# Sociodemographic Determinants of Acculturation Stress Among International University Students

# Prashanth Talwar<sup>1</sup>, Souba Rethinasamy<sup>2\*</sup>, Kartini Abd Ghani<sup>1</sup>, Tan Kock Wah<sup>1</sup>, Nur Fatihah Mat Yusoff<sup>1</sup>

<sup>1</sup>Faculty of Cognitive Sciences and Human Development, University Malaysia Sarawak, MALAYSIA

<sup>2</sup>Faculty of Language and Communication, University Malaysia Sarawak, MALAYSIA

\*e-mail: rsouba@unimas.my

**Published:** 29 June 2022

**To cite this article (APA):** Talwar, P., Rethinasamy, S., Abd Ghani, K., Tan, K. W., & Mat Yusoff, N. F. (2022). Sociodemographic Determinants of Acculturation Stress Among International University Students. *EDUCATUM Journal of Social Sciences*, 8(1), 23-30. https://doi.org/10.37134/ejoss.vol8.1.3.2022

To link to this article: https://doi.org/10.37134/ejoss.vol8.1.3.2022

#### **Abstract**

The study attempted to identify which sociodemographic factors predict acculturation stress and also to examine the levels of acculturation stress amongst 208 international students enrolled in a Malaysian university. A convenience sampling technique was implemented for data collection by utilizing a self-reported questionnaire. As for the sociodemographic factors predict acculturation stress multiple regression analyses demonstrated that among the independent variables, family support, year of study, difficulties in comprehending lectures, and strains of relationship with boyfriend/girlfriend had significant predictive effects on acculturation stress. Young and male international students expressed significantly higher levels of acculturation stress than their older and female counterparts. Students who acknowledged strong family support and were single depicted lesser acculturative stress compared to those with inadequate support and were in a romantic relationship.

As for the levels of acculturation stress, findings revealed that acculturation stress was relatively high amongst most of the international students. Perceptions of discrimination and rejection, as well as feelings of homesickness and fear were portrayed by large numbers of students.

Keywords: Acculturation stress, Acculturation factors, International students, Study abroad, Sociodemographic correlates

# **INTRODUCTION**

Studying abroad has become an increasingly popular choice for higher education, among aspiring students. In keeping with this trend, it has been noted that growing numbers of foreign students, particularly from the Middle East, Africa and several parts of Asia, are likewise pursuing their higher education in Malaysia (Azman & Abd. Aziz, 2006). Overseas education may provide many benefits; however, it can also pose challenges to students as they have to adjust to a new environment, a different culture, achieve proficiency in a new language, and overcome feelings of isolation and acculturative stress (Jeong et al., 2011; Akhtar & Kroner-Herwig, 2015; Iorga et al., 2020).

There has been a steady increase in the enrollment of international students in Malaysian universities over the last two decades. In order to enrich the educational experience of foreign students, issues pertaining to the transitional and adjustment difficulties of this vulnerable demographic needs to be addressed. Prior research has indicated that international students may experience many challenges as a result of language and cultural barriers, academic and financial difficulties, interpersonal problems, racial discrimination, loss of social support, alienation, depression and homesickness (Yeh & Inose, 2003; Nguyen, Tam & Serik, 2019). Any of these issues, in due course, could affect their acculturation process and heighten acculturative stress.

Ostensibly, international students may encounter many problems on a daily basis in their acculturative experience, which in turn, could significantly affect their academic performance and general well-being. Acculturative stress is a negative side effect of acculturation (Schwartz & Zamboanga, 2008) and occurs when the acculturation experiences cause problems for individuals (Berry, 2003). The concept of acculturative stress refers to one kind of stress, that in which the stressors are identified as having their source in the process of acculturation, often resulting in a particular set of stress behaviours such as lowered mental health status (especially confusion, anxiety, depression), feelings of marginality and alienation, heightened psychosomatic symptoms, and identity confusion (Berry, 1995). The acculturation theory proposes four possible strategies/outcomes of acculturation: assimilation, separation, integration, and marginalization. (Berrry, 1995).

