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LIFE SATISFACTION AND STRESS AMONG EAST ASIAN GRADUATE STUDENTS AND SPOUSES

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SOJOURN IN THE UNITED STATES: LIFE SATISFACTION AND STRESS AMONG EAST ASIAN GRADUATE STUDENTS AND SPOUSES

By

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ABSTRACT

SOJOURN IN THE UNITED STATES: LIFE SATISFACTION AND STRESS AMONG EAST ASIAN GRADUATE STUDENTS AND SPOUSES

By

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International students attending universities or colleges in the U.S., usually arrive with a clear sense of their academic goals and knowing that they will be spending several years on a campus working toward their degree. However, they often haven't considered what their lives will be like beyond this (Davis, 2003). Intercultural transitions involve complex processes and are reliant on the interaction of a number of factors (De Verthelyi, 1995). Although varied approaches have been employed to examine international student adjustment, researchers agree that this population experiences an array of difficulties during their sojourn in the U.S. (Barratt & Huba, 1994; Charles & Steward, 1991; Cheng, 1999; et al.).

The purpose of this study was to examine East Asian graduate students and their spouses' stress-mediating and adaptation-facilitating factors through certain selected variables. The data were collected through an on-line survey using five different language versions in order to determine life satisfaction predictors. Four findings resulted from this study: 1) no differences were found between the East Asian graduate students and their spouses' life satisfaction scores; 2) social support and having one child were significant predictors; 3) non-student female spouses were slightly more involved in social support interaction than their husbands; 4) the non-student spouses' higher life satisfaction and lower sense of coherence indicated that they might be internally unsatisfied but externally contented.

DEDICATION

This thesis is dedicated to my dearest family. To my parents Jason and Serena, words aren't enough to express my gratefulness of this wonderful life you two had given me. To my sister Tina, who kept inspiring me with her vivid creativeness. To the Tuan family, who kept filling our family with the flow of love and joy.

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CHAPTER ONE

INTRODUCTION

In 2004-2005, the number of international students enrolled in U.S. higher education institutions totaled 565,039 (Institute for International Education (IIE), 2005a), marking the sixth year in a row that U.S. universities and colleges have hosted more than half a million foreign students (IIE, 2005a). Allan Goodman, President and CEO of IIE said, "International students in U.S. classrooms widen the perspectives of their U.S. classmates, contribute to vital research activities, strengthen the local economies in which they live, and build lasting ties between their home countries and the United States." (IIE, 2004).

Each of the five leading sending countries (four of whom were Asian), experienced increases in enrollment in 2004-05, accounting for almost half (47%) of all international students in the U.S. (see Table 1 on the next page). India remained the largest sending country for the fourth consecutive year with 80,446 students, and China, the second-largest with 62,523 students (although this data came from 2003-04 as the 2004-05 data was not available), had a 1% increase in enrollment, after experiencing a decline of 5% the previous year. The Republic of Korea, which remained the third leading sender for the fourth year in a row, was up by 2% to a total of 53,358, while Japan, the fourth leading sender with 42,215 students in the U.S., experienced a 3% increase in enrollment, reversing a trend in declining enrollments that began three years ago. Canada was the fifth largest sender and the only non-Asian country among the top five countries (IIE, 2005a).

Table 1

Five Leading Countries in 2004-05 Who Sent Students to the U.S. for a University Education

Rate	*Country*	*No. of Students*	*% of Students in Academic Level*			*% of Foreign Students in US*	*% of Change This Year*
			Graduate	*Undergrad*	*Other*		
1	India	80,466	72%	20%	7.5%	14.2%	+1%
2	China	62,523	79%	13%	8%	11.1%	+1%
3	Korea	53,358	45%	44%	11%	9.4%	+2%
4	Japan	42,215	20%	68%	12%	7.5%	+3%
5	Canada	28,140	46.5%	49%	5%	5.0%	+4%
	Total	266,702	—	—	—	47.2%	—

Note: China's data is from the year 2003-04.
Korea signifies the Republic of Korea.

Scope of the Problem

Asia, which continues to be the largest sending region, indicates a 3% increase of students enrolling in U.S. universities and colleges in the IIE's Open Doors 2005 Report. The total number of Asian students (325,112) represents 58% of the total international enrollment in the U.S., and over two-thirds of that percentage (33.9%) is represented by students from East Asian countries (IIE, 2005b) (see Table 2 on the next page). The table also shows that more students are enrolled at the graduate level than undergraduate.

Table 2

East Asian Countries in 2004-05 Who Sent Students to the U.S. for a University Education

Rate of Sending Country	*Country*	*No. of Students*	*No. of Students in Academic Levels*		*% of Foreign Students in US*	*% of Change This Year*
			Graduate	*Undergrad*		
2	China	62,523	49,394 (79%)	8,128 (13%)	11.1%	+1%
3	Korea	53,358	24,012 (45%)	23,478 (44%)	9.4%	+2%
4	Japan	42,215	8,443 (20%)	28,707 (68%)	7.5%	+3%
6	Taiwan	25,914	14,771 (57%)	8,034 (31%)	4.6%	-1 %
15	Hong Kong	7,180	1,436 (20%)	5,242 (73%)	1.3%	-2%
	Total	191,190	98,056	73,589	33.9%	—

Note: China's data is from the year 2003-04.
Korea signifies the Republic of Korea.
Numbers and percentages do not add up due to a portion of students enrolled in other academic studies.

According to the Council of Graduate Schools (CGS), among the 1.5 million graduate students enrolled in both public and private university institutions in the U.S. in Fall, 2004, 17% (or 224,820) were temporary residents/non-U.S. citizens (CGS, 2005, Oct.). Over the period of 1986 - 2004, the total enrollment and total first-time enrollment of international graduate students grew at a 3% and 2% annual rate, while the graduate student number of U.S. permanent residents/U.S. citizens grew by only 1% per year (CGS, 2005, Oct.) (see Table 3 on the next page). Moreover, in Fall, 2005, another 1%

increase was found in first-time international graduate enrollment (CGS, 2005, Nov.).

Table 3

Trends in Graduate Enrollment and First-Time Graduate Enrollment of Non-Permanent Residents/Non-U.S. Citizens vs. Permanent Residents/U.S. Citizens from 1986 to 2004

	2004	*Average Annual % Change 1986 to 2004*
Total Enrollment	1,503,540	2%
Non-U.S. Citizen Temporary Residents	224,820	3%
U.S. Citizen and Permanent Residents	1,129,606	1%
Total First-time Enrollment	327,856	2%
Non-U.S. Citizen Temporary Residents	49,184	2%
U.S. Citizen and Permanent Residents	254,464	1%

Enrollment of so many international students in U.S. universities and colleges is a financial boon for the host county The NAFSA Association of International Educators[1] reports that international students brought $13.3 billion dollars into the U.S. economy in 2004 as money spent on tuition, living expenses, and related costs. The IIE's Open Doors Report on 2004/05 data from campuses indicates that nearly 72% of all international students reported their primary source of funding coming from personal and family sources or other sources outside of the United States. The U.S. Department of Commerce data describe higher education as the country's fifth largest service sector export, as these students bring money into the national economy and provide revenue to their host states.

[1] The NAFSA: Association of International Educators was called the National Association of Foreign Student Advisers, which was established in 1948.

(IIE, 2005a).

International students attending universities or colleges in the U.S., usually arrive with a clear sense of their academic goals and with the intention of spending several years on a campus working toward their degree. However, they often haven't considered what their lives will be like beyond this (Davis, 2003). Intercultural transitions involve complex processes and are reliant on the interaction of a number of factors (De Verthelyi, 1995). Although varied approaches have been employed to examine international student adjustment, researchers agree that this population experiences an array of difficulties during their sojourn in the U.S. (Barratt & Huba, 1994; Charles & Steward, 1991; Cheng, 1999; Han, 1996; Hayes & Lin, 1994; Kaczmarek, Matlock, Merta, Ames, & Ross, 1994; Lin & Yi, 1997; Parr, Bradley, & Bingi, 1992; Pedersen, 1991; Searle & Ward, 1990; Ying & Liese, 1994).

The adjustment problems faced by international students can be integrated into the following four major categories (from research focusing mainly on international undergraduate students:

(1) *General living adjustment*: adjusting to American food, living/housing environment and transportation, a new climate; learning to deal with financial problems and health care concerns (Mori, 2000; Rorhlich & Martin, 1991).

(2) *Academic adjustment*: lack of proficiency in the English language, understanding of the U.S. educational system, and effective learning skills for gaining academic success (Barker, Child, Gallois, Jones, & Callan, 1991; Brabandt, Palmer, & Gramling, 1990; Parr et al., 1992; Church, 1982; Deressa & Beavers, 1988; Mau & Jepsen, 1990; Ying, 2002; Ying &

Liese, 1991, 1994; Wan, Chapman, & Biggs, 1992; Xie, Xia, & Zhou, 2004).

(3) *Socio-cultural adjustment:* experiencing culture shock, cultural fatigue or racial discrimination; having difficulty adjusting to new social/cultural customs, norms and regulations; experiencing differences in intercultural contacts/social activities; and encountering conflicts between American r values, world views, life styles, etc. and those of their home countries (Barker et al., 1991; Church, 1982; Furnham & Bochner, 1982, 1986; Henderson, Milhouse, & Cao, 1993; Wan et al., 1992).

(4) *Personal psychological adjustment*: experiencing homesickness, loneliness, depression, frustration, alienation, isolation, the loss of status or identity, and feeling a sense of worthlessness (perhaps for the first time in their lives) (Das, Chow, & Rutherford, 1986; Kaczmarek, et al., 1994; Pedersen, 1995; Robie & Ryan, 1996; Rorhlich & Martin, 1991; Sandhu, 1995; Stoynoff, 1997; Wan et al., 1992; Wehrly, 1986; Xie et al., 2004).

Statement of the Problem

Most of the research regarding international students in the U.S. has not distinguished between undergraduate and graduate students. Graduate students, however, may experience not only the areas listed above, but additional problems unique to their situation (Poyrazli, Arbona, Nora, McPherson, & Pisecco, 2002). Further, foreign students from substantially different backgrounds tend to have special types and intensities of problems. Thus, the sample of international students in this study focuses on graduate level students who come from East Asia, a region considered to have similar

historical, cultural, and geographical backgrounds.

According to IIE's Open Doors Report (2005c), among the total number of 264,410 (158,382 male and 106,028 female) international graduate students in the 2003-04 academic year, 22.5% were married. This shows evidence of a certain segment of international graduate students who take on the spousal role, and/or a parental role during the couple's academic years. This often means that these roles require competing for the spouse or parent's limited resources of time and emotional energy (Dyk, 1987).

Previous studies on this issue have tended to neglect a focus on the adjustment situation for the student's spouse. Bronfenbrenner's (1979) ecological perspective points out that the husband-wife subsystem does not exist in isolation. Evidently, there is a need for researchers to consider the reciprocal interaction among both the couples' social networking and their life satisfaction within a foreign country. Kim (1988) conceptualizes cross-cultural adaptation as a process of dynamic "stress-adaptation-growth interplay … in which neither occurs without the other and each occurs because of the other" (p. 57). As this factor is added into the graduate student's own academic experience, additional strain may occur and have negative effects on the couple's marital relationship (De Verthelyi, 1995; Legako, 1996).

As deduced from prior research, the time spent in the U.S. often leads international graduate student couples to experience substantial stressors and demands, which are often overlooked until a crisis occurs (Boss, 2002).Little research has been devoted to the examination of factors which may predict and mediate stressors before a "blow-up" occurs, thus easing and facilitating the adaptation of the international couple to their brief sojourn in the U.S. Antonovsky (1987), a medical sociologist, pioneered work in searching for health factors (salutogenesis) rather than pathological factors (pathogenesis).

Clearly, there is a need for theory-based research to examine and place within a meaningful framework the mediating factors among international graduate student couples.

The purpose of this study, therefore, is to examine East Asian graduate students and their spouses' stress-mediating and adaptation-facilitating factors through a conceptual framework, which provides a more holistic perspective of individuals, their social systems, and the physical and biological environments around them. The theoretical framework that will be used integrates the concepts of stress, adaptation, and the contextual factors into a single theoretical foundation in order to better understand the effect of these concepts on East Asian graduate student couples. The basic concept draws theoretically and empirically from two conceptual frameworks, which both adapted Hill's (1958) ABC-X family crisis framework as their core model. Specifically, McCubbin and Patterson's (1983) Double ABC-X Model of Family Adjustment and Adaptation, and Boss's (2002) Contextual Model of Family Stress (discussed in greater detail in Chapter Two).

Significance and Generalizability

It is a common occurrence for international students to encounter such issues as adjustment to new classes, the English language, a higher (and/or different level of studies, and a totally unfamiliar environment. These factors are all capable of generating fatigue, worry, or frustration that can distract one from pursuing a satisfying academic life, not to mention a satisfying family/marital relationship. Antonovsky (1987) stated that the satisfaction of life can be raised when individuals are more capable and comfortable dealing with the stressors. Hence, stronger positive energy leads to a more productive

outlook and sense of greater motivation influencing the student's academic life, his/her family, the community, and the host country.

On the other hand, there are some international students and couples who make the transition to the host country with relative ease and learn to lead comfortable and productive lives. According to Tseng & Newton (2002), "How and why some international students experience their study abroad lives in positive ways is largely ignored in existing research." This indicates that additional information is needed in order to establish a healthier and more holistic picture of international students living in the U.S.

One major reason given for some international students adapting more easily to the U.S. may lie in the use of support groups. Xie, Xia, and Zhou (2004) reiterate the need to establish international student support groups on campuses to help make the transition from their home country to the host culture easier. Once students adapt to the requirements and roles of the new culture, their academic and psychosocial experience is likely to be successful (Charles & Stewart, 1991).

The value of support groups for international students lies in their innate ability to provide: 1) information and orientation to the new country; 2) group or individual counseling, support, and other relevant services, if needed; and 3) a sense of life satisfaction for the graduate student and/or his family based on knowledge and understanding.

CHAPTER 2

Review of Literature

Stressors Associated with Graduate Study and Sojourn in the U.S.

English Competence

Language competence in the host country is the main key to the acculturation process (Berry, Kim, Minde, & Mok, 1988; Furnham, 1993; Gudykunst, Matsumoto, Ting-Toomey, Nishida, Kim, & Heyman, 1996; Kim, 1988; Ng, 2004; Redmond & Bunyi, 1993; Stevens & Schoen, 1988; Tzeng, 2000; White, Biddlecom, & Guo, 1993). Successful communication is essential to an individual's ability to adapt successfully and to maintain a sense of psychological well-being and positive self-esteem (De Verthelyi, 1995; Jo, 1999; Surdam & Collins, 1984).

The most direct result of weak English language skills for an international graduate student in the U.S. will be the effect on his or hers academic work, which usually includes a certain amount of writing (Ying, 2003). This means not only being able to express him or herself in correct English, but also being able to convey a grasp of the subject matter on hand – a challenge many Asian students find unfamiliar coming their own more restricted and rote-based education system (Ying, 2003).

Difficulty in English can also cause other problems for graduate students. One problem exists for those who work as teaching assistants (Pedersen, 1991), because it is essential that they be understood by a majority of students who speak English as their primary tongue. Other problems include the pressure under which some students live to maintain a certain grade point average because they are on scholarship from their home country and are usually required to complete their degree in a certain amount of time

(Charles & Steward, 1991). This requires a certain level of competency in the English language. competent English ability for graduate students.

Other effects resulting from a language barrier are: the inability to converse freely with new-made friends and neighbors in the community (Perrucci & Hu, 1995), the lack of important cultural insights that come about through language (Wierzbicka, 1997), and difficulty making friends with Americans (Heikenheimo & Shute, 1986; Ying, 2002). On a good note, although proficiency in English does predict adjustment, Poyrazli, Arbona, and Nora, et al. (2002) found that it did not predict loneliness..

Socio-Cultural Interaction

Sociocultural adjustment refers to a sojourner's ability to "fit in" or effectively interact with members of host cultures (Ward & Searle, 1991). Studies find that engaging in higher degrees of interaction with host residents will lower the effects of cultural shock for international students (Chapdelaine & Alezitch, 2004; Mallinckrodt & Leong, 1992; Rohrlich & Martin, 1991; Trice, 2004; Ward & Searle, 1991; Westwood & Barker, 1990; Ying, 2003). Moreover, it is essential that culturally similar friends provide appropriate emotional support and insight into the dominant culture in order to facilitate the adjustment process (Ogbu, 1991; Stanton-Salazar, 1997). On the other hand, students who are less likely to interact with their host peers are unlikely to learn and develop the culture-specific social skills that would enable effective cross-cultural interactions (Furnham & Bochner, 1982). Nevertheless, the amount of acculturate training that international graduate students can receive from host nationals is limited (Chapdelaine & Alezitch, 2004).

A significant factor that relates to international graduate students' satisfaction with their host country's social and community relations is their exposure to the culture. Such

factors include familiarizing oneself with the U.S. before coming (Ying, 2002) by reading newspapers, magazines, and, if available, watching movies, travel films, and American programs on satellite TV, etc. (Perrucci & Hu, 1995; Trice, 2004). In contrast, graduate students who have insufficient support networks experience less academic assistance from their host peers (Westwood & Barker, 1990), as well as feelings of loneliness, homesickness (Ying, 2003), anxiety, depression, and alienation (Hull, 1978; Schräm & Lauver, 1988), which all result in a poorer quality of overseas experience. However, in Ying's (2003) study among Taiwanese Chinese graduate students, no significant correlation is found between academic achievement and social support.

According to some research studies (Hofstede, 2001; Schram & Lauver, 1988; Sodowsky & Plake, 1992), international students who experience the most difficulty in establishing relationships with their host peers often come from countries that share few cultural similarities with the American way of life (Hofstede, 2001). Asian (Abe, Talbot, & Geelhoed, 1998; Alreshoud & Koeske, 1997; Pruitt, 1978), African, and South American students tend to encounter more difficulties than do students from Europe (Schram & Lauver, 1988; Sodowsky & Plake, 1992). These differences may be explained by the discrimination that is targeted more towards those students rather than Western Europeans (Heikenheimo & Shute, 1986; Pruitt, 1978). Nevertheless, it appears that relatively few international graduate students spend substantial time with Americans (Trice, 2004).

Personal Psychological Adjustment

Homesickness, loneliness, and depression are pervasive feelings for newly arrived international students (Wehrly, 1988). Poyrazli et al. (2002) state that international graduate students' personal assertiveness is found to be a unique predictor of their

cross-cultural adjustment processes. According to research, being assertive is a means of feeling less lonely (Poyrazli et al., 2002), initiating contact more often, getting more involved in interpersonal interactions (Chen, 1992), and having a higher academic self-efficacy (Bandura, 1986; Maddux & Meier, 1995; Poyrazli et al., 2002). As a result, students tend to approach challenging situations without incapacitating anxiety or confusion. With such personal tools, international students are more capable of coping with adjustment problems.

International graduate students tend not to utilize campus counseling facilities (Mau & Jepsen, 1990), although mental health professionals are considered one of the potentially significant sources of support for them.. A longitudinal study examining international students' counseling service utilization finds that students who do use the counseling center for personal problems are more likely to be at the graduate level, older, and male (Yi, Lin, & Kishimoto, 2003). Findings also indicate that due to the strong adherence to their cultural value orientation, many Asian students do not seek professional psychological help unless they have exhausted their own support systems (Lin, 1996).

