the error terms, and
- (d) normality of the error term distribution (Hair et al., 1998).

### **Research Area Two**

Research area two was concerned with whether the results from the present study supported previously obtained results regarding acculturation (Sodowsky & Plake, 1992), theories of biculturalism (Sodowsky & Plake, 1992; Szapocznik et al., 1981), and previous results on counseling self-efficacy (Larson et al., 1992). This research area is divided into three parts: (a) acculturation, (b) biculturation, and (c) counseling self-efficacy.

#### **Acculturation**

Hypotheses IIA–IID were concerned with whether the present findings on acculturation supported previously obtained results regarding acculturation on continent-of-origin, years of residence in the U.S., gender, and visa status (Sodowsky & Plake, 1992).

Hypotheses IIA–IID were tested with four separate MANOVAs. This approach was selected in order to replicate the methods used in previous research (Sodowsky & Plake, 1992). MANOVA is considered an appropriate statistical method to use in situations when there is more than one dependent variable to examine, when the dependent variables are correlated, and when an interaction effect is of interest (Weinfurt, 1995). For these analyses, the dependent variables were the three subscales of AIRS (Perceived Prejudice, Acculturation, and Language Use). The independent variables were continent of origin, years of residence in the U.S. gender, and visa status.

Prior to data analyses, a power estimate was conducted. Approximately 50 subjects per group have been recommended for a three-group MANOVA with three dependent variables, at a power of .80 (Lauter, 1978, cited in Hair et al., 1998). The sample size per group was smaller than the recommended size of 50 subjects per group, which consequently decreased power to obtain statistically significant results and increased the possibility of Type II error. Furthermore, the data were examined to determine whether they violated any of the assumptions underlying MANOVA, including: (a) independence among observations, (b) univariate and multivariate normality, and (c) homogeneity of variance-covariance matrices (Hair et al., 1998; Weinfurt, 1995).

### **Biculturalism**

Being bicultural has been proposed as the most adaptive form of acculturation (Szapocznik et al., 1981). Although the AIRS has been reported to measure biculturalism (Sodowsky & Plake, 1992), the bicultural validity of this measure has not been tested. On the AIRS, biculturalism is measured by the middle score on the Likert-type scale (Sodowsky & Plake, 1992). Based on bicultural theory, it was expected that the total score on AIRS would have a negative curvilinear relationship with COSE, Role Ambiguity, and Role Conflict (Hypothesis IIE). The relationship was expected to have a negative curvilinear shape (inverted U-shape), because higher scores on AIRS corresponds with being less acculturated. More specifically, it was expected that international students who are bicultural, would report more counseling self-efficacy, less Role Ambiguity, and less Role Conflict compared to students who are not acculturated (rejecting majority culture) or overly acculturated (assimilated/rejecting native culture).

To examine the possibility of a curvilinear relationship between the independent variable, AIRS, and the three dependent variables (COSE, Role Ambiguity, and Role Conflict), three trend analyses were conducted. Each trend analysis included a regression analysis consisting of three steps: AIRS was entered in the first step, AIRS-squared in the second step, and AIRS-cubed in the third step. AIRS-squared provided information regarding the possibility of a curvilinear relationship between AIRS and the dependent variables, and AIRS-cubed provided information regarding possible cubic (s-shaped) relationships.

Prior to the data analysis, a power estimate was conducted. Hair et al. (1998) recommended a minimum of 15–20 observations per independent variable to obtain appropriate power, which in the present analyses would require a sample size between 45–60. However, more specifically Hair et al. further recommended a sample size of about 50 to detect small effects, at an alpha level of .05, with a power of .80, for a two-variable regression analysis. However, the present sample included three dependent variables. The present sample of 40 international students for a three-variable regression analysis was low, thus decreasing power to obtain statistically significant results and increasing the chance of Type II error. Furthermore, the data were examined to determine whether they violated any of the assumptions underlying multiple regression, including: (a) linearity between independent and dependent variables, (b) constant variance of error term, (c) independence of the error terms, and (d) normality of the error term distribution (Hair et al., 1998).

### Counseling Self-Efficacy

Hypotheses IIF–IIH were concerned with whether the present findings on counseling self-efficacy supported previously obtained results regarding counseling self-efficacy on level of training, gender, and ethnicity/race (Larson et al., 1992). Hypotheses IIF–IIH were tested with separate one-way ANOVAs. This approach was selected in order to replicate the methods used in previous research (Larson et al., 1992). ANOVA is considered an appropriate statistical method in situations where the purpose of the analysis is to explore whether the mean of one dependent variable is significantly different across the levels of independent variables (Weinfurt, 1995). The dependent variable for all analyses was COSE, and the independent variables were level of training, gender, and race/ethnicity. It should be noted that Larsen et al. (1992) used COSE-Short Form (30 items of COSE's 37 items), which makes comparison with the present sample using the COSE, somewhat limited.

Prior to the data analysis, a power estimate was conducted. A sample size of 17 is recommended for a two-group comparison, with an alpha of .05 and power at .80 (Bratcher et al., 1970, as cited in Kirk, 1982). The present sample size was sufficient to achieve appropriate power in all analyses, except for the comparison between White and Asian American students in which the Asian American sample was too small ( $n = 14$ ). Furthermore, the data were examined to determine whether they violated any of the assumptions underlying ANOVA, including: (a) the dependent variable is normally distributed, and (b) homogeneity of variance (Hair et al., 1998).

## **CHAPTER III**

### **RESULTS**

Chapter III is divided into two sections. The first section contains the scale development of the ISSS. The second section provides the results of the research questions and hypotheses. In addition, some post hoc analyses were conducted to provide supplementary information regarding the data. Alpha was set at .05 for all analyses.

#### **Scale Development of the ISSS-Total**

ISSS-total was developed for the purpose of the present study to measure the degree to which issues unique to international students are discussed in supervision. The scale items were based on the literature concerning international students and multicultural supervision. The scale was evaluated by six doctoral level faculty and/or supervisors, three international students, and two U.S. minority students born outside of the U.S. Initial construct validity of ISSS-total was tested against SWAI-Trainee Form, SWAI-Rapport, SWAI-Client Focus, Role Ambiguity, Role Conflict, and some additional questions regarding the overall quality of supervision and supervisors' race. Positive correlations were expected between ISSS-total and SWAI-total, SWAI-Rapport, SWAI-Client Focus, and more advanced levels of training. It was also expected that higher scores of ISSS-total would be associated with supervisors' sensitivity to diversity issues and quality of supervision as rated by supervisees, as well as supervisors' race.

The small number of international student participants who completed ISSS ( $n = 40$ ), precluded the use of a factor analysis and identification of subscales. Even though a factor analysis could not be completed, Bartlett's Test of Sphericity and Kaiser-Meyer-Olkin Measure of Sampling Adequacy (MSA) were employed to examine the data. The Bartlett's Test of Sphericity was statistically significant, chi-square (210) = 568.04,  $p = .00$ , indicating that the correlation matrix included at least some statistically significant interitem correlations. The MSA for the total scale was .76, confirming that the scale (interitem correlations as a whole) was appropriate for factor analysis. For the individual items, MSA ranged from .27 to .89. Three items fell below the .50 cutoff point (items 8, 17, and 18) and were therefore excluded from the scale and further analyses. In addition, item 12 was excluded because of its low correlations (less than .31) with all items except for the excluded items 17 and 18. Table 1 reports means, standard deviations, and the correlation matrix for the ISSS-total. Instead of developing subscales for the ISSS-total as intended, all ISSS items were summed up creating a total score. Internal consistency, using Cronbach's alpha, was .94 for ISSS-total.

Initial construct validity of ISSS-total score was tested via correlations with SWAI-total, SWAI-Rapport, SWAI-Client Focus, Role Ambiguity, Role Conflict, level of training, and some additional questions regarding the participants' perception of their supervisor's sensitivity to diversity issues and overall quality of supervision. Table 2 presents the correlations between ISSS-total and criteria measures. As expected, the results indicated that higher scores on ISSS-total were associated with more advanced levels of training and supervisors' sensitivity to diversity issues. Contrary to expectations, ISSS-total was not correlated with SWAI-total, SWAI-Rapport, SWAI-Client Focus, Role Ambiguity, or Role Conflict.



Table 1

Interitem Correlations, Means, Standard Deviations, and Measure of Sampling Adequacy for ISSS-Total

ISSS Item no.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	—																				
2	.68	—																			
3	.67	.69	—																		
4	.63	.68	.73	—																	
5	.32	.38	.37	.39	—																
6	.64	.73	.48	.53	.42	—															
7	.58	.65	.57	.56	.32	.63	—														
8 <sup>a</sup>	.04	.09	.25	.17	.09	.03	.18	—													
9	.68	.69	.72	.67	.20	.61	.62	.01	—												
10	.47	.37	.36	.38	.44	.57	.38	-.25	.52	—											
11	.40	.46	.38	.32	.28	.38	.38	.12	.32	.28	—										
12 <sup>a</sup>	-.02	-.03	.04	.06	.10	.15	.30	.15	.14	.25	.11	—									
13	.62	.60	.63	.57	.30	.53	.54	.04	.64	.36	.50	.01	—								
14	.47	.74	.35	.44	.42	.60	.54	-.08	.47	.50	.48	.14	.47	—							
15	.42	.46	.47	.30	.44	.46	.46	-.11	.49	.62	.53	.23	.48	.60	—						
16	.42	.48	.22	.51	.35	.55	.50	-.01	.43	.51	.35	.27	.38	.56	.43	—					
17 <sup>a</sup>	-.04	-.11	.02	.04	-.11	-.03	.13	.45	-.08	-.24	-.10	.34	-.18	-.26	-.16	-.11	—				

Table 1—Continued

ISSS Item no.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
18 <sup>a</sup>	.08	.06	.15	.05	.16	.16	.10	.27	.10	.18	-.03	.31	.09	-.03	-.09	-.07	.45	—			
19	.72	.73	.54	.56	.28	.72	.52	.13	.70	.48	.47	.09	.66	.64	.56	.60	-.06	-.03	—		
20	.50	.51	.39	.42	.24	.65	.45	-.11	.59	.66	.35	.14	.43	.56	.46	.61	-.28	.03	.58	—	
21	.62	.66	.58	.53	.37	.70	.63	-.04	.69	.57	.38	.16	.67	.56	.55	.57	-.01	.23	.70	.80	—
<i>M</i>	2.88	2.62	2.15	2.05	3.18	1.92	2.32	2.70	1.72	2.40	3.90	2.32	2.48	2.85	2.50	1.90	3.28	1.42	2.25	1.70	1.85
<i>SD</i>	1.16	1.31	1.31	1.28	1.53	1.21	1.31	1.47	1.15	1.60	1.26	1.40	1.30	1.29	1.55	1.03	1.38	.84	1.35	1.04	1.14
<i>MSA</i> <sup>b</sup>	.87	.84	.80	.82	.68	.84	.74	.25	.89	.79	.87	.55	.84	.80	.80	.84	.44	.27	.74	.67	.73

Note. *N* = 40.

<sup>a</sup> = excluded due to low *MSA*. <sup>b</sup> *MSA* = Kaiser-Meyer-Olkin Measure of Sampling Adequacy.  
 $p = .05, r \geq .26, p = .01, r \geq .37, p = .001, r \geq .46, p = .0001, r \geq .50$ .

Table 2  
Correlations Between ISSS-Total and Construct Measures

Variables	SWAI	Rapport	Client Focus	RA	RC	Level	Diversity	Quality
ISSS-total	.16	.20	.06	.06	-.01	.39*	.44**	.25

*Note.* SWAI = Supervisory Working Alliance Inventory-Trainee Form; Rapport = SWAI-Rapport; Client Focus = SWAI-Client Focus; RA = Role Ambiguity; RC = Role Conflict; Level = Level of Training; Diversity = Supervisees' perceptions of supervisors' sensitivity to diversity issues; Quality = Supervisees' perceptions of overall quality of supervision.

\* $p < .05$ . \*\* $p < .01$ .

The international student participants reported the race of their supervisors: 83% of the supervisors were White ( $n = 35$ ), 7% were Hispanic or Latino(a) ( $n = 3$ ), and 5% were Asian or Pacific Islander ( $n = 2$ ). The minority supervisors were collapsed into one group and compared with White supervisors, via an ANOVA. The result of the ANOVA was statistically significant,  $F(1,38) = 5.55$ ,  $p = .02$ , indicating that students' who had racial minority supervisors obtained higher ISSS-total scores than students with White supervisors (minority supervisor,  $M = 55.60$ ,  $SD = 11.33$ ; White supervisor,  $M = 38.54$ ,  $SD = 15.53$ ). This finding suggests that international supervisees who are in supervision with racial minority supervisors discuss more cultural issues applicable to them being international students compared with international students in supervision with White supervisors.

In sum, the ISSS-total was developed to measure the degree to which issues unique to international students were discussed in supervision. Given the small sample size of international students in the present study, the proposed factor analysis could not be conducted on ISSS-total to determine the factor structure of the scale. Instead all items, except for four excluded items, were summed up creating a total

score. Internal consistency for the ISSS-total was high, indicating that the construct is internally consistent. Construct validity was supported by relationships between higher scores on ISSS-total, and more advanced training levels, supervisees' perception of supervisors being more sensitive to diversity issues, and with having racial minority supervisors compared to White supervisors. However, ISSS-total did not have a relationship with Role Ambiguity, Role Conflict, supervisory working alliance, and overall quality of supervision as rated by trainees.

### Hypotheses Testing

Presentation of results concerning the study hypotheses is divided into two parts: (1) research area one, and (2) research area two. Research area one involves questions and hypotheses concerning international students' possible unique training experiences in comparison with U.S. students. Research area two focuses on whether the present findings support previously obtained results regarding acculturation, biculturation, and counseling self-efficacy.

#### Research Area One

Table 3 presents the results of descriptive statistics, including means and standard deviations for all study variables for each group at every level of training. Table 4 presents the correlation matrix for all study variables (COSE, Role Ambiguity, Role Conflict, MMRS, AIRS, ISSS-total, SWAI, Rapport, and Client Focus). These two tables include all the descriptive data for research area one and will be referred to throughout this section.

Table 3

Means and Standard Deviations for Counseling Self-Efficacy, Role Ambiguity,  
Role Conflict, Acculturation, and ISSS-Total

Variable	International Students			U.S. Minority Students			U.S. Majority Students		
	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>
COSE	-								
Level 1	166.50	13.40	4	157.75	21.52	16	155.69	16.43	16
Level 2	154.10	24.26	10	166.44	27.37	18	163.75	16.43	20
Level 1 & 2	157.64	21.97	14	162.35	24.82	34	160.17	16.70	36
Level 3	161.45	23.41	22	173.23	18.32	26	166.19	20.29	68
Level 4	161.83	21.24	6	166.60	21.36	25	170.89	16.11	66
Level 3 & 4	161.54	22.58	28	169.98	19.95	51	168.51	18.43	134
Total	160.24	22.19	42	166.92	22.20	85	166.74	18.35	170
RA									
Level 1	32.50	8.39	4	35.06	9.97	16	33.88	9.92	16
Level 2	24.00	5.60	10	32.00	10.99	18	31.70	10.96	20
Level 1 & 2	26.43	7.34	14	33.44	10.48	34	32.67	10.42	36
Level 3	27.82	10.27	22	32.27	13.86	26	31.84	11.27	68
Level 4	33.17	12.64	6	32.56	12.71	25	28.38	10.38	66
Level 3 & 4	28.96	10.80	28	32.41	13.17	51	30.13	10.94	134
Total	28.12	9.76	42	32.82	12.11	85	30.67	10.85	170
RC									
Level 1	26.75	6.18	4	21.94	8.12	16	19.44	5.58	16
Level 2	20.00	7.15	10	20.44	6.50	18	21.75	7.91	20
Level 1 & 2	21.93	7.36	14	21.15	7.23	34	20.72	6.98	36
Level 3	19.04	7.25	22	23.19	10.23	26	20.35	7.63	68
Level 4	23.67	8.29	6	23.00	8.11	25	20.65	7.64	66
Level 3 & 4	20.04	7.57	28	23.10	9.15	51	20.50	7.61	134
Total	20.67	7.47	42	22.32	8.45	85	20.55	7.46	170

Table 3—Continued

Variable	International Students			U.S. Minority Students			U.S. Majority Students		
	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>
<b>MMRS<sup>a</sup></b>									
Level 1				103.60	16.73	15			
Level 2				116.40	26.42	15			
Level 3				120.56	25.65	25			
Level 4				110.78	25.44	23			
Total				113.61	24.64	78			
<b>AIRS<sup>b</sup></b>									
Level 1	96.50	16.42	4						
Level 2	109.12	19.18	8						
Level 3	105.14	22.30	22						
Level 4	104.17	13.82	6						
Total	104.92	19.75	40						
<b>ISSS-total<sup>b</sup></b>									
Level 1	22.50	3.78	4						
Level 2	34.38	15.20	8						
Level 3	45.86	15.75	22						
Level 4	42.17	13.17	6						
Total	40.68	16.00	40						
<b>SWAI<sup>b</sup></b>									
Level 1	96.00	3.46	4						
Level 2	113.88	7.86	8						
Level 3	106.27	14.24	22						
Level 4	99.66	9.48	6						
Total	105.78	12.72	40						

Table 3—Continued

Variable	International Students			U.S. Minority Students			U.S. Majority Students		
	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>
<b>Client Focus<sup>b</sup></b>									
Level 1	40.00	2.45	4						
Level 2	48.00	2.27	8						
Level 3	44.95	5.99	22						
Level 4	40.00	5.10	6						
Total	44.32	5.64	40						
<b>Rapport<sup>b</sup></b>									
Level 1	56.00	2.45	4						
Level 2	65.88	8.20	8						
Level 3	61.31	9.12	22						
Level 4	59.67	6.35	6						
Total	61.45	8.37	40						

*Note.* COSE = Counseling Self-Estimate Inventory; RA = Role Ambiguity; RC = Role Conflict; Level = Level of Training (1 = first and second year of doctoral training without prior MA degree; 2 = first and second year of doctoral training with a previous MA degree; 3 = third, fourth, and fifth year of doctoral training; and 4 = predoctoral internship); Comb. = combined scores of level of training 1 and 2; and level of training 3 and 4; MMRS = Majority-Minority Relations Scale; AIRS = American-International Relations Scale; ISSS-total = International Student Supervision Scale; SWAI = Supervisory Working Alliance Inventory-Trainee Form; Rapport = SWAI-Rapport; Client Focus = SWAI-Client Focus. Higher scores on MMRS and AIRS equal lower levels of acculturation.