Much of the research on acculturation experiences of international students has focused on countries like the United States, Canada, United Kingdom, New Zealand, Japan and Australia (Heng, 2018; Misra et al., 2003; Povrazli & Kavanaugh, 2006; Poyrazli et al., 2010; Rosenthal et al., 2008; Ryder et al, 2013; Sandhu & Asrabadi, 1994; Zhang & Brunton, 2016; Nguyen, Tam & Serik, 2019; Yeh & Inose, 2003). In contrast, very few studies have been conducted to understand acculturative stress among international students studying in Malaysia. Currently Malaysian institutions are endeavouring to attract utmost number of foreign students from all around the globe (Yusliza & Shankar, 2010). However, few questions that need to be addressed are the international students able to acclimatize themselves to the university that they have chosen? What are the sociodemographic factors which cause acculturation stress? What are the levels of acculturative stress experienced by international students? Therefore, this study is conducted with the aim of identify which sociodemographic factors predict acculturation stress and also to examine the levels of acculturation so as to ameliorate their academic and acculturation experience.

### **METHODOLOGY**

Data for the present study was collected through a cross-sectional survey of international students enrolled in a public university in Malaysia. It is mandatory to take soft skill courses for first year students. However, students can take soft skill classes if they have failed the course in the first year. Therefore, the group consisted of students studying in the first year to third year. A convenience sampling technique was utilized to recruit foreign students, irrespective of the type of degree they were pursuing. Participants who belonged to different faculty. Prior to assessment, students were briefed about the purpose of the study and assured about the anonymity of their responses. Participation was voluntary and signed consent was obtained from the students. The study was conducted among a sample comprising of 208 undergraduate students. The self-administered questionnaire was distributed during the last 20 minutes of a 2-hour class lecture and applied only to students who were present in class, on the day of assessment.

The self-report English language questionnaire consisted of two sections. Socio-demographic profile of students was included in the first section, successively followed by the Acculturative Stress Scale for International Students (ASSIS) questionnaire (Sandhu & Asrabadi, 1994) in the second section. The present study received approval from the University Research Committee and was supported by the Scholarship of Teaching and Learning University Grant.

The ASSIS questionnaire, developed by Sandhu and Asrabadi (1994), was utilized in this study to assess the acculturative stress experienced by participating students. The scale contained 36 items on seven subscales, which include perceived discrimination (8 items), homesickness (4 items), perceived hate/rejection (5 items), fear (4 items), stress due to change/culture shock (3 items), guilt (2 items), and non-specific items (10 items). Responses were in a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The total score of the scale varied from 36 to 180, wherein a higher score indicated a higher level of acculturative stress. Initial investigations revealed Cronbach's alpha coefficient of .95, indicating that the ASSIS was an internally reliable measure. The internal consistency of the scale in the present study was found to be .90.

This is a Quantitative research designs. SPSS (version 23) was utilized to analyze the data. Descriptive and inferential statistics was used to interpret data. Multiple regression analysis will be performed to identifying the factors of acculturation stress (based on ASSIS subscales). Cronbach's alpha coefficients were computed to evaluate the reliability of ASSIS. Level of significance was set at p<0.05, unless stated otherwise. Data was normally distributed; hence no variable transformation was deemed necessary.

### **RESULTS**

### Participant demographics

The sample consisted of 70% males and 30% females. Mean age of participants was 21 years with 80% in the lower age group (18-22 years) and 20% in higher age group (23-27 years). Of the 208 respondents, 82% were first year undergraduate students, 11% were in the second year, and 7% were third year undergraduates. Most of the participants were enrolled in the Faculty of Computer Science (31%), followed by the Faculties of Business Administration (24%), Social Science (17%), Engineering (16%), and Resource Science (12%). A large proportion of students were Muslims (87%), whilst the remaining were Christians (7%), Buddhists (4%) and Hindus (2%). Since the participants had reported 14 unique countries of origin, they were subsequently coded for geographical region. Accordingly, the international students in this sample mainly originated from South Asia (48.2%; Bangladesh, Pakistan, India), East Asia (2.4%; Japan), South-East Asia (28.4%; Indonesia, Brunei), Central Asia (1%; Kyrgyzstan), Middle East (6.7%; Egypt, Jordan, Yemen), and Africa (13.5%). None of the students were married, though a small percentage (20%) divulged that they were in a romantic relationship, while maximum (80%) indicated that they were single. In terms of accommodation, 37% lived in the campus hostels while 63% stayed outside the campus. Majority of the students reported perceiving low quality of family support (56%) and low peer-group support (59%), whereas good family support and peer-group support was acknowledged by 44% and 41% students, respectively.

