

UNIVERSITI PUTRA MALAYSIA

ACCULTURATIVE STRESS LEVEL AND ITS CONTRIBUTING FACTORS AMONG INTERNATIONAL POSTGRADUATE STUDENTS AT UNIVERSITI PUTRA MALAYSIA, SERDANG

YE HUADAN

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Dissertation Submitted to the Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, in Fulfillment of the Requirements for the Degree of Master of Public Health

August 2017

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Abstract of dissertation presented to the Department of Community Health, Universiti Putra Malaysia in fulfillment of the requirement for the Degree of Master of Public Health

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Chairman: Associate Professor Dr. Muhamad Hanafiah Juni, MD, MPH Faculty : Medicine and Health Sciences

Introduction: Acculturative stress among international students is a serious issue. Oversea students face several problems because of the linguistic and cultural differences in their host country. It is important to understand their acculturative stress level and its contributing factors, in order to develop plans and policies and attract international students as well as ease their stay at UPM.

Methodology: A cross sectional study was conducted among the international postgraduate students using multistage random sampling proportionate to size from six faculties. Data was collected using a pretested, self-administered questionnaire which consists of three sections i.e., socio-demographic factors, adapted acculturative stressors scale and perceived stress scale. Data was analyzed using IBM Statistical Package for Social Science (SPSS) version 22.0. Descriptive analysis was used to determine the factors contributed to acculturative stress and predictors were explored using hierarchical regressions analysis. P value of less than 0.05 was considered statistically significant.

Result: A total of 404 respondents were assessed in this study, with the response rate of 82.1%. The obtained data showed that the prevalence of moderate acculturative stress was 77.7%, with 5.2% high stress. Mean age of the respondents was 32 years (M=32, SD=6.9), whereas the majority of respondents (75.7%) were male students. Respondents were mainly from Middle East (42.3%) and Africa (37.1%). Hierarchical regression analysis found that the gender (p<0.05), religion (p<0.05), continent of origin (p<0.05), duration of stay (p<0.001), academic pressure (p<0.001), financial concern (p<0.001), and social support (p<0.05) were significant predictors.

Conclusion: The findings of the study reveal that over four fifths of international postgraduate students in UPM were in moderate to high acculturative stress level. The top three significant predictors of acculturative stress among international postgraduate students were academic pressure, financial concern and social support.

Key words: Acculturative stress level, international postgraduate students, contributing factors



Abstrak disertasi yang dikemukakan kepada Jabatan Kesihatan Komuniti, Universiti Putra Malaysia sebagai memenuhi keperluan untuk Ijazah Sarjana Kesihatan Awam

PARAS TEKANAN AKUTURATIF DAN FAKTOR PENYUMBANG DALAM KALANGAN SISWAZAH ANTARABANGSA DI UNIVERSITI PUTRA MALAYSIA, SERDANG

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Pengerusi : Profesor Madya Dr. Muhamad Hanafiah Juni, MD, MPH Fakulti : Perubatan dan Sains Kesihatan

Pendahuluan: Tekanan akuturatif adalah isu yang serius dalam kalangan siswazah antarabangsa. Siswazah dari luar negara menghadapi beberapa masalah disebabkan perbezaan linguistik dan budaya berbanding dengan negara asal responden. Memahami tahap tekanan akuturatif dan faktor penyumbangnya adalah amat pentinG untuk membantu dalam pelan perancangan dan polisi dan menarik lebih ramai siswazah antarabangsa dan juga membantu sepanjang sesi pembelajaran di UPM.

Metodologi: Kajian bahagian silang telah dijalankan dalam kalangan siswazah antarabangsa dengan penggunaan kaedah pensampelan secara rawak bagi pelbagai tahap daripada setiap fakulti. Data telah dikumpulkan dengan penggunaan pra-ujian secara soal selidik yang diisi sendiri dimana ia mengandungi tiga bahagian iaitu faktor sosiodemografik, skala penyesuaian tekanan akuturatif dan skala tekanan persepsi. Analisis data telah dilakukan dengan pengunaan Pakej Statistik untuk Sains Sosial IBM versi 22.0. Analisis deskriptif telah digunakan untuk menentukan faktor yang menyumbang kepada tekanan akuturatif dan nilai jangkaan diexplorasi dengan penggunaan analisis hierarki regresi. Nilai p bawah 0.05 dianggap sebagai signifikan secara statistik.

Hasil: Sejumlah 404 responden telah dikaji dalam kajian ini dan kadar respon adalah 82.1%. Data yang dikumpulkan menunjuk bahawa tekanan akuturatif adalah sederhana iaitu sebanyak 77.7% dan 5.2% daripadanya menunjukkan nilai tekanan pada tahap yang tinggi. Umur purata responden adalah 32 tahun (M=32, SD=6.9), dan majoriti responden adalah siswazah lelaki. Kebanyakan respoden adalah berasal dari Timur Tengah (42.3%) dan Afrika (37.1%). Analisis hieraki regresi menunjukkan bahawa jantina (p<0.05), agama (p<0.05), kontinen asal (p<0.05), tempoh menetap (p<0.001),

tekanan akademik (p<0.001), masalah kewangan (p<0.001) dan sokongan sosial (p<0.05) yang signifikan.