A more culturally acceptable behavior for international graduate students, who are experiencing psychological problems, is to try to improve their academic performances or focus on their career goals, rather than seeking personal counseling (Yi, Lin, & Kishimoto, 2003). Thus, Lin (1996) indicates that they are likely to be in subjective crisis when they do approach the counselors. In contrast, Yi et al. (2003) state that depression is one of the top three concerns of students who do end up going for counseling.

Graduate Student and Spousal Adjustment to Graduate Study and Sojourn

The issue of adjusting to university life has been frequently researched among non-traditional and graduate student populations, while few studies have focused exclusively on married students (Meehan & Negy, 2003). Legako (1996) found that graduate training had a negative effect on students' marital relationships. Thus, it could be deduced that for married international graduate students, they might experience even more strain due to the adjustment issues they, their spouses, and/or other family members might be experiencing (De Verthelyi, 1995). The magnitude and scope of adjustment problems for them become multiplied not only by their marital status, but also by the temporary immigration status they are facing. Surprisingly little is known about international married students' adjustment process, and more specifically, the spouse's "marginality" (De Verthelyi, 1995; Schwartz & Kahne, 1993).

Spouses' Initial Stress

Similar to the findings of Wehrly (1988) among newly arrived international students, homesickness, loneliness, and depression are also common to the spouses (De Verthelyi, 1995). Most spouses arriving for the first time in the U.S. often experience, during the first weeks and even first months, many negative feelings, and especially those of self doubt (De Verthelyi, 1995). Arrival in the U.S. is also considered to be an important source of variability which affects the spouse's initial feelings and acculturation stress. Thus, arrival as a couple means sharing from the onset, the impact of uncertainty and cultural differences, as well as the initial explorations of the options provided by the host environment. Most importantly, it establishes the basis for mutual emotional support. Conversely, separate arrivals may result in conflict and misunderstanding (De Verthelyi, 1995).

Spouses' Personal Project

One of the reasons that international graduate student spouses are being neglected by the intercultural literature may be their lack of specific tasks and academic goals during their temporary stay (De Verthelyi, 1995). Unlike their graduate student spouses, the "stay-at-home" spouses have not initiated the move to study overseas and do not have a demanding academic program as well (Furnham & Bochner, 1986). In addition, many spouses arriving in the United States on a visa with work restrictions, may be forced to go from an active professional life in the public sphere in their home country to the status of a "homemaker," which means a loss of professional identity and a severe blow to their self-esteem. With their role being contingent on their student spouse's academic commitments and career plans (Schwartz & Kahne, 1993), there is a need to establish personal projects as one way to overcome their feelings of loss or resentment and avoid the idea of an empty period in their lives.

In a study of medical, law, and other graduate students, Sokolski (1996) reports greater marital satisfaction being found among couples in which both partners are students than among couples with only one partner in school. Therefore, the non-student spouse's personal project acts as an important coping mechanism which includes such things as contact with a different culture, improving their English, providing their children with the opportunity of becoming easily bilingual, and even having the idea of becoming a student themselves sometime during their sojourn (De Verthelyi, 1995).

Lack of Purposeful Activities and Social Interaction

Research suggests that in comparison to unmarried graduate students, graduate married students are more satisfied with their social and community relations and their programs (Perrucci & Hu, 1995). Conversely, Stern (1998) finds that married graduate

students experience less satisfaction in their social activities than their single counterparts. Among international graduate students specifically, studies indicate that for those who come to the host country with family members may have less time to interact with host nationals (Chapdelaine & Alexitch, 1995; Trice, 2004).

Findings show that spousal support (Trice, 2004), and additional demands from the family are some of the reasons for graduate students' not seeking or having outside friendships (Chapdelaine & Alexitch, 2004). For those whose spouse resides with them in the U.S., there might be a higher priority for establishing a support network with co-nationals (Trice, 2004), which is often the result of the spouse's lack of adequate vocabulary that restricts their communication with outsiders (De Verthelyi, 1995). As a result, graduate students may be less likely to learn culture-specific social skills and, thus, experience higher degrees of social difficulty in their acculturation process. Moreover, non-student spouses may experience further dependency on their student partners which could, result in feeling resentment at the loss of autonomy (De Verthelyi, 1995; Vogel, 1986).

Lack of Intimate Relationship

Studies point out that the quantity of time spent together (Legako, 1996), the demonstration of affection, having sexual relations (Brannock, 1996), and experiencing physical intimacy (Sokolski, 1996) are major issues of discord between couples which negatively affects their marital satisfaction during graduate school. In another longitudinal study among international students' utilization of counseling services finds that "Relationship with Romantic Partner" is one of the top three concerns for graduate students (Yi, Lin, & Kishimoto, 2003).

Spousal Support

De Verthelyi (1995) indicates that non-student spouses, mostly women, decide to accompany their graduate student husband overseas based on the thought that their presence will help him feel more secure and comfortable, which will result in a smoother study experience. According to other research studies, marriage is a primary source of support, and spouses are named as the most reliable source of support in general (Beach, Martin, Blum, & Roman, 1993), as well as during specific times of need (Dakof & Taylor, 1990). Spousal support may facilitate a sense of well-being in the face of individual stressors, beneficially reducing the impact of stress on individual outcomes (Repetti, 1989). However, contrary to the research cited above, studies among international married students find that spouses are actually an added stress factor to the students, and a possible interference to the student's academic success (Adelegan & Park, 1985)!

Social Support

Acquiring support is pivotal in surviving the early stages of the intercultural transitions (Xie, Xia, & Zhou, 2004). Quality social support can act as an individual's stress mediator (Wolff & Ratner, 1999). Previous research suggests that religious faith or a sense of spirituality can act as a social support resource to help a family cope with stressors (attending church, etc.) (Danielson, Hamel-Bissell, & Winstead-Fry, 1993; Ellison & Levin, 1998; Friedman, 1998; Hanson & Boyd, 1996).

Zimmerman (1995), however, asserts that support from social relationships is perhaps the most crucial contributor to the adjustment of international graduate students and their families or spouses. More specifically, it has been found that the development of a relationship between American student peers and their international counterparts results in more satisfaction occurring with the latter's academic program (Adelman, 1988;

Boyer & Sedlacek, 1988; Church, 1982; Perrucci & Hu, 1995; Westwood & Barker, 1990).

While the association with Americans facilitates entry to, participation in, and appreciation of the new culture, the other necessary social support of maintaining ties with culturally similar students serves the function of supporting a continued sense of self (Chen, 1999; Church, 1982; Fontaine, 1986; Heikenheimo & Shute, 1986; Lulat & Altbach, 1985; Perrucci & Hu, 1995; Schräm & Lauver, 1988; Surdam & Collins, 1984; Trice, 2004; Westwood & Barker, 1990; Ying, 2003; Ying & Liese, 1991, 1994; Zimmerman, 1995). Co-ethnics can provide much needed emotional support as foreign students adjust to the U.S. and the use of the English language. Such cultural companions can also provide insight into how to become more oriented to the host culture and, when necessary, provide protection from the effects of discrimination (Ogbu, 1991; Stanton-Salazar, 1997).

Underutilization of Programs and Services

As we have seen, although mental health professionals can be one of the potentially significant sources of support for international students, research suggests that international graduate students generally do not seek services from counseling centers on campus (Mau & Jepsen, 1990). As many international graduate student spouses experience loneliness and depression, they are, at the same time, often uninformed about the services of a counseling center or other orientation activities; both intentions being to provide information and facilitate students and spouses' adjustment and adaptation (De Verthelyi, 1995).

As described in the literature, international students' concerns are usually those of distrust and a lack of understanding of the counseling process (Hayes & Lin, 1994; Leong

& Sedlaceck, 1986; Locke & Velazco, 1987), the English communication barrier (De Verthelyi, 1995), as well as the stigma of mental health (Lin, 1996). According to Lin (1996), Asian foreign students favor handling psychological issues themselves, by depending on family members or cultural peers. For the student spouse, especially, it is more likely for them seek out other similarly positioned international spouses (De Verthelyi, 1995). Therefore, many of these sojourners do not seek professional help unless they have exhausted their support system, making it more likely that a crisis will occur before they reach out to health professional (Lin, 1996).

Theoretical Framework

As mentioned earlier in Chapter One, this study proposes to empirically examine a conceptual framework that integrates the concepts of stress, adaptation, and the contextual factors into a single study, and to better understand the effect of these concepts on the East Asian graduate student couples. The basic concept draws theoretically and empirically from two conceptual frameworks, which both adapted Hill's (1958) ABC-X family crisis framework as their core model. Specifically, McCubbin and Patterson's (1983) Double ABC-X model of family adjustment and adaptation, and Boss's (2002) Contextual model of family stress.

The Double ABC-X Model

The Double ABC-X Model (see Figure 1 on page 21) (McCubbin & Patterson, 1983), based on Hill's ABC-X family crisis framework (1949, 1958), but further expanded, seeks to explain family responses to stressful situations. It considers family adaptation over an extended period of time within the context of pre-existing family stressors. The model proposes two related, but distinct phases of the family adaptation

process. The first is the Adjustment Phase, which is in response to a stressor; the second is the Adaptation Phase, which occurs following a family crisis.

During the Adjustment Phase, when a family encounters a stressor event, a set of demands is placed on the family which includes: 1) the stressor event or transition; 2) the hardships directly associated with this stressor; and 3) prior strains already existing in the family system which may be exacerbated by the stressor and hence be made aware of by one or more family members (McCubbin & Patterson, 1983, p.10). In the usual adaptation process, the family attempts to make adjustments in their patterns of interaction in such a way so as not to disturb or incrementally change the family's established patterns of behavior and structure. These efforts can best be described as family resistance to change, which are utilized as a means of protecting themselves from change.

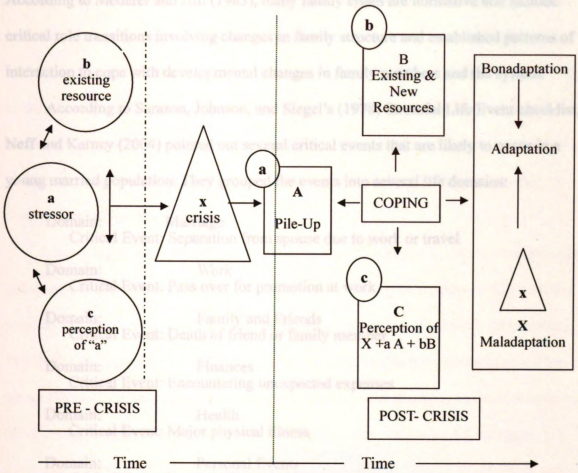

Figure 1. The Double ABC-X Model.[2]

The Adaptation Phase in the Double ABC-X Model follows the Adjustment Phase when a family crisis occurs. Crisis (x), "…involves disorganization and the demand for structural change(s) in the family unit to restore stability at its prior level or another (higher or lower) level of family functioning" (McCubbin & Patterson, 1983, p.26).

[2] From "The family stress process: The Double ABCX Model of adjustment and adaptation," by H. I. McCubbin and J. M. Patterson, 1983, *Social stress and the family: Advances and developments in family stress theory and research,* p.12. Copyright 1983 by the Haworth Press, Inc.)

According to Mederer and Hill (1983), many family crises are normative and include critical role transitions involving changes in family structure and established patterns of interaction to cope with developmental changes in family members and the system.

According to Sarason, Johnson, and Siegel's (1978) Stressful Life Event checklist, Neff and Karney (2004) pointed out several critical events that are likely to occur in a young married population. They grouped the events into several life domains:

Domain: Marriage
Critical Event: Separation from spouse due to work or travel

Domain: Work
Critical Event: Pass over for promotion at work

Domain: Family and Friends
Critical Event: Death of friend or family member

Domain: Finances
Critical Event: Encountering unexpected expenses

Domain: Health
Critical Event: Major physical illness

Domain: Personal Events
Critical Event: Involved in an accident

Domain: Living Conditions
Critical Event: Difficulties with neighbors

Therefore, since these stressors could occur in the life of an East Asian couple while in their home country, it can be assumed that East Asian couples in this current study already have coped with some kind of stress before arriving in the U.S.

The crisis that leads couples into the second phase is usually the major change in making the transition to sojourners. The vulnerability of couples to crisis, their intercultural transition, depends on the interaction of the stressors (a) with existing resources and sources of support; and (b) with the couple's perception of the stressor.

Although some couples might be able to use existing resources to resist systemic change and maintain family stability, which refers to maintaining stress at a tolerable level, they will still encounter an array of difficulties (e.g., Cheng, 1999; Han, 1996; Lin & Yi, 1997) in the aftermath of the transition process. Therefore, temporary residing families encounter a "pile-up" of stressors and strains (see Figure 1 a A). Along with their existing and new resources (Figure 1 b B), the perceived overall circumstances is up to the family's general orientation (Figure 1 c C).

According to Antonovsky (1979), orientation c C in Figure 1, which he refers to as *coherence*, is a pervasive, enduring, though dynamic feeling of confidence that both the internal and external contexts are predictable. Thus, applied to individuals (Antonovsky, 1987), it is the degree to which the person feels confident that life's challenges will be comprehensible, manageable, and worthy of a commitment of self. A sense of coherence (SOC), then, is an intervening factor between crisis x and adaptation x X in Figure 1. Moreover, Lavee, McCubbin, and Patterson's (1985) study on the Double ABC-X model indicates the family's SOC has a positive and direct effect on the family's adaptive power. This finding was consistent with other studies about strong SOC mediating individuals and family members' stress responses and resulting in outcomes attached with positive adaptation (x X) (Antonovsky & Sagy, 1986; Horsburgh, Rice, & Matuk, 1998; Margalit, 1985).

This Double ABC-X model conceptualizes how resources, support, coping, and stress may relate to family functioning, as mediating and outcome variables. Table 4 shows the East Asian couple's factors in the Double ABC-X model. A perception of how the couple defines stressors, as much as the nature of the stressors themselves, influences the utility and selection of coping behaviors employed. As a couple adapts to the stressors

and demands, changes in the family system occur, and over time, create newly instituted patterns of functioning. In summary, dimensions of adaptation are conditioned by previous functioning, social support, general culture conflict, and the global impact of the sojourners' hardships.

Table 4

Factors in the East Asian Graduate Student Couple's Double ABC-X Model

a- Stressors	*b- Existing Resources*	*c- Preconception of "a""*	*x- Crisis*
Tight financial status	Support of family and friends	This is what "family life" is	Multifaceted hardships
Tense marital relationship	Assimilative East Asian culture		
Disrupted family relationships	Professional competence		
Minor physical illness			
Stressful job tasks.			

a A Pile-Up	*b B Existing or New Resources*	*c C Preconception of X + aA + bB*	*x X Adaptation Balancing*
a + General living adjustment (food, housing, transportation, climate, health care concerns)	b + Contextual support from U.S. local friends and community	Striving to achieve a renewed sense of family in the U.S.	The strategies used to reduce the conflict and maintain balance between the U.S. and East Asian's cultures, roles, and family patterns.
Academic adjustment (English proficiency, U.S. educational system, graduate level studying skills)	Communication among family members		
Socio-cultural adjustment (culture shock, racial issues, intercultural activities)	Spiritual well-being		

Personal psychological adjustment (homesickness, loneliness, depression, frustration, loss of identity, worthlessness).	U.S. host culture: sensitivity, open, honest, flexibility, communication, democratic outlook, forgiveness

The Contextual Model of Family Stress

In comparison with the Double ABC-X model, Boss' contextual model (2002) is used as a further clarification for this current study and refers to Hill's ABC-X as the *sojourn* condition. Hill's heuristic core model, adapted to Boss' contextual model,became less linear. Boss also proposed two different contexts in which family stress is mediated, one in which the family has control and one in which it does not (see Figure 2 on the next page). Since families do not live in isolation, it is critical to understand the family stress management process from the larger context in which they live.

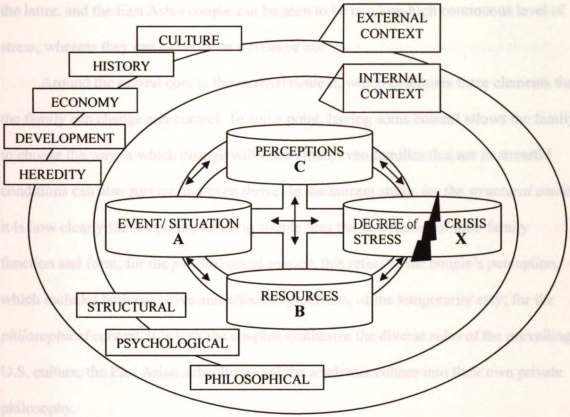

Figure 2. The Contextual Model of Family Stress.[3]

Starting off from the family stress process core, the stressor event (A) here refers to the East Asian couples' time in the U.S., which is classified as a volitional stressor event since the couples chose to study aboard; the family's resources or strengths at the time of the event (B), according to Hill (1958), appear to be the same as the construct "family coping," which Boss defines as "the process of managing a stressful event by the family as a unit with no detrimental effects on any individual in that family" (p.79); the meaning of the event (C), which refers to the couples' family boundary, ambivalence, denial, values, and beliefs; and for the stress and crisis (X), the former is not a definite cause of

[3] From "*Family Stress Management: A Contextual Approach*" (2nd ed.), by P.G. Boss, 2001, p.40. Copyright 2001 by Sage Publications.

the latter, and the East Asian couple can be seen to be in a low-high continuous level of stress, whereas they can either be in a crisis or not.

Around the central core is the internal context, which composes three elements that the family can change and control. To some point, having some control allows the family to choose the way in which change will occur, thus, even families that are in stressful conditions can also survive and even thrive. In the current study, for the *structural context*, it is how clearly the temporary residing couple sees the boundaries of their family function and form; for the *psychological context*, this refers to the couple's perception, which includes both cognitive and affective processes, of the temporarily stay; for the *philosophical context*, it is how the couples synthesize the diverse rules of the prevailing U.S. culture, the East Asian subculture, and the academia culture into their own private philosophy.

The outward ring around the internal context is the external context, which comprises five dimensions, which cannot be ignored when explaining family stress. It cannot be controlled and changed by the family and includes the environment in which the family is embedded, also called the family's ecosystem. The five dimensions within the external context are: culture, history, economy, development, and heredity, each of which has tremendous influence on how the family perceives events and manages (or fails to manage) whatever stress is produced. In other words, it is the "time" and "place" in which a particular family finds itself (Boss, 2002, p.40).

In this particular study of East Asian graduate student couples, the first dimension of *culture context* is the key context in which couples face incongruity between operating and functioning through their own microlevel of East Asian subculture while following the meta rules of the U.S. mainstream culture. The *historical context* must include an

important understanding of policy changes that occurred at the Federal level after the terrorist attacks on September 11, 2001. Barriers to international enrollment were set up in the Departments of Homeland Security and State when significantly strict policy changes for student visa applications were put into place, which made it much more difficult for international students to come to the U.S. The *economic context* could be described as an existing tight financial situation as a result of international students being restricted to on-campus employment. A description of the *developmental context* would be where the East Asian couple is in a situation where they are pursuing higher academic achievement, but are also maintaining a marriage and family life. For the *hereditary context*, it is the couples' heritable and genetic context that determines whether they have more or less stamina and resilience when dealing with the pressure of their temporary stay.