### **Association with acculturation stress**

The global average score of acculturative stress on the 36-item ASSIS was found to be 114.13 (SD = 21.30, range = 66 to 160) in the current study. According to Sandhu and Asrabadi (1994; 2016), mean scores above 109 demonstrates evidence of acculturative stress perceived by international students, and underscores their need for counseling services. A cause for concern was that majority of the participants in this study (52.4%) reported that they had experienced acculturative stress. Furthermore, based on the ASSIS subscales, nearly 22% of the students had perceived discrimination, 14% perceived hate/rejection, 11% reported feeling homesick, 11% conveyed fear, 9% felt stress due to change/culture shock, 6% reported feeling guilty, and the remaining 27% showed stress due to non-specific items.

With reference to sociodemographic factors, in the current sample, male students displayed significantly higher ASSIS scores (M=116, SD=21.90) in comparison to females (M=109.73, SD=19.33); [t=2.07, df=132, p=0.04]. Participants in the lower age group (18 to 22 years) experienced higher acculturation stress (M=116.24, SD=20.12) compared to older age group (M=105.53, SD=23.98); [t=2.63, df=54.61, p=0.01]. Students who were reportedly single had a significantly lower score on the ASSIS (M=104.39, SD=26.28) than those in a relationship (M=115.69, SD=19.78); [t=2.46, df=189, p=0.015]. Though not statistically significant, participants who lived in campus hostels displayed greater acculturation stress (M=115.38, SD=21.70) than those staying outside (M=113.41, SD=21.12); (t=0.64, df=206, p=0.523). In terms of social support, students who perceived low quality family support, exhibited significantly higher acculturation stress (M=118.43, SD=19.64) compared to those with good family support (M=108.70, SD=22.18); [t=3.35, df=206, p=0.001]. Similarly, participants who reported low peergroup support also showed higher acculturation stress (M=115.26, SD=21.75) than those with good peer-group support (M=112.46, SD=20.64), although not statistically significant [t=0.93, df=206, p=0.35].

The participating students also disclosed several issues that they had encountered during their international educational experience. And these included, concerns about transport and food, language problems, difficulties in comprehending lectures, misunderstandings with classmates or housemates, strains of relationship with boyfriend/ girlfriend, feelings of exclusion, financial worries, addiction problems, and need for additional sports amenities and recreational facilities.

Multiple regression analysis demonstrated that all predictors explained 27% of variance ( $r^2 = .27$ , F (23,184) = 2.92, p< .000). The independent variables which were found to be significant predictors of acculturation stress included, year of study ( $\beta = .26$ , p< .001), family support ( $\beta = .20$ , p< .000), difficulties in comprehending lectures ( $\beta = .28$ , p< .000) and strains of relationship with boyfriend/girlfriend ( $\beta = .23$ , p< .000).

## **DISCUSSION**

This study attempts to identify which sociodemographic factors predict acculturation stress and also to examine the levels of acculturation amongst a sample of international students. Findings from this study revealed that the process of acculturation continues to be a major challenge facing international students. It was observed that majority of the participants experienced a high level of acculturative stress, which is a cause for concern. According to Berry et al. (1987), acculturative stress can produce a reduction of individuals' physical, psychological, and social health, which is not a propitious outcome for students. Clearly, there is a need to provide commensurate services geared towards counteracting and reducing the levels of acculturative stress experienced by international students.

Identifying the factors of acculturation stress (based on ASSIS subscales) revealed that nearly onefourth of the participating students had perceived discrimination. This result is quite surprising, given that Malaysia is a multi-racial country and the populace is accustomed to interethnic interaction and integration. Moreover, majority of the foreign students in this study originated from Asia, and so it was foreseeable that they would find it easier to adjust in a culturally-familiar university environment without any likelihood of encountering mistreatment. Nonetheless, results indicate that some degree of discrimination was perceived by the participants. This was consistent with prior research which has shown that international students constantly report encounters with discrimination (Jung et al., 2007; Lee & Rice, 2007). Students who perceive discrimination may feel less motivated to interact with others from the host nation, which can lead into isolation/alienation and loneliness (Constantine et al., 2005; Klomegah, 2006). Regrettably, many of the participants in this study also acknowledged experiencing hate or rejection. Perhaps the foreign students were ultrasensitive and perceived rejection in the verbal and nonverbal communication and behaviors of locals (Sandhu & Asrabadi, 1994). Lamentably, being rejected or having perceptions of rejection by social groups can induce high anxiety and have negative repercussions on psychological health and wellness (Young, 2017). All things considered, experiencing discrimination or rejection can have a harmful effect on the overall well-being of international students.

