JOB STRESS LEVEL AMONG NON-ACADEMIC STAFF IN SCHOOL OF HEALTH SCIENCES AT UNIVERSITI SAINS MALAYSIA (USM) HEALTH CAMPUS

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By

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATION

USM	Universiti Sains Malaysia
GAS	General Adaptation Syndrome
SPSS	Statistical Package for Social Sciences
SARS-CoV-2	Severe Acute Respiratory Syndrome Coronavirus 2
COVID-19	Coronavirus Disease 2019

TAHAP TEKANAN PEKERJAAN DALAM KALANGAN STAF BUKAN AKADEMIK PUSAT PENGAJIAN SAINS KESIHATAN (PPSK) UNIVERSITI SAINS MALAYSIA (USM) KAMPUS KESIHATAN.

ABSTRAK

Tekanan berkaitan pekerjaan berlaku apabila tuntutan kerja dari pelbagai aspek dan kombinasi melebihi kemampuan seseorang untuk mengatasi. Tekanan berkaitan pekerjaan boleh disebabkan oleh banyak kejadian kepada pekerja. Objektif kajian ini adalah untuk mengetahui tahap tekanan pekerjaan dan keadaan kesihatan dalam kalangan kakitangan bukan akademik di Pusat Pengajian Sains Kesihatan. Kajian rentas telah dilakukan terhadap 98 kakitangan bukan akademik di Pusat Pengajian Sains Kesihatan menggunakan soalan soal selidik. Data dianalisis menggunakan SPSS 26.0. Ujian Mann Whitney digunakan untuk menentukan perbezaan antara umur dan tahap tekanan pekerjaan. Di samping itu, Pearson Chi Square digunakan untuk menentukan hubungan antara jantina, status perkahwinan dan pengalaman bekerja dengan tahap tekanan pekerjaan dan Ujian Korelasi Pearson digunakan untuk menentukan hubungan antara tahap tekanan pekerjaan dan gejala tekanan dalam kalangan kakitangan bukan akademik di Pusat Pengajian Sains Kesihatan. Dapatan kajian ini menunjukkan bahawa tahap tekanan min keseluruhan dalam kalangan kakitangan bukan akademik berada pada tahap rendah (M = 54.89, SD = 11.667). Secara keseluruhan, kebanyakan (100%) keadaan kesihatan kakitangan bukan akademik tidak terjejas. Selain itu, tidak ada perbezaan yang signifikan antara umur dan tahap tekanan pekerjaan dalam kalangan staf bukan akademik (p = 0.323). Tambahan pula, tidak ada hubungan yang signifikan antara jantina (p = 0.082), status perkahwinan (p = 0.703), dan pengalaman pekerjaan (p = 0.919) dengan tahap tekanan pekerjaan dalam kalangan kakitangan bukan akademik di Pusat Pengajian Sains Kesihatan, USM. Kajian ini juga mendapati bahawa terdapat hubungan yang kuat

dan positif antara tahap tekanan pakerjaan dengan gejala tekanan dalam kalangan kakitangan bukan akademik ($p = 0.001$, $r = + 0.544$). Kesimpulannya, kakitangan bukan akademik di Pusat Pengajian Sains Kesihatan mempunyai tahap tekanan kerja yang rendah dan keadaan kesihatan yang baik.

JOB STRESS LEVEL AMONG NON-ACADEMIC STAFF IN SCHOOL OF HEALTH SCIENCES AT UNIVERSITI SAINS MALAYSIA (USM) HEALTH CAMPUS

ABSTRACT

Job-related stress happens where work demands of various aspects and combinations exceed the person's capacity and capability to cope. Job-related stress can be due to numerous events to the employee. The objective of this study is to determine job stress levels and health conditions among non-academic staff in the School of Health Sciences. A cross-sectional study was conducted on 98 non-academic staff in Scholl of Health Sciences by using a self-administered questionnaire. The data were analyzed by using SPSS 26.0. Mann Whitney Test was used to determine the difference between age and job stress level. In addition, Pearson Chi-Square was used to determine the association between gender, marital status, and years of working experience with stress level, and the Pearson Correlation Test was used to determine the relationship between job stress level and stress symptoms among non-academic staff in School of Health Sciences. The findings of this study showed that the overall mean stress level among non-academic stress was at a low level (M=54.89, SD=11.667). Overall, it appeared most (100%) of the non-academic staffs' health conditions were not affected. Besides, there is no significant difference between age and stress level among non-academic staff (p=0.323). Furthermore, there is no significant association between gender (p=0.082), marital status(p=0.703), and years of experience (p=0.919) and job stress level among non-academic staff in the School of Health Sciences, USM. The study also found that there is a strong and positive relationship between job stress level and stress symptoms among non-academic staff (p=0.001, r=+0.544). In conclusion, non-academic staff at the School of Health Sciences had a low level of job stress and good health condition.

