

The copyright © of this thesis belongs to its rightful author and/or other copyright owner. Copies can be accessed and downloaded for non-commercial or learning purposes without any charge and permission. The thesis cannot be reproduced or quoted as a whole without the permission from its rightful owner. No alteration or changes in format is allowed without permission from its rightful owner.



**JOB STRESS AMONG PRODUCTION OPERATORS:
THE CASE OF MANUFACTURING COMPANY IN GELANG PATAH, JOHOR.**

By

UMMU NOOR HABIBAH BT YAHYA

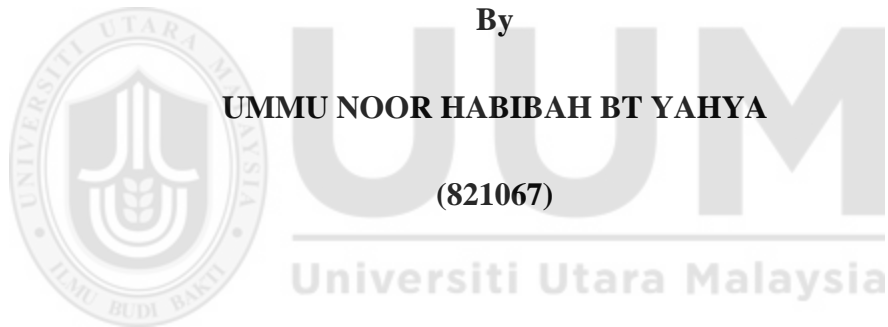


UUM
Universiti Utara Malaysia

UNIVERSITI UTARA MALAYSIA

2018

**JOB STRESS AMONG PRODUCTION OPERATORS:
THE CASE OF MANUFACTURING COMPANY IN GELANG PATAH, JOHOR.**



**A Project Paper Submitted to
School of Business Management,
Universiti Utara Malaysia in Partial Fulfillment of the Requirements for
Master of Science (Management)**



**Pusat Pengajian Pengurusan
Perniagaan**

SCHOOL OF BUSINESS MANAGEMENT

Universiti Utara Malaysia

PERAKUAN KERJA KERTAS PENYELIDIKAN
(Certification of Research Paper)

Saya, mengaku bertandatangan, memperakukan bahawa
(I, the undersigned, certified that)

UMMU NOOR HABIBAH BT. YAHYA (821067)

Calon untuk Ijazah Sarjana
(Candidate for the degree of)

MASTER OF SCIENCE (MANAGEMENT)

telah mengemukakan kertas penyelidikan yang bertajuk
(has presented his/her research paper of the following title)

**JOB STRESS AMONG PRODUCTION OPERATORS: THE CASE OF
MANUFACTURING COMPANY IN GELANG PATAH, JOHOR**

Seperti yang tercatat di muka surat tajuk dan kulit kertas penyelidikan
(as it appears on the title page and front cover of the research paper)

Bahawa kertas penyelidikan tersebut boleh diterima dari segi bentuk serta kandungan dan meliputi bidang ilmu
dengan memuaskan.

(that the research paper acceptable in the form and content and that a satisfactory knowledge of the field is covered
by the research paper).

Nama Penyelia : **DR. MOHD RASHDAN BIN SALLEHUDDIN**
(Name of Supervisor)

Tandatangan :
(Signature)

Tarikh : **16 MEI 2018**
(Date)

PERMISSION TO USE

In presenting this project paper in partial of requirement for a postgraduate degree from the Universiti Utara Malaysia, the author agrees that the University Library may make it freely available for inspection. The author further agree that permission for copying of this thesis in any manner in whole or in part, for scholarly purposes may be granted by my supervisor on their absence by the Dean of the Graduate School. It is understood that any copying or publication or use of this thesis or parts thereof for financial gain shall not be allowed without any written permission. It is also understood that due recognition shall be given to me and to Universiti Utara Malaysia for any scholarly use which may be made of any material from thesis.