Kesimpulan: Keputusan kajian ini menunjuk bahawa lebih daripada empat perlima siswazah antarabangsa di UPM mengalami tekanan akuturatif serderhana dan tinggi. Tiga jangkaan yang paling signifikan bagi tekanan akuturatif dalam kalangan siswazah antarabangsa adalah tekanan akademik, masalah kewangan dan sokongan sosial.

Kata kunci: Tahap tekanan akuturatif, siswazah antarabangsa, faktor penyumbang



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CHAPTER 1

INTRODUCTION

1.1 Background

The development of science and technology has brought the world very close and has eased communication methods. It has also created sources for people to visit different countries for trade, commerce and educations. Recently, education is considered an important contributor of foreign exchange in the economy of the country. Around 14.5 billion USD per year are added in the economy of United States of America by international students and around 8.70 billion USD per year to the economy of UK (de Araujo, 2011). International students have contributed 17.5 billion USD per year to the Australian economy in 2015 (Altbach, 2015). In addition to that, international students from different backgrounds also play an important role in exchanging sciences and techniques, research knowledge, affecting culture and lifestyles in the worldwide (Eustace, 2007). It has been noticed that the population of international students in almost all developed nations is increasing.

There is an increasing evidence showing international students are more likely to encounter extra stressors and particularly susceptible to feelings of acculturative stress, due to limited personal resources when they enter a new country. It is necessary to explain the perception of acculturation, before the origination of a criticism of acculturative stress which impacts international students. The pioneer of acculturation researcher, Berry (2005) has reported that acculturation is twofold encroachment of ethnic and psychosomatic change which occurs due to the contact among two or more ethnic groups and their different members. Acculturative stress is referred to the interrelation with the way of life in a new country, subsequent to encounter with a new cultural patterns (Berry, 2003). Acculturative stress are also related to the aptitude of the individual that he has enough facilities/approaches to overcome the situation or not. It is also a contributing factor for acculturative stress.

The Most common stressors which foreign students face are reduced self-esteem, perceived discrimination, absence of coping strategies, different living condition, limited financial funding, poor social integration, and low language proficiency (Poyrazli & Grahame, 2007), new academic styles, and other daily life events (Mori, 2000). Furthermore, the adjustment problems of international students differ by their race, country of origin, and culture (Wilton & Constantine, 2003). If insufficient managing strategies are involved the acculturative stress and controlling approaches are not adequate to overcome the stressors, the acculturative stress will be higher. Hence, after arriving in the host countries, international students need to cope with various challenging tasks related to acculturation.

Acculturative Stress may have negative and positive impact. Sometimes it helps and contributes people to finish the task and perform well. However, it becomes harmful when it turns into an over-stress condition. So compared with the domestic students, international students tend to be more vulnerable. For example, Adlaf, Gliksman, Demers and Newton- Taylor (2001) reported that the degree of stress in international students at university in significantly higher among the general Canadians. Some researchers reported that international students face exceptional academic and personal contests than that of the native students (Trice, 2003). Therefore, reports about international students' adjustment and their issues have to be documented, and the perspective of moderating the stress and increasing the constructive sides of their acculturation experience are highlighted by several authors (Ward, Bochner & Furnham, 2008).

The international university students' influence has been known as the key contributor to current economic environment and educational ability of Malaysian industry. In 2007, Malaysia launched National Education Strategic Plan (NESP) for rising internationalization of Higher Education in the Country. This policy was developed to make Malaysia as an educational hub which may provide quality education for the Asian and other developing and underdeveloped countries of the world. It is expected that Malaysia will draw RM60 billion or US\$20 billion with this policy and attract 200,000 international students by 2020 (Chu, Foong, Lai & Pang, 2015). Until 2016, there were 120,000 international students along with 151,000 school children in Malaysia. Over 30,000 international students pursued their postgraduate degrees. Thus they contribute RM7.9 billion in the country's economy. It is estimated that by 2020 it will increase to RM15.6 billion per annum (Malaysia's higher education mid-year report, 2016). The population of international students in University Putra Malaysia (UPM) has also increased considerably since last decade; currently there are 4,686 international students enrolled at UPM.

