



UNIVERSITI PUTRA MALAYSIA

**RELATIONSHIP OF SOCIAL NETWORK, SOCIAL SUPPORT,
RELIGIOSITY AND PERCEIVED STRESS AMONG OLDER ADULTS IN
PENINSULAR MALAYSIA**

AZZIDA ANOM BINTI ABDUL DZAHIR

IPPM 2019 1



**RELATIONSHIP OF SOCIAL NETWORK, SOCIAL SUPPORT,
RELIGIOSITY AND PERCEIVED STRESS AMONG OLDER ADULTS IN
PENINSULAR MALAYSIA**

By

AZZIDA ANOM BINTI ABDUL DZAHER

**Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia, in
Fulfillment of the Requirements for the Degree of Master of Science**

December 2018

All material contained within the thesis, including without limitation text, logos, icons, photographs and all other artwork, is copyright material of Universiti Putra Malaysia unless otherwise stated. Use may be made of any material contained within the thesis for non-commercial purposes from the copyright holder. Commercial use of material may only be made with the express, prior, written permission of Universiti Putra Malaysia.

Copyright © Universiti Putra Malaysia



Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfillment of the requirement for the degree of Master Science

**RELATIONSHIP OF SOCIAL NETWORK, SOCIAL SUPPORT,
RELIGIOSITY AND PERCEIVED STRESS AMONG OLDER ADULTS IN
PENINSULAR MALAYSIA**

By

AZZIDA ANOM BINTI ABDUL DZAHER

December 2018

Chairman : Professor Dato' Tengku Aizan Tengku Abdul Hamid, PhD
Institute : Malaysian Research Institute on Ageing

Perceived stress is an important indicator of mental and physical health among elderly. Chronic activation from stress perceived by elderly may negatively affect their mental and physical health over time, which subsequently cause increase in the number of elderly seeking medical treatments. Social network, social support and religiosity may influence elderly's perceived stress, however there is a dearth of research on perceived stressed among older Malaysians. Thus, this study aims to determine the predictors of perceived stress among older adults in Peninsular Malaysia. A total of 2322 older respondents participated in this study. Instruments used in this study included Perceived Stress Scale-4, Lubben Social Network-6, Medical Outcome Study Social Support Survey, and Religiosity Intrinsic-Extrinsic Scale.

Data analyzes were carried out using SPSS, 22. Mean age of the respondents was 69.1 years and 52% were female. The ethnics distribution was 62.5% Malay, 32.2% Chinese, 5.1% Indians and 0.2% other ethnicity. The mean social network of respondents was 22.3 (SD = 16.81), social support 39.7 (SD = 14.78) and religiosity 57.6 (SD = 8.57).

The prevalence of high stress was 8.6%, moderate stress was 59.8% and low stress was 31.6%. A multiple linear regression analysis was utilized to determine the predictors of stress. The results showed that gender ($\beta = 0.115$, $p < 0.01$) and social support ($\beta = -0.095$, $p < 0.05$) were significant predictors of perceived stress among elderly. The results indicated that being women and had lower social support were more likely to develop perceived stress in late life. Therefore, older adults should have better social

support and being encouraged to participate in social and activities to prevent from stress.



Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Master Sains

**HUBUNGAN JARINGAN SOSIAL, SOKONGAN SOSIAL, KEAGAMAAN
DAN TEKANAN DI KALANGAN WARGA TUA DI SEMENANJUNG
MALAYSIA**

Oleh

AZZIDA ANOM BINTI ABDUL DZAHER

Disember 2018

Pengerusi : Professor Dato' Tengku Aizan Tengku Abdul Hamid, PhD
Institut : Institut Penyelidikan Penuaan Malaysia

Tekanan adalah penunjuk penting kesihatan mental dan fizikal di kalangan orang tua. Pengaktifan kronik dari tekanan yang dialami oleh orang tua boleh menjejaskan kesihatan mental dan fizikal mereka dari semasa ke semasa, yang seterusnya menyebabkan peningkatan dalam bilangan warga tua yang mencari rawatan perubatan. Rangkaian sosial, sokongan sosial dan keagamaan mungkin mempengaruhi tekanan dikalangan orang tua, namun terdapat sedikit kajian tentang tekanan dikalangan warga tua di Malaysia. Oleh itu, kajian ini bertujuan untuk menentukan prediktor tekanan di kalangan warga tua di Semenanjung Malaysia. Sejumlah 2322 warga tua mengambil bahagian dalam kajian ini. Instrumen yang digunakan dalam kajian ini termasuk Skala Perceived Stress-4, Lubben Social Network-6, Kajian Hasil Kajian Sosial Sokongan Sosial, dan Skor Intrinsik-Extrinsic Religiosity.

Analisis data dilakukan dengan menggunakan SPSS, 22. Umur responden adalah 69.1 tahun dan 52% adalah perempuan. Taburan etnik adalah 62.5% Melayu, 32.2% Cina, 5.1% India dan 0.2% etnik lain. Purata rangkaian sosial adalah 22.3 (SD = 16.81), sokongan sosial 39.7 (SD = 14.78) dan keagamaan 57.6 (SD = 8.57).

Purata tekanan tinggi ialah 8.6%, tekanan sederhana ialah 59.8% dan tekanan rendah ialah 31.6%. Analisis regresi logistik berganda digunakan untuk menentukan prediktor tekanan. Hasil kajian menunjukkan jantung ($\beta = 0.115$, $p < 0.01$) dan sokongan sosial ($\beta = -0.095$, $p < 0.05$) adalah prediktor kepada tekanan yang dialami oleh warga tua. Keputusan menunjukkan bahawa orang tua (perempuan) dan kekurangan sokongan sosial lebih cenderung untuk mengalami tekanan dalam kehidupan. Oleh itu, warga tua disarankan untuk mendapatkan lebih sokongan sosial and digalakkan untuk menyertai kegiatan-kegiatan sosial untuk mengelakkan dari tekanan.

ACKNOWLEDGEMENTS

I have been blessed by being supported by many knowledgeable and caring people. I greatly appreciate the encouragements and advices provided by my Chairman of the Supervisor Committee, Professor Dr. Tengku Aizan Binti Tengku Abdul Hamid, who guided and helped me by providing secondary data to finish my Master thesis successfully.

Much gratitude goes to my Supervisor Committee, Dr. Chew Siew Mooi as well as Dr Abbass, and Fong Hui Foh who provided support and guidance blended with care and understanding. They have helped and inspired me to accomplish tasks that I only dreamed of doing.

My sincere gratitude is also extended to the financial support provided by MyBrain15, Ministry of Higher Education Malaysia. I am also indebted to all the staff of Malaysian Research Institute on Ageing (MyAgeing) for their generous co-operation. Special thanks also to all my graduate friends at the MyAgeing for sharing the literature and invaluable assistance. The time spent and memorable memories will always be cherished.

Last but not least I would like to express my gratitude to my family members who gave me the opportunity to complete my thesis. It would have not been possible to finish my Master program without their strong support. Without my family's emotional and financial support, I could never stand where I am today. Also, I would like to thank my husband, Mohd Riduan and my daughters, Amna and Yasmeen for being so patience with me during this study journey

I certify that a Thesis Examination Committee has met on 4th September 2017 to conduct the final examination of Azzida Anom Binti Abdul Dzaher on her thesis entitled " Relationship of Social Network, Social Support, Religiosity and Perceived Stress among Older Adults in Peninsular Malaysia" in accordance with the Universities and University Colleges Act 1971 and the Constitution of the Universiti Putra Malaysia [P.U.(A) 106] 15 March 1998. The Committee recommends that the student be awarded the Master of Science.