Request for permission to copy or to make other use of materials in this thesis, in whole or in part should be addresses for:

Dean of School of Business Management

Universiti Utara Malaysia

06010 Sintok

Kedah Darul Aman

ABSTRACT

Stress is an emergent occupational problem in the modern society. Contending with stressful situations in the workplace is a common occurrence for all employees in manufacturing company. The purpose of this study was to identify the level of job stress among production operators at one of manufacturing company in Gelang Patah, Johor. The study also attempted to determine if there were any significant in the respondent's level of job stress when the independent variables are work load, work environment, co-worker relationship and social support. A total of 100 production operators participated in this survey. The findings of this study showed that work load and work environment does significantly influence on job stress while co-worker relationship and social support does not significantly influence on job stress.

Keyword: Workload, Work Environment, Co-worker Relationship, Social Support, Job Stress

ABSTRAK

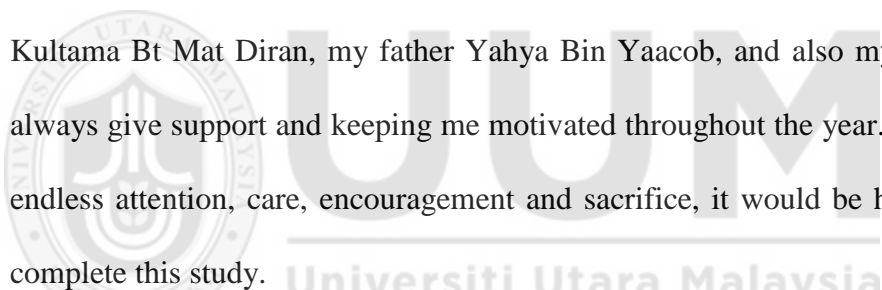
Tekanan kerja merupakan masalah pekerjaan yang semakin menular di kalangan masyarakat moden. Menghadapi keadaan yang tertekan merupakan perkara yang biasa untuk semua pekerja terutamanya dalam industry pembuatan. Tujuan kajian ini adalah untuk mengenalpasti paras tekanan kerja di kalangan pengendali pengeluaran di salah satu syarikat pembuatan di Gelang Patah, Johor. Kajian ini juga dijalankan untuk mengenalpasti sama ada terdapat hubungan yang signifikan terhadap tahap tekanan kerja pengendali pengeluaran berdasarkan beban kerja, suasana kerja, hubungan rakan sekerja dan sokongan social. Hasil kajian ini menunjukkan bahawa tekanan kerja dan suasana kerja mempunyai kesan yang signifikan terhadap tekanan kerja manakala hubungan rakan sekerja dan sokongan social tidak mempunyai kesan yang signifikan terhadap tekanan kerja.

Kata kunci: Beban kerja, suasana kerja, hubungan antara pekerja dan sokongan sosial.

ACKNOWLEDGEMENT

In the name of Allah, Most Gracious and Most Merciful, Alhamdulillah, praised to Allah S.W.T for the completion of this project paper. I would like to express my gratitude and appreciation to those who helped, supported and encouraged me, and made this accomplishment possible.

First, I would like to thank my supervisor, Dr. Mohd Rashdan Bin Sallehuddin. There is no word to thank you for all that you have done for me. Your time, guidance and continuous support and feedback has kept me on track throughout. Second, an honest gratitude and special thanks for my mother Kultama Bt Mat Diran, my father Yahya Bin Yaacob, and also my siblings that always give support and keeping me motivated throughout the year. Without your endless attention, care, encouragement and sacrifice, it would be hard for me to complete this study.



It is also a pleasure to offer my appreciation to my lovely friends Siti Shuhaila, Anna Syafiqah Hassan, Malina Mohammad, Nur Fatihah Zaharuddin, Ahmad Zaki Abdul Rahman, Najwa Nordin and Farhan for helped me during my data collection process at Gelang Patah, Johor. Without your help and support, it would be hard for me to complete this research.

To my other half, Siti Aisyah Atiqah Rafei, I must thank you for supported me from beginning of this journey to the end. I owe entirely to the Allah s.w.t for keep giving me the patience and courage to finish this research. I hope this research will be of assistance of someone in the future.