Conclusion

As indicated above, various factors affect married graduate students while temporarily residing in the U.S. Given the particularly salient relationship that social support has for overseas students (Ying, 2003), this factor is an important predictor of adaptation. Other variables are also used to examine East Asian graduate students and their spouses' adaptation. Gender, according to Boss (2002), "…is one of the influences that people construct about the meaning of an event or situation" (p.15). Prior studies (Espiritu, 1999; Zhou, 2000) indirectly suggest that female immigrants acculturate at a faster pace than their male counterparts and while male spouses accompanying international female students are rare exceptions (De Verthelyi, 1995), it is suggested that an examination be made of gender's effect on the temporary residing couple's life

satisfaction.

According to the Double ABC-X model (McCubbin & Thompson, 1987), Antonovsky's (1987) sense of coherence (SOC) was identified for mediating individuals and family members' stress responses resulting in outcomes attached to positive adaptation (life satisfaction), which is also this present study's proposed purpose.. As studies mostly focus on SOC as a determinant of patients' health condition (Carstens & Spangenberg, 1997; Rena, Moshe, & Abraham, 1996; Santavirta, Bjorvell, Konttinen, Solovieva, Poussa, & Santavirta, 1996; Strumpfer, 1997), and also stressed individuals' psychological well-being (Anson, Carmel, Levenson, Bonnch, & Maoz, 1993; Carmel & Bernstein, 1989; Engelhard, Hout, & Vlaeyen, 2003; Larsson & Kallenberg, 1996; Newton, 1999), there was no study examining foreign students' SOC. Given this (conceptual) reason, SOC was included in this present study to examine its dynamic with other factors affecting East Asian couples' sojourn in the U.S.

In addition to social support, gender, and SOC, McRoy and Fisher (1982) point out the findings from past research that indicate how various personal and family characteristics of couples play a significant part in the adjustment to marriage. Of those characteristics, educational attainment has already been discussed in this study, while the remaining two characteristics, the absence or presence of children and the length of marriage have been brought into the study as predictors of East Asian graduate student couples' life satisfaction. The latter finding, that of length of marriage was studied by Legako (1996), who reported that marriages lasting more than ten years fared better than those of shorter duration, which usually refers to graduate students in general. This factor therefore, is an important element to include in this study.

In summary, this present study proposes to investigate the stress-mediating and adaptation-facilitating factors of social support, gender, sense of coherence (SOC), number of children, and duration of marriage of East Asian graduate students and their spouses. Moreover, referring to the study's theoretical framework, the factors of existing and new resources (b B), stressors and stressor pile-up (a A), and perception of stressors (c C), were examined to determine the couple's adaptation and adjustment to their temporary residing status in the U.S. (x X – life satisfaction).

CHAPTER 3

Research Methodology

As presented in the previous chapter, there is a body of research that indicates factors influencing international students' adjustment. Tseng and Newton (2002) claimed that among the numerous theories of life satisfaction being conducted with domestic students, those studies seldom focused on international students as research participants. The purpose of this study is to examine East Asian graduate students and their spouses' stress-mediating and adaptation-facilitating factors through certain selected variables. The goal of collecting and analyzing data in this study is to provide international student affairs' office in the sampling universities' with information for conducting more suitable orientation programs and other relevant services. It can also assist in providing necessary information for counseling and clinical centers and agencies in dealing more knowledgeably with foreign student couples' adaptation problems. In order to reach this goal, several research objectives were developed to guide this study (see Figure 3 on next page).

Conceptual Model

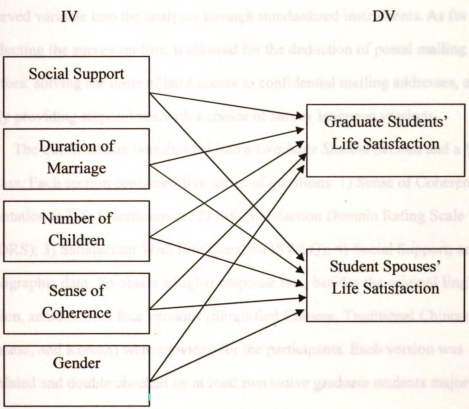

Figure 3. Conceptual Model.

Research Design

Given the lack of attention to determinants of international graduate student couples' life satisfaction and stress, this proposed study is considered exploratory research.[4] A quantitative design will be used to explore the contribution of selected variables to the life satisfaction of East Asian graduate students and their spouses.

An on-line questionnaire was set up to gather the data. Obtaining a questionnaire method resulted from the purpose of gaining a characteristic

[4] According to Babbie (2004), exploratory studies are mostly done for: 1) satisfy researcher's curiosity and desire; 2) test the feasibility of undertaking a more extensive study; and 3) to develop the methods to be employed in any subsequent study. In this present study, the purpose of exploratory research is to gain a better understanding of the East Asian couples' life satisfaction, and expect to come up with implications for future programming of the sample group.

description from the sampling population, and also its flexibility of including each observed variable into the analyses through standardized instruments. As for conducting the survey on-line, it allowed for the deduction of postal mailing time and fees, solving the issue of hard access to confidential mailing addresses, and easily providing respondents with a choice of survey language versions.

The questionnaire was divided into a *Graduate Student Section* and a *Spousal Section*. Each section contained five series of questions: 1) Sense of Coherence-Orientation to Life Questionnaire; 2) Life Satisfaction Domain Rating Scale (LSDRS); 3) Satisfaction With Life Question (SWLQ); 4) Social Support; and 5) demographic data. To obtain a higher response rate, besides the original English version, an additional four versions (Simplified Chinese, Traditional Chinese, Japanese, and Korean) were provided for the participants. Each version was translated and double checked by at least two native graduate students majoring in Linguistics and Family Studies to insure its reliability.

The unit of analysis was individual. Before analyzing the hypotheses, a correlation analysis was conducted among the sample's demographic data. Following the sample correlations, a pair-t test was used to test the first hypothesis. The second hypothesis was analyzed by a multiple linear regression[5].

$$y_i = \beta_0 + \beta_1 G_i + \beta_2 CII_i + \beta_3 CIII_i + \beta_4 MII_i + \beta_5 MIII_i + \beta_6 O_i \varepsilon + \beta_7 S_i + \varepsilon_i$$

i : Individual;

$$y = \begin{cases} \text{LSDRS : 15 - item Life Satisfaction Domain Rating Scale (LSDRS);} \\ \text{SWL - Q : A single Satisfaction With Life Question (SWL - Q);} \end{cases}$$

$$G = \begin{cases} 1 \text{ if female;} \\ 0 \text{ if male;} \end{cases}$$

[5] The baseline group: An individual with no children and being married for one year or less than one year (CI: having no children, MI: married for one year or less than one year).

$$CII = \begin{cases} 1 \text{ if have one child;} \\ 0 \text{ otherwise;} \end{cases}$$

$$CIII = \begin{cases} 1 \text{ if have two or more children;} \\ 0 \text{ otherwise;} \end{cases}$$

$$MII = \begin{cases} 1 \text{ if married for two to three years;} \\ 0 \text{ otherwise;} \end{cases}$$

$$MIII = \begin{cases} 1 \text{ if married for four years and more;} \\ 0 \text{ otherwise;} \end{cases}$$

O = Sense of Coherence: 29-item Orientation to Life Questionnaire (OLQ) (Antonovsky, 1987).
S = Social Support: 17-item Social Support Index (SSI) (McCubbin, Patterson, & Glynn, 1982).

This was not a representative study because the sample size was too small for the results to be generalized. Therefore, it could only make statements about the sample itself and not generalize the findings. The rule-of-thumb for determining the sample size was: 8 x (the number of independent variables) + 50. By having five independent variables in this study, the needed sample size was 8*5+50=90.

Research Objectives

The following research objectives were established:

(1) To describe the East Asian graduate students and spouses' demographic data and the inter-correlations of study variables.

(2) To determine if there are differences between East Asian graduate students and their spouses' life satisfaction.

(3) To determine if East Asian graduate students and their spouses' life satisfaction can be predicted by duration of marriage, number of children, gender, sense of coherence, and social support.

Research Hypotheses

Two research hypotheses were derived from the research objectives. That:

(1) The East Asian graduate student's life satisfaction is higher than their spouse's life satisfaction.

(2) Life satisfaction of East Asian graduate students and spouses' can be predicted by duration of marriage, number of children, gender, sense of coherence, and social support.

Definition of the Terms (Conceptual and Operational)

Independent Variables

(1) *Social support*:

Conceptual definition: This is defined as the degree to which families are integrated into the community, view the community as a source of support and feel that the community can provide emotional, esteem, and network support (McCubbin, Patterson, & Glynn, 1982).

Operational definition: The Social Support Index (SSI) is a 17-item instrument which uses a 5-piont scale ranging from Strongly Disagree to Strongly Agree. Versions of the SSI with 22 and 25 items have been used in the past but the additional items consist of social desirability items and are not used in scoring or analysis and so were not included. The internal reliability (Cronbach's alpha) of the SSI measure is .82.

(2) *Duration of marriage*:

Conceptual definition: This is defined as how long the couples have been married.

Operational definition: Duration of marriage information was provided by asking the respondents: How many years have you been married?: 1. less than

one year, 2. one year, 3. two years, 4. three years, 5. four years, 6. five years, 7. six years, 8. seven years, 9. eight years, 10. nine years, 11. more than ten years.

(3) *Number of children*:

Conceptual definition: This is defined as how many children the couples have.

Operational definition: The data of number of children was provided by asking the respondents: How many children do you have? : 1. None, 2. 1, 3. 2, 4. 3, 5. 4 and over.

(4) *Sense of coherence (SOC)*:

Conceptual definition: A global orientation that expresses the extent to which one has a pervasive, enduring, and dynamic feeling of confidence that (1) the stimuli deriving from one's internal and external environments in the course of living are structures, predictable and explicable; (2) the resources are available to one to meet the demands posed by these stimuli; and (3) these demands are challenges, worthy of investment and engagement (Antonovsky, 1987).

Operational definition: SOC was measured by asking the respondents to fill out Antonovsky's 29-item Orientation to Life Questionnaire (OLQ) (1987). The OLQ is a 7-point, semantic differential scale; scores may range from a low of 29 to a high of 203. It is composed of an overall scale score and three subscale scores. Internal consistency (Cronbach's alpha) has been reported and ranged from .84 to .94 (Antonovsky, 1987).

(5) Gender:

Conceptual definition: This defines the sex of the individual participants

Operational definition: This variable was used as a dummy variable to see if there was any difference among the sample. The gender data was gathered by asking the respondents: What is your gender? : 1. male, 2. female.

Dependent Variables

(1) *Life satisfaction (adaptation)*:

Conceptual definition: The outcome of family efforts to achieve a new level of balance and fit after a family crisis. Individual growth and development are promoted when positive family adaptation occurs (McCubbin & Thompson, 1987).

Operational definition: Adaptation was measured by using measures of individual life satisfaction. Respondents were asked to fill out the 15-item Life Satisfaction Domain Rating Scale (LSDRS) and the single Satisfaction With Life Question (SWL-Q) (Campbell, Converse, & Rodgers, 1976). Both the LSDRS and SWL-Q have a 7-point, bi-polar, Delighted-Terrible format; scores may range from 15 to 105 for the LSDRS, and 1 to 7 for the SWL-Q. High scores indicate high life satisfaction. The internal reliability (Cronbach's alpha) of the LSDRS is .76.

Other Essential Definitions

(1) *East Asian graduate student couples:*

Conceptual definition: Married graduate students having origins in any of the East Asia countries, which includes China, Hong Kong, Japan, South Korea, and Taiwan, that had enrolled for a graduate program in the United States, and had either their student or non-student spouse residing with them during their study sojourn in the U.S.

Operational definition: Foreigners from East Asia who enrolled in a graduate program between Spring 2003 and Fall 2005 with a SEVIS (the Student and Exchange Visitor Information System) I-20 form and F-1 student visa. Their non-student spouse held an F-2 (dependent of the F-1 holder) visa.

(2) *Sojourn*:

Conceptual definition: To stay or dwell in a place for a short period of time; reside temporarily.

Operational definition: In this study, it specifically referred to people who legally stay in the United States by holding a SEVIS (the Student and Exchange Visitor Information System) I-20 form and F-1 Student Visa and F-2 Student's Dependent Visa.

Instrumentation

Life Satisfaction (Adaptation)

Horsburgh, Rice, and Matuk (1998) state that although family adaptation is viewed as more than the sum of individual family members' adaptation, individual outcomes are viewed within the Double ABC-X Model (McCubbin & Thompson, 1987) as indicative of the family's level of adaptation as a whole. McCubbin and Thompson (1987) describe adaptation as the "outcome of family efforts to achieve a new level of balance and fit after a family crisis" (p.15). They also indicate that individual growth and development are promoted when positive family adaptation occurs.

In this study, adaptation was operationalized using measures of individuals' life satisfaction. There are research precedents for measuring adaptation in this way. Dean (1985), Burckhardt (1985), and Magilvy (1985) measured life satisfaction as an indicator of individual adaptation to chronic illness—the higher the satisfaction with life, the higher the level of adaptation deemed present. Previous studies have indicated the multidimensional nature of Life Satisfaction (Andrews & Withey,

1976; Blair, 1977; Campbell, Converse, & Rogers, 1976; Flanagan, 1982, 1978; Gill, 1984; Young & Longman, 1983). To capture this complexity, researchers advocate the simultaneous use of more than one Life Satisfaction measure (Dean, 1985; Horsburgh et al., 1998; Horsburgh, 1994; Katz, 1987; Spitzer, 1987). Therefore, two independent measures of Life Satisfaction were used in this study – the Life Satisfaction Domain Rating Scale (LSDRS) and the Satisfaction With Life Question (SWL-Q).

Life Satisfaction Domain Rating Scale (LSDRS). The LSDRS (Horsburgh, 1994) is a 15-item scale based on the work of Flanagan (1978) and with the 7-point rating scale of Andrews and Withey (1976). It was used to assess well-being. Flanagan undertook a study to define the critical attributes of a person's life satisfaction in the U.S. More than 6,500 critical incidents were collected from nearly 3,000 people of various ages, races and backgrounds representing all regions of the country. Through an inductive process, fifteen categories of life satisfaction were formulated. Flanagan did not report validity or reliability estimates for his scale, but a very similar scale developed by Campbell, et al., (1976, p. 63) reported a test-retest stability correlation of .76 for the composite of life satisfaction domains. This finding was interpreted to "form a lower bound for test-retest reliability" (p.68) because there was an eight month lapse between initial and second interviews – a long enough time period to have permitted true change to have occurred.

The life satisfaction domains of the LSDRS include the following: physical and material well-being, satisfaction with relations with other people, satisfaction with social, community and civic activities, satisfaction with personal development

and fulfillment, and satisfaction with recreation. These domains are fairly consistent with Orem's (1991) conceptualization of well-being. Each of the LSDRS items were recoded so that a high score would indicate a high life satisfaction. Scores on the LSDRS could range from 15 to 105. Construct validity of the LSDRS was reported by previous studies (Horsburgh, 1994; Orem, 1991). Horsburgh (1994) investigated the concurrent validity of the LSDRS by examining the relationship between subjects' scores on the LSDRS and their scores on the second life satisfaction measure, the Satisfaction with Life Question (SWL-Q), and reported a .59 ($p < .001$) finding.

Satisfaction With Life Question (SWL-Q). The second measurement for life satisfaction in this study is the single Satisfaction With Life Question (SWL-Q) (Campbell, Converse, & Rodgers, 1976). While Campbell et al. noted the importance of measuring satisfaction with the various life domains; they also emphasized interest in the concept of a general sense of satisfaction with life. They stated, "it is not unlikely that people evaluate their lives in general terms and it seems very possible that this overall evaluation may not be a simple sum of the domain evaluations" (p. 13). Therefore, they formulated a general life-satisfaction item using a seven-point semantic differential scale.

The SWL-Q was used by Horsburgh (1994) with a sample of 133 "well" adults and 180 adults with end stage renal disease (ESRD), and another study by Horsburgh et al. (1998) with 28 male ESRD patients and their spouses. Construct validity of the Delighted-Terrible scaling format SWL-Q was supported by previous studies (Horsburgh, 1994; Orem, 1991). In this current study, subjects' scores on the

7-point SWL-Q were recoded so that a high score indicated high life satisfaction. Subjects' scores on the SWL-Q ranged from a low of 1 (terrible) to a high of 7 (delighted).

Sense of Coherence (SOC) —Orientation to Life Questionnaire

Antonovsky's 29-item Orientation to Life Questionnaire (OLQ) (Antonovsky, 1987) was used to measure physically ill patients and their spousal level of SOC. The OLQ was developed from qualitative data and tested in Hebrew and English language adults in Israel, Canada, and the United States (*N*s ranged from 117 to 338). The questionnaire has been used in at least 33 languages in 32 countries with at least 15 different versions. The SOC scale is considered a reliable, valid, and cross culturally applicable instrument measuring how people manage stressful situations and stay well (Eriksson & Lindström, 2005).

Respondents were asked to select a response on a 7-point, semantic differential scale. The respondents were supposed to mark the number which expressed their answer, with numbers 1 to 7. If the words under 1 were right for the answer, they circled 1; if the words under 7 were right for them, they circled 7. If they felt differently, they were supposed to circle the number which best expressed their feelings. Questionnaires that were answered in the extreme positions (either 1 or 7) were to be rejected. Thirteen of the items (1, 4, 5, 6, 7, 11, 13, 14, 16, 20, 23, 25, and 27) were formulated "negatively" and had to be reversed in scoring, so that a high score always expressed a strong SOC.

The range of possible scores was from 29 to 203; the higher the score, the stronger the SOC. Antonovsky reported a mean SOC score of 136 (SD = 19.8) for a national Israeli sample of 297 subjects, a mean score of 132 (SD = 21.9) for 308

U.S. undergraduate students, and mean of 160 (*SD* = 16.7) for 338 Israeli army officer trainees. Sagy, Antonovsky, and Adler (1990) reported a mean score of 148.9 (*SD* = 23.3) for 805 Israeli retirees. For a sample of 20 adults with insulin-dependent diabetes mellitus, a mean score of 143 was reported (Lundman & Norberg, 1993). Horsburgh, Rice, and Matuk (1998) reported a mean score of 143.5 (*SD* = 28.1) for 28 couples who were using a home chronic ambulatory peritoneal dialysis treatment program in Canada.

An account of the development of the SOC scale and its psychometric properties, showing it to be a reliable and reasonably valid scale, appears in Antonovsky (1987, chap.4). It is composed of an overall scale score and three subscale scores. The Sense of Coherence is, according to Antonovsky, " ... a global orientation that expresses the extent to which one has a pervasive, enduring though dynamic feeling of confidence" (p. 19). Each subscale is described below.

(1) Comprehensibility subscale ("C", 1, 3, 5, 10, 12, 15, 17, 19, 21, 24, and 26): " ... the stimuli arriving from one's internal and external environments in the course of living are structured, predictable and explicable" (p. 19). Comprehensibility is referred to as the extent to which an individual perceives life's challenges in a clear, ordered, and structured manner (Antonovsky, 1987). Sample item: "Has it happened in the past that you were surprised by the behavior of people whom you thought you knew well?" Scale: 1 = never and 7 = always.

(2) Manageability subscale ("MA", 2, 6, 9, 13, 18, 20, 23, 25, 27, and 29): " ... the resources are available to one to meet the demands posed by

these stimuli" (p. 19). Having resources "at one's disposal" (p. 17) may refer to either direct or indirect control of such resources. When an individual encounters hardship, he or she is expected to endure it and not to be overwhelmed (Antonovsky, 1987). Sample item: "Do you have the feeling that you're being treated unfairly?" Scale: 1=never and 7=always.