Several surveys about acculturative stress have been done among international students in Malaysia and the findings support the fact that international students have more chance to encounter higher stress upon arrival to Malaysia compared to host groups of students, as they have to adjust to new environment and face something uncertain. For example, a study involving 233 Iranian international students studying in private and public universities in Malaysia showed that insufficient support and conflict with other students were determined stressors, and those who had ineffective interpersonal support for stress management reported higher stress levels (Malekian & Khan, 2017). A similar study conducted by Chuah and Singh (2016) in 4 different universities of Malaysia found that the international students who pursue their bachelor degrees usually preferred to get social support and other help from local national students. In addition, another study among international students who pursue postgraduate degree at Universiti Kebangsaan Malaysia (UKM) indicated that surroundings and approach were the top two causes of acculturative stress (Desa, Yusooff, & Kadir, 2012).

Although research on the adopting issues of the international student is conducted by several researchers. And some strategy or measures have been taken to solve their problems. However, the effect and efficiency are not satisfied, and international students still encounter all kinds of acculturative stress. More efforts are still needed to integrate the findings and there is a great room for further understanding the problem. Therefore it is very important to further explore the potential negative factors and de-

termine the acculturative stress level of international students, especially graduate students, and develops some strategies to facilitate international students, hence, they may adopt the new environment in Malaysia and reduce acculturative stress level effectively.

1.2 Problem Statement

Previous studies showed that most of the international students face acculturative stress in a foreign country (Yu, Chen & Li, 2014; Gallagher, 2013). Obviously, the acculturative stress is mainly caused by adapting to an absolutely different social and cultural condition. Psychosocial, physical, and behavioral issues are more significant among foreign students than other sojourners (Yu, et al., 2014; Gallagher, 2013). Simultaneously, these issues can be acute or chronic stressors in these students and may lead to various undesirable health problems, including cardiovascular diseases such as ischemic heart disease and hypertension, diabetes, cancers, neurodegenerative diseases, unhealthy lifestyles (i.e. substance use, alcohol consumption and eating disorders), depression, even suicide, and other health consequences (Ekman & Arnetz, 2006). Along with the severe disease, the stress exposure is the leading cause of heart dysfunction which usually threatens humans' life (Wittstein, Thiemann, Lima, Baughman & Schulman, 2005). In the field of cytology, prolonged stress may be the reason for the disorder of brain, or disturb regular brain functioning, causing neurological and psychological syndromes (Morimoto, 2006). A study conducted in Australia reported that 5.3 percent women and 5.6 percent men had the ideation of commit suicide (Goldney, Wilson, Grande, Fisher, & McFarlane, 2000). Their findings demonstrate that in depression most of the international students reach at extreme levels and that could lead to tragic consequence. Previous studies have summarized a number of unhealthy behaviors correlated to stressors among international students, such as drug abuse, alcohol consumption (Park et al., 2004), severe mental problems (Bovier, Chamot & Perneger, 2004; Zhang, et al., 2012), no adaptive coping strategies (Bittner, Khan, Babu, & Hamed, 2011), decreased social involvement (O'Brien, Cho, Lew, Creedy, Ho, et al., 2008) and undesirable academic performance (Sanders & Lushington, 2002).

International students are prone to have less personal and social sources to live in the host country and tend to face relatively more problems acculturating than the established social groups, as a consequence, acculturative stress would be the major problem for them. Even though, several studies on acculturative stress have proved that international students meet all kinds of troubles which affect their physical and mental health, but very few studies have been conducted to examine acculturative stress level and contributing factors among international students. On the other hand, the significant predictors of acculturative stress may vary in different social-cultural environments. For example, report says that apparent discrimination grounds bigger stress, more personality clash, a lesser academic contentment, bigger psycho-social and social adjustment (Leong & Ward, 2000).

In case of Malaysia, a little work has been conducted and there is great room for a study which can provide a detailed information about international students as the re-

mediation measures can be done. Most of the international students in the Malaysian universities are from Asian and African countries. It has been identified that Asian international students seem to be more passive and less assertive than other continental members and more likely to face acculturative stress. In addition, catching up with lecturers and involving in an active discussion in classes would be the most challenging stressors among international students. Among the group of international students, graduate students may be the most susceptible to the acculturative stresses due to high academic requirements. Another reason is that they have to handle these burdens without the same source of support that their family, friends and society would usually provide in their home countries.

1.3 Significance of Study

Unlike the previous studies conducted in advanced countries i.e., USA, German, UK, New Zealand, Australia and so on, this study in Malaysian environs reveals to a quite different viewpoint. So far, no study about acculturative stress among international postgraduate students was done in Universiti Putra Malaysia, so this study can contribute to the body of knowledge. Malaysia possesses multi-cultural characteristics and multi-socializing diversity, as well as the increasing population of enrolled foreign students in different institutes and universities, which makes this study very important. Therefore, the understanding of international students' acculturative stress level and the factors those contributing to acculturative stress make contributions to ease their stay in Malaysia.