TABLE OF CONTENT

| CONTENT | M/S |
|-------------------|------|
| PERMISSION TO USE | ii |
| ABSTRACT | iii |
| ABSTRAK | iv |
| ACKNOWLEDGEMENT | v |
| TABLE OF CONTENT | vi |
| LIST OF TABLES | x |
| LIST OF FIGURES | xii |
| LIST OF APPENDIX | xiii |

CHAPTER 1: INTRODUCTION

| | | |
|-----|-------------------------|----|
| 1.1 | Background of the Study | 1 |
| 1.2 | Problem Statement | 5 |
| 1.3 | Research Question | 9 |
| 1.4 | Research Objective | 10 |
| 1.5 | Significant of the tudy | 10 |

| | | |
|-----|-----------------------------|----|
| 1.6 | Scope of the Study | 11 |
| 1.7 | Definition of the Key Terms | 12 |

CHAPTER 2: LITERATURE REVIEW

| | | |
|-------|--|----|
| 2.1 | Introduction | 14 |
| 2.2 | Job Stress | 14 |
| 2.3 | Workload | 17 |
| 2.3.1 | Relationship between Workload and Job Stress | 19 |
| 2.4 | Work Environment | 20 |
| 2.4.1 | Relationship between Work Environment and Job Stress | 22 |
| 2.5 | Co-worker Relationship | 23 |
| 2.5.1 | Relationship between Co-worker Relationship and Job Stress | 25 |
| 2.6 | Social Support | 26 |
| 2.6.1 | Relationship between Social Support and Job Stress | 28 |
| 2.7 | Person-Environment Fit Theory | 29 |

CHAPTER 3: METHODOLOGY

| | | |
|-----|--------------------------|----|
| 3.1 | Introduction | 31 |
| 3.2 | Research Framework | 31 |
| 3.3 | Hypothesis Statement | 32 |
| 3.4 | Research Design | 33 |
| 3.5 | Measurement of variables | 34 |
| 3.6 | Data Collection | 39 |
| 3.7 | Sampling | 40 |

CHAPTER 4: DATA ANALYSIS

| | | |
|---------|--------------------------------|----|
| 4.1 | Introduction | 41 |
| 4.2 | Number of Returns | 41 |
| 4.3 | Descriptive Analysis | 42 |
| 4.3.1 | Demographic of the Respondents | 42 |
| 4.3.1.1 | Gender | 42 |
| 4.3.1.2 | Age | 44 |
| 4.3.1.3 | Marital Status | 45 |

| | | |
|---------|--|----|
| 4.3.1.4 | Academic Qualification | 46 |
| 4.3.1.5 | Duration of Work | 47 |
| 4.3.2 | Dependent and Independent Variables | 48 |
| 4.3.2.1 | Workload | 48 |
| 4.3.2.2 | Work Environment | 49 |
| 4.3.2.3 | Co-worker Relationship | 50 |
| 4.3.2.4 | Social Support | 51 |
| 4.3.2.5 | Job Stress | 52 |
| 4.4 | Reliability Test | 53 |
| 4.5 | Correlation Analysis | 54 |
| 4.5.1 | Correlation Analysis on Workload and Job Stress | 54 |
| 4.5.2 | Correlation Analysis on Work Environment and Job Stress | 55 |
| 4.5.3 | Correlation Analysis on Co-worker Relationship and Job Stress | 56 |
| 4.5.4 | Correlation Analysis on Social Support and Job Stress | 57 |

| | | |
|-------|--------------------------------------|----|
| 4.6 | Multiple Regression Analysis | 58 |
| 4.6.1 | Independent Variables and Job Stress | 58 |
| 4.7 | Summary of the Result | 60 |