CHAPTER 1

INTRODUCTION

This chapter provides an overview of the background of the study, statement of the problem, research questions and objectives, the hypothesis of the study, conceptual and operational definitions as well as the significance of the study.

1.1 Background of the Study

Job stress can be defined as emotional reactions and harmful physical responses towards the body where the requirements of the job exceed or do not match with the capabilities or supplies of the employee (Vats et al., 2020). Job stress is a very common event that happened to some people that have been working especially under an organization in which it occurs due to various work and socio-demographic factors (Muhammad Zaki et al., 2016). Generally, work-related stress is an arising problem that affected people globally not only the health and well-being of the employee but also the competence rate of the organizations (Mensah et al., 2017).

Work-related stress can be due to numerous events to the employee or the worker. Causes of job stress may include environment and surroundings, organizational climate, and conflicts that arise from the demands of the job for the employee (Mustafa et al., 2017). For example, some people might feel under pressure if they were able to meet the demands of their job well. However, other sources of job stress could be lack of recognition, co-worker or colleague pressure or conflict, overwhelming workload, unrealistic demands, or even organizational changes that can cause job stress to the employee (Fresne, 2019).

From a previous study of Occupational Stressors among University Non-academic Staff, it said that the first three highest stressors for non-academic staff of the public universities in Ghana were working method ambiguity, followed by performance criteria ambiguity and work scheduling ambiguity (Mensah et al., 2017). For work method ambiguity, the respondents of the study disagreed that they were certain about the method used for their work and very knowledgeable of completing particular aspects of their job activity where these might be due to lack of competence among the staff. Thus, it became a stress factor among the non-academic staff of the public university of Ghana.

The next stress factor is followed by performance criteria ambiguity where it was quite hard to satisfy their superior's expectation on the job as there is lacking transparency in performance criteria. Thirdly, the factor that causes stress among the non-academic staff of the public universities in Ghana was work scheduling ambiguity where most of them disagreed that they are knowledgeable of doing certain aspects of the job, very certain about their job activities flow, and knowledgeable of doing giving work activity. Other stressors or factors of job stress were workloads and interpersonal relationships in the workplace (Mensah et al., 2017).

In the previous studies, many of them studied the relationship between job stress and its effects on mental and physical health. Effects of stress could be in two terms in which it may cause short-term or long-term impacts to the body. Short-term effects or also known as acute effects of stress are; recurring headaches, sleep disturbances, having difficulty in concentrating, short temper, and may also cause moodiness or job dissatisfaction (UMASS Lowell, 2020).

1.2 Problem Statement

Work-related stress is a worldwide problem in which the effects were not only to the employee but affects the organization. The effects of job stress on people may include physical, emotional, and behavioral problems and thus may affect health conditions, energy, life and well-being, mental health as well as personal and professional relationships (The Balance Careers, 2020). Besides, excessive stress conditions might also increase the risk of having a sleep disturbance, back and headaches, difficulty in concentrating, and accidents as well as potentially life-threatening or chronic diseases such as high blood pressure and cardiovascular diseases (The Balance Careers, 2020).

A study of Causes and Prevention of Occupational Stress (2017) stated that stressful working environment and condition may lead to three types of strains which are; behavioral symptoms (e.g. absenteeism and lack of performance), physical symptoms (e.g. fatigue, headache and sleep disturbance) and psychological and behavioral problems (e.g. irritability and anxiety). Stress affects health which will lead to illness or certain diseases such as psychological disorders, cardiovascular and gastrointestinal disease, etc. (Mustafa et al., 2017).

The turnover intention in an aspect of a job refers to the intention of the employee to look for a new job with another employer within the next year (Medina, 2012). Turnover can be in two conditions either voluntary or involuntary. Voluntary turnover is when someone leaves their job either because they have job dissatisfaction, salary or found a better job while involuntary turnover is when someone has to leave their job because they are fire due to poor performance or wrongdoings (Newth, 2020). The previous study stated that job stress has a significant positive relationship with turnover intention (Arshadi & Damiri, 2013).

The past study of job stress on employees' performance in Pakistan, stated that positive stress is sometimes needed to enhance the employee's performance. The managers in Pakistan maintain a certain level of stress for their employees to enhance the efficiency and effectiveness of their employees. Hopelessness, depression, reduced motivation, less determination at work, and lack of job satisfaction are some of the negative effects of stress on the employee. All of these may result in increases in absenteeism, poor morale support, and less motivation among employees. If the stress is uncontrolled, it would affect the employee as well as the organization. Thus, it will cause a reduction in the productivity of the organization (Zafar et al., 2015).

1.3 Research Questions

i. What is the level of job stress experienced among non-academic staff in the School of Health Sciences at Universiti Sains Malaysia (USM) Health Campus?

ii. Is there any difference between age with stress levels among non-academic staff in the School of Health Sciences at Universiti Sains Malaysia (USM) Health Campus?

iii. Is there any association between gender, marital status, and years of job experience with stress levels among non-academic staff in the School of Health Sciences at Universiti Sains Malaysia (USM) Health Campus?

iv. Is there any relationship between job stress level and stress symptoms among non-academic staff in the School of Health Sciences at Universiti Sains Malaysia (USM) Health Campus?