<sup>a</sup>Only U.S. minority students completed MMRS. <sup>b</sup>Only international students completed AIRS, ISSS-total, SWAI, Client Focus, and Rapport.

### International Students Compared to U.S. Students

Hypotheses IA and IB were concerned with whether there were any differences among international students, U.S. minority students, and U.S. majority

Table 4  
Correlations Among Study Variables for International,  
U.S. Minority, and Majority Students

Group Variable	COSE	RA	RC	Level	AIRS <sup>a</sup>	ISSS <sup>a</sup>	SWAI <sup>a</sup>	Client <sup>a</sup>	Rapport <sup>a</sup>
<b>Internationals (<i>n</i> = 40–42)<sup>c</sup></b>									
RA	-.29*								
RC	-.27*	.81**							
Level	.03	.11	-.09						
AIRS	-.38**	.42**	.42**	.04					
ISSS	-.03	.06	-.01	.39**	.38**	.16	.06	.20	
SWAI	.28**	-.57**	-.60**	-.06	-.32*	.16		.86**	.94**
Client	.07	-.51**	-.47**	-.11	-.17	.06		.64**	
Rapport	.38**	-.53**	-.59**	-.01	-.37**	.20			
<b>U.S. Minority Students (<i>n</i> = 78–87)</b>									
RA	-.30**								
RC	-.13	.68**							
Level	.14	-.06	.08						
MMRS <sup>b</sup>	.05	.10	.21*	.09					
<b>U.S. Majority Students (<i>n</i> = 170)</b>									
RA	-.38**								
RC	-.20**	.59**							
Level	.24**	-.16*	.02						
<b>Total Sample (<i>N</i> = 308)</b>									
RA	-.33**								
RC	-.19**	.67**							
Level	.16**	-.10*	-.01						

*Note.* COSE = Counseling Self-Estimate Inventory; RA = Role Ambiguity; RC = Role Conflict; Level = Level of Training (1 = first and second year of doctoral training without prior MA degree; 2 = first and second year of doctoral training with a previous MA degree; 3 = third, fourth, and fifth year of doctoral training; and 4 = predoctoral internship); MMRS = Majority-Minority Relations Scale; AIRS = American-International Relations Scale; ISSS = International Student Supervision Scale-total; SWAI = Supervisory Working Alliance Inventory-Trainee Form-total; Rapport = SWAI-Rapport; Client = SWAI-Client Focus. Higher scores of MMRS and AIRS equal lower levels of acculturation.

<sup>a</sup>Only international students completed AIRS, ISSS-total, SWAI, Client Focus, and Rapport.

<sup>b</sup>Only U.S. minority students completed MMRS. <sup>c</sup>= due to missing data.

\**p* < .05. \*\**p* < .01.



students on counseling self-efficacy and role difficulties in supervision across levels of training. A 3 (student identity)  $\times$  4 (level of training) MANOVA was conducted to examine the data. The independent variable, student identity, consisted of three levels (international students, U.S. minority students, and U.S. majority students). The sample of permanent residents was not included in this analysis, because as a group of non-U.S. citizens, permanent residents differed from the international students on several important variables (see p. 39). The other independent variable, level of training, consisted of four levels (1 = first-and second-year of doctoral training without prior MA degree; 2 = first-and second-year year of doctoral training with a previous MA degree; 3 = third, fourth, and fifth year of doctoral training; and 4 = predoctoral internship). The dependent variables in the analysis were COSE, Role Ambiguity, and Role Conflict.

Prior to analysis, the data were examined to determine whether they violated any of the assumptions underlying MANOVA. The Bartlett's Test of Sphericity was statistically significant (chi-square = 192.28,  $p < .000$ ), indicating the presence of linear correlations among the dependent variables. Examination of the data and data collection indicated that there was independence among observations. However, the examination of the data also revealed some problems with normality (both skewness and kurtosis). Kolmogorov–Smirnov's Test for Normality revealed statistically significant results for Role Ambiguity and Role Conflict, suggesting that these variables were not normally distributed. The Levene's Test of Equality of Error Variance was not statistically significant for any of the three dependent variables (COSE,  $p = .39$ ; RA,  $p = .26$ ; RC,  $p = .29$ ), indicating that the variance of the dependent variables were equal across groups. However, there were some problems with homogeneity of covariance, identified by a statistically significant Box's Test of

Equality of Covariance Matrices, Box's  $M = 99.31$ ,  $F(66, 3914) = 1.32$ ,  $p = .04$ . Hair (1998) also noted that Box's  $M$  is highly sensitive to departure from normality. To help achieve normality and homogeneity of covariance, Role Ambiguity and Role Conflict were subjected to a square-root transformation. Although, the transformation did improve problems with skewness and kurtosis, only minimal differences were detected between the two results (transformed and untransformed). Based on these results, I decided to proceed with the analysis process using the untransformed data because of the inherent problems with interpretation of transformed data. Pillai's Trace was chosen as the criteria to measure the MANOVA, as it is considered to be the most robust in instances where assumptions are violated.

Table 3 presents results of descriptive statistics. Table 4 presents the correlation matrix of all study variables. Table 5 presents the results of the MANOVA. The results revealed no statistically significant multivariate effects, and thus Hypotheses IA and IB were not supported. However, an examination of the means revealed a trend towards international students reporting less counseling self-efficacy and less Role Ambiguity than U.S. majority and minority students. In addition, the mean of Role Conflict for international students in the first level of training was much higher than that of U.S. students. It is possible that the lack of statistically significant results in this analysis may be due to low power.

**Post Hoc Analyses.** The results of the previous MANOVA revealed somewhat low power at the multivariate level, except for at the interaction level. In an effort to improve power, two additional  $2 \times 2$  MANOVAs with fewer cells were conducted, thus increasing the sample size in each cell.

Table 5

Results From the 3 (Student Identity)  $\times$  4 (Level of Training) Multivariate Analysis of Variance on Counseling Self-Efficacy, Role Ambiguity, and Role Conflict

Groups	Pillai's Trace	<i>df</i>	<i>F</i>	$\eta^2$	Power
Student identity	.04	6,568	1.81	.02	.68
Level	.03	9,855	.95	.01	.48
Interaction	.07	18,855	1.10	.02	.78

*Note.*  $N = 297$ .  $\eta^2$  = eta-square, effect size. Student identity = international students, U.S. minority students, and U.S. Majority students. Level = Level of training (1 = first- and second-year of doctoral training without prior MA degree; 2 = first- and second-year of doctoral training with a previous MA degree; 3 = third, fourth, and fifth year of doctoral training; and 4 = predoctoral internship).

First a 2 (student identity)  $\times$  2 (level of training) MANOVA was conducted on the three dependent variables (counseling self-efficacy, Role Ambiguity, and Role Conflict). In this analysis, the independent variable, student identity, consisted of international students and U.S. majority students. U.S. minority students were excluded from this analysis in an effort to increase power, by decreasing the number of cells. The previous four levels of training were also collapsed into two levels. The first level consisted of first- and second-year of doctoral training, and the second level consisted of third, fourth, and fifth year of doctoral training and students on predoctoral internship.

Prior to conducting the MANOVAs, the data were examined to determine whether it violated any of the underlying assumptions. Examination of the data and the data collection indicated that there was independence among observations. Kolmogorov–Smirnov's Test for Normality revealed statistically significant results for Role Ambiguity and Role Conflict, suggesting that these variables were not

normally distributed. Neither the Levene's Test of Equality of Error Variances (COSE,  $p = .30$ ; RA,  $p = .34$ ; RC,  $p = .88$ ), nor the Box's M, Box's M = 30.39,  $F(18, 11296) = 1.60$ ,  $p > .05$ , were statistically significant, indicating equality among variances. To help achieve normality and homogeneity of covariance, Role Ambiguity and Role Conflict were subjected to a square-root transformation. As only minimal differences were obtained between the results of transformed and untransformed data, I decided to proceed with the analysis process using the untransformed data because of the inherent problems of interpretation of findings with transformed data. Pillai's Trace was chosen as the criteria to measure the MANOVA, as it is considered to be the most robust in instances where assumptions are violated.

Table 6 presents results from the MANOVA. The results revealed a statistically significant medium multivariate effect for student identity, Pillai's Trace = .05,  $F(3, 206) = 3.78$ ,  $p = .01$ ,  $\eta^2 = .05$ . No interaction effect was obtained for student identity across levels of training. No main effect was found associated with level of training. The subsequent univariate analysis of variance conducted on student identity revealed a statistically significant difference between the groups on counseling self efficacy, COSE,  $F(1, 210) = 3.88$ ,  $p = .05$ ,  $\eta^2 = .02$ , with U.S. majority students reporting higher levels of counseling self-efficacy than international students (see Table 7).

A second 2 (student identity)  $\times$  2 (level of training) MANOVA was conducted on the three dependent variables (counseling self-efficacy, Role Ambiguity, and Role Conflict). In this MANOVA, international students were compared with U.S. minority students across two levels of training (1 = first- and

Table 6

Results From the 2 (Student Identity)  $\times$  2 (Level of Training) MANOVA  
on Counseling Self-Efficacy and Role Difficulties in Supervision

Groups	Pillai's Trace	<i>df</i>	<i>F</i>	$\eta^2$	Power
Student identity	.05	3,206	3.78*	.05	.80
Level of training	.02	3,206	1.43	.02	.38
Interaction	.02	3,206	1.60	.02	.42

*Note.*  $N = 212$ .  $\eta^2$  = eta-square, effect size. Student identity = international students and U.S. majority students. Level of training consisted of two levels (1 = first- and second-year of doctoral training; 2 = third, fourth, and fifth year of doctoral training and predoctoral internship).

\* $p < .05$ .

Table 7

One-way Analysis of Variance Summary for Effects of International  
and U.S. Majority Students on Counseling Self-Efficacy

Source	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	$\eta^2$
Between groups	1	1424.30	1424.30	3.88*	.02
Within groups	210	77104.23	367.16		
Total	211	78528.53			

*Note.*  $\eta^2$  = eta-square, effect size.

\* $p < .05$ .

second-year of doctoral training; and 2 = the second level consisted of third, fourth, and fifth year of doctoral training and students on predoctoral internship).

Examination of the data and the data collection indicated that there was independence among observations. Kolmogorov-Smirnov's Test for Normality revealed statistically significant results for Role Ambiguity and Role Conflict,

suggesting that these variables were not normally distributed. Neither Levene's Test of Equality of Error Variances (COSE,  $p = .71$ ; RA,  $p = .07$ ; RC,  $p = .12$ ) nor the Box's M, Box's M = 28.77,  $F(18, 12770) = 1.51$ ,  $p = .08$ , were statistically significant, indicating equality among variances. To help achieve normality, Role Ambiguity, and Role Conflict were subjected to a square-root transformation. As only minimal differences were found between the results of the transformed and untransformed data, I decided to proceed with the data analysis using the untransformed data because of the inherent problems of interpretation of findings using transformed data. Pillai's Trace was chosen as the criteria to measure the MANOVA, as it is considered to be the most robust in instances where assumptions are violated.

Table 8 presents the results of the MANOVA. The results revealed a statistically significant, medium multivariate effect associated with student identity, Pillai's Trace = .10,  $F(3, 121) = 4.23$ ,  $p = .01$ ,  $\eta^2 = .10$ . Neither the interaction effect nor the main effect on level of training was statistically significant. The subsequent univariate analysis of variance conducted on student identity revealed a statistically significant difference between the groups on Role Ambiguity,  $F(1, 125) = 4.79$ ,  $p = .03$ ,  $\eta^2 = .04$ , with U.S. minority students reporting more Role Ambiguity than international students (see Table 9).

In addition, two univariate analyses of variance analyses (ANOVAs) were conducted to examine whether Role Ambiguity increased and Role Conflict decreased over years in graduate training as proposed by Olk and Friedlander (1992). The total sample ( $N = 308$ ) was used in these analyses. A one-way ANOVA was conducted for the total sample on Role Ambiguity across the four levels of training (1 = first- and second-year of doctoral training without prior MA degree; 2 = first-

Table 8

Results From the 2 (Student Identity)  $\times$  2 (Level of Training) MANOVA  
on Counseling Self-Efficacy and Role Difficulties in Supervision

Groups	Pillai's Trace	<i>df</i>	<i>F</i>	$\eta^2$	Power
Student identity	.10	3,121	4.23**	.10	.85
Level of training	.02	3,121	.81	.02	.22
Interaction	.06	3,121	2.34	.06	.58

*Note.*  $N = 127$ .  $\eta^2$  = eta-square, effect size. Student identity = international students and U.S. minority students. Level of training consisted of two levels (1 = first- and second-year of doctoral training; 2 = third, fourth, and fifth year of doctoral training and predoctoral internship).

\*\* $p < .01$ .

Table 9

One-way Analysis of Variance Summary for Effects of International  
and U.S. Minority Students on Role Ambiguity

Source	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	$\eta^2$
Between groups	1	622.14	1412.15	4.80*	.04
Within groups	125	16230.76	488.96		
Total	126	16852.90			

*Note.*  $\eta^2$  = eta-square, effect size.

\* $p < .05$ .

and second-year year of doctoral training with a previous MA degree; 3 = third, fourth, and fifth year of doctoral training; and 4 = predoctoral internship). The obtained result was not statistically significant,  $F(3, 304) = 1.52$ ,  $p = .21$ , indicating that Role Ambiguity did not decrease with more years of training. A second one-way ANOVA was conducted for the total sample on Role Conflict across the same four

levels of training. Also this result was not statistically significant,  $F(3, 304) = .175$ ,  $p = .91$ , indicating that Role Conflict did not increase across years of training. Thus, the present findings did not support the proposed theory that supervisees' Role Ambiguity decreases and Role Conflict increases as they become more advanced in their training. Table 10 presents means and standard deviations of Role Ambiguity and Role Conflict by level of training.

Table 10  
Means and Standard Deviations for Role Ambiguity  
and Role Conflict Across Levels of Training

Variables	Level of Training			
	1 ( <i>n</i> = 37)	2 ( <i>n</i> = 51)	3 ( <i>n</i> = 122)	4 ( <i>n</i> = 98)
RA				
<i>M</i>	34.40	30.49	31.46	29.84
<i>SD</i>	9.48	11.03	12.26	11.18
RC				
<i>M</i>	21.97	21.25	20.96	21.48
<i>SD</i>	7.91	7.61	8.52	7.77

*Note.* RA = Role Ambiguity; RC = Role Conflict; Level of Training (1 = first- and second-year of doctoral training without prior MA degree; 2 = first- and second-year of doctoral training with a previous MA degree; 3 = third, fourth, and fifth year of doctoral training; and 4 = predoctoral internship).

In sum, the comparison of international students with U.S. students revealed that international students reported less counseling self-efficacy than U.S. majority students and less Role Ambiguity than U.S. minority students. In addition, Role



Ambiguity and Role Conflict were not found to increase or decrease across levels of training as proposed by Olk and Friedlander (1992).

### The Impact of Acculturation

Hypotheses IC and ID were concerned with whether acculturation together with other study variables (Role Ambiguity, Role Conflict, and level of training) predicted counseling self-efficacy for international students and U.S. minority students. Hierarchical multiple regression analyses were conducted to test these hypotheses. For both hierarchical regression analyses, the dependent variable was counseling self-efficacy.