CHAPTER 5: DISCUSSION AND CONCLUSION

| | | |
|-----|-------------------------------------|----|
| 5.1 | Introduction | 61 |
| 5.2 | Discussion | 61 |
| 5.3 | Limitation of the Study | 63 |
| 5.4 | Recommendation for the Future Study | 64 |
| 5.5 | Conclusion | 64 |

| | |
|-------------------|----|
| REFERENCES | 66 |
|-------------------|----|

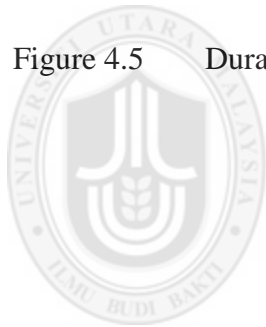
LIST OF TABLES

| TABLES | M/S |
|--|-----|
| Table 3.1 Five Point of Likert Scale | 35 |
| Table 3.2 Research Variables and Measurement | 36 |
| Table 4.1 Survey Response Result | 42 |
| Table 4.2 Gender of Respondent | 43 |
| Table 4.3 Ages of Respondent | 44 |
| Table 4.4 Marital Status of Respondent | 45 |
| Table 4.5 Academic Qualification of Respondent | 46 |
| Table 4.6 Duration of Work | 47 |
| Table 4.7 Mean and Standard Deviation Statistic for Workload | 48 |
| Table 4.8 Mean and Standard Deviation Statistic for Work Environment | 49 |
| Table 4.9 Mean and Standard Deviation Statistic for Co-worker Relationship | 50 |
| Table 4.10 Mean and Standard Deviation Statistic for Social Support | 51 |
| Table 4.11 Mean and Standard Deviation Statistic for Job Stress | 52 |

| | | |
|------------|--|----|
| Table 4.12 | Total Mean and Average Mean for Job Stress | 52 |
| Table 4.13 | Cronbach Alpha Statistic for Actual Study | 53 |
| Table 4.14 | Correlation Analysis on Workload and Job Stress | 54 |
| Table 4.15 | Correlation Analysis on Work Environment and Job Stress | 55 |
| Table 4.16 | Correlation Analysis on Co-worker Relationship and Job Stress | 56 |
| Table 4.17 | Correlation Analysis on Social Support and Job Stress | 57 |
| Table 4.18 | The Model Summary | 58 |
| Table 4.19 | The Anova Model | 59 |
| Table 4.20 | The Coefficient of the Study Model | 59 |

LIST OF FIGURES

| FIGURES | M/S |
|--|-----|
| Figure 3.1 Research Framework | 32 |
| Figure 4.1 Genders of Respondent | 43 |
| Figure 4.2 Ages of Respondent | 44 |
| Figure 4.3 Marital Status of Respondent | 45 |
| Figure 4.4 Academic Qualifications of Respondent | 47 |
| Figure 4.5 Duration of Work | 48 |



UUM
Universiti Utara Malaysia

LIST OF APPENDIX

APPENDIX

M/S

Research Questionnaire

73



CHAPTER 1

INTRODUCTION

1.1 Background of the Study

The development of an organization nowadays leads to the high demand for workers to increase their productivity in carrying out the task in an organization. As we know that workers are the driving force and main pillars in an organization's development. Therefore, if they failed to increase their productivity, it will cause a failure to the organization in achieving the goals. There are several factors that affecting their productivity such as workload, work environment, co-worker relationship, social support, and so on. If these factors do not manage well by the management, it will lead to job stress. Long times ago, the term of job stress may be rarely heard or spoken among Malaysians compared with Western society but today, it has become a daily word for us.

In any organization, regardless of public or private organizations, there are workers who often subjected to job stress and often exposed to the causes of job stress such as production operators in factories. Those who are in this position always bound to give high commitment and focus on their job. Mistakes and failures to work well by production operators will cause them to do the same job repeatedly and sometimes, these mistakes will cause them to be scolded by their leaders. Such situations will cause them to depression and automatically their productivity will be decreased. Stress is a recent phenomenon and is often related

with job performance, health and employees' productivity. It can give a negative effect to the productivity and quality of the employees if it's not handled properly.

According to the past studied by Awang, Dollard & Field (2010), majorities of the respondent (77%) agreed that job stress has already increased. While Helvinder (2003) stated in World Health Organization's (WHO) report that there were about 100 million people around the world facing stress. While according to the report that published by United Nations, stress at the work place has been labeled as a 20th century's disease. Bernama Online (8hb November, 2011) reported that half of Malaysian's employees work more than 8 hours per day. This situation can cause employees to be under pressure and certainly a lot of negative implications occur when a person cannot control the job stress.