Homesickness was another contributing factor of acculturative stress that was observed amongst many of the participants in this study. International students are often very lonely in their new environment as they are uprooted from the security of their home, surroundings and culture. It is therefore not surprising that homesickness is among the most frequently reported concerns of international college students (Yi et al., 2003). Lack of friends, social network and familiar culture could endanger feelings of loneliness (McClure, 2007; Sawir et al., 2008; Zhao et al., 2008). It has been indicated that homesickness, in its mild form, can prompt the development of coping skills and motivate healthy attachment behaviors (Hendrickson et al., 2010). On the other hand, intense homesickness can be particularly problematic for students (Thurber & Walton, 2011). Thus, it could be surmised that successful or unsuccessful adjustment to a new university environment, may either help or hinder coping with homesickness (Willis et al., 2003). As such, encouraging friendships with host-country students and homeland students (Thurber & Wakton, 2012), in addition to maintaining healthy contact with family, could surely aid in mitigating the intensity of homesickness among international students.

Another factor in this study which contributed equally to acculturative stress was the perception of fear. The experience of international study can actually be harrowing for some students who experience social exclusion, linguistic and cultural barriers, a lack of understanding, racism, and other problems such as homesickness (Sherry et al., 2010). Any of these issues, in some way could trigger feelings of insecurity and fear, which probably could have been the cause among the current sample of students as well. Also noticeable in this study was that, only a small percentage of international students showed signs of stress due to culture shock and guilt. Perhaps these factors were not so alarming, given that majority of the participants originated from Asia and therefore marginal socio-cultural differences may not have been perceived as stressful by them. Apart from the above-mentioned factors, it should be pointed out that some non-specific sources of acculturative stress were also observed by most of the students in this study. These include, issues related to inarticulate English communication skills, feelings of inferiority, social exclusion, holding different cultural values, feeling as an outsider, and worries about the future. In other words, these additional concerns also demonstrated that the international students perceived varying degrees of acculturation stress during their educational experience.

In terms of demographic correlates, students who were in the younger age group expressed higher levels of acculturation stress in the present study. Extant research has offered inconsistent results regarding the association between acculturative stress and age. While some researchers have indicated that that older international students experience more difficulties in adjusting (Poyrazli et al., 2001), other studies have not demonstrated any significant relationship between age and overall stress level (Yeh & Inose, 2003; Poyrazli et al., 2004). The contrary results in the present study, however, were in keeping with the findings by Msengi (2003) wherein younger international students exhibited higher levels of acculturative stress. As posited by Msengi (2003), perhaps the younger students in this study may have likewise experienced more difficulties and challenges, due to lack of maturity and inadequate coping skills to deal with stress.

With regard to gender, acculturative stress was significantly higher among male students when compared to their counterparts, in the present study. Analogous to the findings about age, prior research has presented mixed results pertaining to gender differences in acculturation stress. Some studies (Misra et al., 2003; Yeh & Inose, 2003; Poyrazli et al., 2004) have contended that there is no significant gender difference in the level of acculturative stress, whereas Poyrazli et al. (2002) reported gender differences when analyzing loneliness, a subcategory of acculturative stress (Poyrazli et al., 2002). Male graduate students in that study reported experiencing higher feelings of loneliness than did female students, which was consistent with the findings of higher stress noted among male participants in the present study. Moreover, it could be hypothesized that perhaps better egalitarian gender role attitudes among the female students in this study might be related to a higher sense of wellbeing. On the other hand, it is also plausible that gender differences in the current study may be partly due to the smaller number of female participants.