1.4 Research Objective

1.4.1 General Objective

The purpose of the study is to determine the job stress experienced by non-academic staff in the School of Health Sciences at USM Health Campus.

1.4.2 Specific Objective

The specific objectives of this study are:

i. To identify the health condition and level of job stress experienced among non-academic staff in the School of Health Sciences at Universiti Sains Malaysia (USM) Health Campus.

ii. To determine the difference between age with stress levels among non-academic staff in the School of Health Sciences at Universiti Sains Malaysia (USM) Health Campus

iii. To determine the association between gender, marital status, and years of job experience with stress level among non-academic staff in the School of Health Sciences at Universiti Sains Malaysia (USM) Health Campus.

iv. To determine the relationship between job stress level and stress symptoms among non-academic staff in the School of Health Sciences at Universiti Sains Malaysia (USM) Health Campus.

1.5 Research Hypothesis

Hypothesis 1:

H_o: There is no significant difference between age with stress levels among non-academic staff in the School of Health Sciences at Universiti Sains Malaysia (USM) Health Campus.

H_A: There is a significant difference between age with stress levels among non-academic staff in the School of Health Sciences at Universiti Sains Malaysia (USM) Health Campus.

Hypothesis 2:

H_o: There is no significant association between gender, marital status, and years of job experience with stress levels among non-academic staff in the School of Health Sciences at Universiti Sains Malaysia (USM) Health Campus.

H_A: There is a significant association between gender, marital status, and years of job experience with stress levels among non-academic staff in the School of Health Sciences at Universiti Sains Malaysia (USM) Health Campus.

Hypothesis 3:

H_o: There is no significant relationship between job stress level and stress symptoms among non-academic staff in the School of Health Sciences at Universiti Sains Malaysia (USM) Health Campus

H_A: There is a significant relationship between job stress level and stress symptoms among non-academic staff in the School of Health Sciences at Universiti Sains Malaysia (USM) Health Campus

1.6 Significance of the Study

Having a job or career may improve our stability, health, and attitudes toward life. Nevertheless, some individual may need to encounter with stress at their workplace as the demands of the job is more than the abilities of the worker or the employee to supply or complete the task. Job stress or workplace pressure can cause physical, emotional, and behavioral impacts. Stress can be in two forms where it can be good stress or bad stress. Some stress will challenge the worker to be more energetic psychologically and physically and thus, it motivates us to master our current job or task and we can learn new skills. Nonetheless, sometimes when the job demands do not match the capabilities of the worker, the stress will then turn out to be bad as the demands cannot be met (Zafar et al., 2015).

The significance of this study is to add to existing knowledge on the effects of stress during work. The results and conclusions from this study will help those concerned with job stress for further management of the problems to avoid worsening of the condition. Results of this study present a comparison between job stress levels of different job profiles and age groups. Any differences between the groups can be used as a precedent to aid further studies.

This study will identify the job stress level among non-academic staff in the School of Health Sciences at Universiti Sains Malaysia (USM) Health Campus as they are supporting staffs that are needed to ensure that academics can work smoothly as planned. Furthermore, this study also helps the worker to recognize the signs or symptoms where they as a worker at any places can be mentally, emotionally, or physically stressed due to their job demands.

1.7 Conceptual and Operational Definitions

Table 1.1 *Definition of Terms*

Terms	Conceptual definition	Operational definitions
Job stress	Job stress can be defined as emotional reactions and harmful physical responses towards the body where the requirements of the job exceed or do not match with the capabilities or supplies of the employee (Vats et al., 2020).	This study, it is referring to the stress that must be encountered by the employee during working.
Non-academic staff	Non-academic staff can be defined as those that are not relating to formal education, lecturing, or research activities or someone who does not have any academic employment function (Higher Education Statistics Agency (HESA), 2019)	In this study, the non-academic staff is referring to other workers than academic staff who work as; Administrative Officer, Assistant Administrative Officer, Assistant Officer, Assistant Secretary/Secretary, Graphic Designer, Science Officer, Assistant Science Officer, Assistant Operation, Research Officer, Assistant Research Officer, Medical Laboratory Technologist, Assistant Health Officer, Clinical Instructor, Medical Rehabilitation Officer, Food Technology Officer, Dietetic Officer, Radiologist and Medical Therapist at School of Health Sciences, USM.

CHAPTER 2

REVIEW OF LITERATURE

2.1 Introduction

This chapter presents a review of the literature related to job stress levels among non-academic staff in the School of Health Sciences at Universiti Sains Malaysia (USM) Health Campus. The resulting literature review is organized into six separated sections covering topics most relevant to meeting the objectives of this study, answering this study's research questions, and supporting or disagreeing with its hypotheses. The final section will be the detail of the study's conceptual framework and instrumentations of some related studies.