(3) Meaningfulness subscale ("ME", 4, 7, 8, 11, 14, 16, 22, and 28): " ... these demands are challenges worthy of investment and engagement" (p. 19). Meaningfulness is the extent to which an individual believes that life makes sense emotionally and that one possesses the motivation and desire to cope with encountered stimuli (Antonovsky, 1987, 1996b). Meaningfulness connotes the emotional investment in life. That is, each individual identifies specific areas in life that are worthy of time and effort (Antonovsky, 1996b; Sullivan, 1993). Sample item: "Until now your life has had:" Scale: 1 = no clear goals or purpose and 7 = very clear goals and purpose.

It is important to note that SOC is not a personality test and that a person's SOC score changes during the lifetime, for example, during psychological stress, anxiety or depression. Internal consistency Cronbach's alphas have been reported and ranged from .84 to .94 (Antonovsky, 1987). Preliminary work (Antonovsky, 1993, 1987) has supported content and concurrent, convergent, and discriminant validity for the OLQ. Factor analyses of the OLQ demonstrated that the three

components of the SOC (comprehensibility, manageability, and meaningfulness) were not empirically unique (Antonovsky, 1993). This is consistent with Antonovsky's (1987) view that the three components are "inextricably intertwined" (p. 86).

Social Support Index (SSI)

This is defined as denoting which families are integrated into the community, view the community as a source of support and feel that the community can provide emotional, esteem, and network support (McCubbin, Patterson, & Glynn, 1982). The Social Support Index (SSI) is a 17-item instrument which uses a 5-point scale ranging from Strongly Disagree to Strongly Agree. The total score for SSI is obtained by simply summing the number chosen by the respondent (i.e., 0 = Strongly Disagree, 1 = Disagree, 2 = Not sure, 3 = Agree, 4 = Strongly Agree) for all 17 items. However, 6 of the items (7, 9, 10, 13, 14, and 17) must be reversed before scoring (i.e., 4 = Strongly Disagree, 3 = Disagree, 2 = Not sure, 1 = Agree, 0 = Strongly Agree) in order to ensure that all items are scored in the same positive direction for analysis and interpretation. The test-retest reliability is .83. The internal reliability (Cronbach's alpha) of the SSI measure is .82.

Sampling Procedures

The research was conducted in one of the States in the Midwest. According to the Institute for International Education (IIE) (2005e), the two universities that were chosen for the sampling ranked number seven and number twenty in 2004/05 on the top 25 host institutes' ranking and also the top 40 doctoral/research institutes' ranking in the U.S. In that academic year, the Midwest (Illinois, Indiana, Iowa,

Kansas, Michigan, Minnesota, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin) had a total of 122,943 international students (IIE, 2005f), which was about 21.76% of the U.S. total (IIE, 2005g). The State itself ranked number eight throughout the U.S. as having 20,879 foreign students, which was 3.7% of the U.S. total. Of the top five leading countries of origin in the State, East Asian countries such as China, ranked third (11.3%, 2,369); Korea ranked fourth (10.4%, 2,174); and Japan ranked fifth (3.6%, 743) (IIE, 2005d).

Like the U.S. and the State, East Asia sends the most international students to the two sampling universities (here referred to as UA and UB). Nearly half (49.95%) of UA's and 50.02% of UB's international graduate students come from five East Asian countries: China, Hong Kong, Japan, Korea, and Taiwan (Briggs, 2005; A. Cameron, personal communication, March 22, 2006) (see Table 5 on the next page). The two schools have a total of 5,215 (UA: 2082, UB: 3133) international graduate students (IIE, 2005f). In Fall 2005, more than two-thirds of UA' s (63.23%) and UB' s (71.84%) international student enrollment were in graduate programs (Briggs, 2005; A. Cameron, personal communication, March 22, 2006).

Table 5

The Number of Fall 2005 East Asian Graduate Students in UA and UB

	UA Graduate Student					*UB Graduate Student*				
Country	*N*			*% of*	*With*	*N*			*% of*	*With*
	M	*F*	*Sub*	*Int'l*	*F-2*	*M*	*F*	*Sub*	*Int'l*	*F-2*
China	246	264	510	24.50	113	389	335	724	23.11	106
HK	4	10	14	0.67	—	15	5	20	0.64	1
Japan	36	34	70	3.36	10	88	28	116	3.70	27
Korea	145	193	338	16.23	154	378	112	490	15.64	162
Taiwan	76	32	108	5.19	10	136	81	217	6.93	16
Total	507	533	1040	49.9	287	1006	561	1567	50.02	312

Note: UA has $N = 2082$ international graduate students, UB has $N = 3133$ international graduate students.
HK is for Hong Kong and Korea is for the Republic of Korea.
N is for the total numbers of graduate students, M is for male, F is for female, and Sub is for subtotal.
% of Int'l is for percentages of total international graduate students.
With F-2 is for graduate students who has a F-2 visa dependent (i.e., spouse) listed on their own F-1 student visa.

Given that both universities do not keep track of students' marital status, there were no exact statistical numbers for this study to estimate a possible sample size of married East Asian graduate students. Therefore, the possible sample size was to record numbers according to the graduate student's I-20 visa that has spouses listed as dependents. This contains several possibilities: 1) the student couples' long-term sojourn; 2) the absence of the spouse who might be back in their home country; or 3) the spouse may have his/her own visa status (i.e. F-1 or J-1) and is not identified as a dependent. To obtain the largest sample size, the invitation e-mail was sent to all East Asian graduate students in the two universities. It stated that only graduate students who were from East Asia (China, Hong Kong, Japan, Korea, and Taiwan), married with a spouse and staying together in the

States, as well as first-time enrolled in school between Spring 2003 and Fall 2005, were asked to participate in the study. This criterion of first-time enrollment was to control the length of sojourn to less than three years, which limits the possibility of successful adaptation.

As for confidentiality, the samples were obtained through the two universities' International Center and Registrar Office's enrollment records. An invitation e-mail was forwarded by the universities inviting East Asian graduate students and their spouses to participate in this study. A link was provided in the e-mail for them to go straight to the website, where they were asked to complete the questionnaire individually. Participants were assured confidentiality and asked to complete an online consent form before starting the survey. It was stated at the bottom of the consent form that clicking "AGREE" indicated their voluntary agreement to participate in the study and clicking "DISAGREE" indicated their withdrawal from the study. The spousal consent was also assured by requesting their response to the same question.

According to Babbie (2004), three mailings (an original and two follow-ups) seemed the most efficient in practice. He also pointed out that two to three weeks is a reasonable space between mailings. Therefore, the survey strategy in this current study was to send out a friendly follow-up reminder every two weeks in a six-week data collection span. Unfortunately, unexpected delays resulted from the e-mail communication between the researcher and the university officers. Eventually, there was a three-week span in-between the three mailings (the original invitation e-mail and the two follow-ups). The invitational e-mail was forwarded to the East Asian students on October 4, 2005. Sixty-eight responses were received before the first follow-up reminder was sent. Before the second follow-up reminder was sent, there were a total of 86 responses. The data collection was closed on Dec. 9th, 2005 with a total of 91 responses

(see Table 6). It should be known that the second follow-up invitation was only sent to the sample in UB as a result of UA's officer's rejection.

Table 6

Process of Data Collection

Mail	*Date*	*N*	*Cumulative No.*
Invitation E-mail	Oct. 4th, 2005.	68	—
First Follow-up	Oct. 26th, 2005.	18	86
Second Follow-up	Nov. 15th, 2005.	5	91

Note: All mail was sent to both UA and UB's sample except for the second follow-up mailing which was only sent to UB's sample.

CHAPTER 4

Results

This chapter is divided into two sections. The first section presents the sample description. The second section describes the results of each hypothesis tested in the study.

Description of the Sample

According to the sampling criteria, students have to be from an East Asian country (China, Hong Kong, Japan, South Korea, and Taiwan), hold an F-1 student visa, enrolled for the first time between Spring 2003 and Fall 2005, and have their F-2 visa spouse living with them in the United States. The criterion of first-time enrollment was to control the length of sojourn to less than three years in order to avoid long-term adaptation. This was indicated by question #66 and #140 asking "Until now, how many years have you been in the Untied States?" and #68 and #143 asking, "How many years have you been in this program?" Among the total 91 responses received, 35 couples were eliminated as a result of failing to meet this criterion.

A total of 56 (61.54%) married graduate student couples met the sampling criteria and therefore comprise the study sample. Given that each of the surveys was filled out by couples, 56 couples consisted of 112 individuals. The distributions within the sample are: 56 males and 56 females; 67 graduate students (F-1) and 45 non-student spouses (F-2); 11 couples of F-1 male and F-1 female (referred to as Group 1); 44 couples of F-1 male and F-2 female (referred to as Group 2); 1 couple of F-1 female and F-2 male (referred to as Group 3). The couple of F-2 male and F-2 female is not relevant to this present study (see Table 7 and Table 8 on the next page).

Table 7

Distribution of Sample (Individuals)

Group	*Male*	*Female*	*Subtotal*
F-1 (*n*)	55	12	67 (59.82%)
F-2 (*n*)	1	44	45 (40.18%)
Total	56	56	—

Table 8

Distribution of Sample (Couples)

Group	*Female F-1*	*Female F-2*
Male F-1 (*n*)	Group 1: 11 (19.64%)	Group 2: 44 (78.57%)
Male F-2 (*n*)	Group 3: 1 (1.79%)	N/A

Demographic Description

In Group 1 (see Table 9 on page 52), 18.2% of the couples were married for less than one year, 36.4% for two years, 18.2% for three years, and 9.1% for the duration of four, seven, and eight years, respectively. In terms of couples with children, 81.8% of the couples had no children, and 18.2% had one child. Both of the couples were mostly in the 21-30 age range (72.7% male and 81.8% female). Nine couples were from China, one was from the Republic of Korea, and one was from Taiwan. More than half of the males (54.5%) had been in the U.S. for two to three years while 45.5% females had been in the U.S. for one to two years. Thirty-six percent of males and 45.5% of females were enrolled in a Master's program (ex:MA, MS, MEng, MEd, MSW), and 63.6% of males and 45.5% of females in a Doctorate program (ex:PhD, EdD). Thirty-six percent of males and 54.5% of females had been in their degree program for a year and less, 27.3% of

males and females had been in their program for one to two years, and 36.4% of males and 18.2% of females had been for two to three years.

In Group 2 (see Table 9 on the next page), 29.5% of the couples had been married for less than one year, 11.4% for one year and three years, 18.2% for two years and four years, 4.5% for five years and ten years and more, and 2.3% for an eight-year duration. In terms of couples with children, 68.2% of couples had no children, 29.5% had one, and 2.3% had two children. The couples' ages were: 1) in the 21-30 range (47.7% of male and 61.4% of female); and 2) in the 31-40 age range (52.3% of male and 38.6% of female) . Twenty-two couples were from China, two from Japan, 17 from Republic of Korea, and three from Taiwan. Forty-five percent of males had been in the U.S. for one to two years, while 65.9% of females had been in the U.S. for one year or less. Forty-one percent of males were enrolled in a Master's program and 54.5% in a Doctorate program. Forty percent of the males had in their degree program for one year or less, 52.3% for one to two years, and 6.8% for two to three years.

In Group 3, only one couple was identified. They had been married five years, had two children, were from the Republic of Korea, and were in the 31 – 40 age range. They had been in the U.S. for one to two years with the woman being the student (a Master's Degree program), while her non-student husband held a Doctorate degree.

Table 9

Demographic Characteristics of Sample Groups

Characteristic	*Group 1*		*Group 2*	
	Male	*Female*	*Male*	*Female*
Sample Number	11	11	44	44
Duration of marriage		*n* (%)		*n* (%)
Less than 1 year		2 (18.2)		13 (29.5)
1 year		—		5 (11.4)
2 years		4 (36.4)		8 (18.2)
3 years		2 (18.2)		5 (11.4)
4 years		1 (9.1)		8 (18.2)
5 years		—		2 (4.5)
7 years		1 (9.1)		—
8 years		1 (9.1)		1 (2.3)
10 years and more		—		2 (4.5)
Number of Children				
None		9 (81.8)		30 (68.2)
1 child		2 (18.2)		13 (29.5)
2 children		—		1 (2.3)
Age				
21 to 30	8 (72.7)	9 (81.8)	21 (47.7)	27 (61.4)
31 to 40	3 (27.3)	2 (18.2)	23 (52.3)	17 (38.6)
Country Region				
China		9 (81.8)		22 (50.0)
Japan		—		2 (4.5)
Korea, Republic of		1 (9.1)		17 (38.6)
Taiwan		1 (9.1)		3 (6.8)
Years in the U.S.				
1 year and less	3 (27.3)	3 (27.3)	17 (38.6)	29 (65.9)
1 to 2 years	2 (18.2)	5 (45.5)	20 (45.5)	13 (29.5)
2 to 3 years	6 (54.5)	3 (27.3)	7 (15.9)	2 (4.5)
Degree				
Master's	4 (36.4)	5 (45.5)	18 (40.9)	N/A
Professional	—	1 (9.1)	1 (2.3)	
Doctorate	7 (63.6)	5 (45.5)	24 (54.5)	
(Missing data)	—	—	1 (2.3)	
Years in the degree				
1 year and less	4 (36.4)	6 (54.5)	18 (40.9)	N/A
1 to 2 years	3 (27.3)	3 (27.3)	23 (52.3)	
2 to 3 years	4 (36.4)	2 (18.2)	3 (6.8)	
Highest Education				
High school grad-diploma	—	—	—	6 (13.6)
College but no degree	1 (9.1)	—	2 (4.5)	3 (6.8)
Associate degree	—	—	—	18(40.9)

Bachelor's	2 (18.2)	4 (36.4)	13(29.5)	14(31.8)
Master's	8 (72.7)	7 (63.6)	28(63.6)	2 (4.5)
Professional	—	—	—	1 (2.3)
Doctorate	—	—	1 (2.3)	—

Note: Group 3 was left out of the table as a result of inadequate sample size. Demographic characteristics that contained no responses were left out of the table.

Overall, the 56 couples were highly educated individuals in their 30s. Student spouses were overwhelmingly female. Group 2, the F-1 male graduate student and F-2 female non-student spouse, appeared to be somewhat older and have less temporary residing years in the U.S. than Group 1, whose male and female were both F-1 graduate students. Group 3 was not comparable with the other two groups as a result of containing only one single couple.

Correlation Description

According to the sample distribution above, the East Asian couples did not contain an even number of students ($n = 67$) and non-students ($n = 45$). Therefore, to gain a comparative understanding of the student and non-student groups, the correlation analysis was conducted separately for the graduate students (F-1) and the non-student spouses (F-2) rather than analyzing the couples in pairs. Table 12 and Table 13 present the two groups' correlations of sample description.

The LSDRS scores for the graduate student subjects in this study ranged from 49 to 105, and for the non-student spouse subjects 54 to 101. The mean was 80.94 ($SD = 11.26$) and 81.08 ($SD = 12.20$) respectively. Reliability of the LSDRS with the 67 graduate students and 45 non-student spouses, was $\alpha = .91$ and .93 respectively. The SWL-Q scores for the graduate student subjects in this study ranged from 1 to 7, and for the student spouse subjects 2 to 7. The mean score for graduate students and non-student spouses was 5.36 ($SD = 1.06$) and 5.27 ($SD = .96$) respectively. This present study's concurrent validity, which is reported by the correlation of LSDRS and SWL-Q, is .737

($p < .001$) for the graduate students ($n = 67$) and .485 ($p < .001$) for the non-student spouses ($n = 45$). Although the .485 ($p < .001$) correlation of LSDRS and SWL-Q was somewhat low for two instruments that purportedly measured the same construct, this finding was consistent with Campbell et al. (1976) contention that overall life satisfaction is not synonymous with the sum of one's satisfaction with the unique aspects of one's life.

Scores on the SSI could range from 0 to 68; scores for the graduate student subjects in this study ranged from 30 to 59, and for the student spouse subjects was 23 to 63. The mean score for the graduate students and the spouses were 45.48 ($SD = 7.22$) and 45.91 (SD = 8.28) respectively. In this study, reliability coefficients for the 67 graduate students and 45 student spouses reported .81 and .87 respectively. The SOC scores for the graduate student subjects in this study ranged from 96 to 181, and for the student spouse subjects was 75 to 179. Subjects in this study scored a mean of 139.32 ($SD = 21.01$) and 131.11 ($SD = 20.21$) for graduate student and student spouses respectively on the SOC. While the non-student spouses' reported a lower SOC, the graduate student's SOC compares favorably with normative data (current study, p. 41). Reliability coefficients in this current study for the SOC scores of 67 graduate students and 45 non-student spouses were .90 and .88 respectively.

In this current study, the intercorrelations of the three components shown in Table 10 and Table 11 (see next page) were found to have similar magnitude with Antonovsky's national study in Israel (.45, .59, and .62) (Antonovsky, 1987, p. 87). This result was not surprising since Antonovsky's goal was to construct an SOC scale to which each component contributed. Moreover, as each component had their own centrality, successful coping, then, still depended on the whole SOC. This present study followed previous research by using subjects' whole OLQ score to measure the SOC (e.g., Engelhard, Hout, & Vlaeyen, 2003; Horsburgh et al., 1998; Newton, 1999).

Table 10

Pearson Correlations Among Graduate Students' (F-1) SOC Subscales

Subscale	*1*	*2*	*3*
1. Comprehensibility	—		
2. Manageability	.755**	—	
3. Meaningfulness	.585**	.778**	—

Note. $n = 65$.
** $p < .01$ (two-tailed).

Table 11

Pearson Correlations Among Non-student Spouse's (F-2) SOC Subscales

Subscale	*1*	*2*	*3*
1. Comprehensibility	—		
2. Manageability	.552**	—	
3. Meaningfulness	.575**	.795**	—

Note. $n = 45$.
** $p < .01$ (two-tailed).

According to the correlation analysis, it was interpreted to suggest significantly positive correlations on graduate students' LSDRS (Life Satisfaction Domain Rating Scale) and SWL-Q (Satisfaction With Life Question), LSDRS and SOC (Sense of Coherence), LSDRS and SSI (Social Support), SWL-Q and SOC, SWL-Q and SSI, SOC and SSI, and number of children and duration of marriage (see Table 12 on the next page); non-student spouses' were on LSDRS and SWL-Q, LSDRS and SSI, SOC and SSI, number of children and duration of marriage, gender and SOC, and gender and SSI (see Table 13 on page 57). Significantly low positive correlations were reported on graduate students' SWL-Q and duration of marriage; non-student spouses' were on SWL-Q and SSI.

A significantly negative correlation was found among graduate students' SOC and gender, while a significantly moderate negative correlation was found among non-student spouses' number of children and gender. No data supported duration of marriage, number of children, and gender having any significant relationships with East Asian graduate student couples' Life Satisfaction Domain Rating Scale (LSDRS).