Acculturative stress was found to be significantly higher among students who were reportedly in a romantic relationship compared to those who were single, in the present study. Perhaps the interpersonal stress experienced in romantic relationships has a more severe impact on the general well-being of students, which in turn may have led to higher acculturative stress. However, it remains to be ascertained whether the presence or absence of a relationship is responsible for acculturation stress or whether the quality of the relationship is an important parameter. The limited number of studies, along with the multiplicity of variables involved in the romantic context and the considerable ambiguity surrounding the construct of well-being, make it difficult to reach conclusions about the relationship between the two phenomena (Gómez-López et al., 2019). Acculturation stress was also shown to be higher among students who perceived low family support compared to those who self-reported strong family support, in the present study. Past research has demonstrated that international students with weak social support generally report higher levels of mental health symptoms (Lee et al., 2004), such as depression (Ying et al., 2006) and anxiety (Sümer et al., 2008), feelings of hopelessness, loneliness, and higher acculturative stress (Smith & Khawaja, 2011; Yu, Bodycott, & Mak, 2019). Never the less, it has also been hypothesized that a high level of social support can act as a buffer against the negative effects of

stress (Cohen & Wills, 1985). As such, a strong social support system is very important in ensuring that international students succeed in their new environment. A strong self-determined motivation for studying abroad were also found to predict lower culture shock and greater well-being among international students (Yang, Zhang & Sheldon, 2018).

In addition to the aforementioned sociodemographic features, the participating students had also disclosed several issues that they had encountered during their international educational experience such as concerns about transport and food, language problems, difficulties in comprehending lectures, misunderstandings with classmates or housemates, strains of relationship with boyfriend/ girlfriend, feelings of exclusion, financial worries, addiction problems, and need for additional sports amenities and recreational facilities.

A multiple regression was carried out to investigate whether all these independent variables could significantly predict acculturation stress of international students. It was found that family support, year of study, difficulties in comprehending lectures, and strains of relationship with boyfriend/ girlfriend were significant predictors of acculturation stress among students. As discussed earlier, positive social support from family can be particularly valuable for international students who experience even more stress as they grapple with different adjustment challenges in their new environment. Also, strains of relationship with boyfriend/ girlfriend could be a prognosticator for acculturative stress, probably because, balancing romantic relationship and academic performance whilst integrating into an unfamiliar university life might turn out to be problematic for some undergraduate students. Another predictor of acculturative stress that was depicted in this study was the year of study, or in other words, the length of stay. Academic adjustment in a new sociocultural milieu could be influenced by the number of years that the student may have sojourned, in the host country. So, as the year of study progresses or the length of stay increases, students will naturally become familiar with their environment and the academic journey may not seem so taxing, potentially leading to a reduction in acculturation stress. In view of that, it is also fairly conceivable that newly arrived first-year undergraduate students may be more susceptible to acculturative stress. Also identified in the current study was the variable, difficulty in comprehending lectures, which is indeed an important dimension in the educational experience of international students and could affect their acculturation process. Perhaps the students were unable to understand the lectures due to external factors outside of course content, such as limited language proficiency, difficulties adjusting to new academic ethos, or misunderstandings while communicating with faculty and peers. Moreover, students who were accustomed to different pedagogical approaches may find these issues hindering their smooth adjustment and plausibly intensifying acculturation stress.

#### **CONCLUSION**

The present study found that acculturation stress was relatively high amongst most of the international students. Sociodemographic correlates which were demonstrated to be significantly associated with greater acculturation stress in this study included, younger age, male gender, low family support and romantic relationship status. Besides this, it was observed that family support, year of study, difficulties in comprehending lectures, and strains of relationship with boyfriend/girlfriend, were significant predictors of acculturation stress among the international students. Considering the negative outcomes, there is certainly a need to implement appropriate intervention programs in order to reduce the prevalence and intensity of acculturation stress, especially among the international students who are more vulnerable.

Findings of the current study should be interpreted in light of some limitations. Firstly, utilization of a convenience sample may have limited the generalizability of findings. Secondly, this study used a self-reported questionnaire which may have led to response bias. Thirdly, the cross-sectional nature of the design precludes the establishment about directionality and causality of variables. Future studies could utilise random sampling or cluster sampling method and include qualitative data collection through the

use of semi-structured interview questions. Future research could also include year of study as a variable and explore the relationship between the variables investigated.

### **ACKNOWLEDGEMENTS**

This research was supported by funding from the Scholarship of Teaching and Learning (SoTL) Grant, Universiti Malaysia Sarawak (UNIMAS).

