A Well-being Profile of U.S. - Based International Graduate Students: Implications for Counseling and Higher Education Professionals

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Abstract

This study explored the well-being profile of international graduate students (IGS) in USA. Seventy-nine IGS completed a demographics questionnaire and the Five-Factor Wel (5F-Wel; Myers & Sweeney, 2004). Results indicate significant differences in well-being scores between IGS and normed groups of adults. Specifically, IGS scores were significantly lower on 5 well-being factors of self-care, social self, friendship, positive humor, and leisure. Significantly higher mean scores were also found on the well-being factors of cultural identity, realistic identity, work, physical self, nutrition, and stress management. Significant differences found among several demographic variables were also noted. Implications for higher education and counseling professionals are addressed.

Keywords: Well-being, International Students, Adjustment, cultural identity.

Introduction

Nearly 690,923 undergraduate and graduate students enrolled at U.S. higher education institutions hail from foreign destinations (Institute of International Education, IIE, 2010 Open Doors Report), enhancing the intellectual and cultural milieu of their host institutions and communities. International students (IS) are also a valuable source of revenue, as evidenced by the 15 billion dollars IS and their families contributed to the U.S. economy via tuition and living expenses in 2009 alone (ILL; 2009 Open Doors Report). Clearly, American host institutions have a vested interest in the academic and personal health of IS. As such, their fundamental responsibility to welcome, serves, and maintains the well-being of international students (Peterson, Briggs, Dreasher, Horner, & Nelson, 1999; Lee & Rice, 2007). At times, however, this standard contrasts with the implicit notion within the American higher education system "...that international students bear
the responsibility to persist, overcome their discomfort, and integrate into the host society (Lee & Rice, 2007, p. 388; Bevis, 2002; Heggins & Jackson, 2003; Zhao et al., 2005). To contest this discrepancy and optimize academic and personal outcomes for IS at American host institutions, this article explores and suggests the adoption of a holistic well-being perspective and the establishment of dynamic programming and services that can adapt to the nuances of IS needs and concerns.

International Students: Opportunities and Challenges

International students are integral to the intellectual and cultural foundation and energy of their host institution and community (Altbach, 1989; Marion, 1986-in Sumer JCD; Slaughter & Rhoades, 2004). For American students, benefits include having close proximity to international students (Bevis, 2002; Harrison, 2002); opportunities that could help broaden worldviews and weaken stereotypes (Peterson Briggs, Dreasher, Horner, & Nelson, 1999). In addition to the financial incentives of hosting IS and their families, American higher education institutions often experience short and long-term geopolitical benefits. Of particular benefit is their central role in the intellectual and professional development of IS who later return to their home countries and ascend to leadership positions (Altbach, 1998; NAFSA, 2003).

Despite these benefits, there is no shortage of evidence attesting to the numerous personal, academic, and sociocultural challenges encountered by IS, particularly during the early adjustment period (Luzio-Lockett, 1998; McClure, 2007). Reactions are likely to vary, with some IS experiencing acute reactions to adjustment challenges known as ‘culture shock’ (Furnham, 2004). Others may develop acculturative stress, a more chronic response related to longer term cultural adjustments (Berry, 1984). From a temporal standpoint, then, host personnel should remain sensitive to the potential range and severity of adjustment responses experienced by IS.

For example, while IS face adjustment issues paralleling those of their American counterparts (Sheehan & Pearson, 1995), they may be magnified by the language, academic, cultural, social, and/or personal barriers associated with hailing from another culture (Abe, Talbot, & Greelhoed, 1998; Heikinheimo & Shute, 1986). Thus, those with even nominal interaction with IS should be aware of the range of potential behavioral, psychological, and/or psychosocial issues and responses that could impact an IS’s well-being.

The potential array of adjustment issues and responses has helped ensure that adjustment and acculturation concerns remain a centerpiece of the IS literature. Researchers have conceptualized these experiences in different ways. One notion
is to view adjustment and acculturation within a "framework of acculturation" (Berry, 1984; Johnson & Sandhu, 2007). In other words, the acculturative process will, to varying degrees, involve the IS confronting "changes in values, beliefs, and behaviors that result from sustained contact with a second culture" (Johnson & Sandhu, 2007, p. 13). These interactions can impact the adjustment process, levels of acculturative stress, and ultimately, the overall well-being of the IS. Tseng and Newton (Tseng and Newton, 2002-in Hyun article) place IS adjustment into the four categories of general living adjustments, academic adjustments, sociocultural adjustments, and personal psychological problems. General living adjustments include expected dietary changes (Tseng, 2002), but also includes having to secure housing and transportation (Mori, 2000) with limited English skills and while experiencing some degree of culture shock or homesickness (Furnham, 2004). Less noticeable are the inherent academic adjustments IS face. For example, the experiential learning style of the American higher education system (Mutai, 2008) is often new to IS, as are the pressures related to maintaining the academic progress necessary to maintain their government-funded scholarships (Mutai, 2008).

