

**ANALYSING SOURCES OF STRESS AMONG BUSINESS STUDENTS:  
EVIDENCE FROM UNIVERSITI UTARA MALAYSIA**

**By  
ONG QI HONG**

**Thesis Submitted to  
Othman Yeop Abdullah Graduate School of Business  
Universiti Utara Malaysia  
In Partial Fulfillment of the Requirement for the Master of Sciences  
(Management)**

## **PERMISSION TO USE**

In presenting this project paper in partial fulfillment of the requirements for a postgraduate degree from Universiti Utara Malaysia (UUM), I agree that the Library of this university may make it freely available for inspection. I further agree that permission for copying this project paper in any manner, in whole or in a part, for scholarly purposes may be granted by my supervisor or in their absence, by the Dean of Othman Yeop Abdullah Graduate School of Business where I did my project paper. It is understood that any copying or publication or use of this project paper or parts of it for financial gain shall not to be allowed without my written permission. Furthermore, it is also understood that due recognition will be given to me and Universiti Utara Malaysia (UUM) in any scholarly use which may be made of any material from my project paper.

Request for permission to copy or to make other use of materials in this project paper, in whole or in part, should be addressed to:

Dean of Othman Yeop Abdullah Graduate School of Business  
Universiti Utara Malaysia  
06010 UUM Sintok  
Kedah Darul Aman

## **ABSTRAK**

Tekanan boleh menyebabkan gangguan mental kepada pelajar-pelajar universiti. Ia adalah penyakit yang serius. Tahap pendidikan tinggi, beban yang berat dan hospitaliti yang tidak baik memberikan kecenderungan untuk mewujudkan tahap stres yang tinggi di kalangan pelajar. Kajian ini dijalankan untuk menentukan hubungan antara punca tekanan (interpersonal, intrapersonal, akademik, persekitaran dan bahasa) dengan tekanan pelajar. Selain itu, tahap stres pelajar perniagaan dan punca tekanan utama mereka juga dikenalpastikan. Kajian kuantitatif telah dijalankan di Universiti Utara Malaysia (UUM) dengan saiz sampel sebanyak 377 responden. Tahap tekanan mereka diukur dengan menggunakan 10-item Perceived Stress Scale (PSS) manakala punca tekanan diukur dengan menggunakan 40-item Student Stress Survey (SSS) dan 4-item Acculturative Hassles Scale for Students (AHSS). Data yang diperolehi dianalisis dengan menggunakan Statistical Packages for Social Science (SPSS) versi 20. Keputusan kajian menunjukkan tekanan pelajar yang mempunyai kaitan dengan punca interpersonal, punca akademik dan punca persekitaran. Analisis mendapati 4.0% pelajar mempunyai tekanan yang rendah, 71.3% pelajar mempunyai tekanan yang sederhana dan 24.7% pelajar mempunyai tekanan yang tinggi. Punca tekanan terpenting untuk pelajar adalah penurunan kesihatan sendiri dari punca intrapersonal (min = 3.97), peningkatan beban kerja dari punca akademik (min = 3.75), jangkaan gred yang rendah dari punca akademik (min = 3.71), jangkaan tamat pengajian dari punca akademik (min = 3.71) dan saya tidak guna pemikiran Inggeris dari punca bahasa (min = 3.58). Kesimpulannya, tekanan pelajar UUM mempunyai hubungan signifikan dengan punca interpersonal, punca akademik dan punca persekitaran. Nilai min tekanan pelajar adalah 33.0 pada tahap sederhana. Ia adalah tinggi oleh itu pengurusan universiti perlu membuat strategi yang sesuai untuk menangani isu ini.

## **ABSTRACT**

Stress could cause mental disorder to university students. It is a serious illness. A high education level with heavy burden plus unhealthy hospitality fell on students tends to create a higher student stress level. This study was carried out to determine the relationship between stressors (interpersonal, intrapersonal, academic, environment and language) and student stress. Besides, the stress level of business students and their major stress sources were identified too. A quantitative research was conducted in Universiti Utara Malaysia (UUM) with the sample size of 377 respondents. Their stress levels were measured by using the 10-items Perceived Stress Scale (PSS) while the stressors were measured by the 40-items Student Stress Survey (SSS) and 4-items Acculturative Hassles Scale for Students (AHSS). Data obtained was analyzed by using Statistical Packages for Social Science (SPSS) version 20. Results indicated student stress had the association with interpersonal sources, academic sources and environmental sources. Analysis found out 4.0% of students had low stress, 71.3% of students had moderate stress and 24.7% of students had high stress. The major student stress sources consisted of intrapersonal source's decline in personal health (mean = 3.97), academic source's increased class workload (mean = 3.75), academic source's lower grade than anticipated (mean = 3.71), academic source's anticipation of graduation (mean = 3.71) and language source's I am not use to the English way of thinking (mean = 3.58). In short, the stress of UUM student was significantly associated with interpersonal sources, academic sources and environmental sources. The mean value of student stress was 33.0 at moderate level. It was considerably high; hence the university management needs to develop appropriate strategy to address this issue.

## **ACKNOWLEDGEMENT**

First and foremost, I would like to express my sincerest appreciation and thank to my thesis supervisor, Dr. Aliyu Olayemi Abdullateef. His guidance, supervision and dedicated effort throughout the research will never be forgotten.

Also, I want to express my appreciation to thank my postgraduate coursemates and friends for their companions, advices and constant assistances. They are my greatest partners when we worked together. Without their helps, I would say, I would stick with the problems. Apart from that, I want to say thank you to those respondents of UUM students for sparing their time to answer my questionnaires. Thank you very much indeed for the voluntary assistances and contributions in completing this research.

Last but not least, I am grateful to the loves, constructive advices and encouragements from my family members, my caring daddy Ong Seng Kee, my beloved mummy Ooi Mou Lee and my brothers, Qi Chao and Qi Hao. I want to express my deepest thank for their full supports when I am doing this research. This is my pleasure and my proud to become their son and brother.

## TABLE OF CONTENTS

PERMISSION TO USE .....	ii
ABSTRAK .....	iii
ABSTRACT .....	iv
ACKNOWLEDGEMENT .....	v
TABLE OF CONTENTS .....	vi
LIST OF TABLES .....	ix
LIST OF FIGURES .....	x
LIST OF APPENDICES .....	xi
LIST OF ABBREVIATIONS .....	xii
<b>CHAPTER 1            INTRODUCTION.....</b>	<b>1</b>
1.0    Introduction.....	1
1.1    Background of Study .....	3
1.2    Problem Statement .....	4
1.3    Objectives of Study .....	8
1.4    Research Question .....	9
1.5    Significance of Study .....	9
1.5.1    The Significance to Practitioner.....	9
1.5.2    The Significance to Academic .....	11
1.6    Organization of Study .....	12
<b>CHAPTER 2            LITERATURE REVIEW .....</b>	<b>14</b>
2.0    Introduction.....	14
2.1    Stress and Tension .....	14
2.2    Stressor.....	16
2.3    Distress and Eustress.....	17
2.4    Stress and Demographic Characteristics.....	17
2.5    Student Stress Source.....	20
2.5.1    Interpersonal Source .....	20
2.5.2    Intrapersonal Source .....	22
2.5.3    Academic Source .....	25
2.5.4    Environmental Source.....	27
2.5.5    Language Source.....	29

2.6	Chapter Summary .....	31
	<b>CHAPTER 3            METHODOLOGY</b> .....	<b>32</b>
3.0	Introduction.....	32
3.1	Study Area .....	32
3.2	Research Design.....	33
3.3	Theoretical Framework .....	35
3.4	The Background of Research Instrument.....	38
	3.4.1 Perceived Stress Scale.....	38
	3.4.2 Student Stress Survey .....	39
	3.4.3 Acculturative Hassles Scale for Students .....	40
3.5	Research Instrumentation.....	42
	3.5.1 Perceived Stress Scale.....	42
	3.5.2 Student Stress Survey .....	43
	3.5.3 Acculturative Hassles Scale for Students .....	44
3.6	Sample Data .....	46
3.7	Data Analysis .....	48
3.8	Chapter Summary .....	50
	<b>CHAPTER 4            RESULTS</b> .....	<b>51</b>
4.0	Introduction.....	51
4.1	Response Rate .....	51
4.2	Data Screening Procedure .....	52
	4.2.1 Treatment of Missing Data .....	52
	4.2.2 Checking for Outliers.....	53
4.3	Profiles of the Respondents .....	53
	4.3.1 Demographic Data .....	53
	4.3.2 Perceived Stress Scale.....	56
	4.3.3 Student Stress Survey .....	57
	4.3.4 Acculturative Hassles Scale for Students .....	61
4.4	Reliability Analysis.....	62
4.5	Factor Analysis .....	63
	4.5.1 Kaiser-Meyer-Olkin (KMO) and Bartlett's Test .....	63
	4.5.2 Scree Plot .....	64
	4.5.3 Exploratory Factor Analysis .....	65