Regarding the hierarchical multiple regression analysis on international students, the rationale for the order of predictor variables was time of exposure. Variables were entered in the order the trainees were expected to have been exposed to them. AIRS and level of training were entered in the first step and the supervision variables (Role Ambiguity and Role Conflict) were entered in the second step. AIRS and level of training were entered together, because of the theoretical link between these variables; researchers have demonstrated that years of residence in the U.S. are positively associated with level of acculturation among international students (Sodowsky & Plake, 1992). In addition, for international students more years of residence in the U.S. could possibly be associated more advanced stages of academic training. The supervision variables were entered in the last step, because it was expected that students had been exposed more recently to these variables than the other variables.

Regarding the hierarchical multiple regression analysis on U.S. minority students, the rationale for the order of predictor variables was also time of exposure.

MMRS was entered in the first step, level of training in the second step, and the supervision variables (Role Conflict and Role Ambiguity) in the third step. MMRS was entered in the first step, because it was expected that U.S. minority students had been exposed to acculturation throughout their lives. Level of training was entered in the second step, because more years of counseling training and clinical experiences have been related with higher levels of counseling self-efficacy (Larson et al., 1994; Melchert et al., 1996; Sipps et al., 1988). The supervision variables were entered in the last step, because it was expected that the trainees were exposed more recently to these variables than the other variables.

Prior to conducting these analyses, the data were examined to determine whether they violated any of the assumptions underlying regression. Examination of the plots for residuals and partial residuals of the dependent and independent variables revealed linearity, constant variance of error terms, and independence of error terms. As previously noted, Kolmogorov–Smirnov’s Test for Normality revealed statistically significant results on Role Ambiguity and Role Conflict, suggesting that these variables were not normally distributed. Role Ambiguity and Role Conflict were both subjected to a square-root transformation to increase the normality of these distributions. As only minimal differences were found between the transformed and untransformed data, I decided to continue the analysis process using the untransformed data because of the inherent problems with interpretation of transformed data. Furthermore, regression analyses have also been documented as quite robust in terms of violation of normality (Hair et al., 1998).

Table 11 presents the results from the hierarchical regression analysis for international students. The results from this analysis indicated that the variance in COSE was not explained by acculturation and level of training, Step 1:  $F(2, 37) =$

3.07,  $p = .06$ ; or by acculturation, level of training, Role Ambiguity, and Role Conflict, Step 2:  $F(4, 35) = 1.74$ ,  $p = .16$ . Hypothesis IC was not supported because the hypothesized regression model, consisting of level of training, AIRS, Role Ambiguity, and Role Conflict, did not predict COSE.

Table 11

Summary of Hierarchical Regression Analysis for Variables Predicting Counseling Self-Efficacy Among International Students

Variable	<i>B</i>	<i>SEB</i>	<i>B</i>	<i>t</i>	$R^2$
Step 1					
AIRS	-.43	.17	-.38	-2.48*	
Level	.77	4.08	.03	.19	.14
Step 2					
AIRS	-.36	.20	-.32	-1.84	
Level	1.43	4.33	.05	.33	
RA	-.53	.65	-.23	-.81	
RC	.26	.87	.09	.30	.17

Note.  $N = 40$ . Step 2,  $\Delta R^2 = .02$ ,  $F(2, 35) = .51$ ,  $p = .61$ . AIRS = American-International Relations Scale; Level = Level of Training; RA = Role Ambiguity; RC = Role Conflict. Higher scores on AIRS equal lower levels of acculturation.  
\* $p < .05$ .

Table 12 presents results from the hierarchical regression analyses on U.S. minority students. The results of this analysis indicated that the variance in COSE was not explained by acculturation, Step 1:  $F(1, 74) = .12$ ,  $p = .73$ ; by acculturation and level of training, Step 2:  $F(2, 73) = .75$ ,  $p = .48$ ; or by acculturation, level of training, Role Ambiguity, and Role Conflict, Step 3:  $F(4, 71) = 2.28$ ,  $p = .07$ .

Hypothesis ID was not supported, because taken together MMRS, level of training, Role Ambiguity, and Role Conflict did not predict COSE.

Table 12  
Summary of Hierarchical Regression Analysis for Variables Predicting  
of Counseling Self-Efficacy Among U.S. Minority Students

Variable	<i>B</i>	<i>SEB</i>	<i>B</i>	<i>t</i>	<i>R</i> <sup>2</sup>
<b>Step 1</b>					
MMRS	.00	.11	.04	.34	.00
<b>Step 2</b>					
MMRS	.00	.11	.03	.24	
Level	2.81	2.40	.14	1.18	.02
<b>Step 3</b>					
MMRS	.00	.10	.04	.30	
Level	1.88	2.36	.09	.80	
RA	-.73	.28	-.40	-2.60*	
RC	.46	.42	.17	1.10	.11

*Note.*  $N = 76$ . Step 2,  $\Delta R^2 = .02$ ,  $F(2, 73) = 1.38$ ,  $p = .24$ . Step 3,  $\Delta R^2 = .09$ ,  $F(2, 71) = 3.76$ ,  $p = .03$ . MMRS = Majority-Minority Relations Survey; Level = Level of Training; RA = Role Ambiguity; RC = Role Conflict. Higher scores on MMRS equal lower levels of acculturation.

\* $p < .05$ .

**Post Hoc Analyses.** Because of the lack of obtained findings in the regression analyses, two post hoc analysis, one for international students and one for U.S. minority students, were conducted to examine the bivariate relationships between acculturation and Role Ambiguity, Role Conflict, and counseling self-efficacy. See Table 4 for results.

For international students, acculturation (AIRS) had a statistically significant relationship (Pearson's  $r$ ) with COSE, Role Ambiguity, and Role Conflict, indicating that international students who were more acculturated, compared to less acculturated, reported more counseling self-efficacy, less Role Ambiguity, and less Role Conflict. In addition, international students with more counseling self-efficacy, compared to less counseling self-efficacy, also reported being more acculturated and perceiving less Role Ambiguity and Role Conflict.

For U.S. minority students, acculturation (MMRS) had a statistically significant relationship (Pearson's  $r$ ) with Role Conflict, indicating that U.S. minority students who were more acculturated, compared to less acculturated, reported less Role Conflict. In addition, U.S. minority students with more counseling self-efficacy, compared to less counseling self-efficacy, reported less Role Ambiguity.

In sum, these results, concerning the impact of acculturation, demonstrated that acculturation, Role Ambiguity, Role Conflict and level of training neither predicted counseling self-efficacy for international students nor U.S. minority students. However, being more acculturated was found to be associated with more counseling self-efficacy, less Role Ambiguity, and less Role Conflict for international students. In contrast, being more acculturated was only related with less Role Conflict in supervision for U.S. minority students.

### The Impact of Multicultural Supervision

Hypotheses ID and IE were concerned with the relationship between ISSS-total and five other study variables (level of training, acculturation, counseling self-efficacy, Role Ambiguity, and Role Conflict), and with whether ISSS-total functions as a mediator variable for the effect of acculturation on COSE (counseling self-

efficacy), Role Ambiguity, and Role Conflict. Correlations and regression analyses were conducted to test these hypotheses.

Before conducting the data analyses, the data were examined to determine whether they violated any of the assumptions underlying regression analysis. Examination of the plots for residuals and partial residuals of the dependent and independent variables revealed linearity, constant variance of error terms, and independence of error terms. Kolmogorov–Smirnov’s Test for Normality revealed statistically significant results on Role Conflict, suggesting problems with the normal distribution of this variable. Role Conflict was subjected to a square-root transformation to adjust for these problems. As only minimal differences were detected between the transformed and untransformed results, I decided to continue the analysis process using the untransformed data because of the inherent problems with interpretation regarding transformed data. Furthermore, regression analyses have also been documented as quite robust in terms of violation of the normality (Hair et al., 1998).

Table 4 presents the relationship between ISSS-total and the other study variables. The results revealed that ISSS-total was statistically significantly, positively, correlated (Pearson’s  $r$ ) with acculturation (AIRS) and level of training, thus Hypothesis ID was partially supported.

To test whether ISSS-total functioned as a mediator variable in the three-variable mediational model of AIRS, ISSS-total, and COSE (Hypothesis IE), three regression analyses were conducted and four conditions were examined, see Table 13. In the first regression analysis, the mediator variable (ISSS-total) was regressed on the independent variable (AIRS) in order to identify whether the independent variable (AIRS) affected the mediator variable (ISSS-total). The results from the first

Table 13  
Testing the Mediation Model on Counseling Self-Efficacy:  
Summary of Three Regression Analyses

DV	IV	<i>B</i>	<i>SEB</i>	<i>B</i>	<i>t</i>	<i>R</i> <sup>2</sup>
ISSS-total	AIRS	.30	.12	.38	2.50*	.14
COSE	AIRS	-.43	.17	-.38	-2.50*	.14
COSE	AIRS	-.48	.19	-.42	-2.60*	
	ISSS-total	.18	.23	.13	.78	.16

*Note.* *N* = 40. DV = Dependent Variable; IV = Independent Variable; AIRS = American-International Relations Scale; ISSS-total = International Student Supervision Scale; COSE = Counseling Self-Estimate Inventory.

\**p* < .05.

regression revealed that AIRS had a statistically significant affect on ISSS-total,  $F(1, 38) = 6.27, p = .02$ . Thus, the first condition for a mediator variable was met. The condition in the second analysis was that the independent variable (AIRS) must affect the dependent variable (COSE). The results from the second regression revealed that AIRS had a statistically significant affect on COSE,  $F(1, 38) = 6.26, p = .02$ . The condition in the third regression was that the mediator variable (ISSS-total) must affect the dependent variable (COSE). Although the third regression was statistically significant,  $F(2, 37) = 3.41, p = .04$ , ISSS-total did not produce a unique statistically significant effect on COSE beyond the variance explained by AIRS. Table 14 reports results of direct and indirect effects. As shown in Table 14, ISSS-total (multicultural supervision) produced a small indirect effect of AIRS (acculturation) on COSE (counseling self-efficacy); however, ISSS-total did not meet all the required conditions for a mediator variable.

Table 14

## Summary of Direct and Indirect Effects in Predicting Counseling Self-Efficacy

Path	Direct Effect	Indirect Effect	Total Effect
AIRS, COSE	-.38	.05	-.33
AIRS, ISSS-total	.38		.38
ISSS-total, COSE	.13		.13

*Note.*  $N = 40$ . AIRS = American-International Relations Scale; ISSS-total = International Student Supervision Scale; COSE = Counseling Self-Estimate Inventory.

To test whether ISSS-total functioned as a mediator variable in the three-variable-mediation model of AIRS, ISSS-total, and Role Ambiguity, three regression analysis were conducted, see Table 15. The results from the first regression revealed that AIRS had a statistically significant effect on ISSS-total,  $F(1, 38) = 6.27, p = .02$ . Thus, the first condition for mediator variable was met. The condition in the second analysis was that the independent variable (AIRS) must affect the dependent variable (Role Ambiguity). The results from the second regression revealed that AIRS did have a statistically significant effect on Role Ambiguity  $F(1, 38) = 8.17, p = .007$ . The condition in the third regression was that the mediator variable (ISSS-total) must affect the dependent variable (COSE). Although, the third regression was statistically significant,  $F(2, 37) = 4.26, p = .02$ , the mediator variable, ISSS-total, did not produce a unique statistically significant effect on Role Ambiguity beyond the variance explained by AIRS (acculturation). Table 16 reports results of direct and indirect effects. As shown in Table 16, ISSS-total (multicultural supervision) produced a small indirect effect of (AIRS) acculturation on Role Ambiguity; however, ISSS-total did not meet all the required conditions for a mediator variable.



Table 15  
Testing the Mediation Model on Role Ambiguity:  
Summary of Three Regressions

DV	IV	<i>B</i>	<i>SEB</i>	<i>B</i>	<i>t</i>	<i>R</i> <sup>2</sup>
ISSS-total	AIRS	.30	.12	.38	2.50*	.14
RA	AIRS	.21	.07	.42	2.86**	.18
RA	AIRS	.23	.08	.46	-2.88**	
	ISSS-total	-.00	.10	-.11	-.68	.19

*Note.* *N* = 40. DV = Dependent Variable; IV = Independent Variable; AIRS = American-International Relations Scale; ISSS-total = International Student Supervision Scale; RA = Role Ambiguity.  
\**p* < .05. \*\**p* < .01.

Table 16  
Summary of Direct and Indirect Effects in Predicting Role Ambiguity

Path	Direct Effect	Indirect Effect	Total Effect
AIRS, RA	.42	-.05	.38
AIRS, ISSS-total	.38		.38
ISSS-total, RA	-.11		-.11

*Note.* *N* = 40. AIRS = American-International Relations Scale; ISSS-total = International Student Supervision Scale; RA = Role Ambiguity.

To test whether ISSS-total functioned as a mediator variable in the three-variable-mediation model of AIRS, ISSS-total, and Role Conflict, three regression analysis were conducted, see Table 17. The results from the first regression revealed that AIRS did have a statistically significant effect on ISSS-total,  $F(1, 38) = 6.27$ ,  $p = .02$ . Thus the first condition for a mediator variable was met. In the second analysis,

the independent variable (AIRS) must affect the dependent variable (Role Conflict). The results from the second regression revealed that AIRS did have a statistically significant effect on Role Conflict  $F(1, 38) = 7.96, p = .008$ . The condition in the third regression was that the mediator variable (ISSS-total) must affect the dependent variable (COSE). Although the third regression was statistically significant,  $F(2, 37) = 4.78, p = .01$ , the mediator variable (ISSS-total) did not produce a unique statistically significant effect on Role Conflict beyond the variance explained by AIRS (acculturation). Table 18 reports results of direct and indirect effects. As shown in Table 18, ISSS-total (multicultural supervision) produced a small indirect effect of (AIRS) acculturation on Role Conflict; however, ISSS-total did not meet all the required conditions for a mediator variable.

Table 17  
Testing the Mediation Model on Role Conflict:  
Summary of Three Regressions

DV	IV	<i>B</i>	<i>SEB</i>	<i>B</i>	<i>t</i>	<i>R</i> <sup>2</sup>
ISSS-total	AIRS	.30	.12	.38	2.50*	.14
RC	AIRS	.16	.06	.42	2.82**	.17
RC	AIRS	.18	.06	.49	3.09**	
	ISSS-total	-.00	.07	-.19	-1.22	.20

*Note.*  $N = 40$ . DV = Dependent Variable; IV = Independent Variable; AIRS = American-International Relations Scale; ISSS-total = International Student Supervision Scale; RC = Role Conflict.

\* $p < .05$ . \*\* $p < .01$ .

**Post Hoc Analyses.** Two post hoc analyses were conducted in conjunction with the examination of the impact of multicultural supervision. Since no

Table 18  
Summary of Direct and Indirect Effects in Predicting Role Conflict

Path	Direct Effect	Indirect Effect	Total Effect
AIRS, RC	.42	.08	.34
AIRS, ISSS-total	.38		.38
ISSS-total, RC	-.19		-.19

*Note.*  $N = 40$ . AIRS = American-International Relations Scale (acculturation); ISSS-total = International Student Supervision Scale; RC = Role Conflict.

relationships were detected between ISSS-total and counseling self-efficacy, Role Ambiguity, or Role Conflict, a post hoc analysis was conducted to examine whether these variables (counseling self-efficacy, Role Ambiguity, or Role Conflict) would have a relationship with another measure of supervision, the Supervisory Working Alliance (SWAI-total scale, SWAI-Rapport, SWAI-Client Focus). See Table 4 for results. Obtained Pearson's  $r$  values revealed that a stronger supervisory working alliance was statistically significantly associated with more counseling self-efficacy, less Role Ambiguity, less Role Conflict, and more acculturation. The SWAI's subscale Rapport was also statistically significantly correlated with the same four variables, whereas Client Focus was only correlated with Role Ambiguity and Role Conflict. These findings indicate that even though ISSS-total, as a measure of multicultural supervision, was not associated with counseling self-efficacy, Role Ambiguity, and Role Conflict, supervisory working alliance was associated with these variables.

The second post hoc analysis, a multivariate analysis, was conducted to examine possible gender differences among the international students on all study

variables (COSE, Role Ambiguity, Role Conflict, AIRS, ISSS-total, SWAI, SWAI-Rapport, and SWAI-Client Focus). The results revealed no statistical significant multivariate effect on gender, Pillai's Trace = .19,  $F(6, 33) = 1.09$ ,  $p = .28$ ,  $\eta^2 = .19$ , power = .44, indicating no differences between international men and women on these variables. However, a medium effect size was obtained and in combination with low power (.44), this suggests that with more power a group difference could possibly have been detected. Table 19 presents means and standard deviations for international women and men.