Members of the Thesis Examination Committee were as follows:

Rahimah Binti Ibrahim, PhD

Associate Professor
Faculty of Human Ecology
University Putra Malaysia
(Chairman)

Mansor Bin Abu Talib, PhD

Professor
Faculty of Human Ecology
University Putra Malaysia
(Internal Examiner)

Nor Ba'yah Abdul Kadir, PhD

Professor
Faculty of Social Sciences and Humanities
University Kebangsaan Malaysia
(External Examiner)

RUSLI HAJI ABDULLAH, PhD

Professor and Deputy Dean
School of Graduate Studies
Universiti Putra Malaysia

Date: 23 April 2019

This thesis was submitted to the Senate of University Putra Malaysia and has been accepted as fulfilment of the requirement for the degree of Master of Science. The members of the Supervisory Committee were as follows:

Tengku Aizan Binti Tengku Abdul Hamid, PhD

Professor

Malaysian Research Institute on Ageing

University Putra Malaysia

(Chairman)

Ching Siew Mooi, PhD

Associate Professor

Faculty of Medicine and Health Science

University Putra Malaysia

(Member)

Robiah Yunus, PhD

Professor and Dean

School of Graduate Studies

Universiti Putra Malaysia

Date:

Declaration by graduate student

I hereby confirm that:

- this thesis is my original work;
- quotations, illustrations and citations have been duly referenced;
- this thesis has not been submitted previously or concurrently for any other degree at any other institutions;
- intellectual property from the thesis and copyright of thesis are fully-owned by Universiti Putra Malaysia, as according to the Universiti Putra Malaysia (Research) Rules 2012;
- written permission must be obtained from supervisor and the office of Deputy Vice-Chancellor (Research and Innovation) before thesis is published (in the form of written, printed or in electronic form) including books, journals, modules, proceedings, popular writings, seminar papers, manuscripts, posters, reports, lecture notes, learning modules or any other materials as stated in the Universiti Putra Malaysia (Research) Rules 2012;
- there is no plagiarism or data falsification/fabrication in the thesis, and scholarly integrity is upheld as according to the Universiti Putra Malaysia (Graduate Studies) Rules 2003 (Revision 2012-2013) and the Universiti Putra Malaysia (Research) Rules 2012. The thesis has undergone plagiarism detection software.

Signature: _____ Date: _____

Name and Matric No.: _____

Declaration by Members of Supervisory Committee

This is to confirm that:

- the research conducted and the writing of this thesis was under our supervision;
- supervision responsibilities as stated in the Universiti Putra Malaysia (Graduate Studies) Rules 2003 (Revision 2012-2013) are adhered to.

Signature: _____

Tengku Aizan Hamid, PhD

Professor

Malaysian Research Institute on Ageing (MyAgeing)

Universiti Putra Malaysia

(Chairman)

Signature: _____

Ching Siew Mooi, PhD

Associate Professor

Faculty of Medicine and Health Science

University Putra Malaysia

(Member)

TABLE OF CONTENTS

	Page
ABSTRACT	i
ABSTRAK	iii
ACKNOWLEDGEMENTS	iv
APPROVAL	v
DECLARATION	vii
LIST OF TABLES	ix
CHAPTER	
1 INTRODUCTION	1
1.1 Background of the Study	1
1.2 Problem Statement	2
1.3 Significant of Study	5
1.4 Research Questions	7
1.5 Study Objectives	8
1.5.1 General Objective	8
1.5.2 Specific Objectives	8
1.6 Research Hypothesis	8
1.7 Theoretical Framework	10
1.7.1 Theory of Cognitive Appraisal	10
1.8 Conceptual and Operational Definition of Study Variables	13
1.8.1 Perceived Stress	13
1.8.2 Social Network	14
1.8.3 Social Support	14
1.8.4 Religiosity	14
2 LITERATURE REVIEW	15
2.1 Introduction	15
2.2 Perceived Stress	15
2.2.1 Definition of Perceived Stress	15
2.2.2 The Levels of Perceived Stress among Older Adults	16
2.3 Social Network, Social Support and Religiosity	17
2.3.1 Definition of Social Network	17
2.3.2 Definition of Social Support	17
2.3.3 Definition of Religiosity	18
2.4 Predictors of Perceived Stress	19
2.4.1 Association of Social Network and Perceived Stress	19
2.4.2 Association of Social Support and Perceived Stress	21
2.4.3 Association of Religiosity and Perceived Stress	23

2.4.4	Association of Gender and Perceived Stress	25
2.5	Summary	26
3	METHODOLOGY	27
3.1	Introduction	27
3.2	The Data	27
3.2.1	Source of Data	27
3.2.2	Study Location and Research Design	27
3.2.3	Sample Size and Sampling Procedure	27
3.2.4	Sampling Technique	28
3.2.5	Sampling Criteria	28
3.2.6	Ethics Approval	29
3.2.7	Method of Data Collection	29
3.3	Dependent variable	30
3.3.1	Perceived stress	30
3.4	Independent variables	31
3.4.1	Socio-demographic variables	31
3.4.2	Social network	31
3.4.3	Social support	31
3.4.4	Religiosity	32
3.5	Reliability and validity of the scales	33
3.5.1	Reliability of the questionnaire	33
3.6	Data Preparation in the Current Study	33
3.7	Data management and analysis	34
4	RESULTS AND DISCUSSION	37
4.1	Introduction	37
4.2	Sociodemographic Characteristics of the Sample	37
4.3	The Levels of Perceived Stress among Older Respondents	38
4.4	General Description of the Social Network, Social Support and Religiosity	41
4.5	Associations between Sociodemographic Characteristics (categorical variables) and Perceived Stress	43
4.6	Correlations of Sociodemographic Characteristics (continuous variables) and Perceived Stress	45
4.7	Predictors of Perceived Stress	46
4.8	Chapter Summary	52
5	SUMMARY, CONCLUSION, IMPLICATION AND RECOMMENDATIONS	53
5.1	Summary and Conclusion	53
5.2	Implications Based on Findings	53
5.2.1	Theoretical Implication	53
5.2.2	Practical Implication	54
5.3	Limitations and Recommendations	56

REFERENCES	58
APPENDICES	75
BIODATA OF STUDENT	90



LIST OF TABLES

Table		Page
3.1	Reliability of different scales used in this study	33
4.1	Sociodemographic characteristics of the respondents	37
4.2	Descriptive statistic of the PSS-4 based on items	39
4.3	Descriptive statistic of perceived stress (cont. variables)	40
4.4	Distribution of the sample based on the levels of perceived stress	41
4.5	The mean scores, standard deviation, range of respondents' social network	41
4.6	The mean scores, standard deviation, range of respondents' social support	42
4.7	The mean scores, standard deviation, range of respondents' religiosity	43
4.8	Comparison of the sociodemographic factors (categorical variables) and perceived stress	44
4.9	Correlations of sociodemographic factors (continuous variables) and perceived stress	45
5.0	Correlations of social network, social support, religiosity and perceived stress	46
5.1	Result of multiple regression to predict perceived stress of older respondents	46

CHAPTER 1

INTRODUCTION

1.1 Background of the Study

The World Health Organization (WHO, 2012), demographic projection has placed Malaysia as the fourth fastest-growing ageing country in the world. Malaysia is expected to become an ageing nation by 2035. It is being predicted that 15% of the overall total population will be comprise of senior citizens aged 60 years and above. With ageing, comes an increased risk of developing chronic diseases and disability. Apart from physical health issues, they are more likely to suffer from mental and psychological distress (Banker, Prajapati & Kedia, 2011).

Psychological distress has been widely used as an indicator of mental health (Drapeau, Marchand, Beaulieu-Prévost, 2012). Horwitz (2007), considers it a transient emotional response to stress, which if untreated is pathologically resulting in depression. Perceived stress is an important indicator of mental and physical health. Stress occurs when an individual encounters situations they perceive as threatening, demanding, or that tax or exceed their capacity to address (Lazarus & Folkman, 1984). Researchers have noted that life after the retirement age challenges elderly psychologically, as they are at higher risk of loneliness, bereavement and face health-related stressors, which will eventually lead towards a higher level of perceived stress (Donaldson & Watson, 1996; Chioi & Jun, 2009).

Several studies have documented the prevalence of stress among elderly in Malaysia. Approximately, 9% of Malay living in rural community were recorded to be diagnose with the occurrence of prevalence of stress (Abdul Manaf et al., 2016), meanwhile other studies have recorded higher prevalence of stress among Chinese elderly in U.S with estimatedly a rough figure of 74% of Chinese elderly were recorded to have a higher prevalence of stress (Manrui, Melissa & Xinqi, 2014), whereas prevalence of stress that have occurred among Indian elderly in India were equivalent to 78% (Geetha et al., 2014).

There are some identified stressors of perceived stress among older people which include socio-demographic factors such as gender (Manrui, Melissa, & Xinqi, 2014; Kaneda, Zimmer & Fang, 2009), age (Manrui, Melissa, & Xinqi, 2014), income (Yeung & Xu, 2012), level of education (Ross & Zang, 2008) and employment status (Shen et al., 2004) which have been found significantly associated with perceived stress later onwards in life.

