

## INTERNATIONAL STUDENTS' ADJUSTMENT IN HIGHER EDUCATION: RELATION BETWEEN SOCIAL SUPPORT, SELF-EFFICACY, AND SOCIO-CULTURAL ADJUSTMENT

Yusliza Mohd.Yusoff

yusliza1977@yahoo.com

School of Management, Universiti Sains Malaysia, 11800 USM, Penang, Malaysia

### ABSTRACT

*This study was aimed at investigating the relationship between social support (Zimet et al., 1988), self-efficacy (Schwarzer & Jerusalem, 1995), and socio-cultural adjustment (Ward & Kennedy, 1999). The sample consisted of 185 international undergraduate students in one of the public higher education institutions in Malaysia. Multiple linear regression analysis was employed to test the hypotheses. The findings from this study indicated that support from friends and significant others is positively related to all dimensions of socio-cultural adjustment and support from family is positively related to cultural empathy. Self-efficacy is positively related to cultural empathy.*

**Keywords:** social support, self-efficacy, socio-cultural adjustment, international students, Malaysia

### 1. INTRODUCTION

Internalization of higher education is one of the important transformation processes of developing countries towards globalization. Further, globalization and democratization of higher education in Malaysia has raised much interest among educators and researchers to understand this phenomenon. As a result of growth in the global economy and, in order to fulfil business requirements for international competence and skills, university graduates often evaluate the possibility of continuing studies abroad to improve their skills and capabilities. By 2025, internationalization will have sharpened the hierarchy in world higher education, with a handful of university "transnational corporations" in the highest tier alongside private firms (<http://www.timeshighereducation.co.uk/story.asp?sectioncode=26&storycode=413647&c=1>). Rapidly increasing numbers of university students are travelling abroad each year to enhance their education through an international perspective. International students have become an increasingly important part of the higher education system of Malaysia. With its world-class education system and strong international reputation, Malaysia is an increasingly popular study destination for international students interested in education abroad. They are enrolled in a wide range of disciplines at every level of education, including short-term and professional courses, diplomas, bachelor degree and other post-graduate studies such as masters degrees right through to doctoral degrees (<http://www.universitymalaysia.net/>). It has been estimated that international students play a key role in contributing to a culturally diverse society by providing a wide variety of different cultures and perspectives. As well as the richness of diversify, there is also the important benefit of international students as economic drivers.

More foreign students may choose to pursue their tertiary education in Malaysia because of the world recession. The Higher Education Ministry is expecting about 75,000 foreign students to take up undergraduate and postgraduate programmes (New Straits Times, April 5, 2009). In addition, Minister Datuk Khaled Nordin said through the National Higher Education Strategy Plan, the ministry was pushing to make the country the hub for higher education excellence in the region (New Straits Times, April 5, 2009). In a more recent news from Bernama.com, the Higher Education Ministry is targeting intake of 150, 000 foreign students into Malaysia's public and private higher learning institutions by 2015 and could increase the nation's per capita income (<http://www.bernama.com/bernama/v5/newsindex.php?id=534852>). Besides, Minister Datuk Khaled Nordin

also mentioned that this year, 2010, 80,000 foreign students enrolled themselves at 47 private higher learning institutions and 20 public institutions, the number being above the ministry's target (<http://www.bernama.com/bernama/v5/newsindex.php?id=534852>).

Going by the latest statistics, there are more than 10,000 international students currently studying in the public universities in Malaysia (Figure 1). Out of the figures provided by National Higher Education Research Institute, in 2008, Indonesia and Iran constitute the highest number of international students in public universities in this country. They number 3,631 and 3,100 respectively. There are also a big number of students from China (1,583), Yaman (1,374), Libya (727), and Arab Saudi (612) (refer to Table 1).

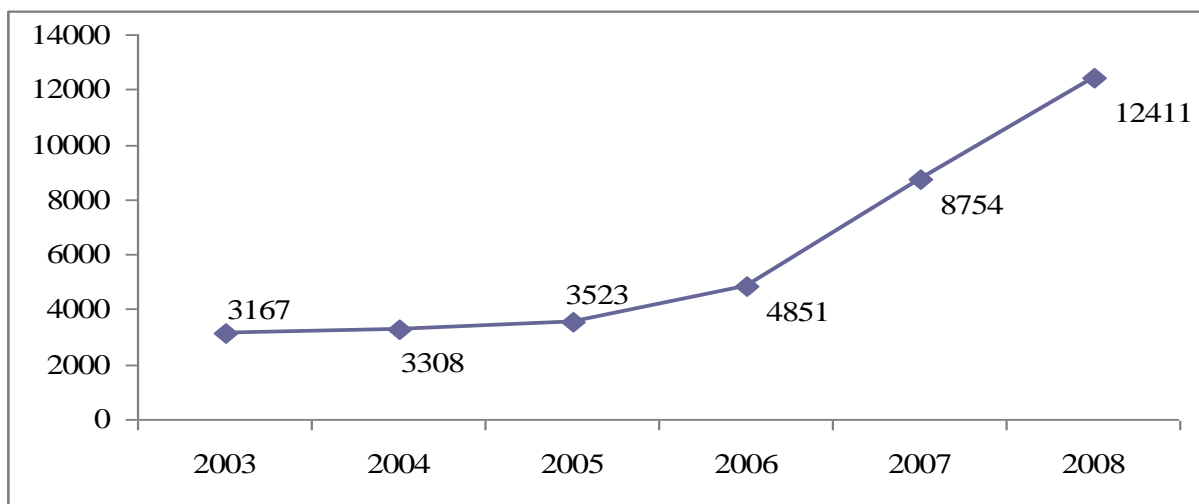


Figure 1. International students in Malaysian public universities.