In fact, job has become one of the important parts in human lives. Based on Maslow's hierarchy of needs (1943), Maslow believed that people are motivated to work in order to fulfill their physiological needs. These are the basic needs that are to be met in order to survive, including food, water, clothing, sleep, and shelter. However, due to some factors in work environment, job life becomes more complicated and more workers are becoming stressed. If this matter not resolved by the relevant party, it may gives a negative impact to the output of the company.

Earlier studies shows that stress will cause physical and psychological symptoms that exist due to the difficulties experienced when individual is trying to adapt to an environment (Benneth, 1997). As a positive influence, stress can

help turn us to action which it can result in a new awareness and an exciting new perspective. As a negative influence, it can result in feelings of distrust, rejection, anger, and depression, which in turn can lead to the negative impact on the organization. According to Meneze (2005), job stress has become challenging phenomenon to the employers because these issues arise in employment world which brings result in low productivity, increased absenteeism, and the other employees' problems such as alcoholism, drug abuse, hypertension and also host of cardiovascular problems to the employees.

In most organizations, especially in industrial companies, whereby there are a lot of constraints that is caused by the complexity of task that employees do, the employee faced with a lot of stress. Increase complexity in organizational work environments has given rise to higher levels of job-related stress experienced (Sosik & Godshalk, 2000). Industrial company is a type of company that set targets of productivity that must be met by the employees, individual and the organization as a whole. In order to do so, the employees are required to move quickly in their task. Working in hurry in order to meet the target set by the organization, makes the employees feel anxiety, whether they can meet the requirement of task or not. In many cases, the employees have to work overtime. Even though overtime means there is additional salary, but the time to spend with family, time to rest or the time for leisure can be lost because of that.

The employer should realize that the stress is unable to be avoided or ignored in an organization. Therefore, the management must aware of the employees' condition. If the employers can detect the pressure or stress among

employees, they should find out some solutions to satisfy the employees and make sure they are able to handle their job stress in an organization and perform well in their job in order to bring benefits to the organization. This is because job stress has become a critical issue because organization nowadays tends to force the employees to meet the objectives to gain the profit of its company. That demand is one of the sources of emerging stress especially in the workplace. This is supported by Carr, Kelley, Keaton and Albrecht (2011) as workplace is one of the greatest causes of stress. More workloads have to be done, more pressure arises. As well as Bradley & Sutherland (1994) stated that work plays as a central role in the lives of many people, and thus the impact of occupational stress.

The employees who sustain stress continue to increase annually. Employees have many duties and obligations that must be resolved. In carrying out their duties, employees often face some problems that can cause stress and result in work under pressure. Stress will become more serious problem if it affects employees' life. If employees experienced stress, then no satisfaction in work because employees cannot work effectively. And of course it will affect company's target which means can affect the company's profit.

There are many authors that provide different definitions of the stress and many studies explains that the impact of the job stress affecting all the employees without acknowledging the gender of the person. All types of organization are possibly to create job stress, in which affects the employee without taking into account in term of size of the organization and department either large or small (Bashir & Asad, 2007). Moreover, the stress have many factors that stimulate

stress among the employees such as workload, long working hours per day, poor relationship between co-workers, lack of increment or promotion, and poor leadership by the top management. All these matters will lead to job stress to the workers (Matteson & Ivancevich, 1987). Therefore, it is very important for employer and employees to realize the stress and the stressor that cause all the negative effects.

1.2 Problem Statement

Between 1999 and 2003, the manufacturing sector in Malaysia reported the highest number of industrial accidents compared to other industries (Khan et al. 2005) and it is apparent that production operators are more exposed to work-related health risks than professional workers (Cooper & Williams 1991). The frequent health risks faced by production operators principally relate to exposure to chemical substances and dust; psychological work stress; and ergonomic related problems (Liang & Xiang 2004). In addition, production operators are exposed to noise, air pollution, physical burdens, unsatisfactory shift work, long working hours, poor social interaction in the workplace and bad relationships with superiors (McLean 1974). With all these possibilities, incidence of job stress is likely to occur and hence, the evaluation of stress is of considerable importance.