This study was conducted to figure out prevalence of the acculturative stress and explore the predictors leading to acculturative stress among international students who pursue postgraduate at UPM. It is expected that the findings of this study would help vulnerable international students to increase the understanding of this issue. At the same, it can help educational settings to prepare program for new students to overcome the challenges, it may also help offices of student service and student affairs organizations in university campuses to provide effective counseling programs to the students who are in troubles and promote constructive international student amendment and broad-based education for the eradication or minimization of adverse effects on them. The findings of this study will also help government to modify plans for National Education Strategic Plan (NESP).

1.4 Research Questions

1.4.1 What is the level of acculturative stress in the international postgraduate students at UPM?

1.4.2 What are the factors which contribute to acculturative stress in the international students pursing their postgraduate at UPM?

1.4.3 What are the associations between level of acculturative stress with contributing factors?

1.4.4 What are the associations between acculturative stressors with demographic factors?

1.4.5 What are the predictors of high level of acculturative stress?

1.5 Objectives of Study

1.5.1 General Objective

The aim of current study is to identify the level of acculturative stress, and factors which contribute to acculturative stress among international postgraduate students at UPM.

1.5.2 Specific Objectives

1.5.2.1 To determine acculturative stress level in international students who pursue postgraduate degree at UPM.

1.5.2.2 To determine the factors which contribute to acculturative stress level in international postgraduate students.

1.5.2.3 To determine associations between acculturative stress level with contributing factors.

1.5.2.4 To determine association between acculturative stressors with demographic factors.

1.5.2.5 To determine the predictors of high acculturative stress level.

1.6 Null Hypothesis

Hypothesis 1: There is no significant association between acculturative stress levels with socio-demographic factors.

Hypothesis 2: There is no significant association between acculturative stress levels with acculturative stressors

Hypothesis 3: There is no significant predictor with acculturative stress level among international postgraduate students at UPM.

1.7 Definition of Important Terms

1.7.1 Acculturation: a process of attaining new cultures (such as: principles, beliefs, and phonological), social-specific behaviors (such as: music, clothing, eating, and entertainment), and approaches through collaborations with persons in an accommodating country (Berry, 1992; Berry, Trimble, & Olmedo, 1986).

1.7.2 Acculturative stress: stress related to new lifestyle adjustment, resulting from an encounter with new cultural paradigms (Berry, 2003).

1.7.3 International students: those who travel to a country different from their own with visa for the purpose of tertiary study, which do not include permanent resident students.



REFERENCES

- Adlaf, E.M., Gliksman, L., Demers, A., & Newton-Taylor, B. (2001). The prevalence of elevated psychological distress among Canadian undergraduates: findings from the 1998 Canadian Campus Survey.Journal of American College Health, 50 (2), p67-72.
- Akhtar, M. (2012). Acculturative stress and its association with academic stress and psychological well-being of international stuents.
- Akhtar, M., and Kröner-Herwig, B. (2015). Acculturative stress among international students in context of socio-demographic variables and coping styles. Current Psychology, 34(4), 803-815.
- Amin, W. M., Al-Ali, M. H., Duaibis, R. B., Oweis, T., & Badran, D. H. (2009). Burnout among the clinical dental students in the Jordanian Universities. Journal of clinical medicine research, (4), 207-211.
- Amos, S., & Lordly, D. (2014). Picture this: A photovoice study of international students' food experience in Canada. Canadian Journal of Dietetic Practice and Research, 75(2), 59-63.
- Amr, M., El Gilany, A. H., & El-Hawary, A. (2008). Does gender predict medical students' stress in Mansoura, Egypt. Med Educ Online, 13, 12.
- Arslan, G., Ayranci, U., Unsal, A., & Arslantas, D. (2009). Prevalence of depression, its correlates among students, and its effect on health-related quality of life in a Turkish university. Upsala Journal of Medical Sciences, 114(3), 170-177.
- Atri, A., Sharma, M., & Cottrell, R. (2007). Role of social support, hardiness, and acculturation as predictors of mental health among international students of Asian Indian origin. International Quarterly of Community Health Education, 27(1), 59-73.
- Bai, J. (2016). Development and validation of the Acculturative Stress Scale for Chinese college students in the United States (ASSCS). Psychological Assessment, 28(4), 443.
- Benson, G. O., Sun, F., Hodge, D. R., & Androff, D. K. (2012). Religious coping and acculturation stress among Hindu Bhutanese: A study of newly-resettled refugees in the United States. International Social Work, 55(4), 538-553.
- Berry, J. W., & Annis, R. C. (1974). Acculturative stress: The role of ecology, culture and differentiation. Journal of Cross-cultural Psychology, 5(4), 382-406.
- Berry, J.W., Kim, U., Minde, T., & Mok, D. (1987). Comparative studies of acculturative stress. International Migration Review, 21, 491–511.

Berry, J. W., Trimble, J. E., & Olmedo, E. L. (1986). Assessment of acculturation.