Source: National Higher Education Research Institute, Ministry of Higher Education (June, 2009)

Table 1. The Malaysia's source countries of international students, 2003-2008.

| State         | 2003        | 2004        | 2005        | 2006        | 2007        | 2008         | Total        |
|---------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|
| Indonesia     | 1496        | 1721        | 1504        | 1850        | 3000        | 3631         | 13202        |
| Iran          |             |             |             | 736         | 2049        | 3100         | 5885         |
| China         | 119         | 175         | 282         | 373         | 1160        | 1583         | 3692         |
| Yemen         | 219         | 308         | 371         | 457         | 837         | 1374         | 3566         |
| Thailand      | 475         | 360         | 493         | 464         | 719         |              | 2511         |
| Bangladesh    | 152         | 175         | 187         | 230         | 309         | 386          | 1439         |
| Sudan         | 284         | 0           | 237         | 278         |             | 554          | 1353         |
| India         | 139         | 171         | 211         | 209         | 257         |              | 987          |
| Nigeria       |             |             |             | 117         | 258         | 442          | 817          |
| Libya         |             |             |             |             |             | 727          | 727          |
| Pakistan      | 74          | 129         | 130         | 137         | 164         |              | 634          |
| Arab Saudi    |             |             |             |             |             | 612          | 612          |
| Singapore     | 172         | 198         |             |             |             |              | 370          |
| Maldives      | 37          | 55          | 108         |             |             |              | 200          |
| Korea Selatan | 0           | 16          | 0           |             |             |              | 16           |
| Bostawa       |             |             |             |             | 1           | 2            | 3            |
| <b>Total</b>  | <b>3167</b> | <b>3308</b> | <b>3523</b> | <b>4851</b> | <b>8754</b> | <b>12411</b> | <b>36014</b> |

Source: National Higher Education Research Institute, Ministry of Higher Education (June, 2009)

### **1.1 International Students' Adjustment Problems**

Moving from one academic environment to another and relocating to a new country to study is becoming an increasingly common occurrence (Brisset et al., 2010). International students who decide to pursue studies in a foreign country have to overcome the challenges that are related to their adjustment experiences. They are required to deal with the differences between their own cultural values, norms and customs and those of their hosts (Ang & Liamputtong, 2008).

According to Misra et al. (2003), all international students go through the process of adjusting to a new educational system and social environment. Adjustment to these new environments can be a stressful process (Li & Gasser, 2005; Sumer et al., 2008) for international students who have the added strain of adjusting to new cultural values, language, and study habits. McLachlan and Justice (2009) found that majority of the international students reported academic, cultural, social differences, and serious health problems at the university in the U.S. Yan and Berliner (2009) found that international students faced with the academic stress, facing the strain of language and academic problems, challenges with interaction with the faculty members, and culture differences.

Clearly, the transition to higher learning institution life, as with most life transitions, can be a stressful period in which many changes are taking place. Explaining the variance in successful adjustment to higher learning institution is important, and there are many factors to consider. Understanding the experiences of international students has important implications for creating and implementing programs that provide academic and personal support. It would help psychologists, counselors, academicians, and the staff of international offices and student support services to assist international students who experience problems and to better prepare students who will be going abroad.

### **1.2 Gap in Previous Studies**

There is a considerable literature that has examined factors associated with the level of socio-cultural adjustment experiences by international students (e.g., Brisset et al., 2010; Cemalcilar et al., 2005; Chirkov et al., 2008; Kashima & Loh, 2006; Li & Gasser, 2005; Ward & Kennedy, 1999; Yang et al., 2006). Furthermore, several studies acknowledge that social support (e.g., Brisset et al., 2010; Chirkov et al., 2008; Jung et al., 2007; Lee et al., 2004; Sumer et al., 2008; Toyokawa & Toyokawa, 2002) and self-efficacy (e.g., Li & Gasser, 2005; Poyrazli et al., 2002; Van Oudenhoven & Van der Zee, 2002) are crucial factors in international students' adjustment research. These studies are widely researched in the United States, Australia, and European countries. Regrettably, these areas have generally been investigated in isolation from one another. Less attention has been made to this topic in Malaysia. In Malaysia, only limited number of studies has been conducted on international students (Ambigapathy, 2008; Morshidi, 2008; Yusliza, 2010; Yusliza & Shankar, 2010). For instance, Morshidi (2008) has made an attempt to study the impact of September 11 on international student flow into Malaysia. The impact of September 11 has seen a decreasing number of new applications from Middle Eastern countries to the United States and Malaysia has emerged as an important destination for students from the Middle East. Yusliza (2010) conducted a study on the demographic differences among international undergraduate students at a Malaysian public university.