4.6	Correlation Analysis .....	71
4.7	Multiple Regression Analysis .....	73
4.8	Student Stress Status .....	75
4.9	Chapter Summary .....	76
<b>CHAPTER 5</b>	<b>DISCUSSION, CONCLUSION AND</b>	
	<b>RECOMMENDATION .....</b>	<b>77</b>
5.0	Introduction.....	77
5.1	Discussion .....	77
5.2	Conclusion .....	85
5.3	Limitation and Recommendation for Further Research.....	87
<b>REFERENCES</b>	.....	<b>88</b>
<b>APPENDICES</b>	.....	<b>109</b>



## LIST OF TABLES

Table 3.1	Rules of thumb for the strength of Cronbach’s alpha .....	48
Table 3.2	Rules of thumb for the strength of correlation coefficients .....	50
Table 4.1	Demographic data .....	55
Table 4.2	Perceived stress scale (PSS): Stress (S) .....	56
Table 4.3	Student stress survey (SSS): Interpersonal sources (IP) .....	57
Table 4.4	Student stress survey (SSS): Intrapersonal sources (IRP) .....	58
Table 4.5	Student stress survey (SSS): Academic sources (A).....	59
Table 4.6	Student stress survey (SSS): Environmental sources (E) .....	60
Table 4.7	Acculturative hassles scale for students (AHSS): Language sources (L) .....	61
Table 4.8	Reliability test .....	63
Table 4.9	Kaiser-Meyer-Olkin (KMO) and Bartlett's test .....	64
Table 4.10	Factor analysis results for stress .....	66
Table 4.11	Factor analysis results for interpersonal.....	67
Table 4.12	Factor analysis results for intrapersonal.....	68
Table 4.13	Factor analysis results for academic .....	69
Table 4.14	Factor analysis results for environment .....	69
Table 4.15	Factor analysis results for language .....	70
Table 4.16	The Pearson coefficient correlation test.....	72
Table 4.17	Multiple regression analysis .....	74
Table 4.18	Summary of the hypothesis testing .....	75
Table 4.19	Prevalence rate of student stress .....	75

## LIST OF FIGURES

Figure 3.1	The flow chart of research methodology design.....	34
Figure 3.2	Theoretical framework of analysing sources of stress among business students: evidence from UUM .....	35
Figure 3.3	The methodology design of Perceived Stress Scale, Student Stress Survey and Acculturative Hassles Scale for Students .....	46
Figure 4.1	Scree plot measurement of student stress .....	65

## LIST OF APPENDICES

Appendix A	Set of questionnaires .....	109
Appendix B	Missing data .....	113
Appendix C	Outliers assessment .....	114
Appendix D	Result of data .....	115
Appendix E	Reliability.....	119
Appendix F	Factor analysis .....	125
Appendix G	Pearson coefficient correlation test.....	127
Appendix H	Multiple regression analysis .....	128

## **LIST OF ABBREVIATIONS**

UUM	Universiti Utara Malaysia
APEX	Accelerated Programme for Excellence
DAS	Depression, Anxiety and Stress
MPP	Students Representative Council
PSS	Perceived Stress Scale
SSS	Student Stress Survey
AHSS	Acculturative Hassles Scale for Students
ASSS	Acculturative Stressor Scale for Students
SPSS	Statistical Packages for Social Science
KMO	Kaiser-Meyer-Olkin
Phd	Doctor of Philosophy
H	Hypothesis
S	Stress
IP	Interpersonal
IRP	Intrapersonal
A	Academic
E	Environment
L	Language
r	Correlation Value
p	Significant Value

# CHAPTER 1

## INTRODUCTION

### 1.0 Introduction

The feeling of pressure, or more commonly known as stress, is not a new phenomenon in this competitive world. It is an intangible material. It will affect the person's state of mind unconsciously. We know the life to be a student is exciting. But it can also be very stressful and tensional. This is because there are so many things that need to achieve within a period. The student is under mental and emotional strain (Smith & Renk, 2007).

Most of the university students and workers will have a high pressure in any place or territory when they are under this condition. The pressure on the students either in academic or social cannot seem to bear especially for those who are nervous or lack confidence. Unfortunately, this had caused a high rate of student committing suicide. And, it is still on an increasing number until today (Chok, 2013). It is important for the students to seek for help before their problems become insurmountable. During the years of their university life, students should try to determine their health and seek for helps to solve the problem on their psychological, physiological and emotional matters (Arthur, 1998).

It cannot be denied that stress is a part of the daily life to every student. As a university student, the biggest sources of the pressure tend to be relationships,

The contents of  
the thesis is for  
internal user  
only

## REFERENCES

- Aanes, M., Mittlemark, M., & Hetland, J. (2010). Interpersonal stress and poor health. *European Psychologist, 15*, 3-11.
- Abdulghani, H. M. (2008). Stress and depression among medical students: A cross sectional study at a medical college in Saudi Arabia. *Journal of Medical Sciences, 24*(1), 12-17.
- Abe, J., Talbot, D. M., & Geelhoed, R. J. (1998). Effects of a peer program on international student adjustment. *Journal of College Student Development, 39*, 539-547.
- Abouserie, R. (1994). Sources and levels of stress in relation to locus of control and self-esteem in university students. *Educational Psychology, 14*(3), 323-330.
- Ah, E. S., Ngamvitroj, A., Park, N., & Kang, D. H. (2004). Predictions of health behaviours in college students. *Journal of Advance Nursing, 48*, 463-474.
- Ahern, N. R., & Norris, A. E. (2011). Examining factors that increase and decrease stress in adolescent community college students. *Journal of Pediatric Nursing, 26*(6), 530-540.
- Aktekin, M., Karaman, T., Yesim, Y. S., Erdem, S., Erengin, H., & Akaydin, M. (2001). Anxiety, depression and stressful life events among medical students: A prospective study in Antalya, Turkey. *Medical Education, 35*(1), 12-17.
- Allcock, D. (1996). *Time and workload management*. Petaling Jaya: Pelanduk Publication.

- Alginahi, Y. M., Ahmed, M., Tayan, O., Siddiqi, A. A., Sharif, L., Alharby, A., & Nour, R. (2009). ICT students, stress and coping strategies: English perspective a case study of Midsize Middle Eastern University. *TRIM*, 5(2), 111-127.
- Allender, S., Hutchinson, F. L., & Foster, C. (2008). Life-change events and participation in physical activity: A systematic review. *Health Promotion International*, 23, 160-172.
- Andrews, B., & Hejdenberg, J. (2007). Stress in university students. *Encyclopedia of Stress*, 2, 612-614.
- Arkoff, A. (1968). *Adjustment and mental health*. New York: McGraw-Hill.
- Arthur, N. (1998). The effects of stress, depression, and anxiety on postsecondary students' coping strategies. *Journal of College Student Development*, 39(1), 11-22.
- Bagana, E., Raci, A., & Lupu, L. (2011). Self esteem, optimism and exams' anxiety among high school students. *Procedia - Social and Behavioural Sciences*, 30, 1331-1338.
- Bandura, A. (1986). *Social foundation of thought and action: A social cognitive theory*. Englewood Cliffs: Prentice Hall.
- Bartlett, E. J., Kotrlik, W. J., & Higgins, C. C. (2001). Organizational research: Determining appropriate sample size in survey research. *Information Technology, Learning and Performance Journal*, 19(1), 43-50.
- Bedeian, A. G., & Mossholder, K. W. (1994). Simple question, not so simple answer: Interpreting interaction terms in moderated multiple regression. *Journal of Management*, 20(1), 159-165.



- Berry, J. W. (1990). *Psychology of acculturation: Nebraska symposium on motivation*. Nebraska: University of Nebraska Press.
- Berry, J. W. (1997). Immigrants, acculturation and adaptation. *Applied Psychology: An International Review*, 46(1), 5-33.
- Berry, J. W., & Annis, R. C. (1974). Acculturative stress. *Journal of Cross-Cultural Psychology*, 5, 382-405.
- Berry, J. W., Kim, U., Minde, T., & Mok, D. (1987). Comparative studies of acculturative stress. *International Migration Review*, 21, 491-511.
- Blanchard, C., Fisher, J., Sparling, P., Nehl, E., Rhodes, R., Courneya, K., & Baker, F. (2008). Understanding physical activity behaviour in African American and Caucasian college students: An application of the theory of planned behaviour. *Journal of American College Health*, 56, 341-346.
- Bois, C. D. (1956). *Foreign students and higher education in the United States*. Washington: American Council on Education.
- Brown, M., & Ralph, S. (1999). Using the DYSA programme to reduce stress and anxiety in first-year university students. *Pastoral Care*, 17(3), 8-13.
- Burchard, E. G., Ziv, E., Coyle, N., Gomez, S. L., Tang, H., Karter, A. J., Mountain, J. L., Pérez-Stable, E. J., Sheppard, D., & Risch, N. (2003). The importance of race and ethnic background in biomedical research and clinical practice. *The New England Journal of Medicine*, 348(12), 1170-1175.
- Burns, J. M., Andrews, G., & Szabo, M. (2002). Depression in young people: What cause it and can we prevent it? *The Medical journal of Australia*, 177, 93-96.