Sociocultural adjustment involves "implicit and explicit pressure to accommodate to U.S. cultural norms (Sandhu & Asrabadi, 1994)" immediately upon their arrival. As an example, their arrival in the U.S., and at their new campus and community in particular, may be an IS's first experience as a member of the minority culture and, as such, may be disoriented by perceived or real displays of discrimination, racism, and prejudice (Sandhu & Asrabadi, 1998). Predictably, there is also overlap between categories. For example, the language barriers noted in Tseng and Newton's (2002) general living category can also impact levels of social interaction and relationships with peers and faculty (Mallinckrodt, & Leong, 1992) that could have strong implications for healthy and productive personal and academic relationships.

The final category defined as personal psychological adjustment centers on the psychological and emotional aspects of adjustment. Acculturative stress, for instance, is associated with a sense of loss and homesickness, loneliness and social isolation, identity and values confusion, discrimination and prejudice, uncertainty, fear, and anxiety, somatic complaints, and cognitive distress (Johnson and Sandhu, 2007). Homesickness levels, for example, have been found to be among the strongest predictors of poor IS adjustment (Ying & Liese, 1994), as have challenges in seeking assistance (Kaczmarek, Matlcok, Merta, Ames, & Ross, 1994). A more recent study of IGS by Hyun, Quinn, Madon, and Lustig (2007) found nearly half (44%) experienced an emotional or stress-related problem that led to diminished personal and academic functioning within the prior year. While an abridged review of the psychology and counseling literature, these findings illustrate the importance of remaining sensitive to the psychological health
of IS, a consideration that in the past has often gone unnoticed or been disregarded (Mori, 2000).

The IS literature in general, and the adjustment and acculturation literature specifically, highlights the range of potential concerns for IS and host institutions. In the counseling literature, the well-being paradigm has been recognized as a useful template for examining the health of IS on American campuses (Tseng & Newton, 2002). However, a comprehensive well-being profile of the intriguing sub-population of international students, those pursuing graduate studies, remains elusive. This study was developed to ascertain a broader profile and understanding of IGS well-being.

**The Well-being Paradigm**

Addressing the health of IS at U.S higher education institutions implies an understanding of the transitional issues they encounter and an appreciation for their overall health. Broadly defined as an individual's general sense of well-being (Myers, Sweeney, & Witmer, 2000), well-being models grew out of an interest in broadening the reach of well-being outside its physical science roots (Hettler, 1984; Sweeney & Witmer, 1991; Witmer & Sweeney, 1992). Within the counseling discipline, well-being is considered "…the paradigm..." (Myers & Sweeney, 2005, p. 269). Today, counseling based well-being models have led to a resurgence of evidence-based well-being scholarship across a diverse range of populations. Among the most widely used models is the Indivisible Self: An Evidence-Based Model of Well-being (Myers & Sweeney, 2005).

The IS-Wel is a theoretically broader, strength and evidence-based model that illustrates the synergistic effects of multiple well-being factors on an individual's overall health (Myers & Sweeney, 2008; Larson, 1999; Roscoe; 2009, Adams et al., 1997; Hettler, 1980). Comprised of a central higher order well-being factor defined as Total Well-being and five second-order factors described as the Creative, Coping, Physical, Social, and Essential Selves. The empirical and practical value of the IS-Wel is clearly evidenced by its utility among diverse populations. In their review of the well-being literature, for example, Myers and Sweeney (2008) noted five primary areas of well-being research: a) well-being of non-counselor populations; b) well-being of counselors-in-training, professional counselors, and counselor educators; c) correlates of well-being; d) cross cultural and cross-national studies; and e) outcome research. For example, IS-Wel, along with its precursor The Wheel of Well-being, have been used to explore the well-being of elementary school children subsets of undergraduate students such as student-athletes (Watson & Kissinger, 2005) and …, as well as graduate students. Additionally, the WEL and 5F-Wel have been translated into several languages and have served as the conceptual base for studies involving cross-cultural and cross-
national populations (Myers & Sweeney, 2008). These studies evidence the wide applicability and utility of counseling based well-being models; however, the current study benefits from 5F-Well's dual efficacy with subsets of the college student populations and cross-cultural and cross-national populations (e.g. Tatar & Meyers, in press; for a more complete list, see Myers & Sweeney, 2008).