The employees faced with the pressure and stress in our daily life, and in fact, if we look at our life, we cannot continue to avoid dealing with the stress because everything we do in relation to stress whether in the low or high stress. Most researcher believe that stress will give a negative impression, and it affects

the individual, especially when dealing with unpleasant situations, as Pinel (2003) explains that stress is a physiological response to a perceived threat. So, it is important for us to seek a clearer understanding of the relationship between workload, work environment, co-worker relationship, and social support with stress among employees.

Many previous studies took sample in such educational institute or bank employees but not many studies mentioned about manufacturing company as workplace that causes stress. At manufacturing company, there's a lot of physical discomfort, such as the sound of noisy engine, narrow workplace, poor ventilation, and so on support the high level of stress that affect to decline of physic and mental condition of the employees. Besides that, the way leader manages their employees also contributing on increasing the stress at workplace. All these factors certainly give a big challenge to the management at manufacturing company to find a way in order to meet their objectives and goals, and at the same time need to manage job stress among employees.

Based on the interview with one of the Human Resource's staff at that company, he said that this department recorded the highest statistic of employee's turnover among production operators. Most of the reason that given by them is they faced the working pressure during work in that department. Even I also got an experienced from work there for three months, so that I supported this statement because I also experience the working pressure while working there.

So, based on this issue, I decided to conduct a study on one of the manufacturing company at Johor. It is a leading electronics manufacturing services provider offering world class design, engineering and manufacturing service to automotive, computing, consumer digital, industrial, infrastructure, medical and original equipment manufacturer (OEM) customers. It's located at Pelabuhan Tanjung Pelepas, Gelang Patah, Johor and started operation in 2006. It has more than 5000 employees, dedicated to create a clean technology supersite at its facility in Port of Tanjung Pelepas (PTP), Malaysia. With a range of solar module production services at PTP, their site development plans include increasing its capacity to support one Gigawatt of solar module production over the next two years.

Manufacturing industry depend heavily on customer demand in order to produce their product and this lead to the workload among production operators. Workload is a risk factor of stress among workers at manufacturing company. Workload happens in this company when company gives a schedule to the production line to hit the target output which it is not fixed. So that, production lines usually work based on order from customer. Depending on the circumstances, orders received by customers in most cases are uncertain. Fluctuations or uncertainty of order becomes a problem to the company because it affects the way they have to schedule their workers. When there's too high of order from customers, they need to push their employees to work overtime and must strive to achieve the specified output. This situation will lead to the high level of job stress among production operators.

Besides that, work environment at assembly lines also does give an impact to the production operator. Assembly line work is often performed in a workplace environment with physical problems, such as noise, vibrations and dangerous machines, which can all be important factors in stress. Furthermore, technical development in assembly line work has often resulted in more complicated tasks for the workers, who may have difficulty in maintaining an overview of all steps in production, which may turn result in more stress. There is also grievance from workers who said that they are too tired to work while standing for almost 12 hours but they have no choice because that is the rules regulated by the company.

The others factor that affecting on job stress in this study is co-worker relationship. This is because full time employees spend a good deal of their lives at work and may see their co-workers more often than personal friends or family members. Without forming personal relationships at work, employees can find it difficult to find friends outside. However, there were some problems that arise at this company related to coworker relationship which may lead to job stress. There are various workers from different countries other than Malaysia, such as Nepal, Myanmar, Bangladesh, and Vietnam. The differences in cultural and language create the difficulties for some employees to communicate and build good relationships. Sometimes, misunderstanding between Malaysian workers and foreign workers happened when delivering the communication. When communications were not able to delivering well, it does affect on coworker relationship which it will lead to the job stress and some of the employees are not

comfortable to working together because they can't build a good relationship with their co-worker.