- Burnard, P., Hajah, T. B. H. A. R., Hayesb, D., & Edwardsa, D. (2007). A descriptive study of Bruneian student nurses' perceptions of stress. *Nurse Education Today*, 27(7), 808-818.
- Busari, A. O. (2012). Identifying difference in perceptions of academic stress and reaction to stressors based on gender among first year university students. *International Journal of Humanities and Social Science*, 2(14), 138-146.
- Bush, H. S., Thompson, M., & Van Tuvergen, N. (1985). Personal assessment of stress factors for college students. *Journal of School Health*, 55(9), 370-375.
- Butler, S. M. (2004). Change in diet, physical activity and body weight in female college freshman. *American Journal of Health Behaviour*, 28, 24-32.
- Can, S. (2010). Organizational stressors for the students teachers in state universities. *Procedia Social and Behavioural Sciences*, 2, 4853-4857.
- Carballo, M. (1994). *Scientific consultation on the social and health impact of migration: Priorities for research*. Geneva: International Organization for Migration.
- Cardwell, M. (2009). *Daily hassles: A major source of stress? Stress research has tended to focus on the impact of major life events on individuals, but for most of us it is more our experience of day-to-day irritations that determines our psychological wellbeing. Mike Cardwell examines the impact of daily hassles as significant sources of stress.* Retrieved from <http://business.highbeam.com/437093/article-1G1-209042690/daily-hassles-major-source-stress-stress-research-has>.
- Cattell, R. B. (1966). The scree test for the number of factors. *Multivariate Behavioral Research*, 1, 629-637.

- Cavana, R., Delahaya, B. L. & Sekaran, U. (2001). *Applied business research: Qualitative and quantitative method*. Queensland: John Wiley & Sons Ltd.
- Centers for Disease Control and Prevention. (2010). *Physical activity guidelines*. Retrieved from <http://www.cdc.gov/physicalactivity/index.html>
- Chan, G. C., & Koh, D. (2007). Understanding the psychosocial and physical work environment in a Singapore medical school. *Singapore Medical Journal*, 48(2), 166-171.
- Chan, R. M. C. (2002). *Acculturation of young new arrivals from mainland China to Hong Kong*. Hong Kong: Aberdeen Kai-fong Welfare Association Social Service Centre.
- Chan, S., & Leong, C. W. (1994). Chinese families in transition: Cultural conflicts and adjustment problems. *Journal of Social Distress and the Homeless*, 3, 263-281.
- Chiu, Y. W., & Ring, J. M. (1998). Chinese and Vietnamese immigrant adolescents under pressure: Identifying stressors and interventions. *Professional Psychology: Research and Practice*, 29(5), 444-449.
- Chok, S. L. (2013, September 5). Teachers, students face stress. *New Straits Times*. Retrieved from <http://www.nst.com.my/opinion/letters-to-the-editor/teachers-students-face-stress-1.349481>.
- Chung, D. K. (1992). *Asian cultural commonalities: A comparison with mainstream America culture*. Thousand Oaks: Sage.
- Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behaviour*, 24, 385-396.

- Cohen, S., & Williamson, G. (1988). Perceived stress in a probability sample of the United States. In S. Spacapan & S. Oskamp (Eds.) *The social psychology of health: Claremont Symposium on applied social psychology*. Newbury Park: Sage.
- Constantine, M. G., Okazaki, S., & Utsey, S. O. (2004). Self-concealment, social self-efficacy, acculturative stress, and depression in African, Asian, and Latin American international college students. *American Journal of Orthopsychiatry*, 74, 230-241.
- Cortina, J. M. (1993). What is coefficient alpha? An examination of theory and applications. *Journal of Applied Psychology*, 78, 98-104.
- Costello, A. B., & Osborne, J. W. (2005). Best practices in exploratory factor analysis: Four recommendations for getting the most from your analysis. *Practical Assessment, Research & Evaluation*, 10(7), 1-9.
- Dahlin, M. (2007). *Future doctor; Mental distress during medical education: Cross-sectional and longitudinal studies*. Doctoral dissertation, Clinical Neuroscience, Division of psychiatry St. Goran, Karilinska Institute.
- Dahlin, M., Joneborg, N., & Runeson, B. (2005). Stress and depression among medical students: A cross-sectional study. *Medical Education*, 39(6), 594-604.
- Daly, M. G., & Willcock, M. (2002). Examining stress and responses to stress in medical students and new medical graduates. *Medical Journal of Australia*, 177, 14-15.
- Dancey, C., & Reidy, J. (2004). *Statistics without maths for psychology: Using SPSS for Windows*. London: Prentice Hall.

- Dao, T. K., Lee, D., & Chang, H. L. (2007). Acculturation level, perceived English fluency, perceived social support level and depression among Taiwanese international students. *College Student Journal*, 41(2), 287-295.
- Darling, C. A., McWey, L. M., Howard, S. N., & Olmstead, S. B. (2007). College student stress: The influence of interpersonal relationships on sense of coherence. *Stress and Health*, 23(4), 215–229.
- Economos, C., Hildebrant, L., & Hyatt, R. (2008). College freshman stress and weight change: Differences by gender. *American Journal of Health Behaviour*, 32, 16-25.
- Edward, A. (2011, October 6). Train students to manage stress. *The Star*. Retrieved from <http://www.thestar.com.my/story.aspx?file=%2f2011%2f10%2f6%2fnation%2f9642041&sec=nation>
- Elias, H., Wong, S. P., & Maria, C. A. (2011). Stress and academic achievement among undergraduate students in Universiti Putra Malaysia. *Social and Behavioral Sciences*, 29, 646-655.
- Elmagarmid, A. K., Ipeirotis, P. G., & Verykios, V. S. (2007). Duplicate record detection: A survey. *IEEE Transactions on Knowledge and Data Engineering*, 19(1), 1-16.
- Evans, W., & Kelly, B. (2004). Pre-registration diploma student nurse stress and coping measures. *Nurse Education Today*, 24(6), 473-482.
- Field, A. (2009). *Discovering statistics using SPSS*. Sage: Los Angeles.
- Finlay-Jones, R. A., & Burvill, P. W. (1977). The prevalence of minor psychiatric morbidity in the community. *Psychological Medicine*, 7(3), 475-489.

- Firth, J. (1986). Levels and sources of stress in medical students. *British Medical Journal*, 292, 1177-1180.
- Firth-Cozens, J. (1987). Emotional distress in junior house officers. *British Medical Journal*, 295, 533-536.
- Folse, M. L., Darosa, D. A., & Folse, R. (1985). The relationship between stress and attitudes towards leisure among first year medical students. *Journal of Medical Education*, 60, 610-617.
- Frey, L. L., & Roysircar, G. (2006). South Asian and East Asian international students' perceived prejudice, acculturation and frequency of help resource utilization. *Journal of Multicultural Counselling and Development*, 34, 208-222.
- Gadzella, B. M., Masten, W. G., & Stacks, J. (1998). Students' stress and their learning strategies, test anxiety and attributions. *College Student Journal*, 32(3), 416-423.
- Gall, T. L., Evans, D. R., & Bellerose, S. (2000). Transition to first-year university: Patterns of change in adjustment across life domains and time. *Journal of Social and Clinical Psychology*, 19(4), 544-567.
- Gan, W. Y., Nasir, M., Zalilah, M. S., & Hazizi, A. S. (2011). Disordered eating behaviours, depression, anxiety and stress among Malaysian university students. *College Student Journal*, 45(2), 296-309.
- George, D., & Mallery, P. (2003). *SPSS for windows step by step: A simple guide and reference (4th ed.)*. Boston: Allyn & Bacon.
- Gibbons, C., Dempster, M., & Moutray, M. (2009). Surveying nursing students on their sources of stress: A validation study. *Nurse Education Today*, 29(8), 867-872.