- Berry, J. W. (1992). Acculturation and adaptation in a new society. International Migration, 30(s1), 69-85.
- Berry, J.W. (1997). Immigrants, acculturation, and adaptation. Applied Psychology: An International Review, 46(1), 5-33.
- Berry, J. W. (2003). Conceptual approaches to acculturation. In K.M. Chun, P. B. Organista, and G. Marin (Eds.), Acculturation: Advances in theory, measurement and applied research (pp. 17-37), Washington, DC: American Psychological Association.
- Berry, J. W. (2005). Acculturation: Living successfully in two cultures. International Journal of Intercultural Relations, 29(6), 697-712.
- Berry, J.W. (2006). Stress perspectives on acculturation. In D.L. Sam & J.W. Berry (Eds.), The Cambridge handbook of acculturation psychology (pp. 43–57). Cambridge, United Kingdom: Cambridge University Press.
- Bewick, B.M., Gill, J., & Mulhern, B. (2008). Using electronic surveying to assess psychological distress within the UK university student population: a multi-site pilot investigation. E-Journal of Applied Psychology, 4, p1-5.
- Bhandari, P. (2012). Stress and health related quality of life of Nepalese students studying in South Korea: A cross sectional study. Health and quality of life outcomes, 10(1), 1.
- Bittner IV, J. G., Khan, Z., Babu, M., & Hamed, O. (2011). Stress, burnout, and maladaptive coping. Looking Forward, 1956.
- Bovier, P. A., Chamot, E., & Perneger, T. V. (2004). Perceived stress, internal resources, and social support as determinants of mental health among young adults. Quality of Life Research, 13(1), 161-170.
- Chen, M. Y., James, K., & Wang, E. K. (2007). Comparison of health promoting behavior between Taiwanese and American adolescents: a cross-sectional questionnaire survey. International Journal of Nursing Studies, 44(1), 59-69.
- Chu, M. Y., Foong, B. K., Lai, C. L., & Pang, A. N. (2015). Foreign students' enrolment in Malaysian higher education institution (Doctoral dissertation, UTAR).
- Chuah, J. S., & Singh, M. K. M. (2016). International students' perspectives on the importance of obtaining social support from host national students. International Education Studies, 9(4), 132.
- Chung, H.K. & Lee, H.Y. (2012). Drinking behaviors by stress level in Korean university students. Nutrition, Research and Practice, 6 (2), p146-154.

- Cohen, S., Kamarck, T., Mermelstein, R. (1983). A global measure of perceived stress. Journal of Health and Social Behavior, 24, 385-396.
- Cohen, S., Kamarck, T., & Mermelstein, R. (1994). Perceived stress scale. Measuring stress: A guide for health and social scientists.
- De Araujo, A. A. (2011). Adjustment issues of international students enrolled in American colleges and universities: A review of the literature. Higher Education Studies, 1(1), 2.
- Desa, A., Yusooff, F., & Kadir, N. B. Y. A. (2012). Acculturative stress among international postgraduate students at UKM. Procedia-Social and Behavioral Sciences, 59, 364-369.
- Ekman, R., & Arnetz, B. B. (2006). The brain in stress–influence of environment and lifestyle on stress-related disorders. Stress in Health and Disease, 196-213.
- Eustace, R.W. (2007). Factors influencing acculturative stress among international students in the United States. Doctoral dissertation. Retrieved from http://krex. kstate. edu/dspace / handle/2097/1.
- Gallagher, H.C. (2013). Willingness to communicate and cross-cultural adaptation: L2 communication and acculturative stress as transaction. Appl Linguist 34(1): 53–73.
- Geppert, C., M.P. Bogenschutz & W.R. Miller (2007) 'Development of a bibliography on religion, spirituality, and addiction', Drug and Alcohol Review 26(4): 389–95.
- Gerber, M., Barker, D., & Pühse, U. (2012). Acculturation and physical activity among immigrants: A systematic review. Journal of Public Health, 20(3), 313-341.
- Goldney, R. D., Wilson, D., Grande, E. D., Fisher, L. J., & McFarlane, A. C. (2000). Suicidal ideation in a random community sample: attributable risk due to depression and psychosocial and traumatic events. Australian and New Zealand Journal of Psychiatry, 34(1), 98-106.
- Guszkowska, M. (2005). Physical fitness as a resource in coping with stress among high school students. Journal of Sports Medicine and Physical Fitness, 45(1), 105-111.
- Hamamura, T., & Laird, P. G. (2014). The effect of perfectionism and acculturative stress on levels of depression experienced by East Asian international students. Journal of Multicultural Counseling and Development, 42(4), 205-217.
- Han, X., Han, X., Luo, Q., Jacobs, S., & Jean-Baptiste, M. (2013). Report of a mental health survey among Chinese international students at Yale University. Journal of American College Health, 61(1), 1-8.
- Hanassab, S. (2006). Diversity, international students, and perceived discrimination: Implications for educators and counselors. Journal of Studies in International Education, 10, 157-172.