Table 12

Pearson Correlations Among the Graduate Students' Research Variables

Variable	*1*	*2*	*3*	*4*	*5*	*6*	*7*
1. LSDRS	—	.737**	.471**	.610**	.230	.105	.046
2. SWL-Q		—	.402**	.450**	.246*	.040	.138
3. SOC			—	.496**	.073	-.025	-.273*
4. SSI				—	.115	.067	-.078
5. Duration of Marriage					—	.537**	.099
6. Number of Children						—	.018
7. Gender							—
M	80.94	5.36	139.32	45.48	3.64	1.31	1.18
SD	11.26	1.06	21.01	7.22	2.49	0.53	0.39

Note. $n = 67$. LSDRS = Life Satisfaction Domain Rating Scale; SWL-Q = Satisfaction With Life Question; SOC = Sense of Coherence; SSI = Social Support Index.
* $p < .05$ (two-tailed). ** $p < .01$ (two-tailed).

Table 13

Pearson Correlations Among the Non-student Spouse's Research Variables

Variable	*1*	*2*	*3*	*4*	*5*	*6*	*7*
1. LSDRS	—	.485**	.339**	.657**	-.110	.013	.213
2. SWL-Q		—	.170	.297*	.032	.101	.042
3. SOC			—	.538**	-.043	-.104	.423*
4. SSI				—	-.089	-.162	.422*
5. Duration of Marriage					—	.601**	-.154
6. Number of Children						—	-.430*
7. Gender							—
M	81.08	5.27	131.11	45.91	3.47	1.38	1.98
SD	12.20	0.97	20.21	8.28	2.50	0.58	0.15

Note. $n = 45$. LSDRS = Life Satisfaction Domain Rating Scale; SWL-Q = Satisfaction With Life Question; SOC = Sense of Coherence; SSI = Social Support Index.
* $p < .05$ (two-tailed). ** $p < .01$ (two-tailed).

Research Hypotheses

Research Hypothesis 1: *The life satisfaction of East Asian graduate students will be higher than their spouses'.*

Both Group 1 and Group 2's analyses on the 15-item Life Satisfaction Domain Rating Scale and the single-item Satisfaction With Life Question (see Table 14 and Table 15 on the next page) show no evidence of significance on the paired sample T-tests results. Therefore, the null hypothesis that the mean of East Asian graduate students' life satisfaction will not be significantly higher than the mean of their spouses' life satisfaction failed to be rejected. In other words, there was no support for Hypothesis 1.

Table 14

Paired T-Test Comparison of East Asian Graduate Student Couples' Life Satisfaction (LSDRS)

Group	*N*	*M*	*SD*	*t*	*df*	*Sig.***
Group 1	11	-2.43	11.44	-.706	10	.496
Group 2	44	-0.64	9.27	-.455	43	.652

Note. LSDRS = Life Satisfaction Domain Rating Scale.
Group 1 = Student (F-1) male with student (F-1) female; Group 2 = Student (F-1) male with non-student (F-2) female.
Group 3 cannot be analyzed as a result of inadequate sample size.
**p < .05 (two-tailed).

Table 15

Paired T-Test Comparison of East Asian Graduate Student Couples' Life Satisfaction (SWL-Q)

Group	*N*	*M*	*SD*	*t*	*df*	*Sig.***
Group 1	*11*	*-0.09*	*1.04*	*-.289*	*10*	.779
Group 2	*44*	*-0.07*	*1.07*	*-.425*	*43*	.673

Note. SWL-Q = Satisfaction With Life Question.
Group 1 = Student (F-1) male with student (F-1) female; Group 2 = Student (F-1) male with non-student (F-2) female.
Group 3 cannot be analyzed as a result of inadequate sample size.
**p < .05 (two-tailed).

Research Hypothesis 2: *Life satisfaction of East Asian graduate students and student spouses' will be predicted by duration of marriage, number of children, gender, sense of coherence, and social support.*

Among the three sample groups, only Group 2, the male student (F-1) with the female non-student (F-2), was used to conduct the multiple linear regression analysis as a result of a larger sample. Moreover, to add up the sample number, the 44 couples were

separated into 88 individuals and set into the same regression analysis. Given that the combined 88 sample included both male and female, interaction terms were conducted beforehand to ensure gender and the other independent variables had no interaction effect on the two measurements of life satisfaction. None of the interactions[6] tested resulted in significance. Therefore, this finding supported researcher to conduct the analysis of 88 individuals rather than 44 couples.

The best fit approach for the regression analysis was reported for the LSDRS (see Table 16 on page 60) and SWL-Q (see Table 17 on page 61). Results demonstrated a 46.6% of variance in Life Satisfaction Domain Rating Scale (LSDRS) and a 23.3% of variance in Satisfaction With Life Question (SWL-Q) explained by gender, two to three years of marriage, four years and more of marriage, having one child, having two or more children, sense of coherence, and social support. Since the observed significance levels are lower than .05 for both LSDRS and SWL-Q's regression analyses, the null hypothesis that the regression coefficient for East Asian graduate students and non-student spouses' gender, duration of marriage, number of children, sense of coherence, and social support all equals zero is rejected. Overall, the domain rating scale (LSDRS) had a higher percentage of observed variability than the overall satisfaction question (SWL-Q) that is explained by the independent variables.

For the Life Satisfaction Domain Rating Scale (LSDRS) (see Table 16), the constant variable, the having one child variable, and the social support variable were the three significant predictors. The constant shows that for the baseline group, referring to individuals with no children and being married for a year or less, they scored 20.109 on the Life Satisfaction Domain Rating Scale (LSDRS) measurement. The second result from this regression equation was that all of the other variables in the regression model

[6] The six interaction terms: Gender x Two to three years of marriage, Gender x Four years and more of marriage, Gender x Having one child, Gender x Having two or more children, Gender x SOC, and Gender x Social support.

held constant, the Life Satisfaction Domain Rating Scale (LSDRS) measurement increased by 5.314 points with the one child couples compared to the no children couples. The third result was that all of the other variables in the regression model held constant, while the Life Satisfaction Domain Rating Scale (LSDRS) measurement increased by 0.978 points when there one point of change in female spouses' social support compared to the male students.

For the Satisfaction With Life Question (SWL-Q) (see Table 17), social support appeared to be the only statistically significant predictor. The results also showed that when all of the other variables in the regression model held constant, the Satisfaction With Life Question measurement increased by 0.05402 points when there was one point of change in female spouses' social support compared to the male students'.

Table 16

Regressions Predicting Life Satisfaction (LSDRS) of East Asian Graduate Student Couples' (Group 2)

Variable	*β*	*t*	*Sig.*
(Constant)	20.109	2.366	.020**
Gender	1.383	0.661	.510
2 to 3 years of marriage	-0.632	-0.253	.801
4+ years of marriage	-3.733	-1.254	.213
1 child	5.314	2.011	.048**
2+ children	6.188	0.864	.390
SOC	0.107	1.774	.080
Social Support	0.978	5.908	.000**

Note. Group 2 = 44 student (F-1) male + 44 non-student (F-2) female.
LSDRS = Life Satisfaction Domain Rating Scale.
R^2 = .466, F = 9.96 for LSDRS ($p < .05$).
Unstandardized partial regression coefficients shown.
**$p < .05$ (two-tailed).

Table 17

Regressions Predicting Life Satisfaction (SWL-Q) of East Asian Graduate Student Couples' (Group 2)

Variable	*β*	*t*	*Sig.*
(Constant)	1.240	1.410	.162
Gender	0.154	0.712	.479
2 to 3 years of marriage	0.077	0.296	.768
4+ years of marriage	-0.001	-0.004	.996
1child	0.121	0.444	.658
2+ children	0.776	1.048	.298
SOC	0.010	1.567	.121
Social Support	0.054	3.155	.002**

Note. Group2 = 44 student (F-1) male + 44 non-student (F-2) female.
SWL-Q = Satisfaction With Life Question.
$R^2 = .233$, $F = 3.48$ for SWL-Q ($p < .05$).
Unstandardized partial regression coefficients shown.
**$p < .05$ (two-tailed).

CHAPTER 5

Discussion and Implications

This chapter is divided into three sections. The first section reviews the findings of the study and discusses their foundation within the conceptual model of the study. The second section outlines the limitations of the study and makes future research recommendations. The final section describes the implications for international student affairs offices.

Discussion of Findings

The intent of this study was to examine temporary residing East Asian couples' stress-mediating and adaptation-facilitating factors through social support, gender, number of children, duration of marriage, and sense of coherence. To capture the multidimensional nature of life satisfaction (adaptation), two scales, the 15-item Life Satisfaction Domain Rating Scale (LSDRS) (Horsburgh, 1994) and the single Satisfaction With Life Question (SWL-Q) (Campbell, Converse, & Rodgers, 1976), were used to measure East Asian student couples' life satisfaction (adaptation).

Findings in Life Satisfaction

Graduate students were hypothesized to report greater life satisfaction than their non-student spouses because their student life was identified from research to be more goal-oriented. In addition, since non-student male spouses accompanying international female students are a rare exception (De Verthelyi, 1995), this suggests that a gender/role difference might be found in the comparison of the two sample groups' (Group 1, $n = 11$, and Group 2, $n = 44$) reported life satisfaction. In this study, through the pair-t test comparison among the two groups of East Asian couples (see Table 12 on page 56), findings for both the two life satisfaction measures did not support previous studies on couples' different levels of satisfaction.

For Group 1 (student male and student female), it might be reasonable for the results showing a non-significant difference in their life satisfaction level. Given that both the male and the female were students, this study suggests that both were living a goal-oriented life (De Verthelyi, 1995); therefore, they were satisfied with life on a more similar level. For Group 2 (student male and non-student female), the hypothesized life satisfaction gap between the couples might have been off-balance by the males' goal orientations and the females' faster pace of acculturation and greater social support. According to prior studies (Espiritu, 1999; Zhou, 2000), female immigrants were found to adapt to new environments faster than their male counterparts. It was also this current study's finding that the non-student female spouses reported higher points of social support (see Table 16 on page 60, and Table 17 on page 61). Thus, the male students' goal-oriented higher satisfaction of life might be pursued by their female spouses' greater adaptation and social support.

Among the other variables, correlations with the East Asian couples' life satisfaction, SOC, and social support showed consistency with previous studies on having positive relationships with life satisfaction. It is also interesting to note that, although minor, a longer duration of marriage appeared to correlate with a higher overall life satisfaction for the graduate students. This finding is consistent with Legako's (1996) conclusion that graduate students with marriages of more than ten years have a happier life than their counterparts of shorter marriage durations.

Findings in Life Satisfaction and Sense of Coherence

Sense of Coherence (SOC), "a global orientation which sees the world as more or less comprehensible, manageable, and meaningful..." (p. 19) (Antonovsky, 1987). The graduate students (F-1) in this study scored a mean of 139.32 ($SD = 21.01$; $n = 65$) on the SOC scale, which is similar to that of the normative data (current study, p.41). Despite their experiences with graduate study and sojourn, they reported fairly strong SOC scores.

If SOC was a relatively flexible construct that was easily influenced by recent life events, one might have anticipated that the graduate students' SOC would have decreased in response to the challenge of graduate study and sojourn. However, the moderate level of SOC found in this study does not suggest that this is the case. They are more consistent with Antonovsky's (1987) contention that the SOC is fairly stable in adulthood, and it predicts a positive outcome in a long term perspective.

Between SOC and the two life satisfaction measurements, moderate positive correlations were found among 67 graduate students (F-1) (see Table 12 on page 56). The results appear to support the Double ABC-X model (McCubbin & Thompson, 1987) proposition that SOC is positively related to adaptation (life satisfaction) (p. 21). They are also consistent with prior studies. Lavee, McCubbin, and Patterson (1985) found a significant positive correlation between SOC and adaptation of Army families to life overseas. Sagy, Antonovsky, and Adler (1990) found a moderate correlation between the SOC and life satisfaction of 805 Israeli retirees, and Horsburgh, Rice, and Matuk (1998) also found moderate to large positive relationships between SOC and life satisfaction of 28 patients and spouses using home dialysis.

In contrast with the graduate students, the non-student spouses scored a mean of 131.11 ($SD = 20.21$; $n = 45$) on the SOC score, which is 8 points lower than their student partners' and an average of 13 points below prior studies' data (current study, p. 42). Specifically, Antonovsky (1987) indicated that the role of housewives, which is the kind of role this current study's spouses are mostly in, and their instrumental functions have been disregarded by the work-oriented society. Therefore, they sense a lower meaningfulness, which is one of the SOC components, as a result of their disvalued decision-making powers and belittled ego identities. To seek an in-depth explanation of why this current study's spouses' reported a lower SOC score than their male partners,' Antonovsky's (1987) definition of SOC and the reviewed literature were investigated.

From the analyses, three points emerge as illustrated here. First, the stimuli derived from the spouses' environment are hard to structure, predict, and explain as a result of the spouses' loss of autonomy as being in a dependent status (e.g., De Verthelyi, 1995; Vogel, 1986). Second, the resources for the spouses' to meet the demands posed by those stimuli are restrained from their language barrier as their English proficiency may not be as good as their partners' (e.g., Perrucci & Hu, 1995; Wierzbicka, 1997). Last, those demands are less possible to be challenging, worth investing, and engaging as a result from the lack of personal goals in the U.S. compared to their partners' academia purpose (e.g., De Verthelyi, 1995; Sokolski, 1996).

Following the reported low SOC of non-student spouses' is a minor correlation between the SOC and Life Satisfaction Domain Rating Scale (LSDRS); moreover, no significant relationship is found between the spouses' SOC and Satisfaction With Life Question (SWL-Q). However, according to Horsburgh and colleagues (1998), Antonovsky states that he is convinced the SOC and life satisfaction are two different phenomena, and that one person can conceive of life satisfaction in which the correlation between life satisfaction and SOC might be low; for example, someone living in a loving family in miserable poverty (Antonovsky, personal communication with M. E. Horsburgh, V. H. Rice, and L. Matuk, March 18, 1993). Within Boss's (2002) contextual model, the non-student spouses' higher life satisfaction and lower SOC, as a comparison to their student partners', can lead to the deduction that they might be internally unsatisfied but externally contented. In other words, the spouses might be experiencing negative energy from the temporary stay (e.g., De Verthelyi, 1995; Schwartz & Kahne, 1993) while living a life of material sufficiency.

Life Satisfaction Predictors

Despite these variables' individual findings of correlations with life satisfaction, they did not appear to be that significantly predictable when combined into a regression analysis of life satisfaction. According to the regression analyses results, there is 46.6% of the observed variability in Life Satisfaction Domain Rating Scale (LSDRS) and 23.3% of the observed variability in Satisfaction With Life Question (SWL-Q) that is explained by social support, gender, two to three years of marriage, four years and more of marriage, having one child, having two or more children, and sense of coherence.

The two different percentages bear out Campbell and colleagues' (1976) concept of the two different measurements of life satisfaction. They stated, "it is not likely that people evaluate their lives in general terms and it seems very possible that the overall evaluation may not be a simple sum of the domain evaluations" (p.13). In this present study, the LSDRS percentage of observed variability predicted by the independent variables is two times higher than the SWL-Q percentage of observed variability predicted by the same variables.

Number of Children vs. East Asian Culture

The number of children was a significant predictor of one of the life satisfaction measures, the LSDRS. A 5.314 point difference in the LSDRS among couples having one child and couples having none, namely, couples with a parental role are to be more satisfied with life than those who do not have children. This result seemed to be in contrast with past studies: Voluntarily childless couples may be better adjusted than those with children (Houseknecht, 1979); the addition of children tends to have a negative impact on the marital relationship (Belsky, Spanier, & Rovine, 1983); the presence of children is negatively associated with satisfaction for several subgroups (Glenn & McLanahan, 1982).

In contrast, there are studies that find children as being contributive to life satisfaction. Verbrugge (1983) and Umberson and Williams (1993) suggest that parenthood has a positive association with the parents' health and well-being. As being parents, they may see the general well-being of the family as a basis for feelings of enjoyment and value in parenting (Ohan, Leung, & Johnston, 2000). It is also found that children may deter dissolution by creating a greater sense of satisfaction in marital relationship (Heaton, 1990; Hoffman & Manis, 1978; Morgan, Lye, & Condran, 1988). Heaton (1990) later on adds to the conclusion that the stabilizing force of children to the marriage is greatest when the children are young and when family size is not too large (four or fewer children).

For the East Asian sojourners in this study, their life satisfaction being predicted by having a child might result from their cultural norms and values. According to Confucianism (K'ung, Confucius, 551-479 B.C.), the social fabric and ethical philosophy of life for the East Asian region, the traditional marriage is not something to be compared with the household relationship itself (Hurh, 1998; Kibria, 1993; Min, 1998; Sue & Morishims, 1982). Marriage is just a path to the offspring. The adults in the family are identified as "father" and "mother" much more than as "husband" and "wife" (Bell & Bell, 2000).

Studies indicate that Asian immigrant families' ideology emphasize strong parental control and parental responsibility for children's academic achievement (Kibria, 1993; Kim & Garcia, 2004; Min, 1998; Pyke, 2000; Zhou & Bankston, 1998). In another study among higher educated Asian immigrants, they are mostly concerned about their children becoming an independent social entity in the U.S. society (Xie, Xia, & Zhou, 2004). Therefore, having a child may fulfill the couples' household orientation and result in a higher level of life satisfaction.

Social Support

Besides number of children, social support is the only other significant predictor of the life satisfaction measurements; moreover, it significantly predicted *both* of the measurements. This result is consistent with past studies' findings on the importance of social support to sojourner's adaptation, as well as life satisfaction (e.g., Wolff & Ratner, 1999; Zimmerman, 1995). The regression model also shows that SWL-Q will increase by 0.05402 points and LSDRS will increase by 0.978 points when there is one point of change in female spouses' social support, compared to the male students'. Although numbers are minor, they partially respond to past studies on how women are *much more* involved in social support interaction than men (e.g., Kessler, McLeod, & Wethington, 1985; Yang, Teraoka, Eichenfield, & Audas, 1994).

Referring to earlier chapters in this current study, social support, gender, number of children, duration of marriage, and sense of coherence all had research-based evidence on their impact on sojourners' life satisfaction. Although sense of coherence did find positive moderate to low significant correlations with the two life satisfaction measurements (see Table 11 on page 55), its predictability did not stand out while being combined with the other predictors. Conversely, only social support statistically stood out in this present study.

Intercultural transition is a stressful event. As reported by Xie and colleagues (2004), attaining support is pivotal in surviving, particularly in the early stage of adaptation. McCubbin, Patterson, and Glynn, (1982) have emphasized the importance of social support as a buffer against family crisis factors, and also as a mediator of family distress, which in this study refers to the temporary stay for East Asian couples. According to the literature review, social relationships with both Americans and Asians enhance sojourners' quality of overseas living; moreover, marital status and gender differences also have an impact on the use and receipt of social support. These studies show evidence

of this present study's finding of social support as being the most significant predictor of temporary residing couples' life satisfaction, and also how females tend to score higher on social support than males.

Social Support vs. Asians' Internal Coping Strategies

In McCubbin, McCubbin, and Thompson's (1993) study among a few different ethnic groups, Asian families' family adaptation is positively and strongly associated (68% of the variance explained) with the strengths of the family's network of socially supportive relationships and by the family's internal strengths of hardiness with its emphasis on a strong commitment. The internal strength notion towards adaptation is also supported by Arnault's (2002) study on Japanese sojourner's wives, who evaluate social support in terms of group-level variable including the hierarchical statuses of the group members, harmony within the group, and the roles of group members.