Perceived stress is associated with not only exposure to stressors, but also having to cope with resources to deal with stressful situations (Pearlin & Skaff, 1996). Coping is the process of attempting to manage the demands created by stressful events that are appraised as taxing or exceeding a person's resources (Lazarus & Folkman 1984). Coping resources can aid in this process; these resources include relatively stable individual differences in optimism, a sense of mastery, and self-esteem, and in social support. Coping resources, in turn, affect coping processes, specifically ones marked by approach, such as taking direct action or confronting emotional responses to a stressor (Taylor & Stanton, 2007).

Social support has shown to affect both physical and mental health status among older adults (Queen & Smith, 2017). In addition, (Umberson et al., 2006), have opined that older adults whom had had adequate social support would have the feelings of belongingness, love, valued, receipt of tangible and intangible support thus help them to stay healthy and sequentially enable them to adapt better to stress. Research consistently demonstrates that social support reduces psychological distress, such as depression or anxiety, during times of stress and promotes psychological adjustment to a broad array of chronically stressful conditions (Taylor & Stanton, 2007).

Furthermore, religious practice among older adults have been identified as one of coping resources to help reduce life stress and adapt to stressful life circumstances (Auerbach et al., 2010). According to George et al., (2000) older adults who have strong religious practices could face of stressful events better as they believed lives are controlled by a higher power or that life events happen for a reason (George et al., 2000). Hence, religiosity is a social capital that older adults have, to avert the negative psychological squeals by helping them to perceive stressful life circumstances as less stressful (Smith, McCullough & Poll, 2003).

The causes of stress are vary, unique and common among older adults (Geetha et al., 2014). Despite of having to determine the prevalence of perceived stress, this study is therefore conducted to identify the factors that affect stress among older adults in Peninsular Malaysia.

1.2 Problem Statement

Chronic activation from stress perceived by elderly may negatively affect their mental health over time, potentially elevating risk for mental illnesses especially depression

and anxiety disorders. According to World Health Organisation (2012) depression is the leading cause of disability and the fourth leading contributor to the global burden of disease in the future. Ironically, depression will be a major mental health illness among older Malaysians by 2020 (Juliana, 2016). The prevalence of depression among older persons in Peninsular Malaysia was recorded almost 8% in rural communities (Sherina, Lekhraj & Mustaqim, 2004) and 6% in urban communities (Sherina et al., 2005).

In spite of that, prolong effect of perceived stress may enhance the risks of physical illnesses, including cardiovascular disease and Type II diabetes (Kiecolt-Glaser et al. 2002). National Health and Morbidity Survey (NHMS) reported that 2 in 5 Malaysians diagnosed with diabetes are those who at age of 70-74 year old (*Kenali Diabetes di Malaysia*, 2017). Among the survey done among Malaysia citizens age 18 year and above, the highest prevalence of Malaysians suffer diabetes was among 60 year old and above, with the prevalence almost 39% (*Kenali Diabetes di Malaysia*, 2017). This subsequently will cause increase risk of associated morbidities such as cardiovascular, stroke and renal disease, and eventually cause significant increase in the number of older adults seeking for medical treatment (*Kenali Diabetes di Malaysia*, 2017). Coping can intervene between stress and mental and physical health outcomes such as these, and thus merits consideration both as an intrinsically significant process and as a potential point of intervention for reducing adverse mental and physical health risks of stress (Taylor & Stanton, 2007).

Besides, mental illnesses include perceived stress among the elderly are often silent and masked as aging occurs, thus, this cause great challenge for health practitioners to screen for those who need intervention. As for the elderly themselves, the main challenge is to overcome the social stigma of the community which resulting in the reluctance among the elderly to seek help for their problems (Ahmedani, 2011; Corrigan, 2004). Over time, mental health illnesses if left untreated may induce functional disability, disturbed rehabilitation, burden to the health care system, and impaired quality of life of the elderly people and their families. According to Wittchen, Mühlrig, and Beesdo (2003), only a fraction of those who need mental health care receive it. By one estimate only about 10% of older adults who are in need of psychiatric treatment ever receive this service (Wittchen, Mühlrig & Beesdo, 2003).

Moreover, with the increasing of age, older adults commonly will encounter inadequate coping resources and skills in spite of having naturally exposed to new and unfamiliar stressors (Manrui, Melissa, & Xinqi, 2014). Having a smaller network and limited social support due to loss of a spouse or separation, deaths in the family subsequently impair the coping resources, which may contribute to physical and mental ill-health

(Geetha et al., 2014). Physical incapacity declining in mental faculties adds up to the feeling of the generation gap, thus enlarges the existing, unsolved problems among the elderly (Moos et al., 2006; Yang, Rockett & Cottrell, 2012; Wang, 2001). This in turn will cause chronic and prolonged stress which is potentially pathogenic (American Psychological Association, 2007).

Furthermore, extended family structure which is the core of elderly care in Malaysia, is gradually fizzling out (Meera, 2018). In Malaysia and many Asian countries, it is norm that family has always been the fundamental source of support for the elderly. According to Prof Dr Philip George, president of the Malaysian Healthy Ageing Society (MHAS), the nuclear family household constituted about 62.8 per cent of households in Malaysia, while the extended family household constituted only about 20.5 per cent. (Meera, 2018). Gradually, family structure becomes smaller and the average household size is dropping. With declining fertility rates, smaller families, longer life expectancy, increased special care needs for the elderly, higher cost of living, increased participation of women in the labour force and migration to distant places for work, it is becoming taxing and untenable for families to provide support as well as cater for the healthcare needs of their elderly relatives.

The rapid growth of Malaysia's ageing population calls for a better understanding of perceived stress among this population. Up to date, the spectrum of perceived stress among the elderly people in Peninsular Malaysia is still little to known. The majority of local studies have indicated that perceived stress were identified as very common among young adult population, particularly University students (Yusoff, Abdul Rahim & Yaacob, 2010; Faleel, Tam, Lee, Har & Foo, 2012) and employees (Sami et al., 2016). Moreover, most local studies have earlier conducted studies which only aimed on focusing on a single mental health problem, most commonly depression, among elderly people (Sherina, Lekhraj & Mustaqim, 2004; Sherina et al., 2005). Although, there is a growing number of literature which addresses perceived stress within a group of elderly people (Chen, Wang, Guo, et al., 2012; Chen & Chou, 2007; Zang, Wang & Xia, 2012; Chan, 2006; Lou, Kwan & Leung, et al., 2011), yet, the research on perceived stressed among them in Malaysia is still lacking.

In addition, there have been an ongoing number of studies which have explored the perception of stress in older adults and the results have been inconsistent. Some studies have found out that perceived stress decreases within the increasing of age (Cohen & Janicki-Deverts, 2009; Hughes, 2005; Nordin & Nordin, 2013; Stone, 2010), meanwhile, others have shown no differences in perceived stressed between younger and older adults (Scott, Jackson & Bergeman, 2011; Marengoni, Angleman, Melis et

al., 2011; Diehl & Hay, 2010). Most of the previous studies have included community-dwelling volunteers and excluded older people with mental and physical limitations, which in turn leave highly selected healthy samples of older adults (Aldwin, 1996; Hay & Diehl, 2010). As a result, there is a lack of adequate representation of the general older population.

Although social factors have received a considerable amount of attention, as being an influential factor in depression among older persons (Koizumi, 2005; Aoki, 1997), there is yet still an insufficient amount of research carried upon elderly subject in Peninsular Malaysia conducting on investigating the association between social network, social support and perceived stress. Hence, the association of religiosity and perceived stress among elderly subjects has not been adequately examined in local studies. Former studies regarding on religiosity and perceived stress have consequently resulted in inconclusive findings. Western studies have only reflected studies consisting of enlargly Christian respondents by faith only. Therefore, the result is not suitable to be generalized towards other religious groups (Smith, Poll & McCullough, 2003) despite of the bias. Nevertheless, most of the researches that have been done in Malaysia, have only been focusing on Islamic religiosity (Nadzirah et al., 2010) which focuses on mental health status within the group range of aged people (Abolfathi Mumtaz et al., 2011). Thus, having a sample of one range group of religion which focuses entirely on Islam cannot be captured as a whole religiosity, as Malaysia is a country which consists of multiple ethnicities with various religions.

Up to date, neither has any international or local studies have taken heed of factors that affect stress among elderly. Coping resources such as social network, social support or religion are known to be able to provide comfort during stress condition. However, the outcomes of these resources on having to alleviate perceived stress among elderly have been largely ignored, despite evidence suggesting their potential importance. The studies in having to examine the association of social network, social support, and religiosity with perceived stress among older adults in Peninsular Malaysia still remain scarce. This study will investigate the association of social network, social support, religiosity and perceived stress among elderly subjects in Peninsular Malaysia, despite of the scarcity of studies in this field of subject.