- He, F. X., Lopez, V., & Leigh, M. C. (2012). Perceived acculturative stress and sense of coherence in Chinese nursing students in Australia. Nurse Education Today, 32(4), 345-350.
- Hendrickson, B., Rosen, D., & Aune, R. K. (2011). An analysis of friendship networks, social connectedness, homesickness and satisfaction levels of international students. International Journal of Intercultural Relations, 35, 281-295. http://dx.doi.org/10.1016/j.ijintrel.2010.08.001
- Hendershot, C. S., Dillworth, T. M., Neighbors, C., & George, W. H. (2008). Differential effects of acculturation on drinking behavior in Chinese-and Korean-American college students. Journal of Studies on Alcohol and Drugs, 69(1), 121.
- Ho. E. (1995). The challenge of cultrire change: The cross-cultural adaptation of Hong Kong Chinese adolescent immigrates in New Zcaland. Unpublished Doctoral Thesis. University of Waikato. New Zealand.
- Holmes, P. (2004). Negotiating differences in learning and intercultural communication ethnic Chinese students in a New Zealand university. Business Communication Quarterly, 67(3), 294-307.
- Hunt, E. N., Martens, M. P., Wang, K. T., & Yan, G. C. (2016). Acculturative stress as a moderator for international student drinking behaviors and alcohol use consequences. Journal of Ethnicity in Substance Abuse, 1-13.
- Hyun, J., Quinn, B., Madon, T., & Lustig, S. (2007). Mental health need, awareness, and use of counseling services among international graduate students. Journal of American College Health, 56(2), 109-118.
- Ismail, A., Ashur, S. T., Jamil, A. T., Lee, C. W., & Mustafa, J. (2016). Stress level and the common coping strategies among international postgraduate students at University Kebangsaan Malaysia Medical Centre (UKMMC), Cheras, Kuala Lumpur, Malaysia. Asean Journal of Psychiatry, 17(1), 9-20.
- Jeong, N., & Lee, M. H. (2010). A predictive model on health promotion behavior in women who immigrate for marriage. Journal of Korean Academy of Nursing, 40(5).
- Jung, H. Y., & Jeon, E. R. (2011). Preference for Korean food and satisfaction of dormitory foodservice by Chinese students studying at Mokpo National University. Journal of the Korean Society of Food Science and Nutrition, 40(2), 283-289.
- Kamya, H. (2009) 'Healing from refugee trauma: The significance of spiritual beliefs, faith community, and faith-based services', in Froma Walsh (ed.) spiritual resources in family therapy, 2nd edn, pp. 286–300. New York: Guilford Press.
- Khawaja, N. G., & Dempsey, J. (2008). A comparison of international and domestic tertiary students in Australia. Australian Journal of Guidance and Counselling, 18(01), 30-46.

- Kim, S. J., & Yoo, I. Y. (2016). Health promotion behavior of chinese international students in Korea including acculturation factors: A structural equation model. Asian Nursing Research, 10(1), 25-31.
- Koh, K.B., Lee, Y.J., Beyn, K.M., Chu, S.H., Kim, D.M., & Seo, W.Y. (2012). Effects of high and low stress on proinflammatory and anti-inflammatory cytokines. Psychophysiology, 49 (9), p1290-1297.
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. Educational and Psychological Measurement, 30(3), 607-610.
- Lee, J. J., & Rice, C. (2007). Welcome to America? International student perceptions of discrimination. Higher Education, 53(3), 381-409.
- Leong, C. H., & Ward, C. (2000). Identity conflict in sojourners. International Journal of Intercultural Relations, 24(6), 763-776.
- Leong, F. L. T., and Chou, E. L. (2002). Counseling international students and sojourners. In P. B. Pedersen, J. G. Dragus, W. J.Lonner, J. E. Trimble (Eds.), Counseling across cultures (pp.185-207). Thousands Oaks, CA: Sage.
- Liao, K. Y. H., and Wei, M. (2014). Academic stress and positive affect: Asian value and self-worth contingency as moderators among Chinese international students. Cultural Diversity and Ethnic Minority Psychology, 20(1), 107.
- Lim, C. H. (2009). Acculturative stresses and adjustment elements of Chinese students' studying in Korea. Korean Journal of Human Ecology, 18(1), 93-112.
- Lovell, G. P., Nash, K., Sharman, R., & Lane, B. R. (2015). A cross-sectional investigation of depressive, anxiety, and stress symptoms and health behavior participation in Australian university students. Nursing & Health Sciences, 17(1), 134-142.
- Lund, H.G., Reider, B.D., Whiting, A.B., & Prichard, J.R. (2010). Sleep patterns and predictors of disturbed sleep in a large population of college students. Journal of Adolescent Health, 46 (2), p124-132.
- Malaysia's Higher Education Mid-Year Report.(2016). Retrieved 23 June 2016 from <u>http://www.thestar.com.my/opinion/online-exclusive/whats-your-</u> <u>status/2016/06/23/malaysia-higher-education-2016/</u>.
- Malekian, K. A., & Khan, A. (2017). Determinants of burnout and stress on students health: A study of Iranian expatriate international students. Sains Humanika, 9(1-4).
- Marshall, L. L., Allison, A., Nykamp, D., & Lanke, S. (2008). Perceived stress and quality of life among doctor of pharmacy students. American Journal of Pharmaceutical Education, 72(6).