2.2 Theory of Stress

A Hungarian Endocrinologist, Hans Selye was the one to explain biological stress. He also mentioned about tress model based on physiology and psychobiology as General Adaptation Syndrome (GAS). The model states that the events that threatened an organism's well-being which is also known as stressors lead to a three-stage bodily response which is; alarm, resistance, and exhaustion. The inflammatory response and repair process which is also known as local adaptation syndrome occurs at the local site of tissue injury as in small, topical injuries. An example of the inflammatory response is contact dermatitis in which may lead to GAS if the local injury is worsening. At Stage 1 (Alarm), when the body encounters the stressor, it reacts with a "fight-or-flight" response, and the sympathetic nervous system is activated. In Stage 2 (Resistance), the parasympathetic nervous system returns the physiological functions to normal levels. Meanwhile, the breathing rate, heart rate, and blood pressure increase as the body focus resources against the stressor. During the definite stage (Exhaustion), if the stressors go

past the body's cut-off, the creature depletes assets and gets powerless against infection and passing (Arumugam et al., 2015).

2.2.1 Definition of Stress

Stress is not a disease. Stress likewise can be characterized as human body responses when given requests and weights that are not coordinated with their insight and capacities and which challenge their capacity to adapt to the issues (World Health Organization, 2020).

2.2.2 Pathophysiology of Stress

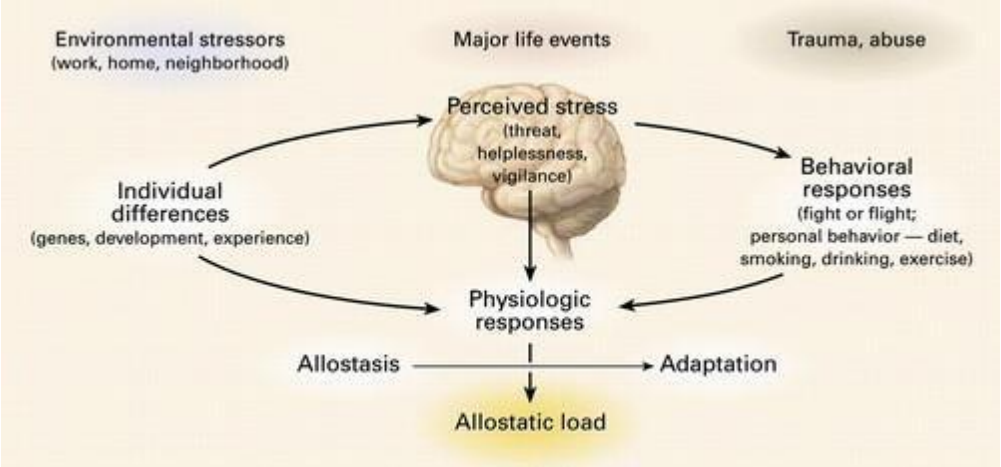

Figure 2.1 The Stress Response and Development of Allostatic Load (Mcewen, 1997).

The allostatic burden can be characterized as the expense of persistent presentation to expanded or fluctuating endocrine or neural reactions subsequently from ongoing or rehashed difficulties that some individual encounters which are known as unpleasant **Figure 2.1** show the stress response and development of allostatic load (Mcewen, 1997). Perception of stress is influenced by different experiences, genetic, and behavior of different people. When the brain experiences an event as a stressful event, the physiologic and behavioral responses are initiated which lead to allostatic and adaption. Over time, it can cause disease as the allostatic load can accumulate, and the

overexposure to neural, endocrine, and immune stress mediators causes adverse effects on many organ systems (Mcewen, 1997).

The brain determines behavioral and physiological responses to the situations experienced as threatening or non-threatening events. Aside from the brain stem and hypothalamus that are important for the euro endocrine and autonomous to respond to stressors, the higher cognitive areas of the brain also play an important role in anxiety, memory, and decision making. These areas of the brain are the targets of stress and stress hormones and the acute and chronic effects of the stressful events in which it influences the way of stress to be responded to (Chaudhuri, 2020).

2.2.3 Causes of Stress

Everybody has different stress triggers. Generally, few factors that cause stress events are; when we worry about something, need to face big life changes, being under lots of pressure, having less control over the outcome of some situation, etc. (Mind, 2017). Stress also occurs due to life events that have big impacts such as the death of a loved one, loss of job, increased in financial burdens, divorce, chronic illness or injury, getting married, being a caregiver to an elderly or other sick family member or even have to go through some traumatic events such as rape, violence, theft or natural disaster that give a negative effect to some people whose experiencing stress (WebMD, 2020).