In sum, the examination of the impact of multicultural supervision revealed that higher scores of ISSS-total were associated with higher levels of acculturation and with more advanced levels of training. However, ISSS-total was not found to be

Table 19  
Means and Standard Deviations for Study Variables  
for International Women and Men

Variables	COSE	RA	RC	AIRS	ISSS	SWAI	Rapport	Client Focus
<b>Women</b>								
<i>M</i>	157.46	27.42	19.96	107.20	42.36	107.88	62.08	45.08
<i>SD</i>	23.24	10.42	8.11	21.85	15.41	13.11	8.79	5.42
<b>Men</b>								
<i>M</i>	164.75	29.25	21.81	101.13	37.87	102.67	60.40	41.87
<i>SD</i>	20.27	8.79	6.37	15.60	17.10	11.61	7.79	5.28

*Note.* COSE = Counseling Self-Estimate Inventory; RA = Role Ambiguity; RC = Role Conflict; Level AIRS = American-International Relations Scale; ISSS = International Student Supervision Scale; SWAI = Supervisory Working Alliance Inventory-Trainee Form, Rapport = SWAI-Rapport, Client Focus = SWAI-Client Focus. Higher scores of AIRS equal lower levels of acculturation.

related with counseling self-efficacy, Role Ambiguity, and Role Conflict. The results further demonstrated that ISSS-total did not mediate the effect of acculturation on COSE, Role Ambiguity, and Role Conflict. However, a stronger supervisory working alliance as rated by international supervisees was associated with more counseling self-efficacy, higher levels of acculturation, less Role Ambiguity, and less Role Conflict. In addition, no gender differences were obtained on any of the study variables between international men and women.

### Summary of Research Area One

The results from research area one demonstrated that international students reported less counseling self-efficacy than U.S. majority students and less Role Ambiguity than U.S. minority students. International students who were more acculturated, compared to less acculturated, also reported more counseling self-efficacy, less Role Ambiguity, less Role Conflict, and stronger supervisory working alliance. In the present study, no differences were obtained between international women and men on any of the study variables. Furthermore, multicultural supervision that included a discussion of issues unique to international students was not associated with these students' counseling self-efficacy and role difficulties in supervision, as well as it did not mediate the effect of students' acculturation on their counseling self-efficacy. However, a strong supervisory working alliance was found to be positively associated with international students' counseling self-efficacy and negatively associated with their Role Ambiguity and Role Conflict. A strong supervisory working alliance was also associated with international students' being more acculturated.

## Research Area Two

Research area two was concerned with whether or not the results from the present study supported previously obtained results regarding acculturation (Sodowsky & Plake, 1992), theories of biculturalism (Sodowsky & Plake, 1992; Szapocznik et al., 1981), and results regarding counseling self-efficacy (Larson et al., 1992).

### Acculturation

Hypotheses IIA–IID were concerned with whether the present findings on acculturation supported previous obtained results regarding acculturation on continent-of-origin, years of residence in the U.S., gender, and visa status (Sodowsky & Plake, 1992). Hypotheses IIA–IID were tested with several separate MANOVAs. This approach was selected in order to replicate the methods used in previous research (Sodowsky & Plake, 1992).

The dependent variables in all the MANOVAs were the subscales of AIRS (Perceived Prejudice, Acculturation, and Language Use). The sample consisted of international students and permanent residents, as this sample combination was more similar to the sample used in Sodowsky and Plake's sample of international people. Means and standard deviations for Hypotheses IIA–IID are presented in Table 20.

Prior to conducting MANOVA analyses, the data were examined to determine whether they violated any of the assumptions underlying MANOVA. The variables were normally distributed. Examination of the data and data collection indicated that there was independence among observations. For all the MANOVAS, neither the Levene's Test of Equality of Error Variance nor the Box's Test of

Table 20

Means and Standard Deviations for the Subscales of AIRS (Acculturation, Perceived Prejudice, and Language Use) Among Non-U.S. Citizens<sup>a</sup>

Variables	Acculturation		Perceived Prejudice		Language Use		<i>n</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Continent							
Asia	41.90	8.33	68.40	13.31	9.80	2.62	10
Europe	37.69	7.01	56.77	12.50	9.85	2.91	13
South Am.	37.33	7.69	56.58	10.37	7.67	3.63	12
Years of Residence in the U.S.							
>5 years	41.36	5.53	53.95	14.73	9.14	3.59	22
<5 years	36.40	7.60	59.48	12.74	8.00	3.32	25
Gender							
Female	39.00	7.36	59.39	14.75	8.61	3.67	33
Male	38.35	8.07	54.24	12.39	8.29	3.14	17
Visa Status							
Int'l's	39.12	6.79	57.22	14.73	8.58	3.48	40
Perm. Res.	37.22	10.92	60.78	11.33	8.00	3.71	9

*Note.* South Am. = South America. Higher scores on Acculturation, Perceived Prejudice, and Language Use equal being less acculturated, perceiving more prejudice, and using less English.

<sup>a</sup>Non-U.S. citizens included both international students and permanent residents.

Equality of Covariance Matrices were statistically significant, indicating equality of variances.

In order to test Hypothesis IIA, Continent-of-Origin, a one-factor MANOVA with three levels was conducted on the sample of international students and

permanent residents. The independent variable was continent-of-origin (South America, Europe, and Asia). Africa was excluded because of small sample size ( $n = 1$ ). No multivariate effect was obtained, Pillai's Trace = .28,  $F(6, 62) = 1.68$ ,  $p = .14$ ,  $\eta^2 = .14$ , power = .60. Hypothesis IIA was not supported, because no differences were obtained between South Americas, Europeans, and Asians on Acculturation, Perceived Prejudice, or Language Use. However, the low power in conjunction with medium effect,  $\eta^2 = .14$ , indicates that with more power it is likely that group differences could be detected. An examination of the means revealed that Asian students reported more Perceived Prejudice and less Acculturation than did European and South American students.

In order to test Hypothesis IIB, Years of Residence in the U.S., a one-factor MANOVA with two levels was conducted on the sample of international students and permanent residents. The independent variable consisted of years of residence in the U.S. (less than 5 years; more than 5 years). A statistically significant large multivariate effect was obtained, Pillai's Trace = .26,  $F(3, 43) = 4.96$ ,  $p < .01$ ,  $\eta^2 = .25$ , power = .89. Subsequent univariate analyses revealed a statistically significant difference between the groups on Acculturation,  $F(1, 45) = 6.39$ ,  $p < .05$ ,  $\eta^2 = .12$ , with students being in the U.S. for more than 5 years reporting being more acculturated. As expected, there was no difference between the groups on perceived prejudice. Table 21 presents the univariate analysis of variance summary for Acculturation. International students and permanent residents who had been in the U.S. for less than 5 years were less acculturated than international students and permanent residents who had been in the U.S. for more than 5 years. Hypothesis IIB was partially supported, because more years of residence in the U.S. was associated with these students' being more acculturated. As expected, there was no difference



on Perceived Prejudice between the two groups. However, contrary to expectations there was no difference on Language Use between the groups.

Table 21

One-way Analysis of Variance Summary for Effects of Years of Residence  
on Acculturation Among Non-U.S. Citizens

Source	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	$\eta^2$
Between groups	1	288.31	288.31	6.39*	.12
Within groups	45	2031.09	45.14		
Total	46	2319.40			

*Note.*  $\eta^2$  = eta-square, effect size. Non-U.S. citizens' students include both international students and permanent residents.

\* $p < .05$ .

In order to test Hypothesis IIC, Gender, a one factor MANOVA with two levels was conducted on gender using the sample of international students and permanent residents. The results revealed that the multivariate effect was not statistically significant, Pillai's Trace = .03,  $F(3, 46) = .50$ ,  $p = .69$ ,  $\eta^2 = .03$ , power = .14. Hypothesis IIC was partially supported, because no differences were found between women and men on the three dependent variables at the multivariate level. Although there was low power (.14) in the analyses, this low power in conjunction with the small obtained effect size,  $\eta^2 = .03$ , precludes the likelihood of obtaining statistically significant results with more power. However, contrary to the findings in Sodowsky and Plake's (1992) study, the examination of the means in the present study revealed a trend towards international men being more acculturated, perceiving less prejudice, and using more English than international women.

In order to test Hypothesis IID, Visa Status, a one-factor MANOVA with two levels was conducted on visa status (international student visa and permanent residents). The results were not statistically significant, Pillai's Trace = .04,  $F(3, 45) = .56$ ,  $p = .64$ ,  $\eta^2 = .04$ , power = .16. Hypothesis IID was not supported, because the obtained results did not confirm the previous findings of differences between international students and permanent residents on Acculturation, Perceived Prejudice, and Language Use. Although there was low power (.14) in the analyses, this low power in conjunction with the small obtained effect size,  $\eta^2 = .03$ , precludes the likelihood of obtaining statistically significant results with more power.

In sum, the present findings supported Sodowsky and Plake's (1992) results in two areas: (1) acculturation increased with more years of residence in the U.S.; and (2) there were no differences between women and men on Acculturation, Perceived Prejudice, and Language Use. Contrary to expectations, no differences were obtained between permanent residents and international students on Acculturation and Perceived Prejudice, as well as between students from different continents on Acculturation, Perceived Prejudice, and Language Use.

### **Biculturation**

Hypothesis IIE was concerned with biculturalism, in terms of whether students who reported bicultural scores on AIRS would report more counseling self-efficacy and less role difficulties (Role Ambiguity and Role Conflict) in supervision. The sample in the present study were all non-U.S. citizen students.

To test for biculturalism, three trend analyses were conducted to detect the possibility of curvilinear relationship between AIRS (independent variable) and COSE, Role Ambiguity, and Role Conflict (dependent variables). One trend analysis

per dependent variable was conducted, and each trend analysis included a regression analysis consisting of three steps. AIRS was entered in the first step, AIRS-squared in the second step, and AIRS-cubed in the third step. AIRS-squared provided information regarding the possibility of a curvilinear relationship between AIRS and the dependent variables, and AIRS-cubed provided information regarding possible cubic (s-shaped) relationships.

Prior to conducting the regression analyses, the data were examined to determine whether they violated any of the assumptions underlying regression analysis. Examination of the plots for residuals and partial residuals of the dependent and independent variables revealed linearity, constant variance of error terms and independence of error terms. However, Kolmogorov–Smirnov’s Test for Normality revealed statistically significant results on Role Conflict, suggesting that this variable was not normally distributed. Role Conflict was subjected to a square-root transformation to correct for non-normality. As only minimal differences were detected between the results of transformed and untransformed data, I decided to continue the analysis process using the untransformed data because of the inherent problems with interpretation of transformed data.

Table 22 presents the correlations (Pearson’s  $r$ ) among the variables for these analyses. Table 23 presents the results of the regression analyses. The statistical program, SPSS, automatically eliminated AIRS-cubed from all three analyses on COSE, due to a lack of unique contribution of this variable. In the hierarchical regression analysis of AIRS on COSE, the first step was statistically significant,  $F(1, 50) = 5.41$   $p = .03$ ,  $R = .31$ , indicating that the linear relationship accounted for 10% of the variance in COSE. The  $\Delta R^2$  (R-square change statistics) in step 2 was not statistically significant, indicating that AIRS-squared did not contribute to the model

beyond the contribution of AIRS. Thus, this result did not support the hypothesis of a curvilinear, or bicultural, relationship between AIRS and COSE.

Table 22

Correlation Matrix Among Acculturation (AIRS, AIRS<sup>2</sup>, AIRS<sup>3</sup>)  
and Counseling Self-Efficacy for Non-U.S. Citizens<sup>a</sup>

Variables	COSE	RA	RC	AIRS	AIRS <sup>2</sup>	AIRS <sup>3</sup>
COSE	—					
RA	-.31*	—				
RC	-.21	.86**	—			
AIRS	-.29*	.30*	.31*	—		
AIRS <sup>2</sup>	-.28*	.28*	.31*	.99**	—	
AIRS <sup>3</sup>	-.26*	.27*	.30*	.97**	.99**	—

*Note.*  $N = 50-53$ , due to missing data, depending on correlation. AIRS = American-International Relations Scale; COSE = Counseling Self-Estimate Inventory; RA = Role Ambiguity; RC = Role Conflict.

<sup>a</sup>Non-U.S. citizens includes all international students, permanent residents, and other nonimmigrant visa students

\* $p < .01$ . \*\* $p < .01$ .

In the hierarchical regression analysis of AIRS on Role Ambiguity, step 1 was statistically significant,  $F(1, 50) = 5.23$ ,  $p = .03$ ,  $R = .31$ , indicating that the linear relationship accounted for 10% of the variance in Role Ambiguity. The  $\Delta R^2$  ( $R$ -square change statistics) in step 2 was not statistically significant, indicating that AIRS-squared did not contribute to the model beyond the contribution of AIRS. This result did not support the hypothesis of a curvilinear, or bicultural, relationship between AIRS and Role Ambiguity.

In the hierarchical regression analysis, of AIRS on Role Conflict, step 1 was statistically significant,  $F(1, 50) = 6.41$ ,  $p = .02$ ,  $R = .34$ , indicating that the linear

Table 23

**Examination of Curvilinear Relationship Between AIRS and Counseling  
Self-Efficacy, Role Ambiguity, and Role Conflict:  
Summary of Hierarchical Regression Analysis**

DV	IV	<i>B</i>	<i>SEB</i>	<i>B</i>	<i>t</i>	<i>R</i> <sup>2</sup>
COSE	Step 1					
	AIRS	-.36	.16	-.31	-2.32*	.10
	Step 2					
	AIRS	-.98	1.37	-.85	-.72	
	AIRS <sup>2</sup>	-.00	.01	.54	.46	.10
RA	Step 1					
	AIRS	.19	.08	.31	-2.30*	.10
	Step 2					
	AIRS	.44	.73	.72	.61	
	AIRS <sup>2</sup>	-.00	.00	-.42	-.35	.10
RC	Step 1					
	AIRS	.15	.06	.34	2.53*	.11
	Step 2					
	AIRS	.00	.54	.22	.17	
	AIRS <sup>2</sup>	.00	.00	.12	.10	.11

*Note:*  $N = 51$ . COSE,  $\Delta R^2 = .00$ ,  $F(1, 49) = .04$ ,  $p = .65$ . RA,  $\Delta R^2 = .00$ ,  $F(1, 49) = .12$ ,  $p = .73$ . RC,  $\Delta R^2 = .00$ ,  $F(1, 49) = .01$ ,  $p = .92$ . DV = Dependent Variable; IV = Independent Variable; AIRS = American-International Relations Scale; COSE = Counseling Self-Estimate Inventory; RA = Role Ambiguity; RC = Role Conflict. Higher scores on AIRS indicate lower levels of acculturation.

\* $p < .05$ .

relationship accounted for 11% of the variance in Role Conflict. The  $\Delta R^2$  (R-square change statistics) in step 2 was not statistically significant, indicating that AIRS<sup>2</sup> did not contribute to the model beyond the contribution of AIRS. This result did not

support the hypothesis of a curvilinear, or bicultural, relationship between AIRS and Role Conflict. In sum, the present findings did not support the theory of biculturalism. More specifically, international students who reported bicultural scores on AIRS did not report more counseling self-efficacy, less Role Ambiguity, and less Role Conflict than students who were more and less acculturated.

### Counseling Self-Efficacy

Hypotheses IIF–IIH were concerned with whether the results from the present study supported previously obtained results regarding counseling self-efficacy (Larson et al., 1992). Several one-way ANOVAs were conducted because this was the method used by Larson et al. COSE was the dependent variable in all analyses. The total sample size ( $N = 310$ ) was used and was considered large enough for most analyses to obtain appropriate power. Table 24 presents means and standard deviations.

Before conducting the ANOVAs, the data were examined to determine whether they violated any of the assumptions underlying ANOVA. Kolmogorov–Smirnov’s Test for Normality indicated normal distribution of the independent variables. The Levene’s Test of Equality of Error Variances was not statistically significant (gender,  $p = .48$ ; level of training,  $p = .38$ , and race,  $p = .23$ ), indicating homogeneity of variance.

In order to test Hypothesis IIF, Level of Training, a one-way ANOVA was conducted on the total sample. The independent variable, level of training, consisted of four levels (1 = first- and second-year of doctoral training without prior MA degree; 2 = first- and second-year of doctoral training with a previous MA degree; 3 = third, fourth, and fifth year of doctoral training; and 4 = predoctoral internship).

Table 24

**Means and Standard Deviations for Counseling Self-Efficacy  
on Level of Training, Gender, and Race**

Variables	Level of Training				Gender		Race	
	1	2	3	4	Women	Men	Minority	Majority
<b>COSE</b>								
<i>M</i>	158.35	162.98	166.84	168.85	164.77	168.33	167.30	166.74
<i>SD</i>	18.49	23.22	20.90	18.20	20.87	19.13	22.08	18.35
<i>n</i>	37	51	124	98	218	92	87	170

*Note.* Level of training consisted of four levels (1 = first- and second-year of doctoral training without prior MA degree; 2 = first- and second-year of doctoral training with a previous MA degree; 3 = third, fourth, and fifth year of doctoral training; and 4 = predoctoral internship).

The results revealed a statistically significant difference associated with COSE on level of training,  $F(3, 306) = 2.85, p = .04$ , with a small effect size,  $\eta^2 = .03$ . Multiple comparisons revealed a statistically significant difference between students in their first- and second-year of doctoral training without a master's degree and students on predoctoral internship. Hypotheses IIF was partially supported, because differences were only detected between the first and fourth level of training. Larson et al. (1992) reported differences between students with and without a master degree in counseling psychology.