Tweed, White, and Lehman's (2004) study finds differences among White Canadian and East Asian college students' coping strategies. In their study, in spite of both groups of students incorporating aspects of externally targeted control (e.g., attempts to control the environment) into their coping strategies, it appears that those from East Asian backgrounds are more likely to engage in coping strategies involving internally targeted control (e.g., attempts to control the self). Asians are also more likely than White Canadian students to report coping by accepting responsibility, accepting the problem, waiting things out, and using self-control, which all represent internally targeted control. Tweed and colleagues (2004) conclude the effect of cultural variables, which are emphasizing greater in-group harmony (collectivist), higher-power distance, and Buddhist/Taoist -influenced beliefs (adapt oneself to fit one's surroundings), increasing the likelihood of internally targeted control.

It might be considered the case that internally targeted strategies are indeed more often effective in East Asian cultural contexts than in Western English-speaking cultural

contexts. East Asians' role prescriptions, family obligations, hierarchical relations, lack of emotional expressiveness, and collectivist values associated with the traditional family systems of Confucianism and Buddhism/Taoism contrast sharply with the emphasis on individualism, self-sufficiency, egalitarianism, expressiveness, and self-development in mainstream U.S. culture (Bellah, Madsen, Sullivan, Swidler, & Tipton, 1985; Cancian, 1987; Chung, 1992; Hurh, 1998; Kim & Choi, 1994; Min, 1998; Pyke & Bengtson, 1996; Tran, 1988; Uba, 1994). It is apparent that when encountering certain stressful events, cultural beliefs and norms guide individuals' understanding of the meanings of these acts in receiving and providing help to cope (Arnault, 2002).

Social Support vs. Theoretical Framework

Reiterating this current study's purpose, social support has been identified as the most significant factor contributing to the temporary residing couples' life satisfaction, stress, and adaptation. With the East Asian internality notion that was indicated in previous paragraphs, it can be deduced that the couples' life satisfaction, stress, and adaptation are impacted by their usage of internal coping strategies. Therefore, evidently, it is essential to see this subject group through an ecological viewpoint while assistance is to be provided to them towards a higher quality of life in the U.S. Through the theoretical frameworks of the Double ABC-X model and the Contextual Model, their adaptation status are the outcome of how they transited through temporarily residing (X), how they piled up their stressors (a A), how they utilized their resources (b B), and how they perceived the sojourn (C) as well as how these were all tied into their internal and external context.

Limitations and Recommendations

Data was collected from a relatively small sample of couples, which limits statistical power and increases the probability of Type II error. The generalizability of the findings

is limited to East Asian graduate student couples who are temporarily residing in the Midwest part of the United States. The unique characteristics of the universities at which the data was obtained may also interfere with the reliability and validity of this study. Within the universities' different educational emphases, it is possible that students with different majors are likely to possess different personality traits that may affect the factors contributing to their life satisfaction. Consequently, these findings may not generalize to other married students, especially those attending universities in other geographical regions of the country with different institutional characteristics.

Another shortcoming is that all of the participants were from East Asia, thus the contribution of cultural difference to life satisfaction and stressors could not be assessed. Given the large numbers of East Asian couples from China, it would be particularly interesting to assess variation among these different nationalities in how they fare in the United States. According to Boss's (2002) basic premise, not all families, even within one culture, are the same. Therefore, future studies may take into consideration different nationalities among East Asian students.

Technical issues arose as the data collection was conducted through an on-line survey. It can be confusing and annoying given the survey's format of a single scroll-down page with 147 questions for the students and the spouses collectively. Moreover, the couples were asked to fill out the survey together, which implies the interference of responses given from the two individuals. The study could also be one of very few studies on cross-cultural couple graduate study and sojourn that uses a longitudinal design. Such a design allows for the examination of how different individual and family characteristics (factors) predict life satisfaction and adaptation at a later point in time, and moves beyond mere correlation. The identification of these factors holds important implications for early interventions aimed at facilitating successful couple graduate study and sojourn.

Future Research

Given the strong conceptual and research (Lavee, McCubbin, & Patterson, 1985) ties between sense of coherence and the Double ABC-X model and life satisfaction studies, SOC was hypothesized to be a meaningful contributor to the adaptation of East Asian graduate students and their spouses. Despite the SOC variable having a significantly positive correlation with life satisfaction, the results of the regression analysis were interpreted to suggest that SOC was not a direct predictor of life satisfaction (see Table 16 on page 60, and Table 17 on page 61). Alternatively, the SOC variable was reported as having a significantly positive correlation with social support—a statistically significant predictor of the two life satisfaction measures.

Despite Lavee, McCubbin, and Patterson's (1985) finding of SOC having a direct effect on adaptation, they indicated coherence being positively affected by social support. Accordingly, although the sense of coherence variable did not emerge as part of the life satisfaction research model as hypothesized, it appears to have a significant *indirect* role in the couples' adaptation to stress (see Figure 4). Consequently, future research investigating the relationship of social support, sense of coherence, and life satisfaction should consider the indirect contributions of sense of coherence to life satisfaction.

Figure 4. Revised Model.

Implications

Among all the intercultural transition stressors that have been reported in studies, no sojourner will encounter all symptoms, but almost all of them will experience a fair share

of struggles and issues (Arnault, 2002; Brislin, 1981). For the internationalization trend in higher education (Altbach, 2002), many student affairs professionals and faculty members are in leadership positions, determining the direction of resource acquisition, resource allocation, and program planning for international student programs and support services (Arnault, 2002; Walker, 2000). Willer (1992) notes the crucial relationship between higher education professionals and international students, "student affairs professionals must be asked to assume active roles as international educators... their positions, expertise, and involvement with [international] students' lives make them, in fact, key personnel ..." (p. 165).

Prior studies emphasize the need for university faculty and counselors to be proactive in providing emotional support for international students (Angelopoulos & Catano, 1993; Lin & Yi, 1997; Sandhu, 1995). While Asians are more internally orientated in coping (Arnault, 2002; Tweed, White, & Lehman, 2004), and are also less inclined to seek help outside of their groups (Lin, 1996), Yamaguchi (2001) suggests that East Asians may often exert externally targeted control indirectly or through proxy agents.

By facilitating a smoother transition for sojourners, not only will their personal growth and family relationships be strengthened, but it will also enhance the students and their family's integration and contribution to the community (Ng, 2004). Therefore, indicating the importance on providing culturally-specific proactive support systems. Ones that fail to do so are neglecting the ways that the participants understand need and help, and the social and contextual rules for seeking and giving help (Arnault, 2002).

Counseling staff also could provide outreach services tailored specifically to the perceived needs of married international students (Yi, Lin, & Kishimoto, 2003). Reaching out to the community may increase the students' awareness of the counseling services and may also help to build up the credibility of the counseling center (Lin, 2000). Providing assistance to spouses requires taking into account their intercultural and intracultural

diversity and being aware of the individual stages they go through in their adjustment process (De Verthelyi, 1995). Traditionally, many graduate school programs training counselors to work in academic settings tend to focus on servicing the needs of individual students. Such programs will need to broaden the focus of their training to include couples and even families to better serve the counseling needs of this growing population of international married students.

In terms of prevention for international graduate student couples, there are three implications:

(1) *International student affairs institute*: Universities could set up particular institutes related to international students' affairs. The institutes should have high awareness towards international issues and students affairs. Culturally responsive services should be intentional, flexible and accessible. They could serve for providing information, assistance, and consultation not only to international students but to faculty and staff as well. They could be a friendly environment and international students should have easy access to it. Also, staff recruitment criteria should include multi-ethnicity, and cultural sensitivity training, for they are to serve as primary contacts and advocates for international students. This institute should act as "a bridge" for international students and the bigger external environment. Creative and culturally appropriate outreach strategies should be developed to incorporate student and community in the programming and the evaluation of services.

(2) *Providing orientations*: Sending detailed pre-arrival information can have limited impact, and is also considered a passive channel. A more direct connection would be the orientations before the beginning of the academic semester. Both the campus and department could hold such orientations in order to cover the multi-dimensional needs of the sojourners. To be respectful,

student spouses should be notified and invited personally to the orientations just as the students are. Topics on daily living issues should be as important as academic concerns. The foci can be helping students to function more comfortably and productively within the mainstream culture. The input of more senior international students is also considered to be a valuable resource while concerning internal with-in group support. It is to be aware that to increase participation, activities should be planned and carried out to meet students' and spouses' comfort levels.

(3) *Coordinating on-going support group activities*: As intercultural transition is to be considered more a continuum than a one point event, programs should not be limited to the one-and-only welcome party, and also should not be bound to targeting new incoming students. Programs can aim at various aspects: personal growth (e.g., English class, support group, stress management focus group), social interaction (e.g., tea time, potluck, BBQ, child care), entertainment (e.g., arts & crafts, movie night). As participants, these students and spouses can also be encouraged to set up their goals and plan their own activities, which enhance their adaptation through such self-motivation and assertiveness. While socializing, students and spouses not only gain opportunities to expand and enrich their social lives, but also enhancing their English proficiency through the communication with others from different cultures.

S. Coontz (personal communication, March 23, 2006) states, "How we can help each family overcome their weakness and difficulties is to conduct research on trying to understand how every family falls into each of its categories." Boss (2002) indicates:

> Before we can help distressed families, we need to know their perceptions and the meaning they give to what is happening: What do they believe is in

> their control? What do they believe is not? What perceptions can be reconstructed? What facts will not change? And what, contextually, is blocking their management and problem-solving strategies? (p. 13)

Researchers, scholars, and clinicians must research the phenomena that not only govern the results of families' life satisfaction and stress, but also how they are constructed from a contextual and cultural point of view.

APPENDICES

APPENDIX A

CONSENT FORM

Sense of Coherence and Life Satisfaction:
East Asian Graduate Student and Spousal Adaptation to
Sojourn in the United States

The purpose of this study is to identify the factors which contribute to a sense of coherence and life satisfaction among East Asian graduate students and their spouses' adaptation to a temporary sojourn in the United States.

You are being asked to participate in this study because it is my understanding that you, and perhaps your spouse, are studying for your graduate degree in the United States as an international student – and that these circumstances have placed you and your spouse in a situation of temporary immigration. Your participation is voluntary. You may choose not to participate at all, or may refuse to answer any questions without any penalty. Your responses are anonymous and your privacy will be protected to the maximum extent allowable by law. The expected time for each individual to complete their own section will be 13 minutes, and it will be a total of 26 minutes to complete the whole survey.

The results from this study will help both U.S. and foreign international student offices to conduct their own orientation programs and other relevant services for East Asian graduate student couples. It can also provide information to related counseling and clinical institutions and agencies for dealing with foreign student couples' adjustment problems. Most of all is to be able to improve the adjustment among all the international graduate students and their spouses.

This study's risk is minimal. The questions on the survey could raise questions that might cause tension in the marriage, but this risk is no greater then that potentially experienced when reading or listening to similar types of information.

If you have any questions about this study, please contact the researcher Lin, Chia-Hui: 3rd Floor, No. 5, Lane 124, Hsin-Yi Road, Pei-Tou, Taipei, Taiwan, by phone: 011-886-2-2876-3401, or by e-mail: linchiah@msu.edu or the study supervisor, Dr. David Imig, 203 Human Ecology, Michigan State University, 517-353-3998, imig@msu.edu. If you have questions or concerns regarding your rights as a study participant, or are dissatisfied at any time with any aspect of this study, you may contact, anonymously, if you wish, Peter Vasilenko, Ph.D., Chair of the University Committee on Research Involving Human Subjects (UCRIHS) by phone: (517) 355-2180, fax: (517) 432-4503, e-mail: ucrihs@msu.edu, or regular mail: 202 Olds Hall, East Lansing, MI 48824.

When you click "AGREE", this indicates your voluntary agreement to participate in this study. If you click "DISAGREE," this will take you away from the website.

1. For the graduate student him/herself:
   - o Agree. (*After submitting, please click the "last page" button on the upper left of your browser twice to go back to the Main page and choose the suitable East Asian Language Survey for both you and your spouse.*)

   - o Disagree.

2. For the spouse (or possibly also a graduate student):
   - o Agree.

   - o Disagree.

Submit

APPENDIX B

E-MAIL INVITATION

To: East Asian Graduate students
Subject: A sincere invitation to an East Asian Graduate Student Couple online study

Dear Graduate Students:

1. Are you from **East Asia** (China, Hong Kong, Japan, South Korea, and Taiwan)?
2. Are you an **I-20 / F-1 visa** graduate student enrolled between **Spring 2003 and Fall 2005**?
3. Are you **married** and have **your spouse (holding a F-2 visa) living here with you** in the United States?

If you are all of the above, I am most sincerely asking you and your spouse to agree to participant in my study of East Asian graduate student couples.

As also being an Asian international graduate student myself, I would really like to know the overall condition of us East Asian graduate student's life in the U.S.. I am sincerely asking for you and your spouse's participant in my study. Sparing a little of your precious time would really mean a lot to me. And as a small token of my personal appreciation for you and your spouse's support for me, I will send a **$10.00 Meijer Gift Card** to you after the online questionnaire has been completed. You will be asked to leave your mailing address voluntarily in a separate section from your responses, and the gift card will be sent to the indicated address.

If you agree to participate, you will be asked to complete an Internet survey. You will be **able to choose from five language versions**, including **Simplified Chinese, Traditional Chinese, Korean, Japanese,** and **English**. Your answers to the questions will be private and protected to the maximum extent of the law. Your e-mail address will only stay with the University's International Center and Registrar Office. I will not be able to keep track of your IP address and will not make any attempt to access your personal information. Your completed questionnaire will be identified by an identification number only.

If you agree to participate in this study, please have your spouse beside you and go to this link to complete the consent form and survey:
https://mifamilies.msu.edu/FamSurvey/eastasian.php

(Please copy the above URL and paste it on your internet browser if you cannot click on it.)

If you have any questions about this study, please contact either me or my study supervisor.

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APPENDIX C

ON-LINE SURVEY – ENGLISH VERSION

East Asian Graduate Student Couples' Survey

Now, you, the graduate student, will be starting this questionnaire. Please ask your spouse to be ready to continue the questionnaire (the spouse section) right after you have submitted yours. Although the two of you are answering the same questions, please answer the questionnaire individually without discussing it until submitting the questionnaire.

[GRADUATE STUDENT SECTION]

=== SENSE OF COHERENCE-ORIENTATION TO LIFE QUESTIONNAIRE ====

**Here is a series of questions relating to various aspects of our lives. Each question has seven possible answers. Please consider your situation as an international graduate student living in the U.S., and click the button which expresses your answer, with numbers 1 to 7. If the words in 1 are right for you, click 1; if the words in 7 are right for you, click 7. If you feel differently, click the button in between which best expresses your feeling. Please give only one answer to each question.

1) When you talk to people in the U.S., do you have an overall feeling that they don't understand you?
.↑↑↑. Never.
..↑↑..
...↑...
...|... Sometimes.
...↓...
..↓↓..
.↓↓↓. Always have this feeling.

2) Ever since you were an international graduate student living in the U.S.: When you had to do something which depended upon cooperation with others, did you have the feeling that it:
.↑↑↑. Surely wouldn't get done.
..↑↑..
...↑...
...|... A fair possibility of getting it done and not getting it done.
...↓...
..↓↓..
.↓↓↓. Surely would get done.

3) Overall: Think of the people with whom you come into contact daily, aside from the ones to whom you feel closest. How well do you know most of them?
.↑↑↑. You feel that they're strangers.
..↑↑..
...↑...
...|... They are acquaintances.
...↓...
..↓↓..
.↓↓↓. You know them very well.

4) Overall: Do you have the feeling that you don't really care about what goes on around you?
.↑↑↑. Very seldom or never.
..↑↑..
...↑...
...|... Sometimes.
...↓...

..↓↓..
.↓↓↓. Very often.

5) Ever since you were an international graduate student living in the U.S.: Has it happened that you were surprised by the behavior of people, both Americans and also people with the same ethnicity as you, whom you thought you knew well?
.↑↑↑. Never happened.
..↑↑..
...↑...
... | ... Happened sometimes.
...↓...
..↓↓..
.↓↓↓. Always happened.

6) Ever since you were an international graduate student living in the U.S.: Has it happened that people whom you counted on disappointed you?
.↑↑↑. Never happened.
..↑↑..
...↑...
... | ... Happened sometimes.
...↓...
..↓↓..
.↓↓↓. Always happened.

7) Overall, life is:
.↑↑↑. Full of interest.
..↑↑..
...↑...
... | ... Sometimes interesting, but sometimes a routine.
...↓...
..↓↓..
.↓↓↓. Completely routine.

8) Until now your life has had:
.↑↑↑. No clear goals or purpose at all.
..↑↑..
...↑...
... | ... Some goals and purpose, but not completely clear.
...↓...
..↓↓..
.↓↓↓. Very clear goals and purpose.

9) Overall: Do you have the feeling that you're being treated unfairly?
.↑↑↑. Very often.
..↑↑..
...↑...
... | ... Sometimes.
...↓...
..↓↓..
.↓↓↓. Very seldom or never.

10) In the past ten years your life has been:
.↑↑↑. Full of changes without your knowing what will happen next.
..↑↑..

...↑...
... | ... Fairly consistent, but also contains some changes.
...↓...
..↓↓..
.↓↓↓. Completely consistent and clear.

11) Most of the things you do in the future will probably be:
.↑↑↑. Completely fascinating.
..↑↑..
...↑...
... | ... Not completely fascinating, but not completely boring.
...↓...
..↓↓..
.↓↓↓. Deadly boring.

12) Overall: Do you have the feeling that you are in an unfamiliar situation and don't know what to do?
.↑↑↑. Very often.
..↑↑..
...↑...
... | ... Sometimes.
...↓...
..↓↓..
.↓↓↓. Very seldom or never.

13) Overall: What best describes how you see life:
.↑↑↑. One can always find a solution to painful things in life.
..↑↑..
...↑...
... | ... There might be a solution to painful things in life.
...↓...
..↓↓..
.↓↓↓. There is no solution to painful things in life.

14) Overall: When you think about your life, you very often:
.↑↑↑. Feel how good it is to be alive.
..↑↑..
...↑...
... | ... Feel that your life is mediocre.
...↓...
..↓↓..
.↓↓↓. Ask yourself why you exist at all.

15) Overall: When you face a difficult problem, the choice of a solution is:
.↑↑↑. Always confusing and hard to find.
..↑↑..
...↑...
... | ... There might be one.
...↓...
..↓↓..
.↓↓↓. Always completely clear.

16) Overall: Doing the things you do every day is:
.↑↑↑. A source of deep pleasure and satisfaction.
..↑↑..
...↑...
... | ... Not a pleasure, but not painful.
...↓...
..↓↓..
.↓↓↓. A source of pain and boredom.

17) Your life in the future will probably be:
.↑↑↑. Full of changes without your knowing what will happen next.
..↑↑..
...↑...
... | ... Consistent, but also contains some changes.
...↓...
..↓↓..
.↓↓↓. Completely consistent and clear.

18) Ever since you were an international graduate student living in the U.S.: When something unpleasant happened, your tendency was:
.↑↑↑. "To beat yourself up" about it.
..↑↑..
...↑...
... | ... To live with it but also might blame slightly yourself about it.
...↓...
..↓↓..
.↓↓↓. To say " ok that's that, I have to live with it " and go on.

19) Overall: Do you have very mixed-up feelings and ideas?
.↑↑↑. Very often.
..↑↑..
...↑...
... | ... Sometimes.
...↓...
..↓↓..
.↓↓↓. Very seldom or never.