- 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.
- Mori, S. (2000). Addressing the mental health concerns of international students. Journal of Counseling and Development, 78,137-144.
- Morimoto, R.I. (2006). Stress, aging, and neurodegenerative disease. New Engl J Med 355(21): 2254–2255.
- 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.
- Msengi, C. M., Msengi, I. G., Harris, S., & Hopson, M. (2011). International students: A comparison of health status and physical health before and after coming to the United States. International Education, 41(1), 59.
- Nawyn, S. (2006) 'Faith, Ethnicity, and Culture in Refugee Resettlement', American Behavioral Scientist, 49(11): 1509–27.
- Nuallaong, W. (2011). Correlation between stressors and academic performance in second year medical students. Journal of the Medical Association of Thailand, 94 (7S), p81-85.
- O'Brien, A.P., Cho, M.A.A., Lew, A-M., Creedy, D., Ho, C.M.R., Fai C.M, & Gordon A.D. (2008). The need for mental health promotion and early intervention services for higher education students in Singapore. The International Journal of Mental Health Promotion, 10(3), p42-48.
- Ozer, S. (2015). Predictors of international students' psychological and sociocultural adjustment to the context of reception while studying at Aarhus University, Denmark. Scandinavian Journal of Psychology, 56(6), 717-725.
- Özoğlu, M., Gür, B. S., & Coşkun, İ. (2015). Factors influencing international students' choice to study in Turkey and challenges they experience in Turkey. Research in Comparative and International Education, 10(2), 223-237.
- Pan, J.Y., Yue, X., and Chan, C.L.W. (2010). Development and validation of the Acculturative Hassles Scale for Chinese Students (AHSCS): An example of mainland Chinese university students in Hong Kong. Psychologia, 53 (3), 163-178.
- Pargament, K.I. (2007) Spiritually integrated psychotherapy: Understanding and addressing the sacred. New York: Guilford Press.
- Park, S. Y., Anastas, J., Shibusawa, T., & Nguyen, D. (2014). The impact of acculturation and acculturative stress on alcohol use across Asian immigrant subgroups. Substance Use & Misuse, 49(8), 922-931.

- Park, C.L, Armeli, S., & Tennen, H. (2004). The daily stress and coping process and alcohol use among college students. Journal of Studies on Alcohol, 65 (l), p126-135.
- Patil, C. L., Hadley, C., & Nahayo, P. D. (2009). Unpacking dietary acculturation among new Americans: results from formative research with African refugees. Journal of Immigrant and Minority Health, 11(5), 342-358.
- Perez-Cueto, F., Verbeke, W., Lachat, C., & Remaut-De Winter, A. M. (2009). Changes in dietary habits following temporal migration. The case of international students in Belgium. Appetite, 52(1), 83-88.
- 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), 767-780.
- Poyrazli, S., and Grahame, K. M. (2007). Barriers to adjustment: Needs of international students within a semi-urban campus community. Journal of Instructional Psychology, 34(1), 28-36.
- Poyrazli, S., and Lopez, M. D. (2007). An exploratory study of perceived discrimination and homesickness: a comparison of international students and American students. The Journal of Psychology, 141(3), 263–279. doi:10.3200/JRLP. 141.3.263-280.
- Rajapaksa, S., & Dundes, L. (2002). It's a long way home: International student adjustment to living in the United States. Journal of College Student Retention: Research, Theory & Practice, 4(1), 15-28.
- Sanchez, M., Dillon, F., Ruffin, B., & De La Rosa, M. (2012). The influence of religious coping on the acculturative stress of recent Latino immigrants. Journal of Ethnic and Cultural Diversity in Social Work, 21(3), 171-194.
- Sanchez, M., Dillon, F. R., Concha, M., & De La Rosa, M. (2015). The impact of religious coping on the acculturative stress and alcohol use of recent Latino immigrants. Journal of Religion and Health, 54(6), 1986-2004.
- Sanders, A.E. & Lushington, K. (2002). Effects of perceived stress on student performance in dental school. Journal of Dental Education, 66 (1), p75-81.
- Sandhu, D. S., & Asrabadi, B. R. (1994). 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, 148-180.