However, the majority of those studies have not examine the relationship between social support (this study utilized Zimet et al. (1988) Multidimensional Scale of Perceived Social Support; support from friends, support from family, and significant others), self-efficacy (adapted from Schwarzer & Jerusalem, 1995), and socio-cultural adjustment—cultural empathy, impersonal endeavors, and cultural relatedness (adapted from Ward & Kennedy, 1999) in a single study as a unique paradigm of understanding the student's adaptation process. It has become increasingly important to gain a greater understanding of the mechanisms that underlie these factors on the successful adaptation among the international students in Malaysia. Therefore, it is crucial to gain a greater understanding of the mechanisms that underlie the relationship between social support, self-efficacy, and socio-cultural adjustment. This study is an attempt to fill this gap in the international student adjustment literature.

This paper is part of a larger research project in which several aspects of international students' adjustment were investigated.

### **1.3 The Purpose of this Study**

The purpose of this study is to examine the relationship of social support and self-efficacy on socio-cultural adjustment of international undergraduate students.

### **1.4 Research Questions**

The following specific questions were addressed in this study:

1. Is there a positive relationship between international undergraduate students' social support and their perceptions on socio-cultural adjustment?
2. Is there a positive relationship between international undergraduate students' self-efficacy and their perceptions on socio-cultural adjustment?

## **2. PREVIOUS STUDIES ON SOCIO-CULTURAL ADJUSTMENT, SOCIAL SUPPORT, AND SELF-EFFICACY**

The following section contains relevant past works that provides the necessary background for this study.

### **2.1 Socio-Cultural Adjustment**

Ward and her colleagues proposed and have developed socio-cultural model (e.g., Searle & Ward, 1990; Ward & Kennedy, 1992; Ward & Searle, 1991). Socio-cultural adjustment refers to "culture specific skills, the ability to negotiate the host culture, or effectively interact with members of host cultures (Searle & Ward, 1990). Theoretically, the model suggested that socio-cultural adjustment can be understood by a social learning context (e.g., socializing with host nationals).

Li and Gasser (2005) examined the relationship between sociocultural adjustment (Ward & Kennedy, 1999), ethnic identity, contact with host nationals, and cross-cultural self-efficacy (Fan & Mak, 1998) of 117 Asian international undergraduate and graduate students from two state universities in the mid western region. The study found that contact with host nationals partially mediated the effects of cross-cultural self-efficacy on sociocultural adjustment. Kashima and Loh (2006) collected and analyzed data from 100 Asian international students in universities in Melbourne. They discovered that sociocultural adjustment (Ward & Searle, 1991) was explained by none of the three social ties. English-speaking background and time in Australia contributed positively and significantly to sociocultural adjustment. Need for cognitive closure contributed negatively to sociocultural adjustment. Interactions between need for cognitive closure and social ties had no impact on sociocultural adjustment.

Yang et al. (2006) adapted Ward and Kennedy's (1999) Sociocultural Adaptation Scale (SCAS) to measure sociocultural difficulty in their study on the relationship between self-construals, English language confidence, and adjustment among 81 international undergraduate and graduate students and 135 Canadian undergraduate students at a western Canadian university. Hierarchical regression showed that more independent international students experiences higher self-esteem and fewer sociocultural difficulties, but the discrepancy between the student's self-construals and the mean score of the Canadian sample did not. They also found that language self-confidence played a pivotal role, mediating the relations between psychological adjustment and sociocultural difficulty. Similarly, using Ward and Kennedy (1999) Sociocultural Adaptation Scale (SCAS) for working instrument, Brisset et al. (2010) found that that sociocultural adaptation is predicted both by attachment intimacy (for French and Vietnamese students) and ethnic identification (for Vietnamese students) among 112 Vietnamese international students in France and 101 French students.

## 2.2 Social Support

One factor that appears to improve adjustment is social support, which may provide international students with opportunities to develop an understanding of the new culture. Copeland and Norell (2002) stated that the role of social support on international relocations is accentuated because an overseas assignment presents both the disruption of established social support networks and the challenge to develop new one. Besides, social support is considered within the stress and coping framework and has been found to be an important predictor in psychological adaptation during cross-cultural transitions (e.g., Brisset et al., 2010; O'Reilly et al., 2010; Safdar et al., 2003; Safdar et al., 2009; Sumer et al., 2008; Ward & Rana-Deuba, 2000).

Toyokawa and Toyokawa (2002) examined the association between the engagement of 84 Japanese students in extracurricular activities and the students' adjustment to American campus life. They hypothesized that students in the high extracurricular activity engagement group would report higher levels of psychological adjustment, social support, and active use of their leisure time than students in the low engagement group. Contrary to their expectation, the hypothesized relationship was not supported. Lee et al. (2004) examined the relationship between acculturative stress and mental health symptoms and the role of social support (Koeske & Koeske, 1989, 1993) as a moderator of this relationship among 74 Korean international students living in the Pittsburgh area. They found that students with high levels of social support were significantly less likely to report symptoms with increasing levels of acculturative stress, compared to students reporting low levels of social support. They also discovered that the buffering effect of support was mainly and exclusively present when there was a high level of acculturation to American language and interpersonal associations.