1.3 Significant of Study

The study is important because, unmanaged stress can lead to a series of negative changes on physiological process and behavioural patterns, which includes depression

(Hammen, 2005), physical inactivity (Stults-Kolehmainen & Sinha, 2013), sleep disorders (Friedman, Brooks, Bliwise, et al., 1995), obesity (Marcellini, Giuli, Papa, et al., 2010), immune dysfunction (Stowell, Kiecolt-Glaser, Glase, 2001), cardiovascular disease (Henderson, Clark, Lewis et al. 2013), and mortality (Nielsen, Kristensen, Schnohr P, et al., 2008).

The proportion of elderly people in Malaysia is increasing at a rapid rate and that the growth is projected to accelerate in a matter of years. Thus, this should be given undivided attention by the related parties, especially the government. Elderly's health, social and economic policies may vary substantially among industrialized nations. Hence, this study may assist greatly in the formulation of effective policies aimed at increasing the national-level health status, as well as the social and economic well-being of elderly population. When health status becomes a priority, it enables government to estimate the elderly's health service expenditures, implement support services, disease prevention programs and community engagement program. In line with the country's aiming at encouraging communities to counterpart their role (*Malaysia is ageing*, 2017). Taking this into account, this study will help to reinforce the needs of government to develop an age-friendly culture that embraces the elderly instead of isolating them which could expose them to a greater risk of stress.

Several factors have been identified as risk factors of perceived stress later onwards in life. The studies were carried out among elderly subjects in Peninsular Malaysia. Several studies regarding on social network, social support, religiosity and perceived stress have been portrayed as being crucial as it has been indicated in most of social science studies which have discovered that social network (Antonucci, Fuhrer & Dartigues, 1997), social support (Liang et al., 2001) and religiosity (George et al., 2000) provides psychological enhancement to help older individuals reduce their levels of stress and overcome depression.

Furthermore, it has also been expected that the study will be contributing to the discussion among nurses and other healthcare professionals on how social network, social support and religiosity can be used to promote the health of elderly patients. This is due to the fact, that these factors certainly do play a significant role in coping with everyday life challenges that causes stress. Nonetheless, providing greater conditions for an elderly individual to deal with typical problems (Barricelli et al., 2012). In consequence of that, a study on social network, social support and religiosity improves our understanding on the roles of social network, social support, and religiosity in alleviating perceived stress within this group range which predominantly have a higher risk of tendency on getting affected by one.

The findings from this study will assist policy makers to develop a strategy to develop new programs and care services within the group range of elderly and thereby, be notified of factors that will affect the lives of aging individuals. Having suffice amount of knowledge regarding on the ways in which may alter factors that are related with the onset and maintenance of perceived stress is essential for effective treatment for older adults that are enduring stressful condition.

By identifying the predictors of perceived stress among elderly, it would be greatly possible for the expert to develop or tailor therapeutic interventions for elderly based on their social history. For instance, an elderly who is being categorized under poor perceived social support and network could be placed within a group range of people who are at a 'higher risk of perceived stress'. This will in turn help to ease the specialist task to categorize and seek out for the potential elderly who are at risk of perceived stress during health screening. Indirectly, academics community from a variety of disciplines such as gerontologist, social workers, psychologist as well as mental health counsellors will able to underline the importance of social and religiosity in promising a healthy living and thus enables them to work cooperatively in having to facilitate aged people with social support, network and religion services. The study is still remarkably uncommon in Malaysia as of the fact that no well-known research has been identified with such studies.

1.4 Research Questions

1. Is there any associations between sociodemographic characteristics (age, gender, ethnicity, religion, marital status, level of education, employment, and living arrangement) and perceived stress?
2. Is there any correlations between social network, social support, religiosity and perceived stress?
3. What are the predictors (sociodemographic characteristics, social network, social support, and religiosity) of perceived stress among elderly subjects in Peninsular Malaysia?

1.5 Study Objectives

1.5.1 General Objective

To examine the relationships between sociodemographic characteristics, social network, social support, religiosity and perceived stress among older respondents in Peninsular Malaysia.

1.5.2 Specific Objectives

1. To describe the levels of perceived stress, social network, social support and religiosity among older respondents in Peninsular Malaysia
2. To examine the associations of sociodemographic characteristics (age, gender, ethnicity, religion, marital status, level of education, employment and living arrangement), and perceived stress among older respondents in Peninsular Malaysia.
3. To examine the correlations of sociodemographic characteristics (age and income), social network, social support, religiosity and perceived stress among older respondents in Peninsular Malaysia
4. To determine the predictors (sociodemographic characteristics, social network, social support and religiosity) of perceived stress among older respondents in Peninsular Malaysia.

1.6 Research Hypothesis

The alternative hypothesis of the study is:

H1. There are significant associations between socio-demographic characteristic (age, gender, ethnicity, religion, marital status, level of education, employment and living arrangement) and perceived stress.

H1a: There is an association between age and perceived stress

H1b. There is an association between gender and perceived stress

H1c. There is an association between ethnicity and perceived stress

H1d. There is an association between religion and perceived stress

H1e. There is an association between marital status and perceived stress

H1f. There is an association between level of education and perceived stress

H1g. There is an association between employment status and perceived stress

H1h. There is an association between living arrangement and perceived stress

H2: There are significant correlations between sociodemographic characteristics (age and income), social network, social support, religiosity and perceived stress.

H2a. There is a correlation between age and perceived stress

H2b. There is a correlation between income and perceived stress

H2c. There is a correlation between social network and perceived stress

H2d. There is a correlation between social support and perceived stress

H2e. There is a correlation between religiosity and perceived stress

H3: There will be significant predictions of perceived stress by social network, social support and religiosity.

1.7 Theoretical Framework

1.7.1 Theory of Cognitive Appraisal

"Theory of Cognitive Appraisal" was proposed by Lazarus and Folkman in 1984 explained that, stress is a two-way process, which firstly involves the production of stressors by the environment, and secondly the response of an individual subjected to these stressors.

This conception regarding stress has led to the theory of cognitive appraisals. Lazarus stated that cognitive appraisal occurs when a person considers two major factors that majorly contribute in his response to stress. These two factors include the threatening tendency of the stress to the individual, and the assessment of resources required to minimize, tolerate or eradicate the stressor and the stress it produces.

This theory distinguishes two basic forms of appraisal, primary and secondary appraisal. These forms rely on different sources of information. Primary appraisal concerns whether something of relevance to the individual's well-being occurs, whereas secondary appraisal concerns coping options. For examples in primary appraisal, is there potential harm or benefit with respect to commitments, values, or goals? Is the health or well-being of a loved one at risk? Is there potential harm or benefit to self-esteem?

In secondary appraisal of coping options, the person evaluates what if anything can be done to overcome or prevent harm or to improve the prospects for benefit. Various coping options are evaluated, such as altering the situation, accepting it, seeking more information, or holding back from acting impulsively and in a counterproductive way. Coping is defined as the person's constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the person's resources (Lazarus & Folkman, 1984b). There are three key features of this definition. First, it is process oriented, meaning that it focuses on what the person actually thinks and does in a specific stressful encounter, and how this changes as the encounter unfolds. The process of coping concerns with what the person usually does, and hence emphasizes stability rather than change. Second, coping is viewed as contextual, that is, influenced by the person's appraisal of the actual demands in the encounter and resources for managing them. Third, there is no priori assumption about what constitutes good or bad coping, thus coping is defined simply as a person's efforts to manage demands, whether or not the efforts are successful.

According to Lazarus and Folkman (1984), coping actions can be distinguished by their focus on different elements of a stressful encounter. They can attempt to change the person–environment realities behind negative emotions or stress (problem-focused coping). They can also relate to internal elements and try to reduce a negative emotional state, or change the appraisal of the demanding situation (emotion-focused coping). Two previous studies have provided strong empirical support for the idea that coping usually includes both functions. Both forms of coping were represented in over 98% of the stressful encounters reported by middle-aged men and women (Folkman & Lazarus, 1980) and in an average of 96% of the self-reports of how college students coped with a stressful examination (Folkman & Lazarus, 1985).