20) Overall: When you do something that gives you a good feeling:
.↑↑↑. It's certain that you'll go on feeling good.
..↑↑..
...↑...
... | ... You might keep on feeling good or it might go away.
...↓...
..↓↓..
.↓↓↓. It's certain that something will happen to spoil the feeling.

21) Overall: Does it happen that you have feelings inside you would rather not feel?
.↑↑↑. Very often.
..↑↑..
...↑...
... | ... Sometimes.
...↓...
..↓↓..
.↓↓↓. Very seldom or never.

22) You anticipate that your personal life in the future will be:
.↑↑↑. Totally without meaning or purpose.
..↑↑..
...↑...
... | ... Some meaning and purpose.
...↓...
..↓↓..
.↓↓↓. Full of meaning and purpose.

23) Do you think that there will always be people whom you'll be able to count on in the future?
.↑↑↑. You're certain there will be.
..↑↑..
...↑...
... | ... An equal amount of certainty and doubts.
...↓...
..↓↓..
.↓↓↓. You doubt there will be.

24) Overall: Does it happen that you have the feeling that you don't know exactly what's about to happen?
.↑↑↑. Very often.
..↑↑..
...↑...
... | ... Sometimes.
...↓...
..↓↓..
.↓↓↓. Very seldom or never.

25) Many people - even those with a strong character - sometimes feel like sad sacks (losers) in certain situations. How often have you felt this way since you have lived here in the U.S.?
.↑↑↑. Never.
..↑↑..
...↑...
... | ... Sometimes.
...↓...
..↓↓..
.↓↓↓. Very Often.

26) Overall: When something happened, have you generally found that:
.↑↑↑. You overestimated or underestimated its importance.
..↑↑..
...↑...
... | ... You might have saw things in the right proportion or you might have miscalculated its importance.
...↓...
..↓↓..
.↓↓↓. You saw things in the right proportion.

27) Overall: When you think of the difficulties you are likely to face in important aspects of your life, do you have the feeling that:
.↑↑↑. You will always succeed in overcoming the difficulties.
..↑↑..
...↑...

... | ... You might or might not succeed in overcoming the difficulties.
...↓...
..↓↓..
.↓↓↓. You won't succeed in overcoming the difficulties.

28) Overall: How often do you have the feeling that there's little meaning in the things you do in your daily life?
.↑↑↑. Very often.
..↑↑..
...↑...
... | ... Sometimes.
...↓...
..↓↓..
.↓↓↓. Very seldom or never.

29) Overall: How often do you have feelings that you're not sure you can keep under control?
.↑↑↑. Very often.
..↑↑..
...↑...
... | ... Sometimes.
...↓...
..↓↓..
.↓↓↓. Very seldom or never.

========= LIFE SATISFACTION DOMAIN RATING SCALE (LSDRS) ========

**In this section of this questionnaire, I want to find out how you feel about various parts of your life. Please click the button that best describes your feelings today as an international graduate student living in the U.S..

Physical and Material Well-being:

30) [Material comforts]--- things like a desirable home, good food, possessions, conveniences, an increasing income, and security for the future. Now in my life, I feel:
1. Delighted
2. Pleased
3. Mostly satisfied
4. Mixed (about equally satisfied and dissatisfied)
5. Mostly dissatisfied
6. Unhappy
7. Terrible

31) [Health and personal safety]--- to be physically fit and vigorous, to be free from anxiety and distress, and to avoid bodily harm. Now in my life, I feel these are:
1. Delighted
2. Pleased
3. Mostly satisfied
4. Mixed (about equally satisfied and dissatisfied)
5. Mostly dissatisfied
6. Unhappy
7. Terrible

Relations with Other People:

32) [Relationships with your parents, brothers, sisters, and other relatives]---things like communicating, visiting, understanding, doing things, and helping and being helped by them. Now in my life, I feel:
1. Delighted
2. Pleased
3. Mostly satisfied
4. Mixed (about equally satisfied and dissatisfied)
5. Mostly dissatisfied
6. Unhappy
7. Terrible

33) [Having and raising children]--- this involves being a parent and helping, teaching, and caring for your children. Now in my life, I feel: (choose "8." if not applicable)
1. Delighted
2. Pleased
3. Mostly satisfied
4. Mixed (about equally satisfied and dissatisfied)
5. Mostly dissatisfied
6. Unhappy
7. Terrible
8. Not applicable.

34) Close relationship with a husband/wife. Now in my life, I feel it is:
1. Delighted
2. Pleased
3. Mostly satisfied
4. Mixed (about equally satisfied and dissatisfied)
5. Mostly dissatisfied
6. Unhappy
7. Terrible

35) [Close friends]--- sharing activities, interests, and views; being accepted, visiting, giving and receiving help, love, trust, support, guidance. Now in my life, I feel these are:
1. Delighted
2. Pleased
3. Mostly satisfied
4. Mixed (about equally satisfied and dissatisfied)
5. Mostly dissatisfied
6. Unhappy
7. Terrible

Social, Community, and Civic Activities:

36) [Helping and encouraging others]--- this includes adults or children other than relatives or close friends. This can be by yourself or as a member of some church, club, or volunteer group. Now in my life, I feel:
1. Delighted
2. Pleased
3. Mostly satisfied
4. Mixed (about equally satisfied and dissatisfied)
5. Mostly dissatisfied
6. Unhappy
7. Terrible

37) Participation in activities, relating to local and national government and public affairs. Now in my life, I feel these are:
1. Delighted
2. Pleased
3. Mostly satisfied
4. Mixed (about equally satisfied and dissatisfied)
5. Mostly dissatisfied
6. Unhappy
7. Terrible

Personal Development and Fulfillment:

38) Learning, attending school, improving your understanding, or getting additional knowledge. Now in my life, I feel these are:
1. Delighted
2. Pleased
3. Mostly satisfied
4. Mixed (about equally satisfied and dissatisfied)
5. Mostly dissatisfied
6. Unhappy
7. Terrible

39) Understanding yourself and knowing your assets and limitations, knowing what life is all about and making decisions on major life activities. For some people, this includes religious or spiritual experiences. For others, it is an attitude toward life or a philosophy. Now in my life, I feel this is:
1. Delighted
2. Pleased
3. Mostly satisfied
4. Mixed (about equally satisfied and dissatisfied)
5. Mostly dissatisfied
6. Unhappy
7. Terrible

40) Work in a job or at home that is interesting, rewarding, and worthwhile. Now in my life, I feel this is:
1. Delighted
2. Pleased
3. Mostly satisfied
4. Mixed (about equally satisfied and dissatisfied)
5. Mostly dissatisfied
6. Unhappy
7. Terrible

41) Expressing yourself in a creative manner in music, art, writing, photography, practical activities, or in leisure-time activities. Now in my life, I feel this is:
1. Delighted
2. Pleased
3. Mostly satisfied
4. Mixed (about equally satisfied and dissatisfied)
5. Mostly dissatisfied
6. Unhappy
7. Terrible

Recreation:

42) [Socializing]--- meeting other people, doing things with them, and giving or attending parties. Now in my life, I feel these are:
1. Delighted
2. Pleased
3. Mostly satisfied
4. Mixed (about equally satisfied and dissatisfied)
5. Mostly dissatisfied
6. Unhappy
7. Terrible

43) Reading, listening to music, or observing sporting events or entertainment. Now in my life, I feel these are:
1. Delighted
2. Pleased
3. Mostly satisfied
4. Mixed (about equally satisfied and dissatisfied)
5. Mostly dissatisfied
6. Unhappy
7. Terrible

44) [Participation in active recreation]--- such as sports, traveling and sightseeing, playing games or cards, singing, dancing, playing an instrument, acting, and other such activities. Now in my life, I feel these are:
1. Delighted
2. Pleased
3. Mostly satisfied
4. Mixed (about equally satisfied and dissatisfied)
5. Mostly dissatisfied
6. Unhappy
7. Terrible

========== SATISFACTION WITH LIFE QUESTION ==========

45) The previous questions asked you about various aspects of your life, now we want to ask you about your life as a whole. How satisfied are you with your life as a whole these days? I feel:
1. Delighted
2. Pleased
3. Mostly satisfied
4. Mixed (about equally satisfied and dissatisfied)
5. Mostly dissatisfied
6. Unhappy
7. Terrible

========== SOCIAL SUPPORT ==========

**Please indicate how much you agree or disagree with each of the following statements about your family and the community you belong to now in the U.S.:

46) If I had an emergency, even people I do not know in this community would be willing to help.
1. Strongly disagree.
2. Disagree.
3. Neutral.
4. Agree.
5. Strongly agree.

47) I feel good about myself when I sacrifice and give time and energy to members of my family.
1. Strongly disagree.
2. Disagree.
3. Neutral.
4. Agree.
5. Strongly agree.

48) The things I do for members of my family and they do for me make me feel part of this very important group.
1. Strongly disagree.
2. Disagree.
3. Neutral.
4. Agree.
5. Strongly agree.

49) People here know they can get help from the community if they are in trouble.
1. Strongly disagree.
2. Disagree.
3. Neutral.
4. Agree.
5. Strongly agree.

50) I have friends who let me know they value who I am and what I can do.
1. Strongly disagree.
2. Disagree.
3. Neutral.
4. Agree.
5. Strongly agree.

51) People can depend on each other in this community.
1. Strongly disagree.
2. Disagree.
3. Neutral.
4. Agree.
5. Strongly agree.

52) Members of my family seldom listen to my problems or concerns; I usually feel criticized.
1. Strongly disagree.
2. Disagree.
3. Neutral.

4. Agree.
5. Strongly agree.

53) My friends in this community are a part of my everyday activities.
1. Strongly disagree.
2. Disagree.
3. Neutral.
4. Agree.
5. Strongly agree.

54) There are times when family members do things that make other members unhappy.
1. Strongly disagree.
2. Disagree.
3. Neutral.
4. Agree.
5. Strongly agree.

55) I need to be very careful how much I do for my friends because they take advantage of me.
1. Strongly disagree.
2. Disagree.
3. Neutral.
4. Agree.
5. Strongly agree.

56) Living in this community gives me a secure feeling.
1. Strongly disagree.
2. Disagree.
3. Neutral.
4. Agree.
5. Strongly agree.

57) The members of my family make an effort to show their love and affection for me.
1. Strongly disagree.
2. Disagree.
3. Neutral.
4. Agree.
5. Strongly agree.

58) There is a feeling in this community that people should not get too friendly with each other.
1. Strongly disagree.
2. Disagree.
3. Neutral.
4. Agree.
5. Strongly agree.

59) This is not a very good community to bring children up in.
1. Strongly disagree.
2. Disagree.
3. Neutral.
4. Agree.
5. Strongly agree.

60) I feel secure that I am as important to my friends as they are to me.
1. Strongly disagree.

2. Disagree.
3. Neutral.
4. Agree.
5. Strongly agree.

61) I have some very close friends outside the family who I know really care for me and love me.
1. Strongly disagree.
2. Disagree.
3. Neutral.
4. Agree.
5. Strongly agree.

62) Member(s) of my family do not seem to understand me; I feel taken for granted.
1. Strongly disagree.
2. Disagree.
3. Neutral.
4. Agree.
5. Strongly agree.

========== INFORMATION ABOUT YOU ==========

**Thank you for answering the questions. Now, I would like to have some information about you.
Please click the most applicable buttons.

63) What is your gender?
1. Male.
2. Female.

64) How old are you?
1. 20 or less
2. 21 ~ 30
3. 31 ~ 40
4. 41 ~ 50
5. 51 ~ 60
6. 61 and above

65) What region are you from?
1. China.
2. Hong Kong.
3. Japan.
4. South Korea.
5. Taiwan.

66) Until now, how many years have you been in the Untied States?
1. One year and less.
2. 1~2 years.
3. 2~3 years.
4. More than 3 years.

67) What program are you enrolled in now?
1. Master's program (ex:MA,MS,MEng,MEd,MSW)
2. Professional school program (ex:MD,DDS,DVM)
3. Doctorate program (ex:PhD,EdD)

68) How many years have you been in this program?
1. One year and less.
2. 1~2 years.
3. 2~3 years.
4. More than 3 years.

69) How many years have you been married?
1. Less than 1 year
2. 1 year
3. 2 years
4. 3 years
5. 4 years
6. 5 years
7. 6 years
8. 7 years
9. 8 years
10. 9 years
11. 10 years and more

70) How many children do you have?
1. None.
2. 1
3. 2
4. 3
5. 4 and over

71) What is your highest education degree?(The one you have already completed.)
1. Less than high school graduate
2. High school grad-diploma or equiv (GED)
3. Some college but no degree
4. Associate degree-occupational/ vocational/ academic program
5. Bachelor's degree (ex:ba,ab,bs)
6. Master's degree (ex:MA,MS,MEng,MEd,MSW)
7. Professional school degree (ex:MD,DDS,DVM)
8. Doctorate degree (ex:PhD,EdD)

72) Do you have a religion?
1. Yes. If you chose this continue with Question 73
2. None. If you chose this continue with Question 74

73) What is your religion?(The one that is most applicable.)
1. Buddhism.
2. Taoism.
3. Catholic.
4. Christianity.
5. Moslem.
6. Others.

74) What is your employment status?
1. Not employed.
2. Employed.

SECTION COMPLETED. Thank you. Now, please have your spouse to continue her/his section below.

[SPOUSE SECTION]

==== SENSE OF COHERENCE-ORIENTATION TO LIFE QUESTIONNAIRE ====
**Here is a series of questions relating to various aspects of our lives. Each question has seven possible answers. Please consider your situation as an international graduate student or student's spouse living in the U.S., and click the button which expresses your answer, with numbers 1 to 7. If the words in 1 are right for you, click 1; if the words in 7 are right for you, click 7. If you feel differently, click the button in between which best expresses your feeling. Please give only one answer to each question.

75) When you talk to people in the U.S., do you have an overall feeling that they don't understand you?
.↑↑↑. Never.
..↑↑..
...↑...
.. | ... Sometimes.
...↓...
..↓↓..
.↓↓↓. Always have this feeling.

76) Ever since you were an international graduate student or student's spouse living in the U.S.: When you had to do something which depended upon cooperation with others, did you have the feeling that it:
.↑↑↑. Surely wouldn't get done.
..↑↑..
...↑...
... | ... A fair possibility of getting it done and not getting it done.
...↓...
..↓↓..
.↓↓↓. Surely would get done.

77) Overall: Think of the people with whom you come into contact daily, aside from the ones to whom you feel closest. How well do you know most of them?
.↑↑↑. You feel that they're strangers.
..↑↑..
...↑...
... | ... They are acquaintances.
...↓...
..↓↓..
.↓↓↓. You know them very well.

78) Overall: Do you have the feeling that you don't really care about what goes on around you?
.↑↑↑. Very seldom or never.
..↑↑..
...↑...
... | ... Sometimes.
...↓...
..↓↓..
.↓↓↓. Very often.

79) Ever since you were an international graduate student or student's spouse living in the U.S.: Has it happened that you were surprised by the behavior of people, both Americans and also people with the same ethnicity as you, whom you thought you knew well?
.↑↑↑. Never happened.

..↑↑..
...↑...
... | ... Happened sometimes.
...↓...
..↓↓..
.↓↓↓. Always happened.

80) Ever since you were an international graduate student or student's spouse living in the U.S.: Has it happened that people whom you counted on disappointed you?
.↑↑↑. Never happened.
..↑↑..
...↑...
... | ... Happened sometimes.
...↓...
..↓↓..
.↓↓↓. Always happened.

81) Overall, life is:
.↑↑↑. Full of interest.
..↑↑..
...↑...
... | ... Sometimes interesting, but sometimes a routine.
...↓...
..↓↓..
.↓↓↓. Completely routine.

82) Until now your life has had:
.↑↑↑. No clear goals or purpose at all.
..↑↑..
...↑...
... | ... Some goals and purpose, but not completely clear.
...↓...
..↓↓..
.↓↓↓. Very clear goals and purpose.

83) Overall: Do you have the feeling that you're being treated unfairly?
.↑↑↑. Very often.
..↑↑..
...↑...
... | ... Sometimes.
...↓...
..↓↓..
.↓↓↓. Very seldom or never.

84) In the past ten years your life has been:
.↑↑↑. Full of changes without your knowing what will happen next.
..↑↑..
...↑...
... | ... Fairly consistent, but also contains some changes.
...↓...
..↓↓..
.↓↓↓. Completely consistent and clear.

85) Most of the things you do in the future will probably be:

.↑↑↑. Completely fascinating.
..↑↑..
...↑...
... | ... Not completely fascinating, but not completely boring.
...↓...
..↓↓..
.↓↓↓. Deadly boring.

86) Overall: Do you have the feeling that you are in an unfamiliar situation and don't know what to do?
.↑↑↑. Very often.
..↑↑..
...↑...
... | ... Sometimes.
...↓...
..↓↓..
.↓↓↓. Very seldom or never.

87) Overall: What best describes how you see life:
.↑↑↑. One can always find a solution to painful things in life.
..↑↑..
...↑...
... | ... There might be a solution to painful things in life.
...↓...
..↓↓..
.↓↓↓. There is no solution to painful things in life.

88) Overall: When you think about your life, you very often:
.↑↑↑. Feel how good it is to be alive.
..↑↑..
...↑...
... | ... Feel that your life is mediocre.
...↓...
..↓↓..
.↓↓↓. Ask yourself why you exist at all.

89) Overall: When you face a difficult problem, the choice of a solution is:
.↑↑↑. Always confusing and hard to find.
..↑↑..
...↑...
... | ... There might be one.
...↓...
..↓↓..
.↓↓↓. Always completely clear.

90) Overall: Doing the things you do every day is:
.↑↑↑. A source of deep pleasure and satisfaction.
..↑↑..
...↑...
... | ... Not a pleasure, but not painful.
...↓...
..↓↓..
.↓↓↓. A source of pain and boredom.

91) Your life in the future will probably be:
.↑↑↑. Full of changes without your knowing what will happen next.
..↑↑..
...↑...
... | ... Consistent, but also contains some changes.
...↓...
..↓↓..
.↓↓↓. Completely consistent and clear.

92) Ever since you were an international graduate student or student's spouse living in the U.S.: When something unpleasant happened, your tendency was:
.↑↑↑. "To beat yourself up" about it.
..↑↑..
...↑...
... | ... To live with it but also might blame slightly yourself about it.
...↓...
..↓↓..
.↓↓↓. To say " ok that's that, I have to live with it " and go on.

93) Overall: Do you have very mixed-up feelings and ideas?
.↑↑↑. Very often.
..↑↑..
...↑...
... | ... Sometimes.
...↓...
..↓↓..
.↓↓↓. Very seldom or never.

94) Overall: When you do something that gives you a good feeling:
.↑↑↑. It's certain that you'll go on feeling good.
..↑↑..
...↑...
... | ... You might keep on feeling good or it might go away.
...↓...
..↓↓..
.↓↓↓. It's certain that something will happen to spoil the feeling.

95) Overall: Does it happen that you have feelings inside you would rather not feel?
.↑↑↑. Very often.
..↑↑..
...↑...
... | ... Sometimes.
...↓...
..↓↓..
.↓↓↓. Very seldom or never.

96) You anticipate that your personal life in the future will be:
.↑↑↑. Totally without meaning or purpose.
..↑↑..
...↑...
... | ... Some meaning and purpose.
...↓...
..↓↓..
.↓↓↓. Full of meaning and purpose.