In order to test Hypothesis IIG, Gender, a one-way ANOVA was conducted with gender as the independent variable. No differences were obtained between women and men on COSE,  $F(1, 308) = 1.97, p = .16, \eta^2 = .01$ . Hypothesis IIG was supported.

In order to test Hypothesis IIE, Race, a one-way ANOVA was conducted with race (U.S. majority versus U.S. minority students). Larson et al. (1992) had specifically compared White and Asian students, however, the sample size of Asian Americans ( $n = 14$ ) in the present study was too small. Instead I collapsed all the U.S. minority students into one group and compared them with U.S. majority students. The ANOVA results were not statistically significant,  $F(1, 255) = .05, p = .83, \eta^2 = .00$ . In sum, the present findings on COSE supported the previous results reported by Larson et al. (1992): that counseling self-efficacy increases with more training; that there are no gender differences on counseling self-efficacy; and that there are no differences between U.S. minority and majority students on counseling self-efficacy.

#### Summary of Research Area Two

Regarding research area two, the present results supported Sodowsky and Plake's (1992) findings that acculturation increases with more years of residence in the U.S., and that there are no differences between women and men on Acculturation, Perceived Prejudice, and Language Use. However, several hypotheses regarding acculturation were not supported, because no differences were obtained between permanent residents and international students and between students from different continents. Furthermore, the present findings did not support the theory of biculturation—that international students who were bicultural would report more counseling self-efficacy, less Role Ambiguity, and less Role Conflict than more or less acculturated students. Finally, the present findings on counseling self-efficacy (COSE) supported the previously obtained results in Larson et al. (1992), including



that counseling self-efficacy increases with more training, that there are no gender and racial differences among students' scores on counseling self-efficacy.

## **CHAPTER IV**

### **DISCUSSION**

The goals of the present study were to increase the knowledge regarding international students in APA-accredited programs in professional psychology and to examine whether these students' experiences as psychologists-in-training differed from U.S. students. It was expected that international students would report lower counseling self-efficacy and different levels of role difficulties in supervision compared to U.S. students, because of issues associated with acculturation. It was further expected that if supervisors of international students discussed issues specifically related to these students in supervision, it would have a positive impact on these students' counseling self-efficacy and role difficulties in supervision. In addition, the present study examined whether the present findings supported previously obtained results regarding acculturation, biculturation, and counseling self-efficacy.

This chapter is organized into four sections. The first section focuses on the results from research area one. The second section presents the results from research area two. In both of these sections, the results are integrated with the literature. Section three addresses limitations and section four presents implications for research and training and supervision based on the findings.

### Research Area One

Research area one was concerned with international students' training experiences and whether these differed from U.S. minority and majority students. Hypotheses IA and IB were concerned with whether these student groups differed on counseling self-efficacy, Role Ambiguity, and Role Conflict across levels of training. It was expected that international students would report less counseling self-efficacy and less Role Conflict, but more Role Ambiguity than U.S. students in early stages of training. In advanced stages of training, it was expected that international students would report similar levels of counseling self-efficacy and Role Ambiguity, but less Role Conflict. However, none of the hypotheses were supported. It is possible that the lack of obtained results were due to low power and unequal sample and cell sizes. For example, there were only four international students in the first level of training.

In general, the sample of international students was small, only 42 of the 310 participants, which resulted in power problems in several analyses. The reason for the low response rate among international students could have been due to the length of the questionnaire, which was longer than that for U.S. majority and minority students. However, it also possible that the estimated 4.9% international students in APA-accredited programs is an overestimate.

In an effort to conduct some analyses with more power, two post hoc MANOVAs with less cells (four cells each), were conducted in conjunction with Hypotheses IA to IB. The original four training levels were collapsed into two levels in these analyses. The first post hoc analysis revealed that international students reported less counseling self-efficacy than U.S. majority students. The second post hoc analysis showed that international students reported less Role Ambiguity than

U.S. minority students. The power continued to be low for level of training in these analyses. However, the effect sizes for level of training was also small, suggesting that it is unlikely even with more power that the linear combination of counseling self-efficacy and role difficulties would increase or decrease across training levels. Post hoc analyses conducted on Role Ambiguity and Role Conflict separately also confirmed the lack of change in these two variables across training levels, which is contrary to the proposed theory (Olk & Friedlander, 1992). However, the lack of change in Role Ambiguity and Role Conflict across training supported Ladany and Friedlander's (1995) results.

Hypothesis IC was concerned with whether acculturation together with level of training, Role Ambiguity, and Role Conflict predicted counseling self-efficacy for international students and for U.S. minority students. This hypothesis was not supported. Low power could possibly explain the lack of obtained findings in the analysis on international students. A medium effect was also obtained, indicating that with more power differences could possibly be obtained. For U.S. minority students, the power was at an appropriate level and the effect size was small, indicating that the model lacked predictive power. Post hoc analyses for Hypothesis IC demonstrated that being more acculturated for international students was associated with more counseling self-efficacy, less Role Ambiguity, and less Role Conflict. More counseling self-efficacy for international students was also associated with less Role Ambiguity and Role Conflict and more acculturation. In contrast, higher levels of acculturation for U.S. minority students was only associated with less Role Conflict, and more counseling self-efficacy with less Role Ambiguity. These findings suggest that the effect of acculturation is more pervasive for international students than for U.S. minority students.

Hypothesis ID was concerned with whether multicultural supervision (measured by ISSS-total) was associated with counseling self-efficacy, level of training, Role Ambiguity, Role Conflict, and acculturation. Hypothesis ID was concerned with whether ISSS-total mediated the affect of acculturation on counseling self-efficacy, Role Ambiguity, and Role Conflict. Hypothesis IE was partially supported, because higher scores on ISSS-total were associated with more advanced levels of training and lower acculturation. Contrary to expectations, ISSS-total was not correlated with Role Ambiguity, Role Conflict, and counseling self-efficacy. Furthermore, Hypothesis IE was not supported, because ISSS-total did not mediate the effect of acculturation on counseling self-efficacy, Role Ambiguity, or Role Conflict. The power was at an appropriate level in the mediation analyses and in conjunction with a medium effect, these findings demonstrates that ISSS-total does not mediate the effect of international students' acculturation on these three variables.

Even though ISSS-total was not correlated with counseling self-efficacy, Role Ambiguity and Role Conflict, a post hoc analysis revealed that having a strong supervisory working alliance, as rated by trainees, was positively linked with these variables. In addition, more acculturated international students reported stronger working alliance with their supervisors. It seemed that it was the aspect of rapport in the supervisory alliance that had the strongest impact on supervisees. The Rapport subscale of SWAI was related with Role Ambiguity, Role Conflict, counseling self-efficacy and acculturation, whereas the other subscale, Client Focus, was only associated with Role Ambiguity and Role Conflict. Both Client Focus and ISSS-total are similar in that these scales assess supervisory content rather than process. It is interesting to note that neither Client Focus nor ISSS-total was related to trainees'

counseling self-efficacy, suggesting the possibility that good rapport with supervisors can translate into supervisees' feeling efficacious with clients.

A post hoc analysis on possible gender differences revealed that there are no differences between international women and men-supervisees on counseling self-efficacy (COSE), Role Ambiguity, Role Conflict, acculturation (AIRS), supervisory working alliance (SWAI), or ISSS-total. However, a large effect size in conjunction with low power (.44) was obtained in this analysis, which indicates that with more power it is likely that group differences could be detected. Examination of the means revealed a trend towards international women, compared to international men, being less acculturated, and having less counseling self-efficacy and role difficulties. Women also reported a tendency for stronger supervisory working alliances and more supervisory discussion regarding multicultural issues.

In sum, the results from research area one demonstrated that international students differ from U.S. students in that they reported less counseling self-efficacy than U.S. majority students and less Role Ambiguity than U.S. minority students. Acculturation was found to have an impact on international students' training experiences; students who were more acculturated reported more counseling self-efficacy, less Role Ambiguity, less Role Conflict, and a stronger supervisory working alliance. A good supervisory working alliance seems critical for international students as because was positively associated with these students counseling self-efficacy and negatively associated with their Role Ambiguity and Role Conflict. On the other hand multicultural supervision, that included a discussion of issues unique to international students, did not impact these students' counseling self-efficacy or role difficulties.

As a whole and in the light of the current literature, the present findings on international students demonstrated that international students in APA-accredited

programs are a culturally diverse group of students, representing 20 countries and six continents. Most of the students were from Asia, followed by Europe, South America, North America, Africa, and Australia. This delineation of continents among the international students in the present study mirrors the delineation of continents among the total body of international students in the U.S. (Davis, 1997).

Many of the international students in the present study had been in the U.S. for several years and had obtained previous degrees, either undergraduate and/or graduate degrees, in the U.S. Specifically, 32 of the 42 international students had obtained their most recent degree in the U.S. These findings suggest that many of the international students in the present study most likely had already overcome initial difficulties in adjusting to the U.S. culture, such as culture shock and severe language barriers. The international students in the present study were also more acculturated than the international sample in Sodowsky and Plake's (1992) study. The present sample reported a lower mean score on all three AIRS subscales, with the largest mean difference (11 points) being on Perceived Prejudice. Therefore, it is also likely that many of the international students, at the point of data collection, were quite acculturated to the U.S. culture and had surpassed the crisis stage of the U-curve adjustment process proposed for sojourners. According to the U-curve proposition, the initial adjustment is easy and euphoric, which is followed by a crisis of unhappiness and poor adjustment. With time, sojourners' adjustment and mood improve (Church, 1982; Sewell & Davidsen, 1956; Surdam & Collins, 1984).

Even though it is likely that international students in the present study were quite acculturated, they did report less counseling self-efficacy than U.S. majority students. A relationship between less acculturation and less counseling self-efficacy was also detected, which supports Tran's (1993) finding of a relationship between

more acculturative stress and less personal self-efficacy. Furthermore, the present findings also lend support to Gutierrez's (1982) proposition that minority students whose native language is not English may face various verbal difficulties as counselors, such as presenting thoughts and ideas verbally to clients. Difficulties with communication, Gutierrez argued could make these students seem less skilled than U.S. students and have negative influence on their view of themselves as counselors.

The acculturation level of the international students in the present study not only influenced their counseling self-efficacy, but also their degree of role difficulties in supervision. More specifically, students who were less acculturated were more uncertain of their supervisor's expectations and evaluations, as well as how to manage the conflictual roles of being a student, supervisee, colleague, and therapist simultaneously. The results also revealed that U.S. minority students reported more Role Ambiguity than international students. One reason for this result may be the status of ethnic and race relations in the U.S., which has resulted in individuals of different ethnic and racial groups often approaching each other with caution (Brown & Landrum-Brown, 1995). Brown and Landrum-Brown reported that there tends to be a high level of caution in supervisory relationships, involving White supervisors and ethnic or racial minority supervisees. This type of supervisory relationship was common in the present study in which 83% of supervisors were White. Individuals who have been exploited and deprived of power tend to react sensitively to abuse of power. Power is inherent in the supervisory structure that belongs to supervisors (Fong, 1994; Fong & Lease, 1997; Williams & Halgin, 1995). Compared to U.S. ethnic and racial minority students, most international students are likely to come from countries in which they have belonged to the majority culture and therefore may not have been exposed to discrimination and oppression in the same way many U.S.



minority students may have been. Thus, it is likely that international students, compared to U.S. students, because of being less exposed to discrimination and oppression, are less sensitive to power dynamics and may therefore report less Role Ambiguity.

It is possible that the degree of role difficulties among low acculturated international students was due to a lack of understanding of the U.S. culture and supervision, and if addressed in supervision could be alleviated. Gopaul-McNicol and Brice-Baker (1998) argued that when cultural issues are not discussed in supervision, it can lead to major misunderstandings concerning what is expected to take place in supervision. However, ISSS-total, as a measure of multicultural supervision, was not related with Role Ambiguity, Role Conflict, counseling self-efficacy, and supervisory working alliance. Furthermore, an examination of the means of each ISSS-total item showed that several items were not frequently discussed in supervision, such as item 6, "My supervisors and I examined how emotions are expressed in my native country and how it may differ from the manner that emotions are expressed in the U.S.," and item 20, "In supervision, we never talked about how the clinical work I am doing in the U.S. could be applied in my future work in my home country." These findings may indicate that supervisors may not deem these issues as important for discussion with international supervisees. It is also possible that international students in the present study, because of the length of time they had been in the U.S., no longer needed to discuss such issues, or that they had already discussed issues such as these in supervision with previous supervisors. Furthermore, the present study did not assess whether international students considered a supervisory discussion of the items in ISSS-total as important. Future research is recommended to explore trainees' perception of what constitutes good multicultural supervision.

Although ISSS-total was not correlated with several other variables, it was associated with more advanced training levels, supervisees' perception of supervisors being more sensitive to diversity issues, and with supervisees' having a racial or ethnic minority supervisors. The finding that higher scores of ISSS-total were associated with students in later stages in their training, suggests that multicultural supervision may be considered by supervisors as an advanced stage of supervision and therefore implemented more frequently with experienced supervisees. Yet, it is also possible that experienced supervisees are more aware of multicultural issues and address these in supervision. However, another possibility may be that if these multicultural issues were addressed in supervision with beginning trainees, it could have a positive impact on international students' counseling and supervision experiences. Ladany, Inman, Constantine, and Hofheinz (1997) found that supervisees, when instructed, were more likely to conceptualize treatment strategies from a multicultural perspective. Thus, if supervisors were instructed to discuss multicultural issues with beginning international supervisees, it may have an impact on these students' counseling self-efficacy and role difficulties.

Although the present study did not show support for a relationship between multicultural supervision and counseling self-efficacy, and between multicultural supervision and role difficulties in supervision, a good supervisory working alliance between international students and their supervisors was found to be associated with these students' counseling self-efficacy and decrease role difficulties. These findings support previous results on the relationship between supervisory working alliance and role difficulties in supervision (Ladany & Friedlander, 1995) and between supervisory working alliance and counseling self-efficacy (Efstation et al., 1990). In addition, these findings bridge with Mallinckrodt and Leong's (1992) and Wan et al.'s (1992)

results concerning the positive impact supportive academic programs and faculty can have on international students. Both Mallinckrodt and Leong, and Wan et al. reported a link between a more supportive academic environment and less stress and anxiety among international graduate students.

It is also possible that a strong supervisory working alliance may function as a buffer for international students against their loss of cultural familiarity. Some international students in the present study may have reacted to the change of cultural environment similarly to the students in Lee and Lodewijks' (1995) study. Lee and Lodewijks found that international students' learning styles differed from native students, because they preferred their professors rather than themselves to direct the course of their learning. Although this was not tested in the present study, it seems possible that international students rely more on their supervisors for validation, support, and encouragement than U.S. students.

### Research Area Two

Research area two was concerned with whether the results from the present study supported previously obtained results regarding acculturation (Sodowsky & Plake, 1992) and counseling self-efficacy (Larson et al., 1992), as well as proposed theories of biculturalism (Sodowsky & Plake, 1992; Szapocznik et al., 1981).

Hypotheses IIA–IID focused on acculturation in terms of continent-of-origin, years of residence in the U.S., gender, and visa status. Hypothesis IIA was not supported because no differences were found between international individuals (international students and permanent residents) from Asia, Europe, and South America on Acculturation, Perceived Prejudice and Language Use. Hypothesis IIB was partially supported because international individuals who had been in the U.S. for

5 or more years were more acculturated than international individuals who had been in the U.S. for less than 5 years. As expected no differences were found between the groups on Perceived Prejudice. However contrary to findings reported by Sodowsky and Plake (1992), no differences were obtained between the groups on the use of the English language. Hypothesis IIC was supported because no differences were obtained between women and men on Acculturation, Perceived Prejudice, or Language Use. However, contrary to Sodowsky and Plake, the examination of the means revealed a trend towards men being more acculturated, perceiving less prejudice, and using more English than international women. Furthermore, Hypothesis IID was not supported, because the results showed no differences between international students and permanent residents on Acculturation, Perceived Prejudice, and Language Use.

The lack of support between some of the findings in Sodowsky and Plake (1992) and the present study may be due to low power and sample differences. The power was low in the analyses on continent-of-origin, gender, and visa status in the present study, and the effect sizes were small except for in the analysis on continent-of-origin. This suggests that with more power group differences are likely to be detected in the analysis on continent-of-origin. Furthermore, the international sample in Sodowsky and Plake's study consisted of undergraduate and graduate international students as well as scholars and academicians whose visa status included visiting visas, permanent residents, and U.S. citizenship. The sample in the present study consisted solely of doctoral students, with either international student or permanent resident visas.