Osborn's (2005) review of well-being studies on undergraduates illustrates the benefits of the counseling based models. There are several studies addressing the physical and social elements of well-being, with spirituality and coping behaviors most notably linked with lower well-being scores. More specifically, Myers and Mobley (2004) found that undergraduates had lower overall well-being scores than non-student adults, with Caucasian students reporting higher scores on more well-being scales than "nontraditional students of color" (p. 486). Using the Wheel of Well-being model, Hermon and Hazler (1999) found short and long-term trait factors related to psychological health of undergraduates to be positively linked with the life tasks, while Smith found a significant negative link between psychological disturbance and well-being. Myers and Sweeney (2008) found positive relationships between healthy love styles and life tasks associated with well-being. Sinclair and Myers (2004), in an earlier study of 272 undergraduate, heterosexual, Caucasian women, found physical well-being to be negatively correlated with body shame and positively correlated with appearance control beliefs. In essence, well-being levels may impact body image. More recently, student-athletes, a subset of college students recognized as having unique characteristics and stressors were found to have lower overall well-being scores than their non-athlete peers (Watson and Kissinger, 2007).

At the graduate level, Myers et al. (2003) survey of counseling students indicated higher well-being scores among doctoral students than beginning students (Myers & Sweeney, 2008, p. 488). Both groups, however, reported higher well-being scores when compared to non-student adults. Dissertation studies have also shown higher well-being scores for both undergraduate and graduate level students, furthering the notion that exposure to the well-being paradigm can lead to improved well-being (Myers & Sweeney, 2008). Among educators, counselor educators were found to have higher well-being levels when compared to graduate level counselors-in-training (Myers et al., 2003). This finding is particularly notable given the inherent value of counselor educators modeling a healthy balance between professional and personal activities. Although certainly not a full accounting of well-being studies among higher education student populations (Myers & Sweeney, 2008), the development of evidence-based well-being models, and their increasingly broad usage across college populations and diverse cultures, provides a solid template for addressing the holistic well-being of international graduate students.
The Research Questions

The issues and concerns of IS and IGS studying on American higher education campuses is well documented (Hyun et al., 2007). Yet, while the well-being paradigm as a means for examining and understanding well-being of IS exists (Tseng & Newton, 2002) holistic well-being profiles of IGS attending American higher education institutions have not been addressed. This study was developed to address this current gap in the literature using the counseling-based Indivisible Self: An Evidenced-Based Model of Well-being. Results of the study can be used to assist counseling and higher education professionals with respect to developing dedicated treatment and/or programming efforts geared toward effecting positive academic and personal outcomes for IGS while on campus and, in theory, well beyond the timeframe of their American education. To that end, the Five Factor Well-being inventory (5F-Wel, Myers & Sweeney, 2005), an empirically validated well-being instrument based on the Indivisible Self: An Evidence Based Model of Well-being (IS-Wel; Myers and Sweeney, 2005), was selected as the conceptual base for this study. More specifically, the following research questions were developed:

1. What is the Total well-being profile of international graduate students (in the Sample a and b) in relation to gender, age, length of stay, pattern of social contact, English proficiency, social support, field of study, degree status, and religious/spiritual orientation, as measured by the 5F-Wel?

2. What are the correlations among gender, age, length of stay, pattern of social contact, English Proficiency, social support, degree status, and religious/spiritual orientation and Well-being as measured by the 5F-Wel?

3. What are the contributions of gender, age, length of stay, pattern of social contact, English proficiency, social support, degree status, and religious/spiritual orientation and Well-being, as measured by the 5F-Wel to the variance in international graduate students self-reported Well-being, as measured by the 5F-Wel?

Methodology

Participants

Participants were 84 international graduate students enrolled at a large, land grant university in the Mid-South of the US. Participants were identified through the university’s database. All participants were asked to complete a demographic data sheet and the Five Factor Well-being Inventory (5F-Wel; Myers & Sweeney, 2005). After exclusions of the incomplete packets, 79 of 84 respondents were included for data analysis. Men made up the largest portion (62%) of participants while women consisted of 38%, which corresponds to the gender ratio characteristic of
participants’ fields of studies. Most participants were 23 to 35 years old. More specifically, 24.1% were 23 to 25 years old, 36.7% were 26 to 30 years old, and 26.6% were 31 to 35 years old. Geographically, participants from 40 countries (e.g., India, China, Bangladesh, Pakistan, Indonesia, and Brazil) are present in the study. A majority of students (55.8%) had weekly contact with family members, while 28.6% reported contact with family in their country of origin on a daily basis and 15.4 % reported monthly contact with family members. In terms of their adjustment, a majority of students (56.4%) reported that they felt "fairly" adjusted to the American culture, while 25.6% reporting a "good" adjustment and 25.6 % felt they had adjusted poorly. Only 3.8% of participants rated their adjustment as "excellent".