Cemalcilar et al. (2005) examined the role of computer-mediated communication (CMC) technologies in the early stages of cross-cultural transition for 280 international students in the United States. The findings suggested that perceived social support influenced sojourners' psychological adaptation directly and academic adaptation indirectly. This study also supported the existence of a positive effect of host national identification on both socio-cultural (Ward & Kennedy, 1994) and psychological adaptations. The results further supported that socio-cultural adaptation to the new culture is positively and significantly correlated with psychological well-being. Socio-cultural adaptation and psychological adaptation found to have a positive and significant relationship with academic adaptation.

Jung et al. (2007) examined the relationship between acculturation, perceived discrimination, personal-enacted identity gap, personal-relational identity gap, depression level, social support (Xu & Burleson, 2001), and social undermining among 218 international undergraduate and graduate students in a large northeastern university in US. They found that social support did not significantly moderate effects of personal-enacted identity gap on depression level. The results also indicate that moderation effects of social support between perceived discrimination and depression level were not significant. Another study by Sumer et al. (2008) examined gender, age, race/ethnicity, social support, English proficiency, and length of stay, and their relationships to depression and anxiety among international students. Subject included 440 international students (57% men and 43% women) with the average age of 26.15 years. They found that students with lower levels of social support reported higher levels of depression and anxiety.

A study on the role motivation to study abroad plays in the adaptation of international students in Canada by Chirkov et al. (2008), they also included social support (Zimet et al., 1988) and sociocultural adaptation (Searle & Ward, 1990) in their study. Two hundred and twenty-eight undergraduate and graduate international students participated in their study at Time 1 and 72 students participated in Time 2. Correlations result produced that when the students get support, they are more educated about the host culture and are motivated to be open and to accept Canadian culture, and even they are better emotional, physical, sociocultural, and academically adjusted. A study by O'Reilly et al. (2010), utilized the Multidimensional Scale of Perceived Social Support (Zimet et al., 1988) to examine social support from family, friends, and significant other, and their relationships to different variables such as loneliness, stress, psychological well-being, and sociocultural adaptation of international students. The study found that, although international students had high levels of social support and low levels of loneliness and stress, students were experiencing high levels of sociocultural adjustment difficulties and psychological distress.

### **2.3 Self-Efficacy**

The general self-efficacy refers to “beliefs in one’s capabilities to organize and execute the courses of action required to manage prospective situations (Bandura, 1997, p. 2). According to Bandura (1995), motivation, affective states, and actions displayed by humans frequently result from what they believe rather than from an objective assessment of the situation. In other words, perceived causative capabilities are a source of human agency and the efficacy theory explains in great details how humans can develop and enhance their efficacy beliefs (Bandura, 1995). Bandura believed perceived efficacy to be the fundamental basis of human motivation.

According to Bandura (1986), students with high levels of self-efficacy in regards to their ability and personal competence are at lower risk for emotional maladjustment. Therefore, the relationship between self-efficacy beliefs and adjustment appears to be positive. This statement has been confirmed by results of empirical studies (i.e., Hechanova-Alampay et al., Li & Gasser, 2005; Poyrazli et al., 2002).

Schwarzer (1992) conceptualized general self-efficacy, which is concerned with more global and stable personal capability to address effectively many stressful situations. General self-efficacy is considered a personal resource or vulnerability factor that can influence a person's feelings, thoughts, and behaviors. General self-efficacy reflects an optimistic self-belief of an individual (Schwarzer, 1992). General self-efficacy also tends to help an individual facilitate goalsetting, effort investment, persistence in face of barriers, recovery from setbacks, and emotional adaptiveness (Bandura, 1995; Poyrazli et al., 2002; Schwarzer, 1992). During the stressful transitional adaptation to a different culture, self-efficacy plays a critical role in protecting against negative experience and emotion, and health impairment (Jerusalem & Mittag, 1995).

Hechanova-Alampay et al. (2002) examined adjustment, strain, self-efficacy, cultural novelty, social support, and amount of interaction with host nationals among 294 domestic and international student sojourners in a medium-sized, mid-western university. They found that individuals with a high sense of confidence in their ability (self-efficacy) reported greater adjustment and less strain. The relationship of self-efficacy and adjustment and strain was stronger upon entry than after six months for both domestic and international sojourners. A total of 122 graduate international students in the U.S. participated in a study conducted by Poyrazli et al. (2002). Findings indicated that English proficiency, assertiveness, and academic self-efficacy contributed uniquely to the variance in students’ general adjustment level. Specifically, they found that graduate international students with higher levels of academic self-efficacy reported fewer adjustment problems.

Van Oudenhoven and Van der Zee (2002) conducted a study on predicting multicultural effectiveness of 171 international students in the Netherlands. The results appeared that self-efficacy (Schwarzer, 1992) was related to students’ adjustment. When self-efficacy is controlled, personality dimensions were able to predict additional variance in success of adjustment, with the exception of academic achievement. The Multicultural Personality Questionnaire scales were able to predict adjustment criteria above self-efficacy. When the effect of the Multicultural Personality Questionnaire scales is controlled, self-efficacy did not have any additional predictive value.