Hypothesis IIE focused on biculturalism and whether students with a bicultural score on AIRS would report more counseling self-efficacy (COSE), less

Role Ambiguity, and less Role Conflict. Biculturalism is also considered to be the most adaptive form of acculturation (Szapocznik et al., 1981). Hypothesis IIE was not supported, because there was no support for bicultural relationships between AIRS and counseling self-efficacy, Role Ambiguity, and Role Conflict. More specifically, students who obtained bicultural scores on AIRS did not report higher counseling self-efficacy and lower role difficulties in supervision compared to students who reported being more or less acculturated. In these analyses, medium effect sizes were obtained in conjunction with low power, and thus it is likely that with more power statistically significant results could be detected. It is also possible that AIRS, as a measure of acculturation, does not discriminate between biculturation and acculturation. Sadowsky and Plake (1992) reported that the middle scores on their scale would indicate biculturalism. However, it is likely that some of the students who scored biculturally, did not rate the items using the middle score but instead rated some items high and others low which consequently could have resulted in a bicultural score and confounded the findings. Yet, it is also likely that being highly acculturated and assimilated to the U.S. culture is necessary for international students to feel efficacious as counselors. It may also take many years to develop a bicultural identity, more years than most international students spend in the U.S. Overall, biculturalism is a complex construct which has not been researched extensively, and more research in this area is needed.

Hypotheses IIF–IIH were concerned with whether the present findings supported previously obtained findings on counseling self-efficacy in terms of level of training, gender, and race (Larson et al., 1992). All three hypotheses were at least partially supported. For Hypothesis IIF, the results revealed that students on predoctoral internship reported higher counseling self-efficacy than students in the

first or second year of their doctoral training and who had not yet obtained a master's degree. It should be noted that level of training was conceptualized somewhat differently by Larson et al. (1992). These authors compared counseling self-efficacy across three-degree levels (B.A., M.A., and Ph.D.), whereas the present study examined counseling self-efficacy in terms of years in doctoral training. Hypothesis IIG was supported, because the results revealed that there were no differences on counseling self-efficacy between women and men. Finally, Hypothesis IIH was also supported, the results revealed no difference on counseling self-efficacy between Caucasian and racial and ethnic minority students.

In sum, the results from research area two revealed that many of the hypotheses regarding acculturation were not supported; however, the lack of findings in this area could be due to low power and differences in demographics between the two samples. Furthermore, the hypothesis on biculturalism was not supported; students with bicultural scores on AIRS did not report more counseling self-efficacy or less role conflict than high and low acculturated students. It is possible that AIRS does not discriminate well between acculturation and biculturation. Finally, the present study supported all the findings previously obtained on counseling self-efficacy in Larson et al. (1992), that is counseling self-efficacy increases by years of training, but that there are no differences on counseling self-efficacy between women and men and between minority and majority students.

### Limitations

There are several limitations in the present study that must be acknowledged, especially in the areas of methods, sample, power, and instrumentation. The limitations regarding the methods have to do with sample selection procedures. First,

the initial randomness of the 250 training directors was somewhat compromised by adding 11 additional programs due to low response rate. Although these 11 programs were randomly sampled, only counseling and clinical psychology programs were included in the random selection of more programs, possibly compromising the range of student participants. In addition, several programs, which did not respond to the initial mailing, were excluded in the follow up contact due to not having any international students in their program. These programs were excluded to keep mailing and copy costs down. Even though these sample maneuvers potentially changed what would have been the make up of the original sample, the present sample could be considered as a stratified random sample.

The student participants were recruited through training directors, who were requested to distribute surveys to students in their programs or internship sites. Even though the training directors were asked to distribute the surveys to a random sample of students in their program or site, there is no information about how the training directors actually selected the students. Another limitation regarding training directors' distribution of surveys was that no follow up contact was possible with nonresponding students, which could have had a negative impact on the response rate. An examination of students' responses showed that U.S. majority students responded at a much higher rate than U.S. minority students or international students. The reasons for these differences may be that the questionnaire given to U.S. majority students consisted of fewer instruments (three instruments) than that of U.S. minority (four instruments) and international students (seven instruments). Examining the returned questionnaires, it also became evident that in some cases questionnaires, consisting of certain demographic questions and instruments, intended for members of one student group, were mistakenly given to members of another group. This also

resulted in some missing data for the international students. In addition, the international students were treated as a homogeneous group, which neglected the diversity within this group.

Issues of low power were common in several analyses. Analyses, such as the  $3 \times 4$  MANOVA, require large samples, and the small sample of international students resulted in low power in these analyses. It is likely that with a larger sample of international students, differences could have been detected in certain analyses, especially in situations where medium effect sizes were already obtained.

Several instruments used in the present study have not been used extensively in the literature and some of them also showed some problems with metrics. Role Ambiguity and Role Conflict were not normally distributed in several analyses, which could also have lowered power especially in analyses where the sample size was small. In addition, Role Ambiguity and Role Conflict were highly correlated ( $r = .68$ ), suggesting possible problems with multicollinearity that could have decreased statistical efficacy, such as power in several analyses (Hair et al., 1998). Finally, the present study employed a quasi-experimental method using self-report measures, which not only limited the possibility of causality but also highlights the possibility of participants presenting themselves in a way that did not represent their behavior (Babbie, 1989).

There are also several limitations to be considered regarding the development of the ISSS-total. First, the sample of international students was small which prevented the employment of a factor analysis to examine the underlying structure of the scale. Second, the scale lacks stability information, such as test-retest. There are also some questions regarding the validity of ISSS-total, because the scale was not related to several other supervision constructs, such as supervisory working alliance,



Role Ambiguity, and Role Conflict. More testing on ISSS-total is essential to further examine the scale's validity and reliability. However, despite the limitations, some initial reliability and validity estimates were obtained for ISSS-total. Being one of the first instruments to measure multicultural supervision, ISSS-total also provides some insights into certain aspects of multicultural supervision as well as its impact on other counseling and supervision variables.

### Implications

#### Future Research

Future research in the area of international students in psychology and counseling training programs should include other additional instruments and variables than the ones examined in the present study to further explore these students' experiences and training needs. For example, an examination of these students' experiences in the areas of academic, research, and professional development would be important as well as examining the impact advisors and mentors have on these students during their training. Although this was not examined in the present study, it is likely that international students' level of role difficulties may have a negative impact on their emotional well being. Olk and Friedlander (1992) reported that more Role Ambiguity and Role Conflict were associated with more anxiety in students. Further research needs to be conducted in the areas of acculturation, role difficulties in supervision, and emotional reactions among international students. The international students in the present study were also treated as a homogeneous group due to the small sample size; however, it is

recommended that future research examine how the diversity within this group (culture, ethnicity, nationality, etc.) is associated with various counselor variables.

The present study sampled international students in professional psychology doctoral programs; however, it is possible that international students in psychology and counseling master's degree programs would report other training needs and issues. International students in these type of degree programs are likely to stay in the U.S. for a shorter period of time and, therefore, be less acculturated than students in the present study, which could have a unique impact their training experiences and needs. Furthermore, the present used a survey approach collecting data. However, since international students and counseling training is a new area of research, a qualitative study could possibly provide more information about these students' experiences. Qualitative research is considered an appropriate methodology to use when exploring a phenomenon about which little is known or little data exist (Hill, Thompson, & Williams, 1997).

The present study also included an examination of the relationship between acculturation and international students' training experiences; however, little is known about the influences of acculturation on other counseling variables. Future research could explore whether acculturation impacts the therapeutic relationship and whether clients' level of acculturation influences their experiences in counseling. There is also a lack of empirical data regarding biculturalism and more research needs to be conducted to increase our understanding of biculturalism and the progressive nature of acculturation. Finally, more research in the area of multicultural supervision is critical as well. Although the present study provided some information about multicultural supervision with international students, little is known about other students' multicultural supervision experiences. Continuing the development of ISSS-

total and other multicultural scales is necessary to further examine the impact of multicultural supervision on other counselor and client variables.

### **Supervision and Training**

The findings from the present study highlight the importance of providing culturally sensitive training and supervision to international students. International students' level of acculturation was associated with their supervision and counseling experiences, and thus it is critical that supervisors and other training personnel acknowledge the pervasive impact of acculturation on these students. It is further recommended that supervisors and other training personnel assess international students' level of acculturation and assist them in their transition to the U.S. culture and educational system.

The present study demonstrated that international students in general had lower counseling self-efficacy than U.S. majority students and that international students' who were less acculturated, compared to more acculturated, reported less counseling self-efficacy and more role difficulties in supervision. Thus, it is critical that supervisors address international students' cultural concerns regarding their roles and functions as counselors and supervisees. To provide good multicultural supervision, supervisors must be culturally sensitive and have some level of awareness regarding other cultures (D'Andrea & Daniels, 1997; Gopaul-McNicol & Brice-Baker, 1998). Supervisors must also acknowledge that the Euro-American culture has a strong influence on current theories of counseling (Kaiser, 1997) and on supervision. An example of a valued student characteristic in U.S. and expected supervisee behavior is self-disclosure; however, in other cultures self-disclosure can be viewed as offensive and inappropriate (Rhinesmith, 1985; Story, 1982).

**Supervisory discussion of cultural behaviors and expectations is recommended when working with international supervisees, and especially with low acculturated supervisees.**

**In terms of role difficulties in supervision, it is essential that supervisors make their expectations and evaluation methods explicit with international supervisees, and other supervisees as well, in order to lessen any confusion these students may have regarding supervision. It is also important that supervisors address their expectations and evaluation methods with international supervisees at all levels of training, because the present study indicated that students' degree of Role Ambiguity and Role Conflict did not change over time. Furthermore, supervisors need to be explicit about how their expectations of supervisees may change, as supervisees become more autonomous and experienced as counselors.**

**Although a strong supervisory working alliance may be important for all supervisees regardless of cultural background, it seems highly critical for international students. This study showed that a strong supervisory working alliance was associated with less role difficulties in supervision and more counseling self-efficacy. International students who were more acculturated reported stronger alliances with their supervisors. Based on these findings, it is recommended that supervisors make an effort to create a supervisory atmosphere in which a strong alliance can develop, especially when working with low acculturated supervisees.**

**Although little is known at this point about international students' experiences in other areas such as research and professional development, it seems likely that these students' experiences and needs may differ from U.S students in these areas as well. It is recommended that academic advisors and other training personnel are aware of international students' cultural backgrounds and possible cultural**

difficulties, and provide assistance and support when needed. Finally, based on the results from the present study, it can be concluded that international students in APA-accredited programs have counseling and supervision experiences, and thus also training needs, that differ from U.S. students. It is highly recommended that training programs, training personnel, and supervisors acknowledge these needs and provide appropriate training and support for international students.

**Appendix A**  
**Approval Letters From the Human Subjects**  
**Institutional Review Board**

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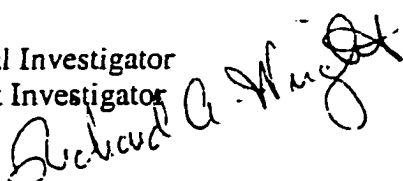
## WESTERN MICHIGAN UNIVERSITY

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Date: 14 July 1998

To: Mary Anderson, Principal Investigator  
Johanna Nilsson, Student Investigator

From: Richard Wright, Chair



Re: HSIRB Project Number 98-06-09

This letter will serve as confirmation that your research project entitled "International Students as Compared to U.S. Students in APA-Accredited Programs in Professional Psychology: Acculturation, Clinical Self-Efficacy, and Role Difficulties in Supervision" has been **approved** under the **exempt** category of review by the Human Subjects Institutional Review Board. The conditions and duration of this approval are specified in the Policies of Western Michigan University. You may now begin to implement the research as described in the application.

Please note that you may **only** conduct this research exactly in the form it was approved. You must seek specific board approval for any changes in this project. You must also seek reapproval if the project extends beyond the termination date noted below. In addition if there are any unanticipated adverse reactions or unanticipated events associated with the conduct of this research, you should immediately suspend the project and contact the Chair of the HSIRB for consultation.

The Board wishes you success in the pursuit of your research goals.

Approval Termination: 14 July 1999

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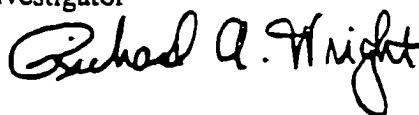
## WESTERN MICHIGAN UNIVERSITY

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Date: 11 August 1998

To: Mary Anderson, Principal Investigator  
Johanna Nilsson, Student Investigator

From: Richard Wright, Chair



Re: Changes to HSIRB Project Number 98-06-09

This letter will serve as confirmation that the changes to your research project "International Students as Compared to U.S. Students in APA-Accredited Programs in Professional Psychology: Acculturation, Clinical Self-Efficacy, and Role Difficulties in Supervision" requested in your FAX dated 10 August 1998 have been approved by the Human Subjects Institutional Review Board.

The conditions and the duration of this approval are specified in the Policies of Western Michigan University.

Please note that you may **only** conduct this research exactly in the form it was approved. You must seek specific board approval for any changes in this project. You must also seek reapproval if the project extends beyond the termination date noted below. In addition if there are any unanticipated adverse reactions or unanticipated events associated with the conduct of this research, you should immediately suspend the project and contact the Chair of the HSIRB for consultation.

The Board wishes you success in the pursuit of your research goals.

Approval Termination: 14 July 1999



Human Subjects Institutional Review Board



Kalamazoo, Michigan 49008-3899

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## WESTERN MICHIGAN UNIVERSITY

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Date: 1 September 1998

To: Mary Anderson, Principal Investigator  
Johanna Nilsson, Student Investigator

From: Sylvia Culp, Chair *Sylvia Culp*

Re: Changes to HSIRB Project Number 98-06-09

This letter will serve as confirmation that the changes to your research project "International Students as Compared to U.S. Students in APA-Accredited Programs in Professional Psychology: Acculturation, Clinical Self-Efficacy, and Role Difficulties in Supervision" requested in your FAX dated 27 August 1998 have been approved by the Human Subjects Institutional Review Board.

The conditions and the duration of this approval are specified in the Policies of Western Michigan University.

Please note that you may **only** conduct this research exactly in the form it was approved. You must seek specific board approval for any changes in this project. You must also seek reapproval if the project extends beyond the termination date noted below. In addition if there are any unanticipated adverse reactions or unanticipated events associated with the conduct of this research, you should immediately suspend the project and contact the Chair of the HSIRB for consultation.

The Board wishes you success in the pursuit of your research goals.

Approval Termination: 14 July 1999

Human Subjects Institutional Review Board



Kalamazoo, Michigan 49008-3899

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## WESTERN MICHIGAN UNIVERSITY

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Date: 22 January 1999

To: Mary Anderson, Principal Investigator  
Johanna Nilsson, Student Investigator for dissertation

From: Sylvia Culp, Chair

A handwritten signature in cursive script that reads "Sylvia Culp".

Re: Changes to HSIRB Project Number 98-06-09

This letter will serve as confirmation that the changes to your research project "International Students as Compared to U.S. Students in APA-Accredited Programs in Professional Psychology: Acculturation, Clinical Self-Efficacy, and Role Difficulties in Supervision" requested in your FAX dated 22 January 1999 have been approved by the Human Subjects Institutional Review Board.

The conditions and the duration of this approval are specified in the Policies of Western Michigan University.

Please note that you may **only** conduct this research exactly in the form it was approved. You must seek specific board approval for any changes in this project. You must also seek reapproval if the project extends beyond the termination date noted below. In addition if there are any unanticipated adverse reactions or unanticipated events associated with the conduct of this research, you should immediately suspend the project and contact the Chair of the HSIRB for consultation.

The Board wishes you success in the pursuit of your research goals.

Approval Termination: 14 July 1999

**Appendix B**  
**Letter From the American Psychological Association**



AMERICAN  
PSYCHOLOGICAL  
ASSOCIATION

August 3, 1998

Johanna Nilsson  
Counseling Center  
Shoemaker Hall  
University of Maryland  
College Park, MD 20742-8111

Dear Ms. Nilsson:

As per your request, please find enclosed labels for all APA accredited doctoral programs in clinical, counseling, and school psychology as well as predoctoral internship training programs in psychology. They are listed in alphabetical order according to institution name.

The charge for doctoral program labels is \$46.00 and \$66.00 for the internship labels. An invoice for payment will be forwarded to you from our accounting department.

Please contact me at (202) 336-5995 if you have any questions.

Sincerely,

\_\_\_\_\_  
Accreditation Assistant  
Program Consultation and Accreditation

## **Appendix C**

### **Recruitment Materials: Letters to Training Directors at APA-Accredited Programs and Internship Sites**

College of Education  
Counselor Education and Counseling Psychology



Kalamazoo, Michigan 49008-5195  
616 387-5100

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## WESTERN MICHIGAN UNIVERSITY

---

September 1, 1998

Dear Training Director:

We are writing to ask for your help with Johanna E. Nilsson's dissertation research. We know your time is valuable and full, but we hope to solicit your cooperation with distributing surveys to predoctoral psychology interns at your site. The purpose of the present study is to gather specific information regarding students' training experiences and needs, by examining various student groups such as international students, U.S. minority and majority students. We hope that the information obtained from the present study will further our understanding of clinical self-efficacy and supervision, and thus be helpful for training programs, training directors, and clinical supervisors.

The students will be assured that their participation is voluntary. By completing the surveys, they indicate their consent to participate. The students will be asked to return the surveys to the researchers in an enclosed, self-addressed, and stamped envelope. Neither the students' identity nor the name of your institution will be asked for in order to assure anonymity and confidentiality.