Ethical Considerations

In keeping with the ACA Code of Ethics, all records of counselor services provided were considered confidential professional information. However, there were specific and limited potential exceptions to this confidentiality such as if there was risk of imminent danger to the participant or to another person; if there was suspicion that a child or elder was being sexually or physically abused or were at risk of such abuse. Moreover, if a valid court order was issued for medical records, the clinician and the agency are bound by law to comply with such requests. All of these points were addressed in the consent form.

During the study, participants are informed that they had the right to discontinue participation at any point; they were not required to complete any portion of any measure. All collected data was kept confidential by being stored in a locked cabinet in a locked office. All group members and co-facilitators maintained the confidentiality of group members. The researcher will not divulge the participants' name or identify their information to anyone. After the data had been used, it will be stored for 2 years in a fireproof safe and then destroyed per the agency’s request.

Instruments

The 5F-Wel. The 5F-Wel was used to assess the well-being of participants. Based on the tenets of Adler’s Individual Psychology, the Indivisible Self Model (Myers & Sweeney, 2004) represents an evidenced and strength-based well-being model consisting of one higher order well-being factor, Total Well-being, five second-order factors, and 17 distinct well-being dimensions. The 17 third-order factors are represented within the five second order factors (Social Self, Essential Self, Creative Self, Physical Self, and Coping Self). Statistical analyses show the 5F-Wel to be have a high reliability, with reported alpha coefficients of .94 for Total Well-being, .85 to .92 for the second order factors, and .66 to .87 for third order factors (Myers & Sweeney, 2005). Using a 4-point Likert-type scale ranging from 4
(Strongly agree) to 1 (Strongly disagree), 79 participants are asked to respond to 73 items that address both attitudinal and behavioral statements (e.g., “I value myself as a unique person”, “I believe that I am a worthwhile person”). Raw scores are gained for each scale through summing the individual scores of each scale, then converted through a linear transformation process. These converted scores represent scores ranging from 25 to 100, with higher well-being levels associated with higher scores. In this study, reliabilities with alpha coefficients were reported as .94 for first-order factor, total well-being factor, .78 (Cope) to .86 (Create) for second–order factors, and .43 (Realistic Belief) to .87 (Nutrition) for third-order factors.

**Statistical Analysis**

Inter-correlations among the variables were conducted for each of the 5F- Wel factors to identify the current levels of well-being among the sample. The comparison of total and subscale mean scores of well-being between international graduate students and WEL norm groups of 3,043 adults was conducted by t-test. The Bonferroni-adjusted critical t value for international students was 3.00. The alpha to determine significance was set at .003 to adjust for the number of contrast. In addition, Effect sizes (Cohen’s d and Pearson’s r) were calculated for detecting significance of clinical differences. The scores of effect sizes were interpreted as being small (.20 for d; .10 for r), medium (.50 for d; .24 for r), or large (.80 for d; .37 for r). Finally, Multivariate analysis of variance (MANOVA) was used to examine possible within- group differences of well-being total and subscale score in the demographic variables (i.e., age, gender, and financial support etc). Considering the small sample size, Pillai’s trace was used to evaluate significant differences based on Olson (1979)’s recommendation.

**Results**

Table 1 presents bivariate zero-order correlations among the well-being variables (total scores, second-order factors, and third-order factors). As shown in Table 2, the mean score of the total and subscales of well-being with international graduate students ranged from 67.28 (realistic belief, SD=10.09) to 91.98 (cultural identity, SD=10.85). In comparison with the well norm groups of 3,043 adults on all of the WEL scales, mean well-being scores of IGS were significantly lower on 5 of the 23 factors, including self-care (M=78.08, SD=13.73); social self (M=83.00, SD=12.16); friendship (M=81.53, SD=12.54); positive humor (M=76.21, SD=12.83); and leisure (M=74.05, SD=13.75).

On the other hand, they had significantly higher mean scores on 6 of the 23 factors of well-being than the well norm group. These include cultural identity (M=91.18, SD=10.85); realistic identity (M=67.28, SD=10.09); work (M=78.42, SD=11.54);
physical self (M=74.12, SD=11.94); nutrition (M=72.36, SD=16.36); and stress management (M=76.21, SD=11.72). While the effect size (i.e., Cohen d and Pearson’s r) were small in most significant factors, there were medium effect sizes of some factors on work (d=.43, r=.21), social self (d=.40, r=.36), self-care (d=.45, r=-.22), and realistic belief IS (d=.51, r=.25). As expected, cultural identity showed the largest effect size (d=1.14, r=.50).