- Shah, M., Hasan, S., Malik, S., & Sreeramareddy, C. T. (2010). Perceived stress, sources and severity of stress among medical undergraduates in a Pakistani medical school. BMC Medical Education, 10(1), 2.
- Sherry, C., Bhat, R., Beaver, B., & Ling, A. (2004). Students as customers: The expectations and perceptions of local and international students. In HERDSA conference.
- Smith, R. A., and Khawaja, N. G. (2011). A review of the acculturation experiences of international students. International Journal of Intercultural Relations, 35(6), 699-713.
- Tochkov, K., Levine, L., and Sanaka, A. (2010). Variation in the prediction of crosscultural adjustment by Asia-Indian students in the United States. College Student Journal, 44(3), 677-689
- Townsend, P., and Poh, H. J. (2008). An exploratory study of international students studying and living in a regional area. Journal of Marketing for Higher Education, 18, 240-263.
- Trice, A. G. (2003). Faculty perceptions of graduate international students: The benefits and challenges. Journal of Studies in International Education, 7(4), 379-403.
- Trice, A. G. (2004). Mixing it up: International graduate students' social interactions with American students. Journal of College Student Development, 45(6), 671-687.
- Uraz, A., Tocak, Y. S., Yozgatlıgil, C., Cetiner, S., and Bal, B. (2013). Psychological well-being, health, and stress sources in Turkish dental students. Journal of Dental Education, 77(10), 1345-1355.
- Vilela, S., Santos, S., Padrão, P., & Caraher, M. (2014). Length of migration and eating habits of Portuguese university students living in London, United Kingdom. Ecology of Food and Nutrition, 53(4), 419-435.
- Walker, R. L., Wingate, L. R., Obasi, E. M., & Joiner Jr, T. E. (2008). An empirical investigation of acculturative stress and ethnic identity as moderators for depression and suicidal ideation in college students. Cultural Diversity and Ethnic Minority Psychology, 14(1), 75.
- Ward, C., Bochner, S., and Furnham, A. (2008). The psychology of culture shock (2nd ed.). London: Routledge.
- Wilton, L., & Constantine, M. G. (2003). Length of residence, cultural adjustment difficulties, and psychological distress symptoms in Asian and Latin American international college students. Journal of College Counseling, 6(2), 177-187.
- Wittstein, I.S., Thiemann, D.R., Lima, J.A., Baughman, K.L., Schulman, S.P., (2005). Neurohumoral features of myocardial stunning due to sudden emotional stress. New Engl J Med 352(6): 539–548.

- Yan, Z., & Cardinal, B. J. (2013). Perception of physical activity participation of Chinese female graduate students: A case study. Research Quarterly for Exercise and Sport, 84(3), 384-396.
- Yan, Z., Finn, K., Cardinal, B. J., & Bent, L. (2014). Promoting health behaviors using peer education: A demonstration project between international and American college students. Americ Journal of Health Education, 45(5), 288-296.
- Yan, Z., & FitzPatrick, K. (2016). Acculturation and health behaviors among international students: A qualitative approach. Nursing & Health Sciences, 18(1), 58-63.
- Yang, B., and Clum, G. A. (1995). Measures of life stress and social support specific to an Asian student population. Journal of Psychopathology and Behavioral Assessment, 17, 51-67.
- Ye, J. (2006). Traditional and online support networks in the crosscultural adaptation of Chinese international students in the United States. Journal of Computer-Mediated Communication, 11(3), 863-876.
- Yeh, C. J., & Inose, M. (2003). International students' reported English fluency, social support satisfaction, and social connectedness as predictors of acculturative stress. Counselling 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.
- Yu, B., Chen, X., & Li, S. (2014). Globalization, cross-culture stress and health. Zhonghua liu xing bing xue za zhi = Zhonghua liuxingbingxue zazhi, 35(3), 338-341.
- Yu, B., Chen, X., Li, S., Liu, Y., Jacques-Tiura, A. J., & Yan, H. (2014). Acculturative stress and influential factors among international students in China: A structural dynamic perspective. PloS one, 9(4), e96322.
- Zhang, Z., & Brunton, M. (2007). Differences in living and learning: Chinese international students in New Zealand. Journal of Studies in International Education, 11, 124-140.
- Zhang, J., & Goodson, P. (2011). Predictors of international students' psychosocial adjustment to life in the United States: A systematic review. International Journal of Intercultural Relations, 35(2), 139-162.
- Zhang, X., Wang, H., Xia, Y., Liu, X., & Jung, E. (2012). Stress, coping and suicide ideation in Chinese college students. Journal of Adolescents, 35 (3), p683-690.
- Zhu, J. F. (2012). Lifestyle changes and acculturative stress of Chinese international students living in Korea (Doctoral dissertation, MS thesis, Chung-Ang Uni. Seoul. Korea).