Coping resources can aid in this process; these resources include relatively stable individual differences in optimism, a sense of mastery, and self-esteem, and in social support. Coping resources, in turn, affect coping processes, specifically ones marked by approach, such as taking direct action or confronting emotional responses to a stressor, and ones marked by avoidance, such as withdrawal or denial. Coping efforts may be adaptive or maladaptive, and the form that coping processes assume affects how successful resolution of a stressor will be (Taylor & Stanton, 2007).

Social support, another significant coping resource, is defined as the perception or experience that one is loved and cared for by others, esteemed and valued, and part of a social network of mutual assistance and obligations (Wills 1991). Research consistently demonstrates that social support reduces psychological distress, such as depression or

anxiety, during times of stress and promotes psychological adjustment to a broad array of chronically stressful conditions (Taylor & Stanton, 2007). Coping resources in turn affect coping processes, that is, the specific intrapsychic or behavioral actions that people use for managing stress.

Thus, this theory describes that coping resources such as social factors must be taken into account in human well-being especially in the context of stress. In the current study, social factors such as social network and social support and religiosity are hypothesized to significantly correlate with perceived stress. Certain socio-demographic factors such as age, gender, ethnicity, religion, marital status, level of education, employment status and living arrangement are hypothesized to significantly associate with perceived stress.



Figure 1.0 shows the conceptual framework of this study

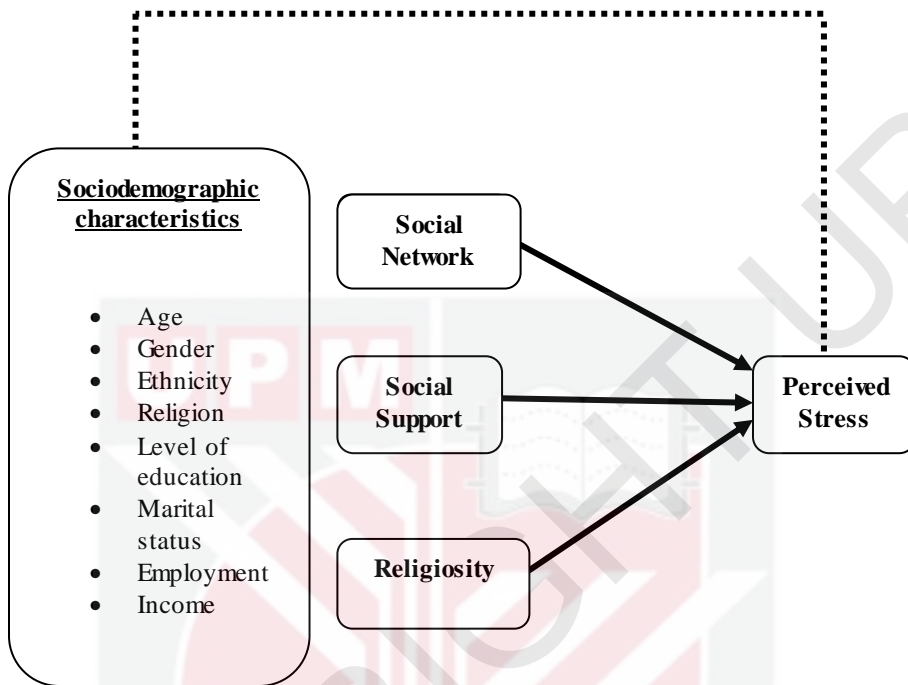


Figure 1.0 Conceptual Framework Relating of Sociodemographic Characteristics, Social Network, Social Support, Religiosity to Perceived Stress

1.8 Conceptual and Operational Definition of Study Variables

1.8.1 Perceived Stress (Dependent Variable)

Stress can be perceived as any form of event that strains an individual's ability to cope (Lazarus, 1999). Perceived stress is the feelings or thoughts that an individual has about how much stress they are under at a given point in time. It incorporates feelings about

the uncontrollability and unpredictability of one's life, how often one has to deal with irritating hassles, how much change is occurring in one's life, and confidence in one's ability to deal with problems or difficulties. Perceived stress was operationalized by 4 items in the Perceived Stress Scale (Cohen, Kamarck & Mermelstein, 1983). PSS-4 scores are obtained by summing across all four items. Total scores ranged from 0 to 16, with higher scores indicating greater perceived stress (Cohen, Kamarck & Mermelstein, 1983).

1.8.2 Social Network (Independent Variable)

Social network is defined as a group of people who maintain an important, often ongoing, relationship in their lives forms social network. These people could be family, relatives, friends, neighbours, or other individuals (Nutt, 2001). In this study, social network had be operationalized by the amount of contact between friends and family members using Lubben Social Network Scale-6 LSNS-6 (Rubinstein, Lubben, & Mintzer, 1994). Higher scores show bigger family or friendship social networks.

1.8.3 Social Support (Independent Variable)

Social support is defined as “information leading the subject to believe that he is cared and loved for, esteemed and valued for and also a member of network of communication and mutual obligation” (Cobb, 1976). In this study, social support function is dimension of emotional and informational support, tangible support, affectionate support and positive social interaction support, which are operationalized by using Medical Outcomes Study Social Support Survey (MOS-SSS). The higher score indicated the better function of social support.

1.8.4 Religiosity (Independent Variable)

Religiosity is defined as “an organized system of beliefs, practices and symbols, designed to enable closeness to God” (Matthews, 1996). In this study, religiosity was measured using Religiosity Intrinsic-Extrinsic Scale (Gorsuch & McPherson, 1989). This scale contains of 14 items with 6 items measuring intrinsic religiosity and 4 items measuring each extrinsic personal and extrinsic social. Higher scores indicate higher level of a specific religious orientation.

REFERENCES

- Abdul Manaf, M.R., Mustafa, M., Abdul Rahman, M.R., et al. (2016). Factors influencing the prevalence of mental health problems among Malay elderly residing in a rural community: a cross-sectional study. *PLoS ONE*, 11(6): 1-12.
- Abolfathi Mumtaz, Tengku Aizan, H., Rahimah, I., Nurizan, Y., & Sen, T.Y. (2011). Moderating effect of religiosity on the relationship between social isolation and psychological well-being. *Mental Health, Religion and Culture*, 14(2).
- Ahmedani, B.K. (2011). Mental Health Stigma: Society, Individuals, and the Profession. *Journal of social work values and ethics*, 8(2), 41-416.
- Al-Dubai, S.A., Aishagga, M.A., Rampal, K.G., & Sulaiman, N.A. (2012). Factor structure and reliability of the Malay version of the perceived stress scale among Malaysian medical students. *Malays J Med Sci*, 19(3):43-49.
- Aldwin, C.M., et al. (1996). Age differences in stress, coping, and appraisal: findings from the normative aging study. *J Gerontol B Psychol Sci Soc Sci*, 51: P179.
- Allen, J. et al. (2012). Social support and age influence distress outcomes differentially across urban, regional and remote Australia: an exploratory study. *BMC Public Health*, 12:928
- Allen, P., & Bennett, K. (2012). *SPSS Statistics: A Practical Guide, version 20*. South Melbourne, Victoria: Cengage Learning Australia.
- Allison, P.D. (2003). Missing data techniques for structural equation modelling. *Journal of Personality and Social Psychology*, 112(4), 545-557.

- Allport, G. W. & Ross, J. M. (1967). Personal religious orientations and prejudice. *Journal of Personality and Social Psychology*, 5: 432-433.
- Allport, G. W. (1966). Religious context of prejudice. *Journal for the Scientific Study of Religion*, 5: 447-457.
- American Psychological Association. (2007). "How does stress affect us?" Retrieved from <http://www.psychcentral.com/lib/2007/>
- Antonucci, T.C., Fuhrer, R., & Dartigues, J. (1997). Social relations and depressive symptomatology in a sample of community-dwelling french older adults. *Psychology and Aging*, 12(1): 189-195.
- Aoki, K. (1997). Depressive state of the elderly and its correlates. *Nippon Ronen Seishin Igaku Zasshi*, 8: 401-410.
- Auerbach, J. R. Z., Abela, X., Zhu, & Yao, S. (2010). Understanding the role of coping in the development of depressive symptoms: symptom specificity, gender differences, an cross-cultural applicability. *British Journal of Clinical Psychology*, 49(4): 547-561.
- Banker, K., Prajapati, B., & Kedia, G. (2011). Study of health profile of residents of geriatric home in Ahmedabad district. *Natl J Community Med*, 2:378-382.
- Barricelli, I.L., Sakumato, K.Y., Silva, L.H.M., & Araujo, C.V. (2012). Influence of religious orientation in the quality of life of active elderly. *Revista Brasileira de Geriatria Gerontologia*, 15(3): 505-515.
- Been, H., et al. (2012). The importance of social support in the associations between psychological distress and somatic health problems and socio-economic factors among older adults living at home: a cross sectional study. *BMC Geriatrics*, 12:27.