Next, the results of 75 multivariate analysis of variance (MANOVA) indicated that there were statistically significant differences with regard to well-being total and subscales scores based on several demographic variables: contact rate with family members in home country (Pillai’s trace=.65, F_{34,118} =1.68, p=.02) and the level of adjustment to culture (Pillai’s trace=.87, F_{51,180} =1.45, p=.40). In addition, results indicated there were no gender differences (Pillai’s trace=.27, F_{17,60} =1.30, p >.05) and no significant age differences (Pillai’s trace=1.198, F_{85,300} =1.11, p >.05) on well-being total score and subscales. Because of unequal cell sizes, we analyzed post-hoc differences using Dunnett’s C tests for significant findings in MANOVA analyses. Results of these follow-up analyses revealed that international graduate students who contacted their families daily reported significantly higher total well-being scores (M=52.14, SD=5.12) than did their counterparts who contacted them weekly (M=47.68, SD=8.31) or monthly (M=44.39, SD=7.68) [F(2, 74)=4.58, p =.01]. With respect to cultural adjustment, participants who reported excellent (M=54.91, SD=7.04) and/or good (M=49.95, SD=8.46) adjustment were significantly higher total well-being scores than did fair (M=47.51, SD= 6.58) or poor adjustment (M=41.09, SD=5.18) [F(3,74)=5.05, p =.003].
Table 1. **Inter-correlations among Total scores, Second-order Factors, and Third-order Factors**

| Item                      | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21  | 22  | 23  |
|---------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| **Creative Self**         |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Thinking                  |    .70** |   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Emotions                  |    .76** .40** | |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Self-Control              |    .79** .56** .48** | |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Work                      |    .79** .38** .51** .59** | |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Positive Humor            |    .78** .42** .49** .45** .51** | |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| **Coping Self**           |    .67** .46** .57** .62** .52** .42** | |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Leisure                   |    .64** .43** .54** .50** .56** .41** .81** | |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Stress Manage             |    .58** .28** .51**** .48** .56** .39** .71** .51** | |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Sense of Worth            |    .54** .37** .46** .51** .29** .42** .63** .29** .40** | |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Realistic Beliefs         |    -.08 -.06 -.08 .10 -.15 -.17 .38** -.02 -.03 .11 | |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| **Social Self**           |    .64** .44** .34** .50** .53** .38** .38** .24** .34** .02 | |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Friendship                |    .68** .48** .45** .52** .57** .57** .43** .43** .25** .33** .02 .89** | |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Love                      |    .44** .33** .19 .39 .39 .39 .27 .27 .18 .27 .06 .91** .63** | |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| **Essential Self**        |    .47** .35** .46** .35** .41** .26 .55** .40** .45** .58** .02 .42** .45** .31** | |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Spiritually               |    .27** .22 .29** .24** .27** .03 .38** .26** .33** .40** .03 .28 .32** .20 .83** | |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Self-care                 |    .29** .32** .22** .29** .16 .17 .28 .10 .24 .40** .08 .38** .35** .33** .63** .40** | |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Gender Identity           |    .50** .24** .52** .25** .45** .43** .47** .46** .39** .46** .15 .27 .33** .17 .66** .29** .14 | |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Cultural Identity         |    .35** .28 .30** .26** .33** .18 .52** .36** .38** .48** .15 .32** .32** .25** .78** .49** .39** .56** | |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| **Physical Self**         |    .62** .44** .44** .47** .58** .44** .57** .64** .55** .21 -.07 .42** .42** .36** .39** .32** .18 .30 .33** | |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Nutrition                 |    .48** .37** .31** .31** .50** .33** .38** .42** .46** .06 -.05 .30 .32** .23** .30** .27** .18 .21 .19 .88** | |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Exercise                  |    .57** .37** .44** .50** .46** .40** .60** .68** .47** .33** .08 .42** .38** .38** .35** .27** .10 .30 .38** .77** .37** | |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Total Well-being          |    .88** .62** .68** .71** .73** .62** .83** .74** .67** .61** .06 .69** .71** .54** .75** .55** .46** .59** .60** .76** .59** .68** | |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |

*p < .05,  p < .01*
Table 2. Comparisons Between International Graduate Students and Well Norm Group