We would gratefully appreciate your assistance in obtaining a diverse sample, representative of the student body in APA-accredited programs. Please randomly distribute the three enclosed surveys to predoctoral interns at your site as follows:

1. the green survey to an international student
2. the yellow survey to a racial/ethnic minority U.S. student
3. the blue survey to a majority U.S. student

Please also fill out the enclosed postcard and return it to us. The postcard, which is marked with the name of your institution, will allow us to track response rate and follow up with non-respondents. Please, note again that the interns' surveys are in no way marked for identifying information and neither are the students asked for any identifying information. If you have any questions or concerns regarding this study, please do not hesitate to contact us by phone, mail, or email.

Thank you for your time and cooperation; it is greatly appreciated.

Sincerely,

*Johanna E. Nilsson*      *Mary Z. Anderson*

Johanna E. Nilsson, M.A.  
Doctoral Candidate  
(301) 314-7651  
email: x94nilsson@wmich.edu

Mary Z. Anderson, Ph.D.  
Assistant Professor  
(616) 387-5113  
email: mary.anderson@wmich.edu

September 1, 1998

Dear Training Director:

We are writing to ask for your help with Johanna E. Nilsson's dissertation research. We know your time is valuable and full, but we hope to solicit your cooperation with distributing surveys to predoctoral psychology interns at your site. The purpose of the present study is to gather specific information regarding students' training experiences and needs, by examining various student groups such as international students, U.S. minority and majority students. We hope that the information obtained from the present study will further our understanding regarding clinical self-efficacy and supervision, and thus be helpful for training programs, training directors, and clinical supervisors.

The students will be assured that their participation is voluntary. By completing the surveys, they indicate their consent to participate. The students will be asked to return the surveys to the researchers in an enclosed, self-addressed, and stamped envelope. Neither the students' identity nor the name of your institution will be asked for in order to assure anonymity and confidentiality.

We would gratefully appreciate your assistance in obtaining a diverse sample, representative of the student body in APA-accredited programs. Please randomly distribute the three enclosed surveys to doctoral students at your site as follows:

1. the **green survey** to an **international student**
2. the **yellow survey** to a **racial/ethnic minority U.S. student**
3. the **blue survey** to a **majority U.S. students**

Please also **fill out the enclosed postcard and return it to us**. The postcard, which is marked with your institution and training program, will allow us to track response rate and follow up with non-respondents. Please, note again that the interns' surveys are in no way marked for identifying information and neither are the students asked for any identifying information. If you have any questions or concerns regarding this study, please do not hesitate to contact us by phone, mail, or email.

Thank you for your time and cooperation; it is greatly appreciated.

Sincerely,

Johanna E. Nilsson, M.A.  
 Doctoral Candidate  
 (301) 314-7651  
 email: x94nilsson@wmich.edu

Mary Z. Anderson, Ph.D.  
 Assistant Professor  
 (616) 387-5111  
 email: mary.anderson@wmich.edu

**NEW FORM**

Letter head

Date

Dear \_\_ (name will be filled in after phone contact) \_\_:

**I am writing regarding to our phone conversation (date), in which you stated that you would be willing to distribute surveys to international and U.S. doctoral students in your program.** The purpose of the present study is to gather specific information regarding students' training experiences and needs, by examining various student groups such as international students, U.S. minority and majority students. We hope that the information obtained from the present study will further our understanding regarding clinical self-efficacy and supervision, and thus be helpful for training programs, training directors, and clinical supervisors.

The students will be assured that their participation is voluntary. By completing the surveys, they indicate their consent to participate. The students will be asked to return the surveys to the researchers in an enclosed, self-addressed, and stamped envelope. Neither the students' identity nor the name of your institution will be asked for in order to assure anonymity and confidentiality.

**We would gratefully appreciate your assistance in obtaining a diverse sample, representative of the student body in APA-accredited programs. Please randomly distribute the enclosed surveys to doctoral students in your program as follows:**

1. the 1/2 green surveys to international students *\* total number of international students in program*
2. the 1/4 yellow surveys to racial/ethnic minority U.S. students
3. the 1/4 blue surveys to majority U.S. students *\* 1-2 surveys depending on number of international students*

Please also fill out the enclosed letter and return it to us. The postcard, which is marked with your institution and training program, will allow us to track response rate and follow up with non-respondents. Please, note again that the students' surveys are in no way marked for identifying information and neither are the students asked for any identifying information. If you have any questions or concerns regarding this study, please do not hesitate to contact us by phone, mail, or email.

**Thank you for your time and assistance. Your help is greatly appreciated.**

Sincerely,

Johanna E. Nilsson, M.A.  
 Doctoral Candidate  
 (301) 314-7651  
 email: x94nilsson@wmich.edu

Mary Z. Anderson, Ph.D.  
 Assistant Professor  
 (616) 387-5113  
 email: mary.anderson@wmich.edu



## **Appendix D**

### **Recruitment Materials: Postcard Information to Training Directors Regarding Distribution of Surveys**

September 1, 1998

Dear Training Director:

( )

Please, respond to the following questions and return this postcard whether or not you choose to assist in survey distribution.

1. I distributed the surveys: Yes No

2. If you answered yes, how many students did you give a survey?

International students – 0...1...2

U.S. minority students – 0...1...2

U.S. majority students – 0...1...2

Thank you very much,

Johanna E. Nilsson, MA.

&

Mary Z. Anderson, Ph.D.

Western Michigan University

**Appendix E**  
**Recruitment Materials: Cover Letter and**  
**Informed Consent to Minority Students**

College of Education  
Counselor Education and Counseling Psychology

Kalamazoo, Michigan 49008-5195  
616 387-5100

## WESTERN MICHIGAN UNIVERSITY

September 1, 1998

Dear Colleague:

I am writing to ask for your help and participation in my dissertation research on students' experiences as clinicians and supervisees. The purpose of the present study is to gather specific information regarding students' training experiences and needs, by examining various student groups such as international students, U.S. minority and majority students. We hope that the information obtained from the present study will further our understanding regarding clinical self-efficacy and supervision, and thus be helpful for training programs, training directors, and clinical supervisors.

Participating in this study will require you to complete a survey containing questions concerning your experiences as a clinician and supervisee, as well as about your experiences with the U.S. majority culture. This survey will take about 20-30 minutes to complete. Once you have completed it, please return it in the enclosed, self-addressed and stamped envelope. The survey is fully anonymous and confidential; that is your name, institution, or any other identifying information will not be recorded.

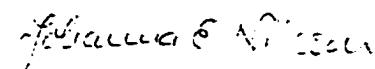
Your participation in this study is entirely voluntarily and you may refuse to participate without penalty and prejudice by simply not filling out this survey. Your completion and return of the survey indicates your consent for us to use the answers you supply.

I know your time is valuable, so to show my appreciation of your participation in this study, I would like to enter your name in a drawing for two 50-dollar cash prizes. The prizes will be drawn on or after October 5, 1998. If you want to enter this drawing, please fill out the enclosed, stamped postcard with your name and address, and return it to me separately from your survey.

This consent document has been approved and stamped for use for one year by the Human Subjects Institutional Review Board. Participants should not complete the survey if this document does not show a stamped date and signature in the upper right corner. If you have any questions about this study, please do not hesitate to contact me, Johanna E. Nilsson by phone (301-314-7651) or email (x94Nilsson@wmich.edu). You may also contact my faculty advisor, Mary Z. Anderson, Ph.D. (616-387-5113); the Human Subjects Institutional Review Board at Western Michigan University (616-387-8293) or the vice president for research at the same university (616-387-8298).

Thank you for your time and attention. Your assistance in this project is greatly appreciated.

Sincerely,



Johanna E. Nilsson, M.A.  
Doctoral Candidate

WESTERN MICHIGAN UNIVERSITY  
H. S. I. R. B.  
Approved for use for one year from this date:  
JUL 14 1998  
FOR R. WEIGHT  
HSIRB Chair

**Appendix F**

**Recruitment Materials: Cover Letter and Informed Consent  
to Majority Students**

September 1, 1998

Dear Colleague:

I am writing to ask for your help and participation in my dissertation research on students' experiences as clinicians and supervisees. The purpose of the present study is to gather specific information regarding students' training experiences and needs, by examining various student groups such as international students, U.S. minority and majority students. We hope that the information obtained from the present study will further our understanding regarding clinical self-efficacy and supervision, and thus be helpful for training programs, training directors, and clinical supervisors.

Participating in this study will require you to complete a survey containing questions concerning your experiences as a clinician and supervisee. This survey will take about 10-15 minutes to complete. Once you have completed it, please return it in the enclosed, self-addressed and stamped envelope. The survey is fully anonymous and confidential; that is your name, institution, or any other identifying information will not be recorded.

Your participation in this study is entirely voluntarily and you may refuse to participate without penalty and prejudice by simply not filling out this survey. Your completion and return of the survey indicates your consent for us to use the answers you supply.

I know your time is valuable, so to show my appreciation of your participation in this study, I would like to enter your name in a drawing for two 50-dollar cash prizes. The prizes will be drawn on or after October 5, 1998. If you want to enter this drawing, please fill out the enclosed, stamped postcard with you name and address, and return it to me separately from your survey.

This consent document has been approved and stamped for use for one year by the Human Subjects Institutional Review Board. Participants should not complete the survey if this document does not show a stamped date and signature in the upper right corner. If you have any questions about this study, please do not hesitate to contact me, Johanna E. Nilsson by phone (301-314-7651) or email (x94Nilsson@wmich.edu). You may also contact my faculty advisor, Mary Z. Anderson. Ph.D. (616-387-5113); the Human Subjects Institutional Review Board at Western Michigan University (616-387-8293) or the vice president for research at the same university (616-387-8298).

Thank you for your time and attention. Your assistance in this project is greatly appreciated.

Sincerely,

Johanna E. Nilsson, M.A.  
Doctoral Candidate

## **Appendix G**

### **Recruitment Materials: Postcard Regarding Award to Student Participants**

Yes, I would like to enter  
in the drawing of two  
50-dollars cash prizes.  
The prizes will be drawn on  
or after October 5, 1998  
Name:

Address:

Again, thank you for your  
assistance in this project,

Johanna E. Nilsson, M.A.

&

Mary Z. Anderson, Ph.D.  
Western Michigan University



## **Appendix H**

### **Researcher's Script: Follow Up Phone Calls to Non-Responding Training Directors**

Hi, Dr.....

1. -- My name is Johanna Nilsson. I am a doctoral student from Western Michigan University. I am calling you to ask you a couple questions concerning a package of surveys that I sent to you about three weeks ago. Do you have time talking to me right now?

If response is: "Yes"

--- I sent you a package of six surveys that I asked you to distribute to students in your program. Did you receive this material?

If response is: "No"

---When is a good time to call you back?

2. ---Included in the material I sent to you was a postcard, with a couple of questions, that I asked you to return to me. Your response on this postcard was to indicate whether or not you choose to assist with distributing surveys to 6 students in your program. Since I have not heard anything from you, I am calling to see whether you did or did not distribute these surveys?

If response is: "No, I did not receive any material"

--- Would you like to help distribute 6 surveys to students in your program. I will send you these surveys. The research is about students' clinical self-efficacy and supervision experiences, with a special focus on international students. Do you have any questions regarding this study that I can answer? Thank you for taking the time to talk with me.

If response is: "No, I did not distribute the material"

--- Ok, I just wanted to know whether or not you distributed the surveys, because it will provide a better understanding of our sample. Do you have any questions regarding this study that I can answer? Thank you for talking time to talk with me.

If response is: "Yes, I did distribute this surveys"

--- Thank you for helping us getting out these surveys. However, since I have not received a postcard from you, I wonder if you could let me know if you were able to distribute the surveys to two international students, to two U.S. ethnic/racial minority students, and to two U.S. majority students? Do you have any questions regarding this study that I can answer?  
Thank you for your help and for taking time to talk with me.

## **Appendix I**

### **Scale Development Materials: The International Student Supervision Scale to Expert-Raters**

**Please rate the items below according to whether you believe them to be applicable for discussion in supervision with an international student.**

**Please mark any items you find confusing. If you have any suggestions/idea about other content that you believe are applicable to international students and supervision, please record these ideas on the next page. Feel free to write on the scale. Thank you for your help!**

	Not very applicable			Very applicable	
	1	2	3	4	5
1. My supervisor and I talked about my ethnic/national/cultural background in supervision.	1	2	3	4	5
2. My supervisor and I talked about how people interact in my native country and how it may differ from the style of interacting in the U.S.	1	2	3	4	5
3. My supervisor and I discussed how my accent and/or lack of verbal fluency were perceived, or could be perceived, by my clients.	1	2	3	4	5
4. My supervisor and I discussed my clients' reactions, or possible reactions, to me as an international student and their clinician.	1	2	3	4	5
5. My supervisor and I never discussed our ethnic/national/cultural/ racial differences.	1	2	3	4	5
6. My supervisor and I examined how emotions are expressed in my native country and how it may differ from the manner that emotions are expressed in the U.S.	1	2	3	4	5
7. Several times my supervisor and I discussed aspects of the U.S. culture/society that I did not understand.	1	2	3	4	5
8. In supervision, it was always I, not my supervisor, who brought up issues related to my being an international student.	1	2	3	4	5
9. I felt my supervisor understood my clinical difficulties and concerns.	1	2	3	4	5
10. In supervision, we talked about my fears/discomforts of doing clinical work in a second language and/or country.	1	2	3	4	5
18. My supervisor and I never discussed the possible differences Between my culture's view of personal space compared to the view in the U.S.	1	2	3	4	5

	Not very applicable			Very applicable	
	1	2	3	4	5
12. My supervisor was open and willing to talk about cultural and ethnic differences.	1	2	3	4	5
13. I have more difficulties conducting therapy than a U.S. born student.	1	2	3	4	5
14. My supervisor and I discussed cultural/ethnic/racial differences between my clients and me.	1	2	3	4	5
15. I felt my supervisor was aware of the various experiences international students can have while studying in the U.S.	1	2	3	4	5
16. In supervision, we never talked about my adjustment to the U.S. society and how it could be related to my clinical work.	1	2	3	4	5
17. My supervisor and I discussed how therapy is conducted in my native country.	1	2	3	4	5
18. I felt that I was more culturally aware than my supervisor.	1	2	3	4	5
19. I believe my supervisor would have preferred to supervise a U.S. student.	1	2	3	4	5
20. We talked about racial issues in the U.S. and how clients of a different race/ethnicity than myself could perceive me.	1	2	3	4	5
20. In supervision, we never talked about how the clinical work I am doing in the U.S. could be applied to future work in my native country.	1	2	3	4	5
22. My supervisor and I discussed the possible differences between non-verbal communication in my native country/culture compared to non-verbal communication style in the U.S.	1	2	3	4	5

## **Appendix J**

### **Survey Materials: The International Student Supervision Scale**

**International Student Supervision Scale**

**Please respond to the following items and rate the extent to which you have discussed these issues with your current or most recent supervisor.**

	Not at all 1	2	3	4	Very much so 5
1. My supervisor and I talked about my ethnic, national, and/or cultural background in supervision.	1	2	3	4	5
2. My supervisor and I have talked about how people interact in my native country and how it may differ from the style of interaction in the U.S.	1	2	3	4	5
3. My supervisor and I have discussed how my accent and/or lack of verbal fluency were perceived, or could be perceived, by my clients.	1	2	3	4	5
4. My supervisor and I discussed my clients' reactions, or Possible reactions, to me as an international student.	1	2	3	4	5
5. My supervisor and I have never discussed our ethnic, national, cultural, and/or racial differences.	1	2	3	4	5
6. My supervisor and I have examined how emotions are expressed in my native country and how it may differ from the manner that emotions are expressed in the U.S.	1	2	3	4	5
7. My supervisor and I have discussed aspects of the U.S. culture/society that I did not understand.	1	2	3	4	5
8. In supervision, it was always I, not my supervisor, who brought up issues related to my being an international student.	1	2	3	4	5
9. In supervision, we have talked about my fears/discomforts of doing clinical work in second language and/or country.	1	2	3	4	5
10. My supervisor and I never discussed the possible differences between my culture's view of personal space compared to the view in the U.S.	1	2	3	4	5
11. My supervisor was open and willing to talk about cultural and ethnic differences.	1	2	3	4	5
12. I believe I have more difficulties conducting therapy In the U.S. than a U.S. born student.	1	2	3	4	5

	Not at all 1	2	3	4	Very much so 5
13. My supervisor and I discussed cultural, ethnic, and racial differences between my clients and me.	1	2	3	4	5
14. I felt that my supervisor was aware of the various experiences international students can have while studying in the U.S.	1	2	3	4	5
15. In supervision, we have never talked about my adjustment to the U.S. society and how it could be related to my clinical work.	1	2	3	4	5
16. My supervisor and I have discussed how therapy is conducted in my native country.	1	2	3	4	5
17. I believe that I am/was more culturally aware than my supervisor.	1	2	3	4	5
19. I believe that my supervisor would have preferred to supervise a U.S. student.	1	2	3	4	5
20. My supervisor and I have talked about racial /ethnic issues in the U.S. and how clients of a different racial or ethnic group than myself could perceive me.	1	2	3	4	5
21. In supervision, we have never talked about how the clinical work I am doing in the U.S. could be applied to my future work in my native country.	1	2	3	4	5
21. My supervisor and I have discussed the possible differences between non-verbal communication in my native country/culture compared to non-verbal communication style in the U.S.	1	2	3	4	5