- Birditt, K.S., & Fingerman, K.L. (2003). Age and gender differences in adults' descriptions of emotional reactions to interpersonal problems. *The Journals of Gerontology: Series B*, 58(4): 237-245.
- Burns, M., Nixon, G., Foy, C., & Harris, N. (2005). Standardisation of data from real-time quantitative PCR methods-evaluation of outliers and comparison of calibration curves. *BMC Biotechnology*, 5(1): 31-43.
- Chan, I., Au, A., Li, P., et al. (2006). Illness-related factors, stress and coping strategies in relation to psychological distress in HIV-infected persons in Hong Kong. *AIDS Care*, 18: 977-982.
- Chaves, E.C.S., Paulino, C.F., Souza, V.H.S., Mesquita, A.C., Carvalho, F.S., Nogueira, D.A. (2014). Quality of life, depressive symptoms and religiosity in elderly adults: a cross-sectional study. *Text Context Nursing*, 23(3): 648-655.
- Chen, C.M., Kuo, S.F., Chou, Y.H., et al. (2007). Postpartum Taiwanese women: their postpartum depression, social support and health-promoting lifestyle profiles. *J Clin Nurs*, 16: 1550-1560.
- Chen, J., Wang, Z., Guo, B., et al. (2012). Negative affect mediates effects of psychological stress on disordered eating in young Chinese women. *PLoS One*: e46878.
- Chioi, N., & Jun, J. (2009). Life regrets and pride among low-income older adults: Relationship with depressive symptoms, current life stressors and coping resources. *Aging Ment Health*, 13:213-225.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences. Statistical Power Analysis for the Behavioral Sciences* (vol. 2nd). Hillsdale, NJ: Erlbaum. <https://doi.org/10.1234/1234678>

- Cohen, S., & Janicki-Deverts, D. (2012). Who's stressed? Distributions of psychological stress in the United States in probability samples from 1983, 2006, and 2009. *J Appl Soc Psychol*, 42: 1320–1334.
- Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior*, 24: 385-396.
- Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin*, 98(2): 310.
- Cobb, S. (1976). Social support as a moderator of life stress. *Psychosomatic Medicine*, 38(5): 300-314
- Cohen, S. (1996). Psychological stress immunity, and upper respiratory infections. *Current Directions in Psychological Sciences*, 5: 86-90.
- Cornwell E. Y., & Waite L. J. (2009). Social disconnectedness, perceived isolation, and health among older adults. *Journal of Health and Social Behavior*, 50: 31-48.
- Corrigan, P.W. (2004). How stigma interferes with mental health care. *American Psychologist*, 50(7):614–625.
- Cruza-Guet, M.-C., Spokane, A. R., Caskie, G. I. L., Brown, S. C., & Szapocznik, J. (2008). The relationship between social support and psychological distress among Hispanic elders in Miami, Florida. *Journal of Counseling Psychology*, 55(4).
- Dezutter, J., Soenens, B., & Hutsebaut, D. (2006). Religiosity and mental health: A further exploration of the relative importance of religious behaviors vs. religious attitudes. *Personality and Individual Differences*, 40: 807–818.

- Diehl, M., & Hay, E.L. (2010). Risk and resilience factors in coping with daily stress in adulthood: the role of age, self-concept incoherence, and personal control. *Dev Psychol*, 46: 1132.
- Donaldson, J.M., & Watson, R. (1996). Loneliness in elderly people: an important area for nursing research. *J Adv Nurs*, 24: 952-959.
- Drapeau, A., Marchand, A., & Beaulieu-Prévost, D. (2012). Epidemiology of psychological distress. In *Mental Illnesses - understanding, prediction and control* Labate L, editor. *INTECH*, 105–134.
- Faleel, S.F., Tam, C.L., Lee, T.H., Har, W.M., & Foo, Y.C. (2012). Stress, perceived social support, coping capability and depression: a study of local and foreign students in the Malaysian context. *International journal of social and Human Sciences*, 6:8-14.
- Fiori, K.L., Antonucci, T.C., & Cortina, K.S. (2006). Social network typologies and mental health among older adults. *Journal of Gerontology: Psychological Science*, 61(1): 25-32.
- Fleck, J. R. (1981). Dimensions of personal religion: A response to J. R. Fleck & J. D. Carter (Eds.), *Psychology and Christianity*, 66-80
- Friedman, L., Brooks, J.O., Bliwise, D.L., et al. (1995). Perceptions of life stress and chronic insomnia in older adults. *Psychol Aging*, 10: 352-357.
- Garson, G.D. (2015). *Missing values analysis and imputation*. Asheboro, NC: Statistical Associates Publishers.
- Geetha, M., Udayakumar, S., Annamalai, K., & Ramasamy, D.J. (2014). Perceived levels of stress and its correlates among residents of old age home in Kanchipuram District, Tamil Nadu. *Med J DY Patil Univ*, 7:728-731.

- Genia, V. & Shaw, D. G. (1991). Religion, intrinsic extrinsic orientation and depression. *Review of Religious Research*, 32: 274-283.
- George, L., Blazer, D., Hughes, D., & Fowler, N. (1989). Social support and the outcome of major depression. *British Journal of Psychiatry*, 154: 478-485.
- Gillani, S.W., Syed, S.A., Sari, Y.O., Sarriff, A., Amin, A., & Baig, M. (2011). Perceived stress scale psychometric validation for Malaysian diabetic patients. *BJPR*, 1(4):156-163.
- Gorsuch, R. L., & McPherson, S. E. (1989). Intrinsic/Extrinsic measurement: I/E-revised & single-item scales. *Journal for the Scientific Study of Religion*, 28, 348-354.
- Hair, J.F, Anderson, R.E., Tatham, R.L., & Black, W.C. (1998). *Multivariate Data Analysis*, 5th ed., Upper Saddle River: Prentice-Hall Inc.
- Hammen, C. (2005). Stress and depression. *Annu Rev Clin Psychol*, 1: 293-319.
- Haseen, F., Adhikari, R., & Soonthornhdada, K. (2010). Self-assessed health among Thai elderly. *BMC Geriatr*, 10(3).
- Hay, E.L., & Diehl, M. (2010). Reactivity to daily stressors in adulthood: the importance of stressor type in characterizing risk factors. *Psychol Aging*, 25: 118.
- Heaney, C.A., Price, R.H., & Rafferty, J. (1995). Increasing coping resources at work: a field experiment to increase social support, improve work team functioning, and enhance employee mental health. *J Organ Behav*, 335-52.

- Henderson, K.M., Clark, C.J., Lewis, T.T., et al. (2013). Psychosocial distress and stroke risk in older adults. *Stroke*, 44: 367-372.
- Herrero J., & Meneses J. (2006). Short Web-based versions of the perceived stress (PSS) and Center for Epidemiological studies-Depression (CESD) Scales: a comparison to pencil and paper responses among internet users. *Comput. Hum. Behav.* 22: 830-846
- Hong, J., Seltzer, M., & Krauss, M. (2001). Change in social support and psychological well-being: a longitudinal study of aging mothers of adults with mental retardation. *Family Relations*, 50(2): 154-163.
- Horwitz, A.V. (2007). Distinguishing distress from disorder as psychological outcomes of stressful social arrangements. *Health*, 11:273-289.
- House, J., & Kahn, R. (1985). Measures and concepts of social support. In Cohen, S., & Syme, L. (Eds.), *Social support and health*. New York: Academic Press.
- House, J. S., Umberson, D., & Landis, K. R. (1988). Structures and processes of social support. *Annual Review of Sociology*, 14: 293-318.
- Hughes, R.B., et al. (2005). Stress and women with physical disabilities: identifying correlates. *Womens Health Issues*, 15: 14-20.
- Hyypa, M.T. (2003). Social participation and health in a community rich in stock of social capital. *Health Educ Res*, 18:770-9.
- Iecovich, E. (2001). Religiousness and subjective well-being among Jewish female residents of old age homes in Israel. *Journal of Religious Gerontology*, 13: 31-46.