2.2.4 Risk factor of Stress

Stress affects people of all ages and throughout their lifetime. The degree of stress is highly dependent on individual factors such as physical health, quality of interpersonal relationships, life commitments, and responsibilities carried. However, it is quite general where most people with adequate or strong social support networks report less stress and overall good mental health and vice versa. Some people who are malnourished had inadequate sleep, and physically also have a low capacity to handle pressures and stresses. Besides, children, teens, newly married, working parents, and single parents are also vulnerable to get stress due to life transitions (Stöppler, 2019).

2.2.5 Management of Stress

Effective management of stress helps to break the stress in life so it brings happier, healthier surroundings and more productivity. Lifestyle measures may be helpful to manage and prevent stress-induced feelings of being overwhelmed. For example, do exercises as it helps in reducing memory impairment and reduce alcohol, drug, and caffeine intake as may not help to prevent stress but only make it worse. Besides, get a healthful, balanced diet and nutrition such as fruit and vegetables to maintain a good immune system at times of stress (Felman, 2020).

Besides, learn to do priority management by organizing a daily to-do list and focus on urgent or time-sensitive tasks, and set aside some time to organize schedules, relax, and pursue own hobbies and interests. Other than that, breathing and relaxation techniques are important to reduce stress and pressures as they may slow down the heart rate and promote relaxation, and also acts as mindfulness meditation. It is also important to share feelings with family, friends, and work colleagues as it helps in reducing feelings of isolation (Felman, 2020).

2.3 The Occurrence of Job Stress among non-academic staff

From a previous study in Universiti Putra Malaysia (UPM) by (Mukosolu et al., 2015), it stated that it involves academic and non-academic staff at different faculties and institute. There are 294 academics and another 217 non-academic staff respondents. 23.1% of academic staff was found stressed with their job while the remaining 76.9% of them did not stress with their job. Other than that, for non-academic staff in UPM, only 19.8% of them were found stress, and the rest with a total of 80.2% had no experience of stress. The general predominance of stress from this investigation was 21.7% where 6.5% announced mellow pressure, 8.6% detailed moderate pressure, 5.9% revealed serious, and 0.7% announced having extraordinary extreme pressure.

A previous study of determinant factors of work stress among teaching and non-teaching staff was done in Indonesia (2019), to analyze the influence of intrinsic factors and extrinsic factors to work stress among both teaching and non-teaching staff in that particular faculty in the university. The examination was a diagnostic exploration with a cross-sectional plan. In this examination, the greater part of educating and non-encouraging staff experienced medium-level work pressure. From the study, for teaching staff the result shows that only 8.33% had a low level of stress, 75% had medium stress level, 13.89% of had high-stress level and only 2.78% experienced a very high level of stress. Meanwhile, for non-teaching staff, 13.33% of had low-stress levels, 71.11% had medium stress levels and only 15.56% of non-teaching staff had a high level of stress (Damayanti & Nawawinetu, 2019).

2.3.1 Factors associated with job stress

Job stress is a response that some people may have when they are burdened with work demands or also known as pressures that exceed their knowledge or capabilities as a worker to complete the task or the demands well (World Health Organization, 2020). There are two classifications of job or workplace stressors which are physical and psychosocial. Physical stressors include poor lighting, pain and restricted health condition, workplace layout or surrounding conditions, etc. Moreover, the examples of psychosocial stressors are; high job demands, inflexibility of working hours, poor job control, bullying, harassment, and job insecurity (Corporate Wellness Magazine, 2019).

World Health Organization stated that pressure perceived at the workplace is unavoidable due to the demands of the work environment. However, pressure leads to stress when the demands of the work are unmanageable and exceed the capabilities of the worker to complete the tasks (World Health Organization, 2020). Work-related stress can be due to high workloads, lack of control over work activities, lack of interpersonal support, lack of skill and experience, difficulty in adapting to new changes, and bullying and harassment. Other than that, blame culture were people are afraid of trying as they are afraid of making mistakes, ineffective work management, lack of communication, and poor physical working surrounding or environment can also be a common area of stress (World Health Organization, 2020).

A study of the impression of work pressure causes and viable mediations in representatives working out in the open, private and non-legislative associations was done based outside and in London (Bhui et al., 2016). The study found that 82.4% of participants (n = 42/51) referred to working conditions as a main source of stress. Working conditions were commonly related to factors such as workload, the physical environment (e.g. noisy

surroundings of work, lack of windows and ventilation, too small rooms, and offices in which was either too low or too high temperature for comfort of the worker), long working hours, heavy workloads and understaffing. Besides, 78.4% of the participants (n = 40/51) had suggested that the nature of the job also contributed to stress, in which most of the participants from private organizations and NGOs were the ones who often reporting this as a cause of stress. Participants stated that most job stress is also due to a job with high unpredictability requirements from day to day, or a job that demands unsociable hours (Bhui et al., 2016).