- Grava-Gubins, I., & Scott, S. (2008). Effects of various methodological strategies: Survey response rates among Canadian physicians and physicians-in-training. *Canadian Family Physician, 54*(10), 1424-1430.
- Halamandaris, K. F., & Power, K. G. (1999). Individual differences, social support and coping with the examination stress: A study of the psychosocial and academic adjustment of first year home students. *Journal of Personality and Individual Differences, 26*(4), 665-685.
- Hair, J. F., Black, W. C., Babin, B. J., Andersen, R. E., & Tatham, R. L. (2010). *Multivariate data analysis* (7th ed.). Upper Saddle River: Pearson Prentice Hall.
- Hair, J. F., Bush, R. P., & Ortinau, D. J. (2009). *Marketing research: In a digital information environment* (4th ed.). Boston: McGraw-Hill.
- Hardy, L. (2003). Helping students de-stress. *Education Digest, 68*(9), 10-17.
- Hargrove, M. B., Nelson, D. L., & Cooper, C. L. (2013). Generating eustress by challenging employees: Helping people savor their work. *Organizational Dynamics, 42*, 61-69.
- Harvey, L., Drew, S., & Smith, M (2006). *The first year experience: A review of literature for the higher education academy*. New York: The Higher Education Academy.
- Hovey, J. D., Kim, S. E., & Seligman, L. D. (2006). The influences of cultural values, ethnic identity, and language use on the mental health of Korean college students. *Journal of Psychology, 140*, 499-511.
- Hudd, S., Dumlao, J., Erdmann-Sager, D., Murray, D., Phan, E., Soukas, N., & Yokozuku, N. (2000). Stress at college: Effects on health habits, health status and self-esteem. *Yale University College Journal, 34*, 217-228.

- Hughes, B. M. (2005). Study, examinations, and stress: Blood pressure assessments in college students. *Educational Review*, 57(1) 78-90.
- Imberti, P. (2007). Who resides behind the words? Exploring and understanding the language experience of the non-English speaking immigrant. *Families in Society*, 88(1), 67-73.
- Insel, P., & Roth, W. (1985). *Core concepts in health (4th ed.)*. Palo Alto: Mayfield Publishing Co.
- Institute for Public Health. (2008). *The third national health and morbidity survey (NHMS III) 2006*. Putrajaya: Ministry of Health.
- James, D. C. S. (1997). Coping with a new society: The unique psychological problems of immigrant youth. *Journal of School Health*, 67(3), 98-102.
- Jarrell, M. G. (1994). A comparison of two procedures, the Mahalanobis distance and the Andrews-Pregibon statistic, for identifying multivariate outliers. *Research in the Schools*, 1, 49-58.
- Joiner, J. T. E., & Walker, R. L. (2002). Construct validity of a measure of acculturative stress in African Americans. *Psychological Assessment*, 14, 462-466.
- Kaiser, H. F. (1960). The application of electronic computers to factor analysis. *Educational and Psychological Measurement*, 20, 141-151.
- Kaiser, H. F. (1974). An index of factorial simplicity. *Psychometrika*, 39, 31-36.
- Khadijah, S., Fariza, F., Wan, S. W. I., Shamsul, A. S., Khairani, O., Noor, A. M., Aida, J., Aniza, I., & Raynuha, M. (2013). Correlates of depression, anxiety and stress among Malaysian university students. *Asian Journal of Psychiatry*, 6(4), 318-323.



- Ko, S. M., Kua, E. H., & Fones, C. S. L. (1999). Stress and the undergraduates. *Singapore Medical Journal*, 40(10), 627-630.
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30, 607-610.
- Kuo, B. C. H., & Roysircar, G. (2004). Predictors of acculturation for Chinese adolescents in Canada: Age of arrival, length of stay, social class and English reading ability. *Journal of Multicultural Counselling and Development*, 32, 143-154.
- Largo-Wight, E., Peterson, M., & Chen, W. (2005). Perceived problem solving, stress, and health among college students. *American Journal of Health Behaviour*, 29, 360-370.
- Laska, M. N., Larson, N. I., Neumark-Sztainer, D., & Story, M. (2010). Dietary patterns and home availability during emerging adulthood: Do they differ by living situation? *Public Health Nutrition*, 13, 222-228.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal and coping*. New York: Springer.
- Lee, J., & Graham, A. V. (2001). Students' perceptions of medical school stress and their evaluation of a wellness elective. *Medical Education*, 35, 652-659.
- Lee, L. T. (2014, January 8). Mental health: Students need help to cope with mental stress, says survey. *New Straits Times*. Retrieved from <http://www.nst.com.my/opinion/letters-to-the-editor/mental-health-students-need-help-to-cope-with-mental-stress-says-survey-1.457309>.

- Lee, S., & Bradley, K. D. (2005). Relation between general self-efficacy, assertiveness, spirituality, and acculturative stress among international students. Paper presented at the Mid-Western Educational Research Association annual meeting, Columbus, OH.
- Li, G., Chen, W., & Duanmu, J. L. (2010). Determinants of international students' academic performance: A comparison between Chinese and other international students. *Journal of Studies in International Education, 14*(4), 389-405.
- Liew, Y. Y., & Muhamad, S. B. Y. (2013). Prevalence and sources of stress among medical students in Universiti Sains Malaysia and Universiteit Maastricht. *Education in Medicine Journal, 5*(4), 34-41.
- Lin, M. C., Endler, N. S., & Kocovski, N. L. (2001). State and trait anxiety: A cross-cultural comparison of Chinese and Caucasian students in Canada. *Current Psychology: Developmental, Learning, Personality, Social, 20*, 95-111.
- Lin, S., & Betz, N. E. (2009). Factors related to the social self-efficacy of Chinese international students. *The Counselling Psychologist, 37*(3), 451-471.
- Linn, B. S., & Zeppa, R. (1984). Stress in junior medical students: Relationship to personality and performance. *Journal of Medical Education, 59*, 7-12.
- Liu, M. (2009). Addressing the mental health problems of Chinese international college students in the United States. *Advances in Social Work, 10*(1), 69-86.
- Macan, T. H., Shahani, C, Dipboye, R. L., & Phillips, A. P. (1990). College student' time management: Correlations with academic performance and stress. *Journal of Educational Psychology, 82*, 760-768.
- Mahmud, Z., Ishak, N. M., & Syafril, S. (2004). Penyesuaian akademik, sosial, dan emosi pelajar-pelajar di kampus. *Jurnal Personalia Pelajar, 8*, 1-16.

- Maki, M. T., & Kitano, H. H. L. (2002). *Counselling Asian Americans*. Thousand Oaks: Sage.
- Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion and motivation. *Psychological Review*, 98, 224-253.
- McArthur, L. H., & Raedeke, T. D. (2009). Race and sex differences in college student physical activity correlates. *American Journal of Health Behaviour*, 33(1), 80-90.
- Md, A. S. M. Y., & Mariam A. W. D. (2011). Differences in depression, anxiety and stress between low- and high-achieving students. *Journal of Sustainability Science and Management*, 6(1), 169-178.
- Mechanic, D. (1978). *Students under stress: A study in the social psychology of adaptation*. London: University of Wisconsin Press.
- Ministry of Education. (2000). *Greater autonomy for NUS and NTU, along with greater accountability*. Singapore: Ministry of Education.
- Misra, R., Crist, M., and 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, 137-157.
- Misra, R., McKean, M., West, S., & Russo, T. (2000). Academic stress of college students: Comparison of student and faculty perceptions. *College Student Journal*, 34(2), 236-245.
- Moberg, G. P. (1999). When does stress become distress? *Lab Animal*, 28(4), 422-426.
- Mori, S. C. (2000). Addressing the mental health concerns of international students. *Journal of Counselling and Development*, 78, 137-144.

- Morni, F., Muhamad, S. A. T., Kamaruzaman, J., & Fatimah, B. (2009). APEX university: Is it the Malaysian way forward. *International Conference on Computer Technology and Development*, 2, 523-526.
- Muhamad, S. B. Y., Ahmad, F. A. R., & Mohd, J. Y. (2010). Prevalence and sources of stress among Universiti Sains Malaysia medical students. *Malaysian Journal Medical Science*, 17(1), 30-37.
- Muhaya, M. (2012). *Pelajar bertanya Prof. Dr. Muhaya menjawab*. Batu Caves: Pts Millennia Sdn Bhd.
- Mullen, K. D., & Costello, G. (1981). *Health awareness through self-discovery: A workbook*. Minneapolis: Burgess Pub.
- National Research Council. (2003). *Guidelines for the care and use of mammals in neuroscience and behavioural research*. Washington: The National Academies Press.
- Nguyen-Michel, S. T., Unger, J. B., Hamilton, J., & Spruijt-Metz, D. (2006). Associations between physical activity and perceived stress hassles in college students. *Stress & Health*, 22, 179-188.
- Nonis, S. A., Hudson, G. I., Logan, L. B., & Ford, C. W. (1998). Influence of perceived control over time on college students' stress and stress-related outcomes. *Research in Higher Education*, 39(5), 587-605.
- Nor, F. I., & Abdul, M. B. (2012). An empirical study of stressors among Multimedia University students: A case of MMU Malacca campus. *IBIMA Business Review*, 2012, 1-10.
- O'Connor, B. P. (2000). SPS, SAS, and MATLAB programs for determining the number of components using parallel analysis and Velicer's MAP test. *Behavior Research Methods, Instruments and Computers*, 32, 396-402.