## **Appendix K**

### **Survey Materials: The International Student Demographic Form**

**Please fill in or circle the most appropriate answer**

1. Country of citizenship: \_\_\_\_\_
2. Native language: \_\_\_\_\_
3. Your age: \_\_\_\_\_
4. Gender: (1) Female (2) Male
5. Religion:
  - (1) Muslim
  - (2) Buddhist
  - (3) Hindu
  - (4) Catholic
  - (5) Protestant
  - (6) Jewish
  - (7) Christian
  - (8) Other: Please specify: \_\_\_\_\_
6. Your relationship status:
  - (1) Married
  - (2) Single
  - (3) Partnered/Cohabiting
  - (4) Divorced
  - (5) Widowed
7. Highest degree completed:
  - (1) Bachelor degree
  - (2) Master degree
  - (3) Specialist degree
  - (4) Other: Please specify: \_\_\_\_\_
8. In what country did you obtain the degree you responded to in Question 7? \_\_\_\_\_
9. What type of program are you currently enrolled in?
  - (1) Counseling Psychology
  - (2) Clinical Psychology
  - (3) School Psychology
  - (4) Professional-Scientific Psychology
10. What year are you in your doctoral training:
  - (1) First and 2nd year without a master degree
  - (2) First and 2<sup>nd</sup> year with master degree in related field
  - (3) Third, fourth, and fifth year
  - (4) On internship
  - (5) Other: Please specify: \_\_\_\_\_
11. What degree program are you currently enrolled in?
  - (1) Ph.D.
  - (2) Psy.D.
  - (3) Ed.D.
  - (4) Other: Please specify: \_\_\_\_\_
12. Do you plan to return to your home country after graduation (or after a possible year of practical training)?
  - (1) yes (2) no
13. Do you plan to obtain a green card/permanent residence?
  - (1) yes (2) no (3) not sure
14. Number of international faculty in your program
 

0	1	2	3	4	5+
---	---	---	---	---	----
15. Number of international students in your program, not including yourself? (Please circle)
 

0	1	2	3	4	5+
---	---	---	---	---	----
16. How long have you been in the U.S.?
  - (1) Less than 6 months
  - (2) Between 6 and 12 months
  - (3) Between 1 and 2 years
  - (4) Between 2 and 3 years
  - (5) Between 3 and 5 years
  - (6) Between 5 and 8 years
  - (7) Beyond 8 years
17. Would you like to stay in the U.S. if possible?
  - (1) yes (2) no (3) not sure
18. Please indicate your U.S. citizenship or visa-status:
  - (1) U.S. citizen
  - (2) Visa student, J or F
  - (3) Immigrant/permanent resident
  - (4) Refugee
  - (5) Visa: other non-immigrant

**Appendix L**  
**Survey Materials: The U.S. Student Demographic Form**

**Please fill in or circle the most appropriate answer**

1. Country of citizenship: \_\_\_\_\_
2. Native language: \_\_\_\_\_
3. Your age: \_\_\_\_\_
4. Gender:
  - (1) Female
  - (2) Male
5. Religion:
  - (1) Muslim
  - (2) Buddhist
  - (3) Jewish
  - (4) Catholic
  - (5) Protestant
  - (6) Hindu
  - (7) Christian
  - (8) Other (please write in \_\_\_\_\_)
6. Your relationship status:
  - (1) Married
  - (2) Single
  - (3) Partnered/Cohabiting
  - (4) Divorced
  - (5) Widowed
7. Highest degree completed:
  - (1) Bachelor degree
  - (2) Master degree
  - (3) Specialist degree
  - (4) Other (please write in \_\_\_\_\_)
8. In what country did you obtain the degree you responded to in Question 7? \_\_\_\_\_
9. What type of program are you currently enrolled in
  - (1) Counseling Psychology
  - (2) Clinical Psychology
  - (3) School Psychology
  - (4) Professional-Scientific Psychology
10. What year are you in your doctoral training:
  - (1) First and 2<sup>nd</sup> year without a master degree
  - (2) First and 2<sup>nd</sup> year with master degree in related field
  - (3) Third, fourth, and fifth year
  - (4) On internship
  - (5) Other (please write in \_\_\_\_\_)
11. What degree program are you currently enrolled in?
  - (1) Ph.D.
  - (2) Psy.D.
  - (3) Ed.D.
  - (4) Other (please write in \_\_\_\_\_)
12. What is your ethnic/racial background?
  - (1) Caucasian/White
  - (2) African-American/Black
  - (3) Hispanic/Latino(a)/Chicano(a)
  - (4) Asian-American/Pacific Islander
  - (5) American Indian/ Alaskan Native
  - (6) Multiracial
  - (7) Other (please write in \_\_\_\_\_)
13. Please circle your citizenship or visa-status:
  - (1) U.S. citizen
  - (2) Visa student, J or F
  - (3) Immigrant/permanent resident
  - (4) Refugee
  - (5) Visa: other non-immigrant

**Appendix M**  
**Survey Materials: Additional Supervision Questions**

**Please answer the questions below regarding the supervisor you thought of when responding to the questions above.**

30. Are you currently in supervision with this supervisor?
- (a) yes
  - (b) no
32. Your supervision experience is/was a part of:
- (a) A master level practicum/internship
  - (b) A doctoral level practicum/internship
  - (c) APPIC-internship (predoctoral internship)
  - (d) Other (please specify:\_\_\_\_\_)
31. Your supervision(s), that you referred to above, took place :
- (a) as part of course or clinic in the department
  - (b) at a mental health center
  - (c) at counseling center
  - (d) at hospital or VA
  - (e) other: please specify:\_\_\_\_\_
33. What is the ethnic/racial background of your supervisor(s) you thought of when answering these questions.
- (a) White, not of Hispanic origin
  - (b) Black or African-American
  - (c) Hispanic or Latino
  - (d) Asian or Pacific Islander
  - (e) American Indian or Native
  - (f) Other (please write in:\_\_\_\_\_)
34. My supervisor was sensitive to diversity issues:
- (a) strongly disagree
  - (b) moderately disagree
  - (c) slightly disagree
  - (d) slightly agree
  - (e) moderately agree
  - (f) strongly agree
35. The supervision with my supervisor was overall very good:
- (a) strongly disagree
  - (b) moderately disagree
  - (c) slightly disagree
  - (d) slightly agree
  - (e) moderately agree
  - (f) strongly agree

## **Appendix N**

### **Summary of Responses: Training Directors and Student Participants**

### Summary of Responses: Training Directors and Student Participants

Program/Sites	Responded:		Participated:		Excluded <sup>a</sup>
	Yes	No	Yes	No	
Clinical	48	2	34	6	8
Counseling	49	1	36	4	9
School	22	18	17	1	4
Combined	5	5	5	0	0
Internship	71	29	55	5	11
Additional	9	2	4	3	2
Total	204	57	151	19	34

<sup>a</sup> The programs were excluded from participation in the present study because lack of international students in their program and to keep mailing and copy cost down.



## **Appendix O**

### **Results of Demographic Data: Data Unique to International Students Data in Comparison to U.S. Minority and Majority Students**

# Demographic Data Unique to International Students

Variable	International Students (n = 42)
Continent	
Country	
Africa	
Tanzania	1
Asia	
China	2
Hong Kong	1
India	1
Israel	6
Singapore	2
South Korea	3
Taiwan	1
Turkey	1
Australia	1
Europe	
England	2
Iceland	3
Ireland	2
Portugal	2
North America	
Canada	6
South America	
Argentina	1
Belize	1
Haiti	1
Jamaica	3
Venezuela	2

## Appendix O—Continued

Variable	International Students (n = 42)
No. of students who want to stay in the U.S. after graduation	
Yes	13 (31%)
No	9 (21%)
Not sure	18 (43%)
No. of international students per training program	
0-2	19 (45%)
3-4	14 (38%)
5+	7 ( 17%)
No. of international faculty in departments	
0-1	36 (85%)
2-3	4 (9%)

## Appendix O—Continued

## International Student Demographic Data in Comparison to Permanent Resident Students, U.S. Minority and Majority Students

Variable	Internationals (n = 42)	Perm.Resid. (n = 10)	U.S. Minority (n = 87)	U.S. Majority (n = 170)
Average Age	29.5	29.3	29.0	31.1
Gender				
Female	26 (62%)	9 (90%)	62 (71%)	121 (71%)
Male	16 (38%)	1 (10%)	25 (29%)	49 (29%)
Religion				
Muslim	2 ( 5%)	0	1 ( 1%)	1 ( 1%)
Hindu	4 (10%)	0	1 ( 1%)	0
Buddhist	0	1 (10%)	0	3 ( 2%)
Christian	17 (40%)	6 (60%)	58 (67%)	109 (64%)
Jewish	8 (19%)	0	2 ( 2%)	21 (12%)
Other	11 (26%)	3 (30%)	25 (29%)	36 (21%)
Relationship				
Single	21 (50%)	3 (30%)	47 (54%)	64 (38%)
Married/ Partnered	21 (50%)	1 (70%)	35 (40%)	99 (58%)
Divorced	0	0	5 ( 6%)	7 ( 4%)
Program Type				
Clinical Psy.	26 (62%)	2 (20%)	39 (44%)	82 (48%)
Counseling Psy.	13 (31%)	5 (50%)	31 (36%)	62 (36%)
School Psy.	3 ( 7%)	3 (30%)	13 (15%)	22 (13%)
Prof-Scientific	0	0	4 ( 5%)	4 ( 2%)

## Appendix O—Continued

Variable	Internationals (n = 42)	Perm.Resid. (n = 10)	U.S. Minority (n = 87)	U.S. Majority (n = 170)
Degree Type				
Ph.D.	31 (74%)	9 (90%)	77 (88%)	151 (89%)
Psy.D.	11 (26%)	1 (10%)	9 (10%)	19 (11%)
Ed.D.	0	0	1 (1%)	0
Level of Training				
Level 1	4 (10%)	1 (10%)	16 (18%)	16 (9%)
Level 2	10 (24%)	2 (20%)	18 (21%)	20 (12%)
Level 3	22 (52%)	6 (60%)	28 (32%)	68 (40%)
Level 4	6 (14%)	1 (10%)	25 (29%)	66 (39%)

**Note.** Other = included among others Universalists, atheists, agnostics, and Native American religions. Level of training: 1 = no. of students in their first-and second-year of doctoral training without prior MA degree; 2 = no. of students in their first-and second-year year of doctoral training with a previous MA degree; 3 = no. of students in their third, fourth, and fifth year of doctoral training; and 4 = no. of students on pre-doctoral internship.

**Appendix P**  
**Summary of Cell Means for MANOVA Analyses**

## Summary of Cell Means for MANOVA Analyses

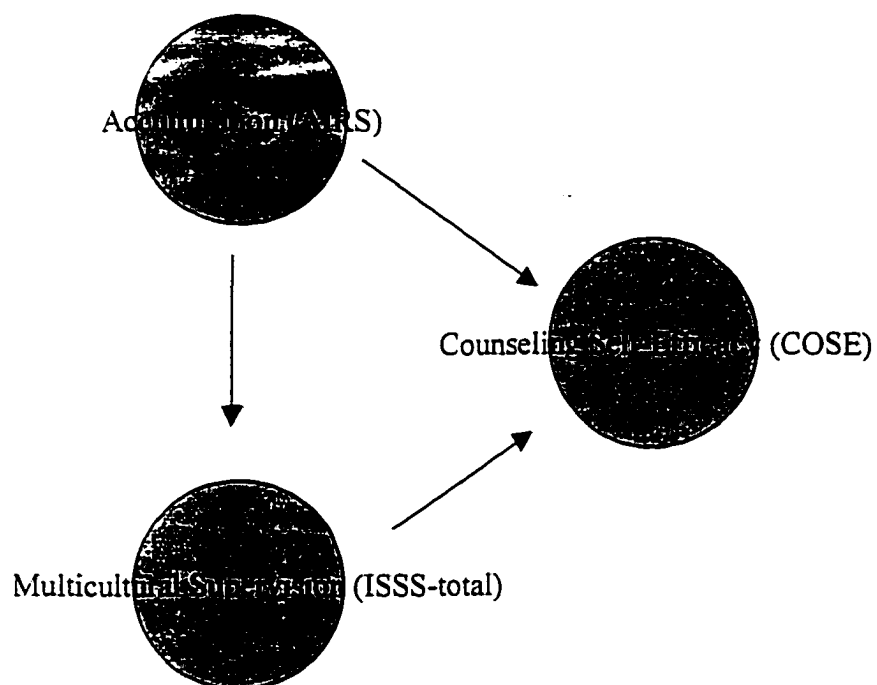
Level of Training	Groups				Total
	U.S. Majority	U.S. Minority	Internationals	Other <sup>1</sup>	
1-2 year wo MA	16	16	4	1	37
1-2 year with MA	20	18	10	3	51
3,4,5 year	68	26	22	6	122
Internship	66	25	6	1	98
Total:	170	85	42	11	308

<sup>1</sup>Other include students with permanent resident visas and other non-immigrant visas except for international students

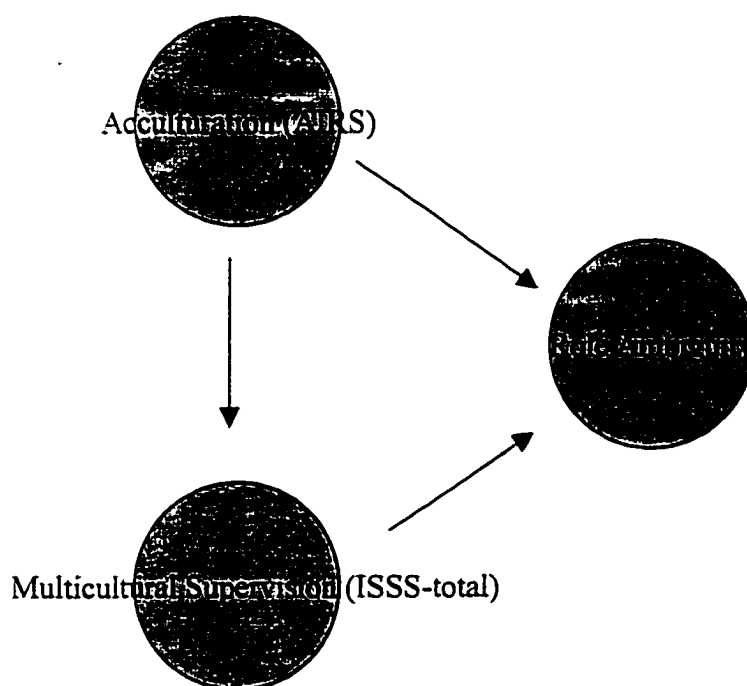
**Appendix Q**  
**Three Mediation Models**



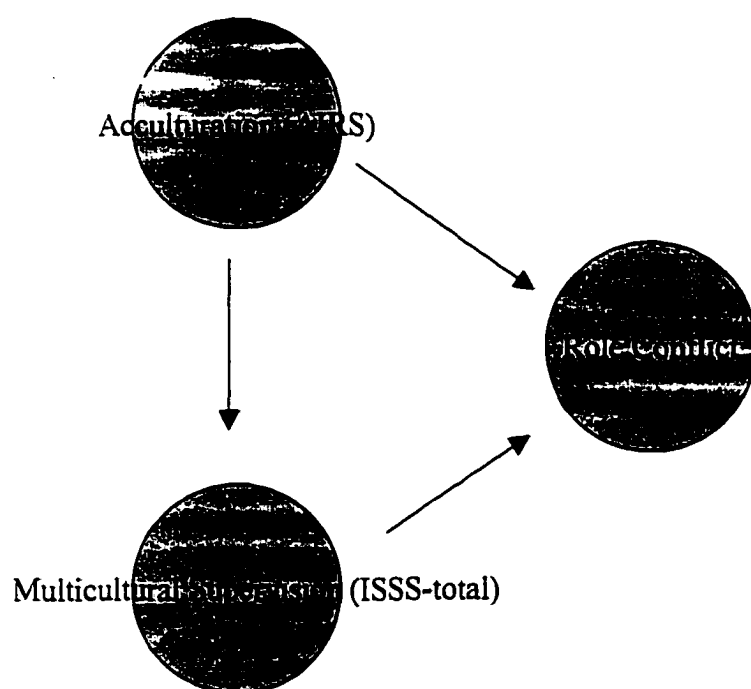
Mediation Model One:  
Multicultural Supervision, Acculturation, and Counseling Self-Efficacy



Mediation Model Two:  
Multicultural Supervision, Acculturation, and Role Ambiguity



Mediation Model Three:  
Multicultural Supervision, Acculturation, and Role Conflict



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