<table>
<thead>
<tr>
<th>5F-Wel Scale</th>
<th>International Graduate Students (n=79)</th>
<th>Well Norm Groups (n=3,043)</th>
<th>t</th>
<th>d</th>
<th>r</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Creative Self</strong></td>
<td>78.77 8.48</td>
<td>78.75 8.67</td>
<td>.02</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>Thinking</td>
<td>80.85 9.56</td>
<td>79.36 11.63</td>
<td>1.36</td>
<td>.14</td>
<td>.07</td>
</tr>
<tr>
<td>Emotions</td>
<td>79.41 11.19</td>
<td>79.98 12.19</td>
<td>-0.45</td>
<td>-.05</td>
<td>-.02</td>
</tr>
<tr>
<td>Self-Control</td>
<td>78.96 10.26</td>
<td>80.58 11.31</td>
<td>-1.38</td>
<td>-.15</td>
<td>-.07</td>
</tr>
<tr>
<td>Work</td>
<td>78.42 11.54</td>
<td>72.93 13.90</td>
<td>4.15**</td>
<td>.43</td>
<td>.21</td>
</tr>
<tr>
<td>Positive Humor</td>
<td>76.21 12.83</td>
<td>80.87 12.61</td>
<td>-3.19**</td>
<td>-.37</td>
<td>-.18</td>
</tr>
<tr>
<td><strong>Coping Self</strong></td>
<td>75.06 7.62</td>
<td>73.73 7.90</td>
<td>1.53</td>
<td>.17</td>
<td>.09</td>
</tr>
<tr>
<td>Leisure</td>
<td>74.05 13.75</td>
<td>78.80 14.23</td>
<td>-3.03**</td>
<td>-.34</td>
<td>-.17</td>
</tr>
<tr>
<td>Stress Management</td>
<td>76.21 11.72</td>
<td>72.05 14.72</td>
<td>3.09**</td>
<td>.31</td>
<td>.15</td>
</tr>
<tr>
<td>Sense of Worth</td>
<td>85.17 10.90</td>
<td>83.02 12.76</td>
<td>1.72</td>
<td>.18</td>
<td>.09</td>
</tr>
<tr>
<td>Realistic Beliefs</td>
<td>67.28 10.09</td>
<td>60.98 14.43</td>
<td>5.41**</td>
<td>.51</td>
<td>.25</td>
</tr>
<tr>
<td><strong>Social Self</strong></td>
<td>83.00 12.16</td>
<td>87.64 10.83</td>
<td>-3.36**</td>
<td>-.40</td>
<td>-.20</td>
</tr>
<tr>
<td>Friendship</td>
<td>81.53 12.54</td>
<td>86.67 11.63</td>
<td>-3.60**</td>
<td>-.43</td>
<td>-.21</td>
</tr>
<tr>
<td>Love</td>
<td>84.47 14.45</td>
<td>88.61 13.56</td>
<td>-2.52</td>
<td>-.30</td>
<td>-.15</td>
</tr>
<tr>
<td><strong>Essential Self</strong></td>
<td>81.78 9.81</td>
<td>79.43 10.01</td>
<td>2.10</td>
<td>.24</td>
<td>.12</td>
</tr>
<tr>
<td>Spiritually</td>
<td>77.55 15.62</td>
<td>76.08 17.97</td>
<td>0.82</td>
<td>.09</td>
<td>.04</td>
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<td>Self-care</td>
<td>78.08 13.73</td>
<td>85.10 16.97</td>
<td>-4.46**</td>
<td>-.45</td>
<td>-.22</td>
</tr>
<tr>
<td>Gender Identity</td>
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<td>80.60 12.43</td>
<td>0.47</td>
<td>.05</td>
<td>.03</td>
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<tr>
<td>Cultural Identity</td>
<td>91.18 10.85</td>
<td>76.16 15.13</td>
<td>12.00**</td>
<td>1.14</td>
<td>.50</td>
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<tr>
<td><strong>Physical Self</strong></td>
<td>74.12 11.94</td>
<td>69.80 16.58</td>
<td>3.12**</td>
<td>.30</td>
<td>.15</td>
</tr>
<tr>
<td>Nutrition</td>
<td>72.36 16.46</td>
<td>66.01 20.30</td>
<td>3.36**</td>
<td>.34</td>
<td>.17</td>
</tr>
<tr>
<td>Exercise</td>
<td>75.89 12.39</td>
<td>73.58 18.02</td>
<td>1.61</td>
<td>.15</td>
<td>.07</td>
</tr>
<tr>
<td><strong>Total Well-being</strong></td>
<td>78.29 7.50</td>
<td>77.98 7.52</td>
<td>0.36</td>
<td>.04</td>
<td>.02</td>
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*p<.05, **p<.01
Discussion
The findings of the present study provide evidence for the significant difference between the national students group (NS) and the IGS. The average of feeling of well-being is significantly lower for the IGS than NS in five variables. These five variables are self-care, humour, friendship, leisure, and social self.