- Orr, J. M., Sackett, P. R., & DuBois, C. L. Z. (1991). Outlier detection and treatment in I/O psychology: A survey of researcher beliefs and an empirical illustration. *Personnel Psychology, 44*, 473-486.
- Osborne, J. W., & Overbay, A. (2004). The power of outliers and why researchers should always check for them. *Practical Assessment, Research & Evaluation, 9*(6), 1-12.
- Oswalt, S., & Riddock, C. (2007). What to do about being overwhelmed: Graduate students, stress and university services. *College Student Affairs Journal, 27*(1), 24-44.
- Padilla, A. M., Alvarez, M., & Lindholm, K. J. (1985). Generational status and personality factors as predictors of stress in students. *Hispanic Journal of Behavioural Science, 8*, 275-288.
- Pallant, J. (2005). *SPSS survival manual: A step by step guide to data analysis using SPSS for Windows (Version 12)*. Sydney: Allen & Unwin.
- Pan, J. Y., Wong, D. F. K., Joubert, L., & Chan, C. L. W. (2008). The protective function of meaning of life on life satisfaction among Chinese students in Australia and Hong Kong: A cross-cultural comparative study. *Journal of American College Health, 57*(2), 221-231.
- Pan, J. Y., Yue, X., & 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.
- Patton, M. Q. (1980). *Qualitative Evaluation Methods*. Thousand Oaks: Sage Publications, Inc.

- Perez, M., Voelz, Z. R., Pettit, J. W., & Joiner, T. (2002). The role of acculturative stress and body dissatisfaction in predicting bulimic symptomatology across ethnic groups. *International Journal of Eating Disorders, 31*, 442-452.
- Phinney, J. S. (1992). The multigroup ethnic identity measure a new scale for use with diverse groups. *Journal of Adolescent Research, 7*(2), 156-176.
- Pierce, L. L. (2009). Twelve steps for success in the nursing research journey. *Journal of Continuing Education in Nursing, 40*(4), 154-162.
- Pinsonneault, A., & Kraemer, K. L. (1993). Survey research methodology in management information systems: An assessment. *Journal of Management Information Systems, 10*(2), 75-105.
- Pomerantz, E. M., Altermatt, E. R., & Saxon, J. L. (2002). Making the grade but feeling distressed: Gender differences in academic performance and internal distress. *Journal of Educational Psychology, 94*, 396-404.
- Poyrazli, S., Arbona, C., Nora, A., McPherson, R., & Pisecco, S. (2002). Relation between assertiveness, academic self-efficacy, and psychosocial adjustment among international graduate students. *Journal of College Student Development, 43*(5), 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 Counselling, 7*, 73-82.
- Pulido-Martos, M., Augusto-Landa, J. M., & Lopez-Zafra, E. (2012). Sources of stress in nursing students: A systematic review of quantitative studies. *International Nursing Review, 59*, 15-25.
- Radcliffe, C., & Lester, H. (2003). Perceived stress during undergraduate medical training: A qualitative study. *Medical Education, 37*(32), 32-38.

- Redhwan, A. A. N., Sami, A. R., Karim, A. J., Chan, R., & Zaleha, M. I. (2009). Stress and coping strategies among Management and Science University students: A qualitative study. *International Medical Journal*, 8(2), 11-16.
- Redwood, S. K., & Pollak, M. H. (2007). Student led stress management programme for first year medical students. *Teaching and Learning in Medicine*, 19(1), 42-46.
- Reisberg, L. (2000). Student stress is rising, especially among young women. *Chronicle of Higher Education*, 46(21), 49-50.
- Ross, S. E., Niebling, B. C., & Heckert, T. M. (2008). Sources of stress among college students. *College Student Journal*, 33(2), 312-318.
- Ryan, M. (2008). The antidepressant effects of physical activity. *Psychology & Health*, 23, 279-307.
- Sahari, S. H., Yusup, M. Y., & Awang, R. A. S. (2012). Part-time adults students in Sarawak and environmental stress factors. *Journal of Asian Behavioural Studies*, 2(7), 47-57.
- Sami, A. R. A. D., Redhwan, A. A. N., Mustafa, A. A., & Krishna, G. R. (2011). Stress and coping strategies of students in a medical faculty in Malaysia. *Malaysian Journal Medical Science*, 18(3), 57-64.
- Sandhu, D. S. (1994). An examination of the psychological needs of the international students: Implications for counselling and psychotherapy. *International Journal for the Advancement of Counselling*, 17, 229-239.
- Schafer, W. (1996). *Stress management for wellness*. Fort Worth: Harcourt Brace College Publishers.

- Schwarzer, R., & Jerusalem, M. (1995). *Generalized self-efficacy scale*. Windsor: NFER-NELSON.
- Sekaran, U., & Bougie, R. (2010). *Research methods for business: A skill building approach (5th ed.)*. New York: John Wiley & Sons, Inc.
- Seyedfatemi, N., Tafreshi, M., & Hagani, H. (2007). Experienced stressors and coping strategies among Iranian nursing students. *BMC Nursing*, 6, 11.
- Shaikh, B. T., Kahloon, A., Kazmi, M., Khalid, H., Nawaz, K., Khan, N., & Khan, S. (2004). Students, stress and coping strategies: A case of Pakistani medical school. *Educational Health (Abingdon)*, 17(3), 346-353.
- Shen, B. J., & Takeuchi, D. T. (2001). A structural model of acculturation and mental health status among Chinese Americans. *American Journal of Community Psychology*, 29(3), 387-418.
- Sherina, M. S., Rampal, L., & Kaneson, N. (2004). Psychological stress among undergraduate medical students. *Medical Journal of Malaysia*, 59(2), 207-211.
- Siti, H. S., Yusup, M. Y., & Awang-Rozaimie, A. (2012). Environmental stress among part time students in Sarawak. *Social and Behavioural Sciences*, 36, 96-102.
- Smith, T., & Renk, K. (2007). Predictors of academic-related stress in college students: An examination of coping, social support, parenting, and anxiety. *NASPA Journal*, 44(3), 405-431.
- Soliman, M. (2014). Perception of stress and coping strategies by medical students at King Saud University, Riyadh, Saudi Arabia. *Journal of Taibah University Medical Sciences*, 9(1), 30-35.
- Spielberger, C. D. (1979). *Understanding stress and anxiety*. New York: Harper.



- Student Affairs Department. (2012a). *Mind management workshop*. Retrieved from <http://about.hepauum.org/index.php/en/UUM/about/index.php/en/item/141-mind-management-workshop-15-mei-2012-bukit-kachi>.
- Student Affairs Department. (2012b). *Program teknik belajar berkesan*. Retrieved from <http://about.hepauum.org/index.php/en/UUM/about/index.php/en/item/146-program-teknik-belajar-berkesan-27-april-2012>.
- Students Health Services. (2012). *College and homesickness*. Columbus: The Ohio State University.
- Tabachnick, B. G., & Fidell, L. S. (2001). *Using Multivariate Statistics*. Boston: Allyn and Bacon.
- Towbes, L. C, & Cohen, L. H. (1996). Chronic stress in the lives of college students: Scale development and prospective prediction of stress. *Journal of Youth and Adolescence*, 25, 199-217.
- Tyssen, R., Vaglum, P., Gronvold, N. T., & Ekeberg, O. (2001). Suicidal ideation among medical students and young physicians: A nationwide and prospective study of prevalence and predictors. *Journal of Affective Disorders*, 64(1), 69-79.
- Uchino, B. (2004). *Social support and physical health: Understanding the health consequences of relationships*. London: Yale University Press.
- Universiti Utara Malaysia. (2012). *About UUM*. Retrieved from <http://www.uum.org.my/en/about-uum>.
- Upton, G., & Cook, I. (2006). *Oxford dictionary of statistics*. Oxford University Press: Oxford. Vagias, W. M. (2006). *Likert-type scale response anchors*. Retrieved from <http://www.clemson.edu/centers-institutes/tourism/documents/sample-scales.pdf>.

- Viswanath, K., & Bond, V. (2007). Social determinants and nutrition: Reflections on the role of communication. *Nutrition Education and Behaviour*, 39, 11-18.
- Wan, T., Chapman, D. W., & Biggs, D. A. (1992). Academic stress of international students attending U.S. universities. *Research in Higher Education*, 33(5), 607-623.
- Wang, K. T., Slaney, R. B., & Rice, K. G. (2007). Perfectionism in Chinese university students from Taiwan: A study of psychological well-being and achievement motivation. *Personality and Individual Differences*, 42, 1279-1290.
- Watson, R., Dearyb, I., Thompsonc, D., & Li, G. (2008). A study of stress and burnout in nursing students in Hong Kong: A questionnaire survey. *International Journal of Nursing Studies*, 45(10), 1534-1542.
- Weinstein, L., & Laverghetta, A. (2009). College student stress and satisfaction with life. *College Student Journal*, 43, 1161-1162.
- Williams, S. M., Arnold, P. K., & Mills, J. N. (2005). Coping with stress: A survey of Murdoch University veterinary students. *Journal of Veterinary Medical Education*, 32(2), 201-212.
- Wong, J. G. W. S., Cheung, E. P. T., Chan, K. K. C., Ma, K. K. M., & Tang, S. W. (2006). Web-based survey of depression, anxiety and stress in first-year tertiary education students in Hong Kong. *Australian and New Zealand Journal of Psychiatry*, 40(9), 777-782.
- Ying, Y. W., Lee, P. A., & Tsai, J. L. (2007). Attachment, sense of coherence and mental health among Chinese American college students: Variation by migration status. *International Journal of Intercultural Relations*, 31(5), 531-544.