2.3.2 The effects of job stress

The effect of stress may lead to diseases such as psychological disorders, cardiovascular disease, gastrointestinal disease, etc. (Mustafa et al., 2017). When stress response keeps firing, it triggers the deterioration of health conditions such as headache, heartburn, increased depression, insomnia, rapid breathing, risk of heart attack, weakened immune system, pounding heart, stomach ache, etc. (Pietrangelo, 2020).

A cross-sectional study was directed in 2016 to survey pulse design and anthropometric boundaries among 324 solid instructing (n = 120) and non-educating (n = 202) staff of Obafemi Awolowo University, Ile-Ife, Nigeria. The prevalence of high blood pressure was 34.9% including healthy teaching and non-teaching staff of the university. The distribution and incident of high blood pressure were 20.1% and 14.8% respectively for teaching to non-teaching staff. Thus, the study found that there were significant correlations between blood pressure and some anthropometric parameters (weight, body mass index, and waist circumference) in both groups. However, the incidence of high blood pressure was higher among teaching compared to non-teaching staff (Adedoyin et al., 2016).

A study on assessment of the relationship between mental health and job stress among nurses found that 57.3% of the nurses were acceptable as to the level of health and 42.7% of them were exposed to impaired mental health. The result of the study stated that 50.7% of the nurses were severely stressed, 46.7% of them had a moderate level of stress and only 1.7% of the nurses had a mild level of stress at their workplace. The findings of the study showed that there was a relationship between mental health and job stress among nurses. Thus, according to the study, the nurses must pay attention to their mental health to ensure their quality of nursing care increases (Shahraki Vahed et al., 2010).

2.3 Theoretical and Conceptual

Framework Theoretical

Framework of the Study

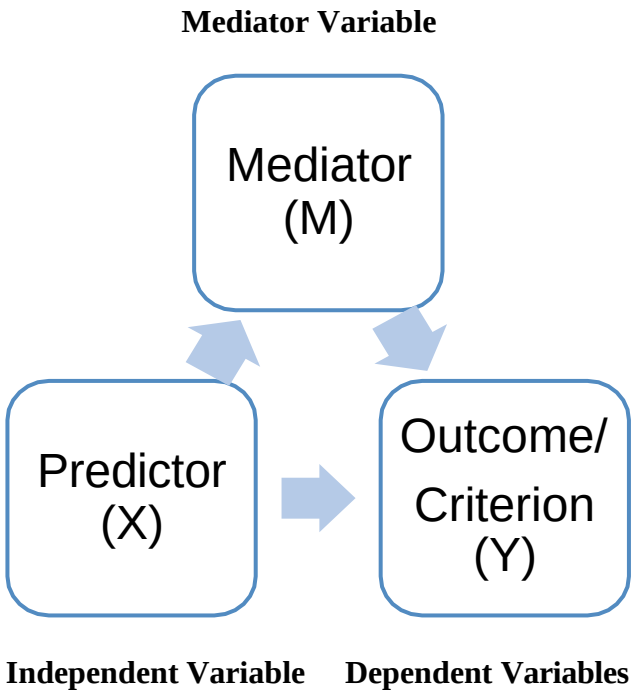

Figure 2.2 Mediation Model of Baron and Kenny's (1986)

The theoretical framework use for this study is based on Mediation Model, introduced by Baron and Kenny in 1986. It is an analysis strategy for testing mediation hypotheses. This model stated two paths towards the dependent level. The independent variable (predictor) must predict the dependent variable (outcome), and the independent variable must predict the mediator (Baron & Kenny, 1986). Hence, if all of these conditions hold in the predicted direction, then the independent variable needs to be less in the third equation than in the second.

To explain a known relationship, examination of the underlying mechanism is done to build mediation studies in which one variable affects another variable via mediator variable. The perfect mediation will behold if the independent variable does not affect as the mediator is regulated. There should be a correlation between the independent variable as it acts as the causes of the mediator variable (Baron & Kenny, 1986).