#### REFERENCES

- Akhtar, M., Kröner-Herwig, B. (2015). Acculturative Stress Among International Students in Context of Socio-Demographic Variables and Coping Styles. Curr Psychol 34, 803–815 https://doi.org/10.1007/s12144-015-9303-4
- Azman, N. & Abd. Aziz, Y. F. (2006). Internationalisation of Malaysian universities: A case study of the National University of Malaysia. *Asian Journal of University Education (AJUE)*, 2(2). 1-23.
- Berry, J. W. (1995). Psychology of acculturation. In N. R. Goldberger & J. B. Veroff (Eds.), *The culture and psychology reader* (pp. 457-488). NY: NY University Press.
- Berry, J. W. (2003). Conceptual approaches to acculturation. In K. M. Chun, P. B. Organista, & G. Marin (Eds.), *Acculturation: Advances in theory, measurement, and applied research* (pp. 17-38). Washington D.C.: American Psychological Association.
- Berry, J. W., Kim, U., Minde, T., & Mok, D. (1987). Comparative studies of acculturative stress. *International Migration Review*, 21, 491-511.
- Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin*, 98(2), 310-357.
- Constantine, M. G., Anderson, G. M., Berkel, L. A., Caldwell, L. D., & Utsey, S. O. (2005). Examining the cultural adjustment experiences of African international college students: A qualitative analysis. *Journal of Counseling Psychology*, 52, 57-66.
- Hendrickson, B., Rosen, D., & Aune, R. K. (2010). An analysis of friendship networks, social connectedness, homesickness, and satisfaction levels of international students. *International Journal of Intercultural Relations*, 35(3), 281-295.
- Heng, T. T. (2018). Exploring the complex and non-linear evolution of Chinese international students' experiences in US colleges. *Higher Education Research & Development*, *37*, 1141–1155.
- Iorga, M., Soponaru, C., Muraru, I., Socolov, S., & Petrariu, F. (2020). Factors Associated with Acculturative Stress among International Medical Students, *BioMed Research International*, 2020, 1-9. https://doi.org/10.1155/2020/2564725
- Jeong, S. Y., Hickey, N., Levett-Jones, T., Pitt, V., Hoffman, K., Norton, C. A., & Ohr, S. O. (2011). Understanding and enhancing the learning experiences of culturally and linguistically diverse nursing students in an Australian bachelor of nursing program. *Nurse Education Today*, *31*, 238-244.
- Jung, E., Hecht, M. L., & Wadsworth, B. C. (2007). The role of identity in international students' psychological well-being in the United States: A model of depression level, identity gaps, discrimination, and acculturation. *International Journal of Intercultural Relations*, 31(5), 605-624.
- Klomegah, R. Y. (2006). Social factors relating to alienation experienced by international students in the United States. *College Student Journal*, 40(2), 303-315.
- Gómez-López,M.,Viejo,C., & Ortega-Ruiz,R.(2019).Well-Being and Romantic Relationships: A Systematic Review in Adolescence and Emerging Adulthood. International Journal of Environmental Research and Public Health. 16(13): 2415.Available From:https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6650954/
- Lee, J. S., Koeske, G. F., & Sales, E. (2004). Social support buffering of acculturative stress: A study of mental health symptoms among Korean international students. *International Journal of Intercultural Relations*, 28(5), 399-414.
- Lee, J., & Rice, C. (2007). Welcome to America? International student perceptions of discrimination. *Higher Education*, *53*, 381-409.
- McClure, J. W. (2007). International graduates' cross-cultural adjustment: Experiences, coping strategies, and suggested programmatic responses. *Teaching in Higher Education*, 12(2), 199-217.
- Misra, R., Crist, M., & Burant, C. J. (2003). Relationships among life stress, social support, academic stressors, and reactions to stressors of international students in the United States. *International Journal of Stress Management*, 10(2), 137-157.