- Yeh, C. J., & Inose, M. (2002). Difficulties and coping strategies of Chinese, Japanese and Korean immigrant students. *Adolescence*, 37(145), 69-82.
- 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, 15-28.
- Zimmerman, D. W. (1994). A note on the influence of outliers on parametric and nonparametric tests. *Journal of General Psychology*, 121(4), 391-401.
- Zuhrin, A. A. (2011, October 6). Many students are depressed. *The Star*. Retrieved from <http://thestar.com.my/news/story.asp?file=/2011/10/6/nation/9640564&sec=nation>.

## **APPENDIX A**

### **SET OF QUESTIONNAIRES**

#### **INFORMED CONSENT LETTER**

Dear Respondent:

I am a master candidate in the College of Business Universiti Utara Malaysia (UUM). I am conducting a study of student stress as part of the requirement for my master degree. The title is Analysing Sources of Stress among Business Students: Evidence from Universiti Utara Malaysia. The objective of this academic research paper is to determine the relationships of UUM students stress based on the selected scales (Acculturative Hassles Scale for Chinese Students, Student Stress Survey and Perceived Stress Scale). The sources of the students' stress will be identified just after the data are analysed. Further in-depth analysis will be used to test the relationships of independent variables and dependent variable.

By doing so, I have a survey that may need your help to assist me. So, I enclose herewith a copy of this letter that consists of questionnaires. All the items are asking about your feelings and thoughts to your study for the whole semester. I would like very much to spend you a little of time to have a look on those questions and fill them up. Your participation is voluntary. Filling in the survey indicates that you have read the information and accept to participate in this study. Your response will be private and confidential.

This survey consists of four parts. Please answer all the parts accordingly by follow the instructions.

Part A: Demographic Data

Part B: Perceived Stress Scale

Part C: Student Stress Survey

Part D: Acculturative Hassles Scale for Chinese Students

Thank you first for spending your precious time and making contribution in completing this survey. I would express my heartfelt gratitude to those supports and encouragements. If you have any queries, please do not hesitate to contact me. I can be reached by sending email to [ongqihong@yahoo.com](mailto:ongqihong@yahoo.com).

Yours Sincerely,

Ong Qi Hong

Part A: Demographic Data

Instruction: Please select the appropriate choice that represents you.

1. Gender:

Male  Female

2. Ethnicity:

Malay  Chinese  Indian  Others

3. Age (years):

≤ 20 years  21-30 years  31-40 years  ≥ 41 years

4. Level of Education:

Diploma  Bachelor's degree  
 Master's degree  Phd.

5. Year of Study:

First year  Second year  
 Third year  Fourth year and above

Part B: Perceived Stress Scale (Cohen et al., 1983)

Instruction: The questions in this scale are asking about the respondent's feelings and thoughts during the last month. In each case, respondent will be asked to indicate by choosing how often a respondent felt or thought a certain way.

1=Never; 2=Rarely; 3=Sometimes; 4=Often; 5=Always (Question 1, 2, 3, 6, 9 & 10)

1=Always; 2=Often; 3=Sometimes; 4=Rarely; 5=Never (Question 4, 5, 7 & 8)

1. In the last month, how often have you been upset because of something that happened unexpectedly? ..... 1 2 3 4 5
2. In the last month, how often have you felt that you were unable to control the important things in your life? ..... 1 2 3 4 5
3. In the last month, how often have you felt nervous and stress? ..... 1 2 3 4 5
4. In the last month, how often have you felt confident about your ability to handle your personal problems? ..... 1 2 3 4 5
5. In the last month, how often have you felt that things were going your way? .....  
..... 1 2 3 4 5
6. In the last month, how often have you found that you could not cope with all the things that you had to do? ..... 1 2 3 4 5
7. In the last month, how often have you been able to control irritations in your life? ..... 1 2 3 4 5
8. In the last month, how often have you felt that you were on top of things? .....  
..... 1 2 3 4 5
9. In the last month, how often have you been angered because of things that were outside of your control? ..... 1 2 3 4 5
10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them? ..... 1 2 3 4 5

Part C: Student Stress Survey (Insel & Roth, 1985)

Instruction: Please select the scale for the following items according to your stress experiences in your study.

1 = Never      2 = Rarely      3 = Sometimes      4 = Often      5 = Always

Items	1	2	3	4	5
1. Finding new friend					
2. Working with un-acquainted people					
3. Roommate's conflict					
4. Change in social activities					
5. Fight with friend					
6. Trouble with parents					
7. New responsibilities					
8. Started college					
9. Change in sleeping habits					
10. Change in eating habits					
11. Outstanding personal achievement					
12. Financial difficulties					
13. Spoke in public					
14. Change in religious beliefs					
15. Minor law violation					
16. Decline in personal health					
17. Held a job					
18. Change in use of alcohol or drugs					
19. Engagement/marriage					
20. Death of a family member					
21. Death of a friend					
22. Severe injury					
23. Increased class workload					
24. Lower grade than anticipated					
25. Change of major					
26. Search for graduate school/job (preparation after graduate)					
27. Missed too many classes					
28. Anticipation of graduation (expectation after graduation)					
29. Serious argument with instructor					
30. Transferred schools					
31. Vacations / breaks (no vacations/breaks or it was too short or not enough)					
32. Waited in long line					
33. Placed in unfamiliar situation					
34. Change in living environment					
35. Car trouble					
36. Computer problems					
37. Messy living conditions					
38. Put on hold for extended period of time (waiting for something for uncertainty time)					

39. Quit job					
40. Divorce between parents					

Part D: Acculturative Hassles Scale for Students (Pan et al., 2010)

Instruction: Please select the scale for the following items according to your stress experiences in your study.

1 = Never      2 = Rarely      3 = Sometimes      4 = Often      5 = Always

<b>Items</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1. I am not able to express my ideas in English fluently					
2. I am not use to the English way of thinking					
3. I do not dare to speak English in class and seminar					
4. I do not have a sufficient English vocabulary					

## APPENDIX B

### MISSING DATA

*Table 1 Stress statistics*

	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10
N Valid	377	377	377	377	377	377	377	377	377	377
Missing	0	0	0	0	0	0	0	0	0	0

*Table 2 Interpersonal statistics*

	IP1	IP2	IP3	IP4	IP5	IP6
N Valid	377	377	377	377	377	377
Missing	0	0	0	0	0	0

*Table 3 Intrapersonal statistics*

	IRP 1	IRP 2	IRP 3	IRP 4	IRP 5	IRP 6	IRP 7	IRP 8	IRP 9	IRP 10	IRP 11	IRP 12	IRP 13	IRP 14	IRP 15	IRP 16
N Valid	377	377	377	377	377	377	377	377	377	377	377	377	377	377	377	377
Missing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

*Table 4 Academic statistics*

	A1	A2	A3	A4	A5	A6	A7	A8
N Valid	377	377	377	377	377	377	377	377
Missing	0	0	0	0	0	0	0	0

*Table 5 Environmental statistics*

	E1	E2	E3	E4	E5	E6	E7	E8	E9	E10
N Valid	377	377	377	377	377	377	377	377	377	377
Missing	0	0	0	0	0	0	0	0	0	0

*Table 6 Language statistics*

	L1	L2	L3	L4
N Valid	377	377	377	377
Missing	0	0	0	0





## APPENDIX D

### RESULT OF DATA

*Table 1 Gender*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	126	33.4	33.4	33.4
	Female	251	66.6	66.6	100.0
	Total	377	100.0	100.0	

*Table 2 Ethnicity*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Malay	187	49.6	49.6	49.6
	Chinese	179	47.5	47.5	97.1
	Indian	6	1.6	1.6	98.7
	Others	5	1.3	1.3	100.0
	Total	377	100.0	100.0	

*Table 3 Age*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	≤ 20 years	24	6.4	6.4	6.4
	21-30 years	327	86.7	86.7	93.1
	31-40 years	18	4.8	4.8	97.9
	≥ 41 years	8	2.1	2.1	100.0
	Total	377	100.0	100.0	