Conceptual Framework of the Study

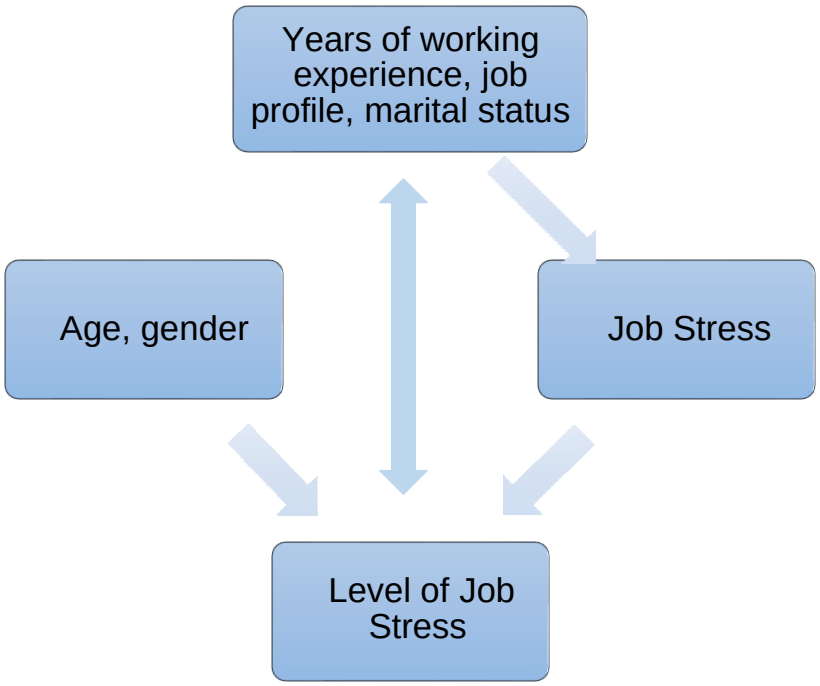

Figure 2.3 Conceptual framework to study job stress level among the non-academic staff of School of Health Sciences in USM Health Campus adapted from Baron and Kenny's Mediator model (1986)

The conceptual framework used in this study was adapted from Mediation Model which is introduced by Baron and Kenny in 1986. Modification of the model was made to show the relationship to be studied in this research. The independent variables are; age, gender, years of working experience, job profile, and working experience. The dependent variable in this study is the level of stress meanwhile the job stress acts as the mediator variable (Baron & Kenny, 1986).

Generally, the objective of this study is to determine the job stress experienced by non-academic staff in the School of Health Sciences at Universiti Sains Malaysia (USM) Health Campus. The main purpose is to examine the level of job stress experienced by the non-academic staff in the School of Health Sciences at Universiti Sains Malaysia (USM) Health Campus. Secondly, this study aims to examine the differences in job stress levels between age among non-academic staff in the School of Health Sciences at Universiti Sains Malaysia (USM) Health Campus. Thirdly, it also assesses the relationship between socio-demographic factors of marital status, job profile, and years of working experience with the level of job stress perceived by non-academic staff in the School of Health Sciences at Universiti Sains Malaysia (USM) Health Campus. In this study, mediating variable does not only affect the outcome which is the dependent variable but it is also affected by the independent variables. Thus, it helps to explain the relationship between the independent and dependent variables.

CHAPTER 3

METHODOLOGY

3.1. Introduction

This chapter explains the approach and rationale used to support the chosen research methodology. Determining and understanding an appropriate research design is crucial for achieving the aims of the study. The chapter begins with a description of a study design and justification for choosing to use the approach. This is followed by a description of the study setting, population, participant selection criteria, sampling plan, sample size determination, and instrumentation, including ethical consideration right through data collection methods. This final section explains the proposed statistical analyses used with the quantitative data.

3.2 Research Design

The study is quantitative and descriptive. It was conducted through a cross-sectional survey. This approach is considered appropriate to give a detailed description of the participant's job stress level among non-academic staff in the School of Health Sciences at Universiti Sains Malaysia (USM) in Health Campus.

3.3. Study Setting and Population

The study was done at the School of Health Sciences, Universiti Sains Malaysia (USM) in Health Campus, Kubang Kerian, Kelantan. Research duration conducted from October 2020 until July 2021. The data was collected from January 2021 until March 2021.

The study was conducted at Universiti Sains Malaysia (USM) Health Campus, Kubang Kerian, Kelantan. It consists of three schools which are; School of Medical Sciences, School of Dental Sciences, and School of Health Sciences. This study involved the School of Health

Sciences which is in this school it consists of 129 academic staff and 130 non-academic staff. Thus, the population for this study only involves 130 non-academic staff from the School of Health Sciences at Universiti Sains Malaysia (USM) Health Campus, Kubang Kerian, Kelantan. The non-academic staff consists of 18 positions in 16 different locations or units. 16 units in School of Health Sciences are; Dean Office, Deputy Dean Office, Administration Office, Academic, and Graduate Studies Office, Research Unit, Science Laboratory Management Unit, Audiology and Speech Pathology Programme, Biomedical Programme, Nursing Programme, Environmental and Occupational Safety and Health Programme, Nutrition and Dietetic Programme, Forensic Science Programme, Exercise Science and Sports Programme, Medical Radiation Programme, Human Identity/DNA (HID/DNA) Unit, and Transformation OKU Unit. 18 positions of the non-academic staff in School of Health Sciences are; Administrative Officer, Assistant Administrative Officer, Assistant Officer, Assistant Secretary/Secretary, Graphic Designer, Science Officer, Assistant Science Officer, Assistant Operation, Research Officer, Assistant Research Officer, Medical Laboratory Technologist, Assistant Health Officer, Clinical Instructor, Medical Rehabilitation Officer, Food Technology Officer, Dietetic Officer, Radiologist and Medical Therapist.

3.4 Sampling Plan

3.4.1 Sample Criteria

Inclusion Criteria

The eligibility requirements for inclusion in the study required each participant must be:

- Non-academic staff in School of Health Sciences at USM Health Campus.
- Able to read, understand and speak the Malay Language fluently.