- Msengi, I. G. (2003). Sources of stress and its impact on health behaviors and academic performance of international students at a comprehensive Midwestern University. *International Journal of Global Health and Health Disparities*, 5 (1), 55-69.
- Nguyen, M. H., Tam, T. L. & Serik, M. (2019). Depression, acculturative stress, and social connectedness among international university students in Japan: a statistical investigation, *Sustainability*, 11(3) p. 878
- Poyrazli, S., & Kavanaugh, P. R. (2006). Marital status, ethnicity, academic achievement, and adjustment strains: The case of graduate international students. *College Student Journal*, 40(4), 767-781.
- Poyrazli, S., Arbona, C., Bullington, R., & Pisecco, S. (2001). Adjustment issues of Turkish college students studying in the U.S. *College Student Journal*, *35*, 52-62.
- Poyrazli, S., Arbona, C., Nora, A., McPherson, B., & Pisecco, S. (2002). Relation between assertiveness, academic self-efficacy, and psychosocial adjustment among international graduate students. *Journal of College Student Development*, 43, 632-642.
- Poyrazli, S., Kavanaugh, P. R., Baker, A., & Al-Timimi, N. (2004). Social support and demographic correlates of acculturative stress in international students. *Journal of College Counseling*, 7(1), 73-83.
- Poyrazli, S., Thukral, R. K., & Duru, E. (2010). International students' race-ethnicity, personality and acculturative stress. *Journal of Psychology and Counselling*, 2, 25-32.
- Rosenthal, D. J., Russell, J., & Thomson, G. (2008). The health and well-being of international students at an Australian university. *Higher Education*, *55*, 51-67.
- Ryder, A. G., Alden, L. E., Paulhus, D. L., & Dere, J. (2013). Does acculturation predict interpersonal adjustment? It depends on who you talk to. *International Journal of Intercultural Relations*, 37(4), 502-506.
- Sandhu, D., & Asrabadi, B. R. (1994). Development of an acculturative stress scale for international students: Preliminary findings. *Psychological Reports*, 75, 435-448
- Sandhu, D., & Asrabadi, B. R. (2016). Development of an Acculturative Stress Scale for International Students: Preliminary Findings. *Psychological Reports*, 75(1), 435–448.
- Sawir, E., Marginson, S., Deumert, A., Nyland, C., & Ramia, G. (2008). Loneliness and international students: An Australian study. *Journal of Studies in International Education*, 12(2), 148-180
- Schwartz, S. J., & Zamboanga, G. L. (2008). Testing of Berry's model of acculturation: A confirmatory latent class approach. *Cultural Diversity and Ethnic Minority Psychology*, 14(4), 275-285.
- Sherry, M., Thomas, P., & Chui, W. H. (2010). International students: A vulnerable student population. *Higher Education*, 60(1), 33-46.
- Smith, R. A., & Khawaja, N. G. (2011). A review of the acculturation experiences of international students. *International Journal of Intercultural Relations*, 35(6), 699-713.
- Sümer, S., Poyrazli, S., & Grahame, K. (2008). Predictors of depression and anxiety among international students. *Journal of Counseling and Development*, 86, 429-437.
- Thurber, C. A., & Walton, E. A. (2012). Homesickness and adjustment in university students. *Journal of American College Health*, 60(5), 1-5.
- Willis, H., Stroebe, M., & Hewstone, M. (2003). Homesick blues. The Psychologist, 16, 526-528.
- Yang, Y., Zhang, Y., Sheldon, K. M. (2018). Self-determined motivation for studying abroad predicts lower culture shock and greater well-being among international students: The mediating role of basic psychological needs satisfaction. *International Journal of Intercultural Relations*, 63, 95–104. https://doi.org/10.1016/j.ijintrel.2017.10.005
- Yeh, C. J., & Inose, M. (2003). International students' reported English fluency, social support satisfaction and social connectedness as predictors of acculturative stress. *Counseling Psychology Quarterly*, 16(1), 15-28.
- Yi, J. K., Giseala Lin, J. C., & Kishimoto, Y. (2003). Utilization of counseling services by international students. *Journal of Instructional Psychology*, 30, 333-342.
- Ying, Y. W., & Han, M. (2006). The contribution of personality, acculturative stressors, and social affiliation to adjustment: A longitudinal study of Taiwanese students in the United States. *International Journal of Intercultural Relations*, 30(5), 623-635.
- Young, J. T. (2017). Confucianism and Accents: Understanding the plight of the Asian international student in the U.S. *Journal of International Students*, 7(3), 433-448.
- Yu, B., Bodycott, P., Mak, A. S. (2019). Language and interpersonal resource predictors of psychological and sociocultural adaptation: *International students in Hong Kong. Journal of Studies in International Education*, 23(5), 572–588. https://doi.org/10.1177/1028315318825336
- Yusliza, M.Y. and C. Shankar, 2010. Adjustment in international students in malaysian
- public university. International Journal of Innovation, Management and Technology, 1(3): 275-278.
- Zhang, Z. & Brunton, M. (2016). Differences in living and learning: Chinese international students in New Zealand, *Journal of Studies in International Education*, 11(2), 124–140.
- Zhao, Y., Jindal-Snape, D., Topping, K., & Todman, J. (2008). Theoretical models of culture shock and adaptation in international students in higher education. *Studies in Higher Education*, *33*(1), 63-75.