### **2.4 Present Study**

This aim of the present study was to examine the relations between social support and self-efficacy with the socio-cultural adjustment of international students in Malaysia. Specifically the following hypotheses were formulated:

Hypothesis 1 : Social support is related to the dimensions of socio-cultural adjustment. Specifically, it was hypothesized that:



Support from friends is positively related to cultural empathy (1a), impersonal endeavours (1b), and cultural relatedness (1c). Support from significant others positively related to cultural empathy (1d), impersonal endeavours (1e), and cultural relatedness (1f). Support from family is positively related to cultural empathy (1g), impersonal endeavours (1h), and cultural relatedness (1i).

Hypothesis 2 : Self-efficacy is related to the dimensions of socio-cultural adjustment. Specifically, it was hypothesized that:

Self-efficacy is positively related to cultural empathy (2a), impersonal endeavours (2b), and cultural relatedness (2c).

### 3. METHODOLOGY

#### 3.1 Participants

Participants were 185 international undergraduate students enrolled in a large public university in the Northern region of Malaysia. In all, 85 were male (45.9%) and 100 were female (54.1%). The students were from a variety of different countries (48.1% from China, 14.1% from Indonesia, 10.3% from Finland, 7.0% from Canada, 4.3% from Thailand, 3.2% from France, 2.7 % from Saudi Arabia, 2.2 % from Korea, and 8.1% from other countries such as Maldives, Nigeria, Singapore, Cambodia, Sudan, Iran, and the United States) and identified a variety of different languages as their native languages (Mandarin: 48.1%; Indonesian: 13.5%; English: 10.3%; Finnish: 9.7%; Thai: 3.8%; French and Arabic: 3.2% respectively; Korean: 2.2%). The average age was 21.2 years ( $SD = 1.53$ ) and their average length of stay in Malaysia was 16 months ( $SD = 12.64$ ). More than three fourths (98.4%) of the subjects were single and 1.6% of the subjects were married. All faculties were represented, with more than half of the students enrolled in the School of Management (56.2%).

#### 3.2 Procedure

Participants were invited to respond to a questionnaire in lectures, tutorial classes or library in the third week of the second semester 2009/2010. They were informed verbally of the research project, procedure, and ethical implications involved. The questionnaires were distributed to those who agreed to participate in the study and returned immediately after they finished completing the questionnaire, which lasted 10 minutes. They were not required to supply their names.

#### 3.3 Measuring Instruments

**Socio-Cultural Adjustment:** Twenty-nine item socio-cultural adjustment scale (SCAS) developed by Ward and Kennedy (1999) was used in the present study. The scale measured the degree to which international students perceived difficulties in understanding the local values and cultures, interacting with the hosts, meeting the demands of daily life, and behaving in a culturally appropriate manner. Sample items included: "Using the transport system" and "Taking a local perspective on the culture". International students used a 5-point likert scale ranging from *no difficulty* (1) to *extreme difficulty* (5).

**Social Support:** This was measured using Zimet et al. (1988) 12-item Multidimensional scale of Perceived Social Support. The scale was designed to measure the perceived adequacy of social support from three sources: family, friends, and significant others. Response choices were in the form of a 5-point Likert-type scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

**Self-Efficac:** The General Self-Efficacy Scale (Schwarzer & Jerusalem, 1995) was administered to assess the international students' self-beliefs to cope with a variety of difficult demands in life. The scale explicitly refers to personal agency, which is the belief that one's actions are responsible for successful outcomes. Adjustment to life in a new culture requires dealing with various situations and facing many challenges and, therefore, general self-efficacy is the most appropriate way to assess factors related to international students' adjustment. The scale consists of 10 items. For each item, international students will be rated on a five-point Likert scale (1=*strongly disagree* to 5=*strongly agree*).

## 4. RESULTS

### 4.1 Socio-Cultural Adjustment Construct Exploratory Factor Analysis Results

An exploratory factor analysis was conducted using principle component analysis and varimax rotation to extract factors. Three factors were extracted based on eigenvalues greater than 1 and item loadings greater than .40. The three factors explained 62.93% of the total variance of Socio-Cultural Adjustment. Three items (7, 13, and 19) had communalities values of less than 0.5 and five items (10, 12, 20, 21, and 22) had high cross loading were deleted from further analysis. The first factor, whose items were labelled the Cultural Empathy, included items 14, 23, 24, 25, 26, 27, 28, and 29. This factor accounted for 29.65% of the variance. Factor 2 accounted for 20.07% of the total variance and included items 8, 9, 16, 17, 18, and 20; this set of items was labelled the Impersonal Endeavors. Factor 3 accounted for 17.26% of the total variance and included items 2, 4, 7, 11, and 13. This set of items was labelled Cultural Relatedness. The results of the exploratory factor analysis indicated that the twenty one items were clearly loading on three factors, thus providing additional empirical support to previous studies. Table 2 shows the results of factor analysis.