Exclusion Criteria

Subjects are excluded from this study if they:

- Lecturers or tutors in the School of Health Sciences at USM Health Campus.
- Non-academic staff in the School of Health Sciences who are currently on study leave or maternity leave.

3.4.2 Sample Size Estimation

The population size for non-academic staff in the School of Health Sciences for the current year was 130. The sampling size was determined by using Raosoft sample size calculation software as shown in Figure 3.1.

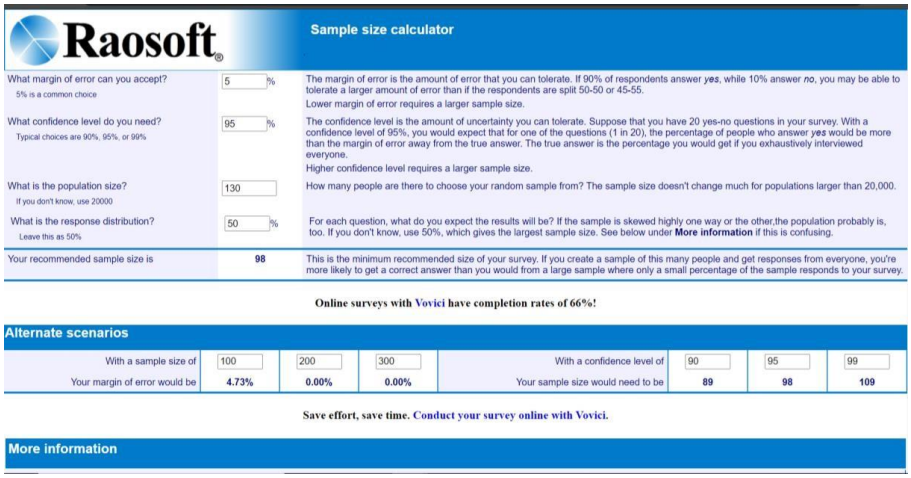

Figure 3.1 Sample size calculation by Raosoft Software

Based on the formula, a confidence level was set at 95%. The recommended sample size for this study was 130 non-academic staff. By considering the probability of dropout, another 10% is added. Therefore, the total number of participants in this study were;

= 98 + drop out of 10%

= 98 + ((10÷100) × 98)

= 98 + 10 = 108 non-academic staff.

3.5 Instrumentation

3.5.1 Instrument

The study used one set questionnaire regarding job stress among non-academic staff which was given to the participants. The Job Stress Level Among Non- Academic Staff stress scale was developed by (Singh & Srivastava, 2017). The questionnaire consists of three-part which are Part A, Part B, and Part C.

Part A: Socio-demographic Data

This part of the questionnaire consists of socio-demographic data that include name, age, sex, marital status, education level, job profile, and working experience. The participants need to tick and fill in the answer in the space provided.

Part B: Stress Symptoms

This part of the questionnaire assesses commonly experienced stress symptoms was developed by Dr. Madhav Madhusudan Singh (2017). The questionnaire consists of 30 questions which were particularly on the topic of general health. Each question will be rated using a 3-point Likert scale with the option of 0—Never, 1—Sometimes, and 2— Always.

Part C: Job Stress Level

This part of the questionnaire is the job stress level questionnaire, which has been developed by Dr. Madhav Madhusudan Singh (2017), where is composed of 32 questions. Each question will be rated using a 4-point Likert scale with the option of 1—Never, 2—Sometimes, 3—Frequently, and 4—Always.

3.5.2 Translation of Instrument

The questionnaire was developed in the English version and was translated into Malay version as suggested by the supervisor by using forward and backward translation. The first step of translation, the instruments were translated into Malay version by a certified bilingual expert translator from the University's School of Languages, Literacies, and Translation of USM. Then the Malay version was translated back into English by using the backward translation also by a certified bilingual expert translator from the University's School of Languages, Literacies, and Translation of USM.

3.5.3 Validation and Reliability

The instrument was sent to three nursing panels to get the content validation before the questionnaire was distributed. The content validation was important to ensure the questionnaire was easy to understand and applied to the population sample. Finally, the questionnaire was modified after the panels had given their opinion on the questionnaire.

Reliability is the degree to which the survey data a consistent and reproducible throughout participants or across the study. Theoretically, to measure the reliability of an instrument, the subscale in the instruments will be assessed using Cronbach's alpha to test is reliability and the overall internal consistency for each scale is within the acceptable values of alpha, ranging from 0.70 and above is good, 0.80 and above is better, and 0.90 and above is considered the best (Statistics Solution, 2017). For the reliability aspects, the pilot study will be done on 13 subjects which is the same as the inclusion criteria but does not include the 108 real participants. The pilot study acts as crucial to know the acceptability, validity, and reliability of the questionnaire. Internal consistency of the questionnaire in this study will be determined using Cronbach's alpha.