The lower scores on self-care and positive humor, results can be interpreted by self-care methods that vary from one society to another depending on the nature of the facilities that provided in each society such as medical care, the availability to access private clinics in different specializations, the existence of sports centers, and the self-care accessibility. Leong and Chou (1996) supported this interpretation in a descriptive study about the frequency of psychological disorders among foreign students. They refer to IS having multiple complaints that do not readily fit into any syndrome complex. Furthermore, Emotions and psychological status contribute to physical problems, and language obstacles contribute to problems in making diagnoses. The same study compared the frequency of the health center use of foreign and American students and examined the differences in diagnoses, isolating those related with stress. Although the international students make up 13 percent of the student population, they made up 21 percent of the individuals who visited the center. The same study reported that various psychiatric disorders can be seen among international students more than domestic students. For example, anxiety, stress reaction, depression, insomnia, sexual dysfunction, and the somatization of emotional problems are the most common psychological disorders among international students (Leong & Chou, 1996).

Researchers attribute the lack of well being in friendship in IS to friendship relations being based on long-term relationships. Additionally, there are several factors that can impact on friendship such as the proficiency of speaking English which plays a major role in making relationships. Also the longer one spends in the society, the more the ability to form friendships will increase. Researchers interpret the leisure activities factor to the reduced knowledge of leisure time culture, and IGS may have cultural limitations which conflict with leisure such as going to bars for drink for Muslims students.

Moreover, results showed that there are higher significance scores on six variables for the IGS than NS. These six variables are cultural identity, realistic identity, work, physical self, nutrition, and stress management. The cultural identity variable showed the largest effect size. The interpretation for that is IGS arrive in the U.S. with national cultural identities defined by deep-seated values, norms, and basic assumptions about life and how to deal with its demands. National cultural identity is a connection to or affiliation with a particular national group that emerges as an individual learns a fundamental cultural pattern, based on a shared value system common to his or her national group. National cultural identity determines, in part, a person’s approach to dealing with people, with time, and with the natural world (Hofstede, 2001; Schein, 1992; Schwartz, 2004).
An individual’s national cultural identity is largely acquired in childhood (Benedict, 1961; Hofstede, 2001), and thus IGS coming to the U.S. bear value preferences learned when growing up Chinese or Arab or Indian—or whatever the national group in which they were raised. Therefore, the implicit cultural orientations they learned as children remain firmly in place during the period of immersion in American academic life or begin to shift after a year or two. One might wonder, for example, if these U.S. educated international students become “Americanized” beyond an ability to speak colloquial American English or watch American football.

Evidence showing international students internalizing American value preferences might be interpreted as meaning they converge toward American cultural dimensions in ways more fundamental than language fluency or social behaviors. To an extent they become, culturally speaking, new Americans. Or perhaps they diverge, becoming different from others of their own nationality, different from Americans, and instead become “citizens of the world” possessing some new mix of cultural values. Alternatively, the American experience might not alter existing national cultural identities, the ones the students arrived with originally. Perhaps the experience might even reinforce those existing national cultural identities.

A second interpretation of the cultural identity variable score is the experience of culture chock. Culture shock is one of the most difficult problems that can face the IS, and can lead to some psychological disorders and adjustment problems. Culture shock is an experience that can describe the impact of moving from one’s own familiar culture to a new one which is unfamiliar. It includes the shock of a new environment, meeting many of new people, and being separated from the important people in one’s life like family members, friends, colleagues, and all people who one is normally able to talk to at a certain time and who support him/her. There are many factors that contribute to culture shock such as social roles; rules’ of behavior, values, climate, food, language, and dress.

This interpretation is supported by studies (Oropeza, Fitzgibbon, and Baron, 1991; Ying and Liese, 1994) who describe the stressors that can create crisis for the international students. The first one is culture shock which is usually manifested as anxiety or depression. The second one is the changes in both social and economic status which can create a feeling of loss, grief, or resentment. The third one is the expectation about the academic system; this will be a stressor especially for the students who have a high achievement motivation. The forth stressor is isolation, alienation, and discrimination. Aubrey (1991) identifies the most common sources for IS’s stressors in their academic achievement and life stress such as life difficulties, adjustment problems and culture shock from experiencing dissimilar values.

The realistic identity score was statistically significant for IGS. This can be explained by how IGS are the product of a very selective educational system and have strong academic skills and high aspirations (Boyer & Sedlack, 1988, Pedersen, 1991), especially graduate students and those who are the best students in their home countries. Therefore, those IGS have a realistic belief about themselves.
Regarding the physical self, this variable has a connection with social upbringing, the learning processes, maturity, religion, language, traditions, and habits. It also can't be eradicated just for removing from one society to another. The fourth variable is work. This is associated with the desire of quick-accomplishment in the attaining of a degree, linked with the fear of the ending of the resources to pay. The fifth variable is Nutrition. IGS came from different countries and different culture and each culture has their own food and different ways of cooking which in many ways differ from American culture or American food. Although American food has been very widespread around the world, every culture has its own food and nutrition habits which may contradict with the American traditions. For example, Muslims are prohibited from drinking alcohol and both Muslim and Jewish students are prohibited from eating pork.