- Israel, B. A. (1982). Social networks and health status: linking theory, research and practice. *Patient Counselling and Health Education*, 4: 65-79.
- Juliana, M. (2016). Depression on the rise as Malaysians burn out from stress, expert warns. Retrieved from <http://www.themalaymailonline.com/malaysia/article/depression-on-the-rise-as-malaysians-burn-out-from-stress-expert-warns>
- Kahoe, R. D. & Meadow, M. J. (1981). A developmental perspective on religious orientation dimensions. *Journal of Religion and Health*, 20: 8-17.
- Kaneda, T., Zimmer, Z., Fang, X, et al. (2009). Gender differences in functional health and mortality among the Chinese elderly: testing an exposure versus vulnerability hypothesis. *Res Aging* 31: 361-388.
- Kiecolt-Glaser JK, McGuire L, Robles TF, Glaser R. 2002. Emotions, morbidity, and mortality: new perspectives from psychoneuroimmunology. *Annu. Rev. Psychol.* 53:83–107
- Keith, V.M. (1993). Gender, financial strain, and psychological distress among older adults. *Res Aging*, 15: 123-147.
- Kenali Diabetes di Malaysia. (2017, November 14). *Gaya Hidup: Perubatan/Kesihatan*. Retrieved from <https://www.ibanding.com/kenali-diabetes-di-malaysia-dan-mengapa-pentingnya-perindungan-insurans/>
- Koenig, H. G., McCullough, M. E., & Larson, D. B. (2001). *Handbook of Religion and Health*. New York: Oxford University Press.
- Koizumi, Y., Awata, S., Kuriyama, S., Ohmori, K., Hozawa, A., Seki, T. (2005). Association between social support and depression status in the elderly: results of a 1-year community-based prospective cohort study in Japan. *Psychiatry Clin Neurosci.*, 59:563–569.

- Koziol, N., & Arthur, A. (2012). *An Introduction to Secondary Data Analysis. Research Methodology Series. United Kingdom: Cambridge University Press.*
- Krause, N., & Liang, J. (1993). Stress, social support, and psychological distress among the Chinese elderly. *J Gerontol*, 48: 282-291.
- Lazarus, R. S. (1999). *Stress and Emotion: A new synthesis*, New York: Springer.
- Lazarus, R.S., & Folkman, S. (1984). *Stress, Appraisal, Coping*. New York: Springer Publishing Company.
- Levin, J.S., & Chatters, L.M. (1998). Religion, health, and psychological well-being in older adults: findings from three national surveys. *J Aging Health*, 10(4): 504-531.
- Liang, J., Krause, N. M., Bennett, J. (2001). Social exchange and well-being: Is giving better than receiving? *Psychology and Aging*, 16:511-523.
- Lin, N. (1982) Social Resources and Instrumental Action. In Peter V. Marsden and Nan Lin, eds., *Social Structure and Network Analysis*. Beverly Hills: Sage.
- Little, R.J.A. (1988). A Test of Missing Completely at Random for Multivariate Data with Missing Values. *Journal of American Statistical Association*, 83(404), 1198-1202
- Liu, E., Schieman, S., & Jang, S. (2011). Religiousness, spirituality, and psychological distress in Taiwan. *Review of Religious Research*, 53(2): 137-159.
- Lou, V.W.Q., Kwan, C.W., Leung, A.Y.M., et al. (2011). Psychological distress among Chinese adult-child caregivers: the effects of behavioral and cognitive components of care. *Home Health Care Serv Quart*, 30: 133-146.

- Lubben, J. (1988). Assessing social networks among elderly populations. family & community health: *The Journal of Health Promotion & Maintenance*, 11: 42-52.
- Lubben, J., Blozik, E., Gillmann, G., Iliffe, S., von Renteln Kruse, W., Beck, J. C., & Stuck, A. E. (2006). Performance of an abbreviated version of the Lubben Social Network Scale among three European community-dwelling older adult populations. *Gerontologist*, 46(4): 503-513.
- Malaysia is ageing: The Star. (2017, May 25). *Straitsimes*.
- Manrui, Z., Melissa, A.S., & Xinqi, D. (2014). The prevalence of perceived stress among U.S Chinese older adults. *AIMS Medical Science*, 1(1): 40-56.
- Marcellini, F., Ciuli, C., Papa, R., et al. (2010). BMI, life-style and psychological conditions in a sample of elderly Italian men and women. *J Nutr Health Aging*, 14: 515-522.
- Marengoni, A., Angleman, S., Melis, R., et al. (2011). Aging with multimorbidity: a systematic review of the literature. *Ageing Res Rev*, 10: 430-9.
- Matthews, D. (1996). *The Spiritual Dimensions of Medicine*. In Seminar Presentation. Loma Linda, CA: Loma Linda University Medical Center.
- Mattis, J.S., & Jagers, R.J. (2001). A relational framework for the study of religiosity and spirituality in the lives of African Americans. *Journal of Community Psychology*, 29(5): 519-539.
- Mazlan, N.H., & Ahmad, A. A. (2012). Validity study of Malay-translated version of perceived stress scale. *Malaysian J Forensic Sciences*, 3(1):52-57.

- McAuley, E., et al. (2000). Social relations, physical activity, and well-being in older adults. *Preventive Medicine*, 31(5): 609-617.
- Meera, M. (2018, December 1). Growing Old in an Innovative New Age. *New Straits Times*. Retrieved from <https://www.nst.com.my/lifestyle/health/2018/05/364169/growing-old-innovative-new-age>
- Mitchell, J. C. (1969). *The Concept and Use of Social Networks*. In J.C. Mitchell (ed.), *Social Networks in urban situations*, Manchester: University of Manchester Press.
- Mitchell, R. E., & Trickett, E. J. (1980). Social networks as mediators of social support. An analysis of the effects and determinants of social networks. *Community Mental Health Journal*, 16: 27-44.
- Moos, R.H., Brennan, P.L., Schutte, K.K., & Moos, B.S. (2006). Older adults' coping with negative life events: common processes of managing health, interpersonal, and financial/work stressors. *Int J Aging Hum Dev*, 62:39-59.
- Moreno-Weinert, I. (2012). The influence of religiosity on psychological well-being and life satisfaction in an elderly population. *Int J Aging Hum Dev*, 60:31-51.
- Myo, N.A., Saiyud, M., Thin, N.N.A., Chitima, K., Songyoos, K., & Pongsak, W. (2016). The social network index and its relation to later life depression among the elderly aged ≥ 80 years in Northern Thailand. *Clinical Interventions in Aging*, 11: 1067-1074.
- Nadzirah, A.B. (2010). Islamic Religiosity, Depression and Anxiety among Muslim Cancer Patients. Retrieved from <http://iafor.org/wp-content/uploads/2015/12/4.-Final-Manuscript-211-Islamic-Religiosity-Depression-and-.....pdf>

- Narkhede, V., Likhari, S., & Rana, A. (2012). A study on depression in elderly inmates living in old age homes in Gujarat. *Indian J Res Rep Med Sci*, 2:21-23.
- Nielsen, N.R., Kristensen, T.S., Schnohr, P., et al. (2008). Perceived stress and cause-specific mortality among men and women: results from a prospective cohort study. *Am J Epidemiol*, 168: 481-491.
- Neville, S., & Alpass, F. (2002). Stress, social support and psychological well-being in older men. of the quality of those supports in maintaining psychological well-being. *Nurs Prax N Z*, 18(3):50-61.
- Nordin, M., & Nordin, S. (2013). Psychometric evaluation and normative data of the Swedish version of the 10-item perceived stress scale. *Scand J Psychol*, 54: 502-507.
- Nutt, T.E. (2001). *Bridging healthy pathways: Successful aging and psychological well-being through social networks and learning*. A&M University, United States.
- Osmanovic-Thunström, A., et al. (2015). Do levels of perceived stress increase with increasing age after age 65? A population-based study. *Age and Ageing*, 44(5): 828-834.
- Pearlin, L.I., & Skaff, M.M. (1996). Stress and the life course: a paradigmatic alliance. *Gerontologist*, 36: 239-247.
- Peat, J., & Barton, B. (2005). *Medical Statistics: A Guide to Data Analysis and Critical Appraisal*. New York: Wiley.
- Phillips, A.C. (2013). *Perceived Stress*. In: Gellman M.D., Turner J.R. (eds) *Encyclopedia of Behavioral Medicine*. Springer, New York, NY