*Table 4 Level of education*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Diploma	6	1.6	1.6	1.6
	Bachelor's degree	311	82.5	82.5	84.1
	Master's degree	52	13.8	13.8	97.9
	Phd.	8	2.1	2.1	100.0
	Total	377	100.0	100.0	

*Table 5 Year of study*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	First year	44	11.7	11.7	11.7
	Second year	149	39.5	39.5	51.2
	Third year	137	36.3	36.3	87.5
	Fourth year and above	47	12.5	12.5	100.0
	Total	377	100.0	100.0	

*Table 6 Perceived stress scale: Stress*

Item	N	Minimum	Maximum	Mean	Std. Deviation
S1. In the last month, how often have you been upset because of something that happened unexpectedly?	377	1	5	3.35	.812
S2. In the last month, how often have you felt that you were unable to control the important things in your life?	377	1	5	3.25	.842
S3. In the last month, how often have you felt nervous and stress?	377	1	5	3.79	.882
S4. In the last month, how often have you felt confident about your ability to handle your personal problems?	377	1	5	3.15	.849
S5. In the last month, how often have you felt that things were going your way?	377	1	5	3.06	.776
S6. In the last month, how often have you found that you could not cope with all the things that you had to do?	377	1	5	3.17	.804
S7. In the last month, how often have you been able to control irritations in your life?	377	1	5	3.36	.671
S8. In the last month, how often have you felt that you were on top of things?	377	1	5	3.42	.680
S9. In the last month, how often have you been angered because of things that were outside of your control?	377	1	5	3.26	.927
S10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?	377	1	5	3.19	.853
Valid N (listwise)	377				

*Table 7 Student stress survey: Interpersonal*

	N	Minimum	Maximum	Mean	Std. Deviation
IP1. Finding new friend	377	1	5	3.15	.655
IP2. Working with un-acquainted people	377	1	5	3.18	.759
IP3. Roommate's conflict	377	1	5	3.23	.749
IP4. Change in social activities	377	1	5	3.24	.810
IP5. Fight with friend	377	1	5	3.05	.888
IP6. Trouble with parents	377	1	5	2.99	.895
Valid N (listwise)	377				

*Table 8 Student stress survey: Intrapersonal*

	N	Minimum	Maximum	Mean	Std. Deviation
IRP1. New responsibilities	377	1	5	3.55	.760
IRP2. Started college	377	1	5	3.41	.804
IRP3. Change in sleeping habits	377	1	5	3.25	.811
IRP4. Change in eating habits	377	1	5	3.17	.836
IRP5. Outstanding personal achievement	377	1	5	3.47	.881
IRP6. Financial difficulties	377	1	5	3.35	.905
IRP7. Spoke in public	377	1	5	3.50	.755
IRP8. Change in religious beliefs	377	1	5	2.09	.979
IRP9. Minor law violation	377	1	5	3.33	.754
IRP10. Decline in personal health	377	1	5	3.97	.771
IRP11. Held a job	377	1	5	3.45	.907
IRP12. Change in use of alcohol or drugs	377	1	5	3.10	.875
IRP13. Engagement/marriage	377	1	5	2.12	1.249
IRP14. Death of a family member	377	1	5	2.11	.961
IRP15. Death of a friend	377	1	5	1.98	.909
IRP16. Severe injury	377	1	5	3.14	.879
Valid N (listwise)	377				

*Table 9 Student stress survey: Academic*

	N	Minimum	Maximum	Mean	Std. Deviation
A1. Increased class workload	377	1	5	3.75	.804
A2. Lower grade than anticipated	377	1	5	3.71	.850
A3. Change of major	377	1	5	3.13	.937
A4. Search for graduate school/job (preparation after graduate)	377	1	5	3.47	.866
A5. Missed too many classes	377	1	5	2.34	.858
A6. Anticipation of graduation (expectation after graduation)	377	1	5	3.71	.877
A7. Serious argument with instructor	377	1	5	2.60	.775
A8. Transferred schools	377	1	5	2.59	.760
Valid N (listwise)	377				

*Table 10 Student stress survey: Environment*

	N	Minimum	Maximum	Mean	Std. Deviation
E1. Vacations/breaks (no vacations/breaks or it was too short or not enough)	377	1	5	3.45	.865
E2. Waited in long line	377	1	5	3.29	.877
E3. Placed in unfamiliar situation	377	1	5	3.24	.795
E4. Change in living environment	377	1	5	3.33	.775
E5. Car trouble	377	1	5	2.50	.806
E6. Computer problems	377	1	5	2.78	1.009
E7. Messy living conditions	377	1	5	3.43	.715
E8. Put on hold for extended period of time (waiting for something for uncertainty time)	377	1	5	3.40	.864
E9. Quit job	377	1	5	2.11	1.185
E10. Divorce between parents	377	1	5	2.47	.711
Valid N (listwise)	377				

*Table 11 Acculturative hassles scale for students: Language*

	N	Minimum	Maximum	Mean	Std. Deviation
L1. I am not able to express my ideas in English fluently	377	1	5	3.56	.827
L2. I am not use to the English way of thinking	377	1	5	3.58	.816
L3. I do not dare to speak English in class and seminar	377	1	5	3.50	.769
L4. I do not have a sufficient English vocabulary	377	1	5	3.56	.824
Valid N (listwise)	377				

*Table 12 Mean and standard deviation of variable*

	N	Minimum	Maximum	Mean	Std. Deviation
Stress	377	1.80	5.00	3.3003	.52046
Interpersonal	377	1.17	4.83	3.1397	.65646
Intrapersonal	377	1.44	4.56	3.0617	.53746
Academic	377	1.38	5.00	3.1628	.64482
Environment	377	1.60	4.50	3.0008	.52998
Language	377	1.00	5.00	3.5477	.70502
Valid N (listwise)	377				

## APPENDIX E

### RELIABILITY

#### Scale: Stress

*Table 1 Reliability statistics*

Cronbach's Alpha	N of Items
.840	10

*Table 2 Item statistics*

	Mean	Std. Deviation	N
S1	3.35	.812	377
S2	3.25	.842	377
S3	3.79	.882	377
S4	3.15	.849	377
S5	3.06	.776	377
S6	3.17	.804	377
S7	3.36	.671	377
S8	3.42	.680	377
S9	3.26	.927	377
S10	3.19	.853	377

*Table 3 Item-total statistics*

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Cronbach's Alpha if Item Deleted
S1	29.65	22.489	.511	.827
S2	29.75	22.202	.526	.826
S3	29.21	21.848	.541	.824
S4	29.86	24.485	.224	.854
S5	29.94	24.393	.273	.848
S6	29.83	22.209	.558	.823
S7	29.64	21.364	.850	.800
S8	29.59	21.376	.835	.801
S9	29.74	21.140	.597	.819
S10	29.81	21.811	.571	.821

*Table 4 Scale statistics*

Mean	Variance	Std. Deviation	N of Items
33.00	27.088	5.205	10

## Scale: Interpersonal

*Table 5 Reliability statistics*

Cronbach's Alpha	N of Items
.905	6

*Table 6 Item statistics*

	Mean	Std. Deviation	N
IP1	3.15	.655	377
IP2	3.18	.759	377
IP3	3.23	.749	377
IP4	3.24	.810	377
IP5	3.05	.888	377
IP6	2.99	.895	377

*Table 7 Item-total statistics*

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Cronbach's Alpha if Item Deleted
IP1	15.68	11.663	.765	.888
IP2	15.66	10.822	.825	.877
IP3	15.61	11.292	.727	.890
IP4	15.60	11.108	.695	.895
IP5	15.79	10.590	.716	.893
IP6	15.85	10.387	.750	.888

*Table 8 Scale statistics*

Mean	Variance	Std. Deviation	N of Items
18.84	15.514	3.939	6

## Scale: Intrapersonal

*Table 9 Reliability statistics*

Cronbach's Alpha	N of Items
.886	16

*Table 10 Item statistics*

	Mean	Std. Deviation	N
IRP1	3.55	.760	377
IRP2	3.41	.804	377
IRP3	3.25	.811	377
IRP4	3.17	.836	377
IRP5	3.47	.881	377
IRP6	3.35	.905	377
IRP7	3.50	.755	377
IRP8	2.09	.979	377
IRP9	3.33	.754	377
IRP10	3.97	.771	377
IRP11	3.45	.907	377
IRP12	3.10	.875	377
IRP13	2.12	1.249	377
IRP14	2.11	.961	377
IRP15	1.98	.909	377
IRP16	3.14	.879	377