**Table 2**  
**Factor Analysis of Socio-Cultural Adjustment**

| Item                                  | Factors    |            |            |
|---------------------------------------|------------|------------|------------|
|                                       | F1         | F2         | F3         |
| <b>FACTOR 1: Cultural Empathy</b>     |            |            |            |
| Item 14                               | <u>.58</u> |            |            |
| Item 23                               | <u>.71</u> |            |            |
| Item 24                               | <u>.80</u> |            |            |
| Item 25                               | <u>.71</u> |            |            |
| Item 26                               | <u>.75</u> |            |            |
| Item 27                               | <u>.80</u> |            |            |
| Item 28                               | <u>.63</u> |            |            |
| Item 29                               | <u>.72</u> |            |            |
| <b>FACTOR 2: Impersonal Endeavors</b> |            |            |            |
| Item 3                                |            | <u>.56</u> |            |
| Item 8                                |            | <u>.66</u> |            |
| Item 9                                |            | <u>.60</u> |            |
| Item 15                               |            | <u>.66</u> |            |
| Item 16                               |            | <u>.71</u> |            |
| Item 17                               |            | <u>.78</u> |            |
| Item 18                               |            | <u>.69</u> |            |
| <b>FACTOR 3: Cultural Relatedness</b> |            |            |            |
| Item 1                                |            |            | <u>.64</u> |
| Item 2                                |            |            | <u>.76</u> |
| Item 4                                |            |            | <u>.62</u> |
| Item 5                                |            |            | <u>.60</u> |
| Item 6                                |            |            | <u>.59</u> |
| Item 11                               |            |            | <u>.64</u> |
| Eigenvalue                            | 10.42      | 1.48       | 1.32       |
| Percentage of Variance                | 49.64      | 7.02       | 6.26       |
| Total Variance Explained              | 49.64      | 56.66      | 62.93      |
| KMO Measure of Sampling Adequacy      | .94        |            |            |
| Approximate Chi-Square                | 2488.01*** |            |            |

Note.  $N = 185$ . Items included for the respective factors are underlined for identification; \*\*\* $P < .001$ .

### 4.2 Social Support Construct Exploratory Factor Analysis Results



As mentioned earlier, social support covers 12 items. Table 3 shows the factor analysis of this measure. A total of two constructs or factors with eigenvalue greater than 1.0 were found, explaining 63.75 percent of the total variance. Factor 1 reflected support from friends and significant others, and contained 8 items with loadings of at least 0.50 on this factor, accounting for 34.23 percent of the total variance. However, the expected distinction between support from friends and significant others was not replicated. The combination of these two supports is therefore used in this study as a single factor. It was labelled as support from friends and significant others and used it in the remainder of this paper to denote the combined factor. Factor 2 contained 4 items with loadings greater than .70 and accounted for 29.52 percent of the total variance. This factor reflected support from family.

**Table 3**  
**Factor Analysis of Social Support**

| Items  | Factors    |            |
|--|------------|------------|
|  | F1         | F2         |
| <b>FACTOR 1: Support from Friends and Significant Others</b> |            |            |
| Item 1   | <u>.76</u> |            |
| Item 2   | <u>.74</u> |            |
| Item 5   | <u>.74</u> |            |
| Item 6   | <u>.52</u> |            |
| Item 7   | <u>.65</u> |            |
| Item 9   | <u>.68</u> |            |
| Item 10  | <u>.75</u> |            |
| Item 12  | <u>.63</u> |            |
| <b>FACTOR 2: Support from Family</b>                         |            |            |
| Item 3   |            | <u>.80</u> |
| Item 4   |            | <u>.89</u> |
| Item 8   |            | <u>.78</u> |
| Item 11  |            | <u>.72</u> |
| Eigenvalue   | 6.54       | 1.11       |
| Percentage of Variance                                       | 54.52      | 9.23       |
| Total Variance Explained                                     | 54.52      | 63.75      |
| KMO Measure of Sampling Adequacy                             | .91        |            |
| Approximate Chi-Square                                       | 1344.22*** |            |

Note.  $N = 185$ . Items included for the respective factors are underlined for identification; \*\*\* $P < .001$ .

#### 4.3 Self-Efficacy Construct Exploratory Factor Analysis Results

The factor analysis result for Self-Efficacy is shown in Table 4. Ten items were used to measure this construct. The analysis resulted in a single factor solution with eigenvalue of 6.10. This criterion is in line with Kaiser's rule, which states that only factors with eigenvalues greater than 1.0 are significant for analytical purposes. The factor explained 61.04 percent of the total variance. All items were represented the Self-Efficacy measure.

**Table 4**  
**Factor Analysis of Self-Efficacy**

| Items                  | Factor     |
|------------------------|------------|
|                        | F1         |
| Item 1                 | <u>.81</u> |
| Item 2                 | <u>.71</u> |
| Item 3                 | <u>.78</u> |
| Item 4                 | <u>.79</u> |
| Item 5                 | <u>.76</u> |
| Item 6                 | <u>.82</u> |
| Item 7                 | <u>.75</u> |
| Item 8                 | <u>.80</u> |
| Item 9                 | <u>.77</u> |
| Item 10                | <u>.83</u> |
| Eigenvalue             | 6.10       |
| Percentage of Variance | 61.04      |

| Items                            | Factor<br>F1 |
|----------------------------------|--------------|
| Total Variance Explained         | 61.04        |
| KMO Measure of Sampling Adequacy | .94          |
| Approximate Chi-Square           | 1106.56***   |

Note.  $N = 185$ . Items included for the respective factors are underlined for identification; \*\*\* $P < .001$ .

#### 4.4 Summary of Factor Analysis Results

Based on the results of the factor analyses that have been discussed above, hypothesis 1 must be restated. Below are the restatements of hypotheses of study's variables:

Hypothesis 1: Social support is related to the dimensions of socio-cultural adjustment. Specifically, the new hypotheses were:

Support from friends and significant others is positively related to cultural empathy (1a), impersonal endeavours (1b), and cultural relatedness (1c). Support from family is positively related to cultural empathy (1d), impersonal endeavours (1e), and cultural relatedness (1f).