The final variable is stress management. Clearly most stress is placed upon the IS after their migration to a strange country where “they experience difference in climate, food, social values, modes of behaviour and verbal and nonverbal communications” (Dillard & Chisolm, 1983, p. 101). The IGS face a lot of stress being in a foreign country which can cause them to develop cautious behavior, or they try to avoid social and interpersonal stressors. These social and interpersonal stressors are frequently paired with language difficulties and lack of familiarity with the American education system (Olivas & Li, 2006).

These results are supported by several studies showing, for example, that IS often face financial stress, cultural misunderstandings, and racial discrimination during their stay in the U.S. (Lin & Yi, 1997; Mori, 2000). The adjustment challenges encountered by many international students frequently lead to acculturative stress, referring to the distress experienced during the process of acculturation (Johnson & Sandhu, 2007; Sandhu & Asrabadi, 1994).

The results of several demographic variables on contact rate with family members at home and the level of adjustment to culture indicated that there were no gender differences and no significant age differences on well-being total score and subscales. Though none were apparent in this study, Myers and Mobley (2004) found relatively high scores for women on the essential self-factor which includes such areas as spirituality, self-care, gender identity and cultural identity. Likewise, male students were likely to have greater challenges in these areas, accounting for the difference.

Implications

Given the changing nature of the IGS population, the increasing numbers of IGS who come from different countries all over the world to the U.S., it is important for the Student Services offices to have a clear understanding of what IGS need to be successful and finish their program of study by earning their degrees. The academic institutions emphasize usually on academic preparedness and performance with little attention to anything beside that. Though awareness of the significance of non-academic factors has increased, the lack of clear data defining the areas in which students need assistance
has forced most academic institutions to respond in a trial and error method. Some progress has been recognized but more is promised with evidence-based programs.

The current study and other studies added to the literature of well-being of the IGS will likely mislead institutions into believing that all students have the same needs while the deeper evidence demonstrates that they do not. Colleges would do well to know who their students are and what specific groups might need in the way of extracurricular or support programs to increase success. Starting with basic demographic data (age, gender, ethnicity, country), the addition of other information regarding work status, family contact rate, family support, SES, disabilities, physical fitness can allow for targeted program development that will help remediate weaknesses and capitalize on strengths.

The well-being programs on campus are common across the country but should now move beyond simple physical fitness. Compulsory orientation courses or programs for all new IS would provide opportunities to get information and introduce holistic well-being as an important resource for student success. Broad information campaigns regarding services for students with disabilities would increase awareness of this valuable resource for students who might not otherwise be aware of available assistance. Individual counseling and support groups for students with other challenges would allow identification and response to students likely to drop out. Additionally, student organizations that support and enhance student strengths would help mitigate the negative impact of disadvantages.

Finally, student mentor programs would encourage students to support and help each other, sharing strengths and challenges as they work toward successful completion especially mentor groups for IS or IGS specifically. These are only a few suggested responses. What is most important is for colleges to know who their students are and to approach the use of limited resources with clear purpose.

**Limitations and Future Research**

Several limitations of this study need to be recognised. The study sample was drawn from a population living in Northwest Arkansas. The population and study sample included more men (62%) than women. As a result, caution should be exercised when generalizing the findings to IGS with different population demographics. Additionally, more specific information, which can be obtained by including the 17 third order factors, would provide more insight into specific areas of strength and weakness in IGS populations. All of the information gathered in the study is taken from self-report and there are limitations inherent in any self-report data. Finally, it should be noted that the data contained is correlational and cannot be used to imply causation.

More research investigating the holistic well-being in the community college population can be conducted following this study. Gathering data from different geographic
locations would further define the impact of regional culture on student success. Further investigation into the causal relationship between specific well-being factors and student success would shed light on the impact of well-being on the ultimate goal of increased student success. Further research could develop an even deeper understanding of the wellness profiles of IGS revealed by this study in different contexts. Well-being profiles may be different in contexts other than Northwest Arkansas. Therefore, a suggested direction for further research would be to replicate this study with IGS in different areas to find out whether if there are any differences. It is also suggested that future research can look into well-being profiles of IGS using a more qualitative approach.
References


March 26-30, Honolulu, HI. Retrieved http://counselingoutfitters.com/vistas/vistas08/Mutai.htm