*Table 11 Item-total statistics*

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Cronbach's Alpha if Item Deleted
IRP1	45.44	63.789	.789	.871
IRP2	45.58	63.414	.773	.871
IRP3	45.73	64.324	.689	.874
IRP4	45.82	63.366	.743	.871
IRP5	45.51	63.325	.702	.872
IRP6	45.64	63.647	.657	.874
IRP7	45.49	64.612	.722	.873
IRP8	46.90	68.548	.274	.890
IRP9	45.66	64.657	.720	.873
IRP10	45.01	65.641	.617	.876
IRP11	45.54	64.446	.596	.877
IRP12	45.89	63.963	.658	.874
IRP13	46.87	72.794	-.019	.910
IRP14	46.88	68.918	.257	.891
IRP15	47.01	68.867	.282	.889
IRP16	45.84	63.515	.690	.873



*Table 12 Scale statistics*

Mean	Variance	Std. Deviation	N of Items
48.99	73.949	8.599	16

**Scale: Academics**

*Table 13 Reliability statistics*

Cronbach's Alpha	N of Items
.899	8

*Table 14 Item statistics*

	Mean	Std. Deviation	N
A1	3.75	.804	377
A2	3.71	.850	377
A3	3.13	.937	377
A4	3.47	.866	377
A5	2.34	.858	377
A6	3.71	.877	377
A7	2.60	.775	377
A8	2.59	.760	377

*Table 15 Item-total statistics*

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
A1	21.55	20.482	.753	.880
A2	21.59	20.551	.693	.885
A3	22.18	19.778	.715	.883
A4	21.83	20.812	.639	.890
A5	22.96	21.570	.540	.899
A6	21.59	19.854	.766	.878
A7	22.70	21.047	.697	.885
A8	22.72	21.252	.682	.887

*Table 16 Scale statistics*

Mean	Variance	Std. Deviation	N of Items
25.30	26.610	5.159	8

## Scale: Environment

*Table 17 Reliability statistics*

Cronbach's Alpha	N of Items
.811	10

*Table 18 Item statistics*

	Mean	Std. Deviation	N
E1	3.45	.865	377
E2	3.29	.877	377
E3	3.24	.795	377
E4	3.33	.775	377
E5	2.50	.806	377
E6	2.78	1.009	377
E7	3.43	.715	377
E8	3.40	.864	377
E9	2.11	1.185	377
E10	2.47	.711	377

*Table 19 Item-total statistics*

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
E1	26.56	22.662	.568	.786
E2	26.72	21.628	.697	.771
E3	26.76	22.691	.629	.780
E4	26.68	22.086	.742	.769
E5	27.51	22.570	.636	.779
E6	27.23	24.001	.310	.817
E7	26.58	23.106	.650	.781
E8	26.61	22.893	.538	.789
E9	27.89	27.473	-.064	.872
E10	27.54	23.175	.644	.781

*Table 20 Scale statistics*

Mean	Variance	Std. Deviation	N of Items
30.01	28.088	5.300	10

## Scale: Language

*Table 21 Reliability statistics*

Cronbach's Alpha	N of Items
.894	4

*Table 22 Item statistics*

	Mean	Std. Deviation	N
L1	3.56	.827	377
L2	3.58	.816	377
L3	3.50	.769	377
L4	3.56	.824	377

*Table 23 Item-total statistics*

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Cronbach's Alpha if Item Deleted
L1	10.63	4.531	.778	.860
L2	10.62	4.594	.771	.862
L3	10.69	4.885	.729	.878
L4	10.63	4.515	.789	.855

*Table 24 Scale statistics*

Mean	Variance	Std. Deviation	N of Items
14.19	7.953	2.820	4

## APPENDIX F

### FACTOR ANALYSIS

*Table 1 Kaiser-Meyer-Olkin (KMO) and Bartlett's Test*

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.948
Bartlett's Test of Sphericity	Approx. Chi-Square	22491.190
	df	1431
	Sig.	.000

*Table 2 Communalities*

	Initial	Extraction
S1	1.000	.452
S2	1.000	.935
S3	1.000	.551
S4	1.000	.907
S5	1.000	.650
S6	1.000	.454
S7	1.000	.848
S8	1.000	.923
S9	1.000	.590
S10	1.000	.560
IP1	1.000	.706
IP2	1.000	.835
IP3	1.000	.824
IP4	1.000	.822
IP5	1.000	.803
IP6	1.000	.833
IRP1	1.000	.763
IRP2	1.000	.730
IRP3	1.000	.818
IRP4	1.000	.812
IRP5	1.000	.718
IRP6	1.000	.873
IRP7	1.000	.742
IRP8	1.000	.907
IRP9	1.000	.732
IRP10	1.000	.595
IRP11	1.000	.904
IRP12	1.000	.713
IRP13	1.000	.896
IRP14	1.000	.904
IRP15	1.000	.963

---

IRP16	1.000	.745
A1	1.000	.670
A2	1.000	.636
A3	1.000	.769
A4	1.000	.907
A5	1.000	.926
A6	1.000	.649
A7	1.000	.787
A8	1.000	.793
E1	1.000	.866
E2	1.000	.894
E3	1.000	.787
E4	1.000	.857
E5	1.000	.871
E6	1.000	.874
E7	1.000	.882
E8	1.000	.772
E9	1.000	.887
E10	1.000	.919
L1	1.000	.773
L2	1.000	.790
L3	1.000	.708
L4	1.000	.804

---

Extraction Method: Principal Component Analysis.

## APPENDIX G

### PEARSON COEFFICIENT CORRELATION TEST

*Table 1 Correlations*

		S	IP	IRP	A	E	L
Stress (S)	Pearson Correlation	1	.901**	.857**	.918**	.846**	.568**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	Sum of Squares and Cross-products	101.850	115.703	90.144	115.846	87.760	78.320
	Covariance	.271	.308	.240	.308	.233	.208
	N	377	377	377	377	377	377
Interpersonal (IP)	Pearson Correlation	.901**	1	.889**	.883**	.861**	.581**
	Sig. (2-tailed)	.000		.000	.000	.000	.000
	Sum of Squares and Cross-products	115.703	162.031	117.960	140.572	112.625	101.027
	Covariance	.308	.431	.314	.374	.300	.269
	N	377	377	377	377	377	377
Intrapersonal (IRP)	Pearson Correlation	.857**	.889**	1	.868**	.820**	.598**
	Sig. (2-tailed)	.000	.000		.000	.000	.000
	Sum of Squares and Cross-products	90.144	117.960	108.613	113.145	87.831	85.140
	Covariance	.240	.314	.289	.301	.234	.226
	N	377	377	377	377	377	377
Academic (A)	Pearson Correlation	.918**	.883**	.868**	1	.846**	.571**
	Sig. (2-tailed)	.000	.000	.000		.000	.000
	Sum of Squares and Cross-products	115.846	140.572	113.145	156.336	108.726	97.538
	Covariance	.308	.374	.301	.416	.289	.259
	N	377	377	377	377	377	377
Environment (E)	Pearson Correlation	.846**	.861**	.820**	.846**	1	.487**
	Sig. (2-tailed)	.000	.000	.000	.000		.000
	Sum of Squares and Cross-products	87.760	112.625	87.831	108.726	105.610	68.436
	Covariance	.233	.300	.234	.289	.281	.182
	N	377	377	377	377	377	377
Language (L)	Pearson Correlation	.568**	.581**	.598**	.571**	.487**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	Sum of Squares and Cross-products	78.320	101.027	85.140	97.538	68.436	186.891
	Covariance	.208	.269	.226	.259	.182	.497
	N	377	377	377	377	377	377

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

## APPENDIX H

### MULTIPLE REGRESSION ANALYSIS

*Table 1 Descriptive statistics*

	Mean	Std. Deviation	N
Stress	3.3003	.52046	377
Interpersonal	3.1397	.65646	377
Intrapersonal	3.0617	.53746	377
Academic	3.1628	.64482	377
Environment	3.0008	.52998	377
Language	3.5477	.70502	377

*Table 2 Model summary*

Model	Change Statistics								
	R		Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
	R	R Square	Square		Change	Change			Change
1	.939 <sup>a</sup>	.882	.881	.17962	.882	557.193	5	371	.000

a. Predictors: (Constant), Language, Environment, Intrapersonal, Academic, Interpersonal

b. Dependent Variable: Stress

*Table 3 ANOVA*

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	89.881	5	17.976	557.193	.000 <sup>a</sup>
	Residual	11.969	371	.032		
	Total	101.850	376			

a. Predictors: (Constant), Language, Environment, Intrapersonal, Academic, Interpersonal

b. Dependent Variable: Stress

*Table 4 Coefficients*

Model		Unstandardized Coefficients		Standardized Coefficients		95.0% Confidence Interval for B		
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound
		1	(Constant)	.747	.062		11.971	.000
	Interpersonal	.260	.038	.328	6.834	.000	.185	.335
	Intrapersonal	.035	.042	.036	.837	.403	-.047	.117
	Academic	.402	.035	.498	11.490	.000	.333	.471
	Environment	.100	.037	.102	2.678	.008	.027	.173
	Language	.016	.017	.022	.954	.341	-.017	.049

a. Dependent Variable: Stress