#### 4.5 Descriptive Statistics, Reliabilities and Correlation Analysis Results

Table 5 provides means, standard deviations, internal consistency estimates, and correlation analysis results for cultural empathy, impersonal endeavours, cultural relatedness, support from friends and significant others, support from family, and self-efficacy. All the values were greater than .70 cut-off values suggested by Nunnally (1978). Scale reliabilities were all sufficiently high. As Table 5 also displays, the scales were not independent. The highest correlation was found between cultural relatedness and cultural empathy, cultural relatedness and impersonal endeavors, and impersonal endeavors and cultural empathy, which could be expected based on the theoretical relatedness of the constructs.

**Table 5**  
**Descriptive Statistics, Reliabilities, and Correlation Results**

| No | Variables                                   | 1     | 2     | 3     | 4     | 5     | 6     | <i>M</i> | <i>SD</i> |
|----|---|-------|-------|-------|-------|-------|-------|----------|-----------|
| 1. | Cultural Empathy                            | (.93) |       |       |       |       |       | 2.39     | .89       |
| 2. | Impersonal Endeavors                        | .74** | (.89) |       |       |       |       | 2.20     | .79       |
| 3. | Cultural Relatedness                        | .66** | .69** | (.84) |       |       |       | 2.22     | .82       |
| 4. | Support from Friends and Significant Others | .31** | .39** | .36** | (.84) |       |       | 3.77     | .90       |
| 5. | Support from Family                         | .14   | .24** | .20** | .68** | (.88) |       | 3.94     | .93       |
| 6. | Self-Efficacy                               | .27** | .31** | .21** | .61** | .55** | (.93) | 3.66     | .73       |

Note. Scale internal consistencies appear in the diagonal

\*\* Correlation is significant at the 0.01 level (2-tailed).

#### 4.6 Multiple Regression Analyses

Three multiple linear regression analyses were conducted using the same predictor variables of support from friends and significant others, support from family, and self-efficacy. The three criterion variables were cultural empathy, personal endeavours, and cultural relatedness. Table 6 shows the results of the regression analysis performed to test this hypothesis.

The first multiple linear regression analysis included cultural empathy as the criterion variable and support from friends and significant others, support from family, and self-efficacy as the predictor variables. The regression model was statistically significant,  $R^2 = .12$ , Adjusted  $R^2 = .11$ ,  $F$  Change = 8.43,  $p = .00$ . Support from friends and significant others ( $\beta = .34$ ,  $p < .01$ ), support from family ( $\beta = .18$ ,  $p < .10$ ), and self-efficacy ( $\beta = .16$ ,  $p < .10$ ) had significant positive effects on cultural empathy. Thus, H1a, H1d, and H2a are supported.

The second multiple linear regression analysis included impersonal endeavours as the criterion variable and the same set of predictor variables (support from friends and significant others, support from family, and self-

efficacy). The regression model was statistically significant,  $R^2 = .16$ , Adjusted  $R^2 = .15$ ,  $F$  Change = 11.44,  $p = .00$ . Only support from friends and significant others ( $\beta = .36$ ,  $p < .01$ ) had significant positive effects on impersonal endeavors. Thus, H1b is supported.

The third multiple linear regression analysis included cultural relatedness as the criterion variable and the same set of predictor variables (support from friends and significant others, support from family, and self-efficacy). The regression model was statistically significant,  $R^2 = .13$ , Adjusted  $R^2 = .12$ ,  $F$  Change = 9.01,  $p = .00$ . Only support from friends and significant others ( $\beta = .40$ ,  $p < .01$ ) had significant positive effects on cultural relatedness. Thus, H1c is supported.

**Table 6**  
**Regression Results between Support from Friends and Significant Others, Support from Family, Self-Efficacy, and Socio-Cultural Adjustment**

| Variable                                    | Socio-Cultural Adjustment        |                                      |                                      |
|---|----------------------------------|--------------------------------------|--------------------------------------|
|   | Cultural Empathy (Standard Beta) | Impersonal Endeavors (Standard Beta) | Cultural Relatedness (Standard Beta) |
| Support from Friends and Significant Others | .34***                           | .36***                               | .40***                               |
| Support from Family                         | .18*                             | .06                                  | .07                                  |
| Self-Efficacy                               | .16*                             | .12                                  | .01                                  |
| $R^2$                                       | .12                              | .16                                  | .13                                  |
| Adjusted $R^2$                              | .11                              | .15                                  | .12                                  |
| $R^2$ Change                                | .12                              | .16                                  | .13                                  |
| $F$ Change                                  | 8.43                             | 11.44                                | 9.01                                 |
| Sig. $F$ Change                             | .00                              | .00                                  | .00                                  |

Note: \*\*\* $p < .01$ , \*\* $p < .05$ , \* $p < .10$

## 5. DISCUSSION

The present study made two contributions to the international students' adjustment literature. First, this study examined international students' socio-cultural adjustment and perceived social support that influenced their adjustment. The findings from this study indicated that support from friends and significant others is positively and significantly related to all dimensions of socio-cultural adjustment and support from family is only positively and significantly related to cultural empathy, but not related to impersonal endeavours and cultural relatedness. Second, the current study examined the relationship between self-efficacy and cross-cultural adjustment. The study suggested that international students' self-efficacy is only positively and significantly related with cultural empathy. However, self-efficacy is not related to impersonal endeavours and cultural relatedness.