- Phillips, D.R., Siu, O.L., Yeh, A.G., & Cheng, K.H. (2008). Informal social support and older person's psychological well-being in Hong Kong. *Journal of Cross Cultural Gerontology*, 23(1): 39-55.
- Phillips, E.J. (1986). A review of the life satisfaction in the elderly scale. *Journal of Counseling and Develop*, 64: 542-543.
- Pokorski, M., & Warzecna, A. (2011). Depression and religiosity in older age. *European Journal of Medical Research*, 16: 401-406.
- Queen, T. & Smith, J. (2017). Aging. In R. Biswas-Diener & E. Diener (Eds), Noba textbook series: Psychology. Champaign, IL: DEF publishers. DOI:nobaproject.com
- Quadhamer, L.A. (1999). *Social Support and life satisfaction in elderly nursing home residents*. California State University, United States.
- Rong, F., et al. (2017). Relation between social network and psychological distress among middle-aged adults in Japan: evidence from a national longitudinal survey. *Social Science & Medicines*, 175: 58-65.
- Ronneberg, C.R., Miller, E.A., Dugan, E., Porell, F. (2014). The protective effects of religiosity on depression: A 2-year prospective study. *The Gerontologist*, 00: 1-12.
- Rosenquist, J.N., Fowler, J.H., & Christakis, N.A. (2011). Social network determinants of depression. *Molecular Psychiatry*, 16: 273-281
- Ross, C.E., & Zhang, W. (2008) Education and psychological distress among older Chinese. *J Aging Health*, 20: 273-289.

- Rubin, D.B. (1987). Multiple imputation for nonresponse in surveys. New York: J. Wiley & Sons.
- Rudkin, L. (2006). Social support. In R. Schulz (Ed.), *The Encyclopedia of Aging: A Comprehensive Resource in Gerontology and Geriatrics* (4th ed., pp. 1121-1128). New York: Springer.
- Sami, A.R., Kurubaran, G, Ramadan, E., Mohammed, A., & Nizar, G. (2016). Perceived stress among Malaysian railway workers. *Malaysian Journal of Medical Sciences*, 23(5): 38-43.
- Sandhu, S. S., Ismail, N. H., & Rampal, K. G. (2015). The Malay version of the perceived stress scale (PSS)-10 is a reliable and valid measure for stress among nurses in Malaysia. *The Malaysian Journal of Medical Sciences : MJMS*, 22(6): 26–31.
- Sarita, S., & Arti, B. (2012). Perceived social support and psychological well-being of aged Kashmiri migrants. *Research on Humanities and Social Sciences*, 2(2).
- Scott, S.B., Jackson, B.R., & Bergeman, C. (2011). What contributes to perceived stress in later life? A recursive partitioning approach. *Psychol Aging*, 26: 830–843.
- Shen, Z., Chen, L., Pei, H., Zhang, N., Zhang, B., & Ma, W. (2004). A survey of stress of state owned enterprises. *Chin J Behav Med Sci*, 6:679–680.
- Sherbourne, C.D., & Stewart, A.L. (1991). The MOS social support survey. *Soc Sci Med*, 32(6): 705-714.
- Sherina,S.M., Rampal, L, Aini Maridah., & Nurhidayati, H. (2005). The prevalence of depression among the elderly in an urban area of Selangor Malaysia. *Int Med J*, 4(2).

- Sherina, M.S., Rampal, L., & Mustaqim, A. (2004). The prevalence of depression among the elderly in Sepang, Selangor. *Med J Malaysia*, 59(1): 45-48.
- Sicotte, M., Alvarado, B.E., Leon, E., & Zunzunegui, M. (2008). Social networks and depressive symptoms among elderly women and men in Havana, Cuba. *Aging & Mental Health*, 12(2): 193-201.
- Silverstein, M., & Bengtson, V.L. (1994). Does intergenerational social support influence the psychological well-being of older parents? The contingencies of declining health and widowhood. *Social Science and Medicine*, 38(7): 943-957.
- Smith, E. (2008). *Using Secondary Data in Educational and Social Research*. New York, NY: McGraw-Hill Education.
- Smith, T.B., Poll, J., & McCullough, M.E. (2003). Religiousness and depression: evidence for a main effect and the moderating influence of stressful life events. *Psychol Bull*, 129(4):614-36.
- Smith, T., McCullough, M.E., & Poll, J. (2003). Religiousness and depression: Evidence for a main effect and the moderating influence of stressful life events. *Psychological Bulletin*, 129(4), 614-636.
- Stewart, D. W., & Kamins, M. A. (1993). *Secondary Research: Information Sources and Methods*. Newbury Park, CA: Sage.
- Stone, A.A., et al. (2010). A snapshot of the age distribution of psychological well-being in the United States. *Proc Natl Acad Sci*, 107: 9985-90.
- Stowell, J.R., Kiecolt-Glaser, J.K., Glase, R. (2001). Perceived stress and cellular immunity: when coping counts. *J Behav Me*, 24: 323-339.

- Strawbridge, W.J., Shema, S.J., Cohen, R.D., Roberts, R.E., & Kaplam, G.A. (1998). Religiosity buffers effects of some stressors on depression but exacerbates others. *Journal of Gerontology: Social Science*, 53B(3): 118-126.
- Stults-Kolehmainen, M.A., & Sinha, R. (2013). The effects of stress on physical activity and exercise. *Sports Med*, 44: 81-121.
- Swati, M., et al. (2014). Predicting effect of social support on psychological wellbeing in elderly. *Indian Journal of Health and Well-being*, 5(10): 1188-1190.
- Tabachnick, B.G., & Fidell, L.S. (2001). *Using Multivariate Statistics (4th Ed.)*. Boston: MA. Allyn & Bacon.
- Taylor, S.E., & Stanton, A.L. (2007). Coping resources, coping processes, and mental health. *Annu Rev Clin Psychol*, 3: 377-401.
- Umberson, D., Williams, K., Powers, D. A., Liu, H., & Needham, B. (2006). You make me sick: Marital quality and health over the life course. *Journal of Health and Social Behavior*, 47: 1-16.
- Vallejo, M. A., Vallejo-Slocker, L., Fernández-Abascal, E. G., & Mañanes, G. (2018). Determining factors for stress perception assessed with the perceived stress scale (PSS-4) in Spanish and Other European Samples. *Frontiers in Psychology*, 9: 37.
- Wang, J.J. (2001). Prevalence and correlates of depressive symptoms in the elderly of rural communities in southern Taiwan. *J Nurs Res*, 9:1-12.
- Walker, K., MacBride, A., & Vachon, M. (1977). Social support networks and the crisis of bereavement. *Social Science and Medicine*, 11: 35-41.

- Wei, Z. (2006). *Education and Distress among Elderly Chinese, a SEM Analysis*. Quebec: American Sociological Association.
- Wills, T.A. (1991). Social support and interpersonal relationships. In *Prosocial Behavior*, ed. MS Clark, 265–89. Newbury Park, CA: Sage
- Wittchen, H. U., Mühlig, S., & Beesdo, K. (2003). Mental disorders in primary care. *Dialogues in clinical neuroscience*, 5(2), 115-28.
- World Health Organization (WHO, 2012). *Depression: A Global Crisis*. Retrieved from http://www.who.int/mental_health/management/depression/wfmh_paper_depression_wmhd_2012.pdf
- Yang, T., Rockett, I.R., Lv, Q., & Cottrell, R.R. (2012). Stress status and related characteristics among urban residents: A six-province capital cities study in China. *PLoS One*, 7:e30521.
- Yeung, W., & Xu, Z. (2012). Economic stress, quality of life, and mortality for the oldest-old in China. *Soc Indic Res*, 108:131-152.
- Yohannes, A. M., Koenig, H. G., Baldwin, R. C., & Connolly, M. J. (2008). Health behaviours, depression and religiosity in older patients admitted to intermediate care. *International Journal of Geriatric Psychiatry*, 23: 735–740.
- Yusoff, M.S.B., Abdul Rahim, A.F., & Yaacob, M.J. (2010). Prevalence and sources of stress among Universiti Sains Malaysia Medical Students. *Malaysian Journal of Medical Sciences*, 17(1): 3-11.
- Zhang, X., Wang, H., Xia, Y., et al. (2012). Stress, coping and suicide ideation in Chinese college students. *J Adol*, 35: 683-690.

BIODATA OF STUDENT

I grade in the year of 2013. In 2007, I started my undergraduate studies towards Bachelor of Nursing in International Islamic University Malaysia (IIUM). Afterwards in 2015, I found my interest in Gerontology study, so I decided to continue my study in this field since Universiti Putra Malaysia have the first university of third age in Malaysia which is Institute of Gerontology.