97) Do you think that there will always be people whom you'll be able to count on in the future?

.↑↑↑. You're certain there will be.
..↑↑..
...↑...
... | ... An equal amount of certainty and doubts.
...↓...
..↓↓..
.↓↓↓. You doubt there will be.

98) Overall: Does it happen that you have the feeling that you don't know exactly what's about to happen?

.↑↑↑. Very often.
..↑↑..
...↑...
... | ... Sometimes.
...↓...
..↓↓..
.↓↓↓. Very seldom or never.

99) Many people - even those with a strong character - sometimes feel like sad sacks (losers) in certain situations. How often have you felt this way since you have lived here in the U.S.?

.↑↑↑. Never.
..↑↑..
...↑...
... | ... Sometimes.
...↓...
..↓↓..
.↓↓↓. Very Often.

100) Overall: When something happened, have you generally found that:

.↑↑↑. You overestimated or underestimated its importance.
..↑↑..
...↑...
... | ... You might have saw things in the right proportion or you might have miscalculated its importance.
...↓...
..↓↓..
.↓↓↓. You saw things in the right proportion.

101) Overall: When you think of the difficulties you are likely to face in important aspects of your life, do you have the feeling that:

.↑↑↑. You will always succeed in overcoming the difficulties.
..↑↑..
...↑...
... | ... You might or might not succeed in overcoming the difficulties.
...↓...
..↓↓..
.↓↓↓. You won't succeed in overcoming the difficulties.

102) Overall: How often do you have the feeling that there's little meaning in the things you do in your daily life?

.↑↑↑. Very often.

..↑↑..
...↑...
... | ... Sometimes.
...↓...
..↓↓..
.↓↓↓. Very seldom or never.

103) Overall: How often do you have feelings that you're not sure you can keep under control?
.↑↑↑. Very often.
..↑↑..
...↑...
... | ... Sometimes.
...↓...
..↓↓..
.↓↓↓. Very seldom or never.

======== LIFE SATISFACTION DOMAIN RATING SCALE (LSDRS) =========
**In this section of this questionnaire, I want to find out how you feel about various parts of your life. Please click the button that best describes your feelings today as an international graduate student or student's spouse living in the U.S..

Physical and Material Well-being:

104) [Material comforts]--- things like a desirable home, good food, possessions, conveniences, an increasing income, and security for the future. Now in my life, I feel:
1. Delighted
2. Pleased
3. Mostly satisfied
4. Mixed (about equally satisfied and dissatisfied)
5. Mostly dissatisfied
6. Unhappy
7. Terrible

105) [Health and personal safety]--- to be physically fit and vigorous, to be free from anxiety and distress, and to avoid bodily harm. Now in my life, I feel these are:
1. Delighted
2. Pleased
3. Mostly satisfied
4. Mixed (about equally satisfied and dissatisfied)
5. Mostly dissatisfied
6. Unhappy
7. Terrible

Relations with Other People:

106) [Relationships with your parents, brothers, sisters, and other relatives]---things like communicating, visiting, understanding, doing things, and helping and being helped by them. Now in my life, I feel:
1. Delighted
2. Pleased
3. Mostly satisfied
4. Mixed (about equally satisfied and dissatisfied)
5. Mostly dissatisfied
6. Unhappy
7. Terrible

107) [Having and raising children]--- this involves being a parent and helping, teaching, and caring for your children. Now in my life, I feel: (choose "8." if not applicable)
1. Delighted
2. Pleased
3. Mostly satisfied
4. Mixed (about equally satisfied and dissatisfied)
5. Mostly dissatisfied
6. Unhappy
7. Terrible
8. Not applicable.

108) Close relationship with a husband/wife. Now in my life, I feel it is:
1. Delighted
2. Pleased
3. Mostly satisfied
4. Mixed (about equally satisfied and dissatisfied)
5. Mostly dissatisfied
6. Unhappy
7. Terrible

109) [Close friends]--- sharing activities, interests, and views; being accepted, visiting, giving and receiving help, love, trust, support, guidance. Now in my life, I feel these are:
1. Delighted
2. Pleased
3. Mostly satisfied
4. Mixed (about equally satisfied and dissatisfied)
5. Mostly dissatisfied
6. Unhappy
7. Terrible

Social, Community, and Civic Activities:

110) [Helping and encouraging others]--- this includes adults or children other than relatives or close friends. This can be by yourself or as a member of some church, club, or volunteer group. Now in my life, I feel:
1. Delighted
2. Pleased
3. Mostly satisfied
4. Mixed (about equally satisfied and dissatisfied)
5. Mostly dissatisfied
6. Unhappy
7. Terrible

111) Participation in activities, relating to local and national government and public affairs. Now in my life, I feel these are:
1. Delighted
2. Pleased
3. Mostly satisfied
4. Mixed (about equally satisfied and dissatisfied)
5. Mostly dissatisfied
6. Unhappy
7. Terrible

Personal Development and Fulfillment:

112) Learning, attending school, improving your understanding, or getting additional knowledge.

Now in my life, I feel these are:
1. Delighted
2. Pleased
3. Mostly satisfied
4. Mixed (about equally satisfied and dissatisfied)
5. Mostly dissatisfied
6. Unhappy
7. Terrible

113) Understanding yourself and knowing your assets and limitations, knowing what life is all about and making decisions on major life activities. For some people, this includes religious or spiritual experiences. For others, it is an attitude toward life or a philosophy. Now in my life, I feel this is:
1. Delighted
2. Pleased
3. Mostly satisfied
4. Mixed (about equally satisfied and dissatisfied)
5. Mostly dissatisfied
6. Unhappy
7. Terrible

114) Work in a job or at home that is interesting, rewarding, and worthwhile. Now in my life, I feel this is:
1. Delighted
2. Pleased
3. Mostly satisfied
4. Mixed (about equally satisfied and dissatisfied)
5. Mostly dissatisfied
6. Unhappy
7. Terrible

115) Expressing yourself in a creative manner in music, art, writing, photography, practical activities, or in leisure-time activities. Now in my life, I feel this is:
1. Delighted
2. Pleased
3. Mostly satisfied
4. Mixed (about equally satisfied and dissatisfied)
5. Mostly dissatisfied
6. Unhappy
7. Terrible

Recreation:

116) [Socializing]--- meeting other people, doing things with them, and giving or attending parties. Now in my life, I feel these are:
1. Delighted
2. Pleased
3. Mostly satisfied
4. Mixed (about equally satisfied and dissatisfied)
5. Mostly dissatisfied
6. Unhappy
7. Terrible

117) Reading, listening to music, or observing sporting events or entertainment. Now in my life, I feel these are:

1. Delighted
2. Pleased
3. Mostly satisfied
4. Mixed (about equally satisfied and dissatisfied)
5. Mostly dissatisfied
6. Unhappy
7. Terrible

118) [Participation in active recreation]--- such as sports, traveling and sightseeing, playing games or cards, singing, dancing, playing an instrument, acting, and other such activities. Now in my life, I feel these are:
1. Delighted
2. Pleased
3. Mostly satisfied
4. Mixed (about equally satisfied and dissatisfied)
5. Mostly dissatisfied
6. Unhappy
7. Terrible

========== SATISFACTION WITH LIFE QUESTION ==========

119) The previous questions asked you about various aspects of your life, now we want to ask you about your life as a whole. How satisfied are you with your life as a whole these days? I feel:
1. Delighted
2. Pleased
3. Mostly satisfied
4. Mixed (about equally satisfied and dissatisfied)
5. Mostly dissatisfied
6. Unhappy
7. Terrible

========== SOCIAL SUPPORT ==========
**Please indicate how much you agree or disagree with each of the following statements about your family and the community you belong to now in the U.S.:

120) If I had an emergency, even people I do not know in this community would be willing to help.
1. Strongly disagree.
2. Disagree.
3. Neutral.
4. Agree.
5. Strongly agree.

121) I feel good about myself when I sacrifice and give time and energy to members of my family.
1. Strongly disagree.
2. Disagree.
3. Neutral.
4. Agree.
5. Strongly agree.

122) The things I do for members of my family and they do for me make me feel part of this

very important group.
1. Strongly disagree.
2. Disagree.
3. Neutral.
4. Agree.
5. Strongly agree.

123) People here know they can get help from the community if they are in trouble.
1. Strongly disagree.
2. Disagree.
3. Neutral.
4. Agree.
5. Strongly agree.

124) I have friends who let me know they value who I am and what I can do.
1. Strongly disagree.
2. Disagree.
3. Neutral.
4. Agree.
5. Strongly agree.

125) People can depend on each other in this community.
1. Strongly disagree.
2. Disagree.
3. Neutral.
4. Agree.
5. Strongly agree.

126) Members of my family seldom listen to my problems or concerns; I usually feel criticized.
1. Strongly disagree.
2. Disagree.
3. Neutral.
4. Agree.
5. Strongly agree.

127) My friends in this community are a part of my everyday activities.
1. Strongly disagree.
2. Disagree.
3. Neutral.
4. Agree.
5. Strongly agree.

128) There are times when family members do things that make other members unhappy.
1. Strongly disagree.
2. Disagree.
3. Neutral.
4. Agree.
5. Strongly agree.

129) I need to be very careful how much I do for my friends because they take advantage of me.
1. Strongly disagree.
2. Disagree.
3. Neutral.
4. Agree.

5. Strongly agree.

130) Living in this community gives me a secure feeling.
1. Strongly disagree.
2. Disagree.
3. Neutral.
4. Agree.
5. Strongly agree.

131) The members of my family make an effort to show their love and affection for me.
1. Strongly disagree.
2. Disagree.
3. Neutral.
4. Agree.
5. Strongly agree.

132) There is a feeling in this community that people should not get too friendly with each other.
1. Strongly disagree.
2. Disagree.
3. Neutral.
4. Agree.
5. Strongly agree.

133) This is not a very good community to bring children up in.
1. Strongly disagree.
2. Disagree.
3. Neutral.
4. Agree.
5. Strongly agree.

134) I feel secure that I am as important to my friends as they are to me.
1. Strongly disagree.
2. Disagree.
3. Neutral.
4. Agree.
5. Strongly agree.

135) I have some very close friends outside the family who I know really care for me and love me.
1. Strongly disagree.
2. Disagree.
3. Neutral.
4. Agree.
5. Strongly agree.

136) Member(s) of my family do not seem to understand me; I feel taken for granted.
1. Strongly disagree.
2. Disagree.
3. Neutral.
4. Agree.
5. Strongly agree.

========== INFORMATION ABOUT YOU ==========

**Thank you for answering the questions. Now, I would like to have some information about you.

Please click the most applicable buttons.

137) What is your gender?
1. Male.
2. Female.

138) How old are you?
1. 20 or less
2. 21 ~ 30
3. 31 ~ 40
4. 41 ~ 50
5. 51 ~ 60
6. 61 and above

139) What region are you from?
1. China.
2. Hong Kong.
3. Japan.
4. South Korea.
5. Taiwan.

140) Until now, how many years have you been in the Untied States?
1. One year and less.
2. 1~2 years.
3. 2~3 years.
4. More than 3 years.

141) What program are you enrolled in now?
1. Master's program (ex:MA,MS,MEng,MEd,MSW)
2. Professional school program (ex:MD,DDS,DVM)
3. Doctorate program (ex:PhD,EdD)

142) How many years have you been in this program?
1. One year and less.
2. 1~2 years.
3. 2~3 years.
4. More than 3 years.

143) How many years have you been married?
1. Less than 1 year
2. 1 year
3. 2 years
4. 3 years
5. 4 years
6. 5 years
7. 6 years
8. 7 years
9. 8 years
10. 9 years
11. 10 years and more

144) How many children do you have?
1. None.
2. 1
3. 2
4. 3
5. 4 and over

145) What is your highest education degree?(The one you have already completed.)
1. Less than high school graduate
2. High school grad-diploma or equiv (GED)
3. Some college but no degree
4. Associate degree-occupational/ vocational/ academic program
5. Bachelor's degree (ex:ba,ab,bs)
6. Master's degree (ex:MA,MS,MEng,MEd,MSW)
7. Professional school degree (ex:MD,DDS,DVM)
8. Doctorate degree (ex:PhD,EdD)

146) Do you have a religion?
1. Yes. If you chose this continue with Question 147
2. None. If you chose this continue with Question 148

147) What is your religion?(The one that is most applicable.)
1. Buddhism.
2. Taoism.
3. Catholic.
4. Christianity.
5. Moslem.
6. Others.

148) What is your employment status?
1. Not employed.
2. Employed.

SECTION COMPLETED
Thank you for completing this questionnaire! You and your spouse's response has a significant contribution to this study!

As a small token of my appreciation for you and your spouse's support for this study, I am sending a $10.00 Meijer Gift Card to you if you are willing to leave a mailing address. The address information is a separate part of the survey, which you have already submitted, and will not be associated with your responses. Your responses will remain confidential and will not be connected to the address information.

After submitting, please click the "survey page" link to go back to the Main page and choose the"Thank you note" to leave your mailing address.

Once again, I appreciate your support!

APPENDIX D

INITIAL IRB APPLICATION APPROVAL

MICHIGAN STATE
UNIVERSITY

Initial IRB Application Approval

March 30, 2005

To: David Imig
203 Human Ecology Building

Re: **IRB # 05-236** Category: EXEMPT 1-2
Approval Date: March 29, 2005
Expiration Date: March 28, 2006

Title: SENSE OF COHERENCE AND LIFE SATISFACTION: EAST ASIAN GRADUATE STUDENT AND SPOUSAL ADAPTATION TO TEMPORARY IMMIGRATION IN THE UNTIED STATES.

The University Committee on Research Involving Human Subjects (UCRIHS) has completed their review of your project. I am pleased to advise you that **your project has been approved.**

The committee has found that your research project is appropriate in design, protects the rights and welfare of human subjects, and meets the requirements of MSU's Federal Wide Assurance and the Federal Guidelines (45 CFR 46 and 21 CFR Part 50). The protection of human subjects in research is a partnership between the IRB and the investigators. We look forward to working with you as we both fulfill our responsibilities.

Renewals: UCRIHS approval is valid until the expiration date listed above. If you are continuing your project, you must submit an ***Application for Renewal*** application at least one month before expiration. If the project is completed, please submit an ***Application for Permanent Closure***.

Revisions: UCRIHS must review any changes in the project, prior to initiation of the change. Please submit an ***Application for Revision*** to have your changes reviewed. If changes are made at the time of renewal, please include an ***Application for Revision*** with the renewal application.

Problems: If issues should arise during the conduct of the research, such as unanticipated problems, adverse events, or any problem that may increase the risk to the human subjects, notify UCRIHS promptly. Forms are available to report these issues.

Please use the IRB number listed above on any forms submitted which relate to this project, or on any correspondence with UCRIHS.

Good luck in your research. If we can be of further assistance, please contact us at 517-355-2180 or via email at UCRIHS@msu.edu. Thank you for your cooperation.

Sincerely,

Peter Vasilenko, Ph.D.
UCRIHS Chair

c: Chia-Hui Lin
810 Cherry Lane
Apt. J

APPENDIX E

REVISION IRB APPLICATION APPROVAL

MICHIGAN STATE
UNIVERSITY

Revision Application Approval

May 13, 2005

To: David IMIG
203 Human Ecology Building

Re: **IRB # 05-236** Category: EXEMPT 1-2
Revision Approval Date: May 13, 2005
Project Expiration Date: March 28, 2006

Title: SENSE OF COHERENCE AND LIFE SATISFACTION: EAST ASIAN GRADUATE STUDENT AND SPOUSAL ADAPTATION TO TEMPORARY IMMIGRATION IN THE UNTIED STATES.

The University Committee on Research Involving Human Subjects (UCRIHS) has completed their review of your project. I am pleased to advise you that **the revision has been approved.**

Revision to include a change in the advertisement/recruitment, consent, instruments and subject incentive. The new consent document is to replace the current one.

The review by the committee has found that your revision is consistent with the continued protection of the rights and welfare of human subjects, and meets the requirements of MSU's Federal Wide Assurance and the Federal Guidelines (45 CFR 46 and 21 CFR Part 50). The protection of human subjects in research is a partnership between the IRB and the investigators. We look forward to working with you as we both fulfill our responsibilities.

Renewals: UCRIHS approval is valid until the expiration date listed above. If you are continuing your project, you must submit an ***Application for Renewal*** application at least one month before expiration. If the project is completed, please submit an ***Application for Permanent Closure***.

Revisions: UCRIHS must review any changes in the project, prior to initiation of the change. Please submit an ***Application for Revision*** to have your changes reviewed. If changes are made at the time of renewal, please include an ***Application for Revision*** with the renewal application.

Problems: If issues should arise during the conduct of the research, such as unanticipated problems, adverse events, or any problem that may increase the risk to the human subjects, notify UCRIHS promptly. Forms are available to report these issues.

Please use the IRB number listed above on any forms submitted which relate to this project, or on any correspondence with UCRIHS.

Good luck in your research. If we can be of further assistance, please contact us at 517-355-2180 or via email at UCRIHS@msu.edu. Thank you for your cooperation.

Sincerely,

Peter Vasilenko, Ph.D.
UCRIHS Chair

APPENDIX F

PERMISSION FOR SOCIAL SUPPORT INDEX

Center on the Family
University of Hawaii at Manoa
Honolulu, Hawaii

Date: April 20, 2005

Dear Chia-Hui Lin

We appreciated hearing from you and learning of your research and plans to utilize measures from the Family Stress Coping and Resilience project here at the University of Hawaii at Manoa and at Washington State University in Pullman Washington.

This letter confirms your permission to utilize the measures you have requested and your right to print the measure and permissions along with your dissertation/thesis as may be required by your University/College. – The measure(s) you have permission for is/are:

- The Social Support Index

We also confirm receipt of your abstract and plans for your research and/or clinical application. We wish you the very best in your pursuits.

- Your study of the relationship between Sense of Coherence and Life Satisfaction

We do ask that you provide us an abstract or executive summary of your project and possible findings in order that we can maintain our inventory of studies utilizing the measures.

Sincerely,

Hamilton I. McCubbin Ph.D.
Professor

cc. Dr. Marilyn McCubbin, University of Hawaii at Manoa
Dr. Laurie McCubbin, Washington State University, Pullman

APPENDIX G

PERMISSION FOR SENSE OF COHERENCE SCALE

From: " [iso-8859-1] Lu nbsp;Saboga Nunes" <saboga@ensp.unl.pt>
To: "Chia-Hui Lin" <linchiah@msu.edu>
Date: 28 Dec 2004, 09:34:17 AM
Subject: RE: Requesting approval

Dear Chia-Hui Lin

You have the permission to use the SOC scale. We just ask you to: Please, in your publication(s), dissertation(s) or any paper:

1) refer for the credits the WWW reference home page - this is how you cite the WWW SOC HOME PAGE: SABOGA NUNES, Luis Ângelo, 1998, HYPERLINK "http://www.salutogenesis.net/"http://www.salutogenesis.net research@salutogenesis.net

2) we also invite you to refer to any unpublished or published paper/dissertation/book, (i.e. any research you ever did on SOC) sending back to me either a copy of it (the best) or the elements that are presented in the table bellow. Please do not hesitate to make copies of this and give them to any researcher that you know has been, is or will be researching on SOC.

Best greetings,

Luis Angelo SABOGA NUNES . Sociologist of Health . MPH . National School of Public Health . Lisboa . Portugal
SOC WWW home page manager

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