### 5.1 The Relationship between Social Support and Socio-Cultural Adjustment

As predicted by Hypothesis H1, social support facilitated their socio-cultural adjustment process, partially supported Hypothesis H1. Specifically, H1a, H1b, and H1c suggested that support from friends and significant others is positively related to cultural empathy, impersonal endeavours, and cultural relatedness. These hypotheses are accepted. The benefits of having social relationships are crucial for the international students' socio-cultural adjustment, especially relationships with friends and others in Malaysia. Having Malaysian friends are essential when it comes to cultural and personal adaptation. As Church (1982) stated, co-national friends are beneficial in providing the sense of belonging and may provide social and emotional support during the adjustment process. In addition, international students lose their shared identity and support from their families as they pursue studies in Malaysia. This loss of support forces them to develop new cross-cultural friendships with individuals from the host nation as well as other international students.

The current study demonstrates that the importance of support coming from other person to the international students. Students who experiences higher levels of support from special person were more likely to experience

more socio-cultural adjustment in the university. Furthermore, it can be argued that international students in this study to have a boyfriend or girlfriend as a support person felt that his or her parents were not able to understand his or her difficulties in studying in Malaysia. The students felt his or her couple, who was an international student as well, was able to provide better support, as he or she had similar experiences to his or her. Couple that have similar experiences would be more understanding of the difficulties faced by them. Literature highlights the importance of perception of support - the perception of being loved by others and that they will be available if needed - in adjustment of the members of the couple (Pasch & Bradbury, 1998; Beach & Gupta, 2006).

Therefore, it is possible that international students in the present study received social support from their friends and others that protected them from cultural and personal difficulties during their adjustment process. Future research should further examine this possibility among international students in other countries.

As expected, international students who reported a higher level of support from family were more successfully adjusted related cultural empathy. Thus, received support for Hypothesis 1d. Participants in this study maybe always communicate with their family about cultural differences as their main source of support. Cost, time difference or geographical location did not appear to be an issue for the students in their study when they faced difficulties about the cultural differences. Ang and Liamputtong (2008) argued that support from family allowed a greater amount of discussion to occur and a number of strategies could be developed to deal with the difficulties.

## 5.2 The Relationship between Self-Efficacy and Socio-Cultural Adjustment

The second hypothesis predicted that self-efficacy would have a positive relationship with socio-cultural adjustment. As predicted by Hypothesis H2a, international students' self-efficacy was related to cultural empathy. Consistent with previous research (Li & Gasser, 2005), argued that self-efficacy is especially important in cross-cultural interactions, in this study is cultural empathy, that are more stressful and entail more uncertainties than within-culture communication. In support of this argument, Poyrazli et al. (2002) found that academic self-efficacy contributed uniquely to the variance in students' general adjustment level. Poyrazli et al. (2002) further argued that *"high academic self-efficacy likely helps students approach challenging situations without incapacitating anxiety or confusion. This high self-efficacy likely helps them feel that they have the ability and competence to deal with academic situations and problems. As a result, they would experience a better academic adjustment"*. Similarly, Van Oudenhoven and Van der Zee (2002) also found that self-efficacy was related to students' adjustment. In the current study, international students who were more self-efficacious were more likely to experience better cultural empathy. These findings were more analogous to previous research (Poyrazli et al., 2002; Van Oudenhoven & Van der Zee, 2002) and further provided support to the pivotal role of self-efficacy in international students' cultural empathy.

## 5.3 Limitations

In discussing the results of the present study, interpretations should be made with great caution on several counts. First, is related to the sample of the study. The results of this research cannot be generalized due to the fact that the entire sample was taken from individuals from one location: the Northern region of Malaysia. A second, limitation of the study is that, the results cannot be generalized because all of the international students in the sample are adjusting to one particular culture: Malaysia. A third limitation of the study is that no control variable was included to the hypotheses. Research has indicated that age, marital status, gender, length of stay, and English language proficiency are related with adjustment (Polek, et al., 2008; Poyrazli & Kavanaugh, 2006; Poyrazli et al., 2002; Sumer et al., 2008). A fourth limitation of the study is that although relationship was found between independent and dependent variables, a cross-sectional study is not able to assign cause-and-effect relationships between the variables. The last limitation of this study is its accuracy and reliability if the students did not totally understand the questionnaire. Many subjects provided feedback on difficulties in understanding the survey questionnaire. There might be inevitably different levels of English proficiency among the participants because majority of the respondents were from China. Therefore, some participants might not be able to respond correctly to the questionnaire because of their lack of English proficiency.

## 6. CONCLUSION

In sum, the present study investigated international students' socio-cultural adjustment and factors that influenced their adjustment process. This study suggests that international students' adjustment is a dynamic process. Results from this study support the critical roles of social support and self-efficacy in their adjustment process. This study adds to the understanding of international students' adjustment processes and offers many avenues for future investigations.

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