How workload, work environment, co-worker relationship, and social support effect on job stress are basic aims in this study. Higher level of stress existed with no managerial concern for solution consequently lowering the employee performance, threatening organizational reputation and loss of skilled employees. These situations call for immediate concern from organization management for employing effective stress management practices to increase employee satisfaction level and reduce job stress. For that reason, this study is conducted to identify and examine which factor give the impact to the job stress among the production operators considering workload, work environment, co-worker relationship, and social support as independent variable. These variables are more relevant to test their influence on job stress because the results may give clearer insights on how the organization can satisfy their employee. Even though the variables have been used in several previous studies, yet there are no proper outcomes to solve job stress in any organizations. Furthermore, the findings from these previous studies are inconclusive and mixed.

1.3 Research Question

- I. Does workload has relationship with job stress?
- II. Does work environment has relationship with job stress?
- III. Does co-worker relationship has relationship with job stress?
- IV. Does social support has relationship with job stress?

1.4 Research objective

- I. To identify the relationship between workload and job stress.
- II. To identify the relationship between work environment and job stress.
- III. To identify the relationship between co-worker relationship and job stress.
- IV. To identify the relationship between social support and job stress.

1.5 Significant of Study

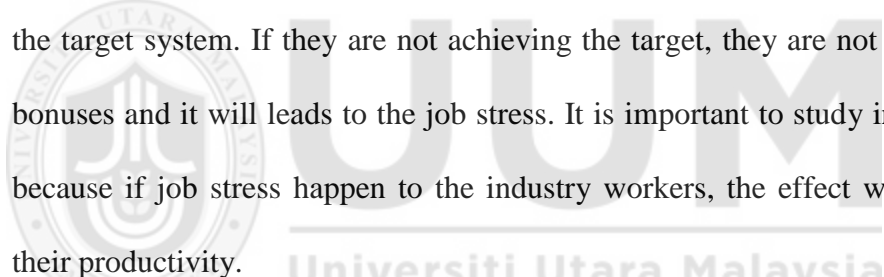
The significant of the research finding are able to contribute the advantages to many practices such as corporate strategy, industrial organization, and also analytical and empirical researches. For a practical perspective, the finding of this study will be useful to enhance the managerial productivity in whole structure of the organization in any sector and industry. Managing of stress among production operators will help the organization towards to accomplish long term goal and objective, increasing the stability of organizational performance and ability to adapt more effectively to the environmental changing.

Besides that, these findings also useful in assist the top management in finding ways of reducing stress among operators so that they can perform better, enhance their performance and commitment. The top management also will have an awareness to find strategy on stress reduction in order to help managing respondents and its environment. The finding of this study will provide information and recommendations with regard to measures that can be implemented by the organization to deal with stress experienced among employees. Finally, the findings of this study theoretically will be used as a

reference material and a guide for students and future researchers who wish to conduct the same experimental study and also contribute to the body of knowledge.

1.6 Scope of Study

Nowadays, stress can happen to almost all of people not only to the employees but also can happen to the students. The most important thing is how we manage our stress before it can give negative effects to us. The scope of my study is to investigate the factors of job stress among industrial workers in Malaysia. From my point of view, the industry worker is more stress because they are dealing with the target system. If they are not achieving the target, they are not eligible to get bonuses and it will leads to the job stress. It is important to study in this industry because if job stress happen to the industry workers, the effect will showed on their productivity.



Most of the industries in Malaysia produce export products, so if we do not focus to this employee, it can affect export transaction in this country. If the productivity of industry workers is low, we can't meet the demand from other country in exporting our products. I choose this company because based on interview with one of Human Resource's staff said that, the statistic of production operator's turnover at that company is higher and they found that most of employees stated that stress as the reason of their resignation. So, this study focuses on one of the manufacturing company at Gelang Patah, Johor. The data for the study obtain from production operators whose working in production or

assembly lines to investigate the causes of job stress such as workload, work environment, co-worker relationship, and social support toward job stress level.

1.7 Definition of Key Term

- **Stress**

Stress is defined as either physical or mental strain that is caused by an inability to adjust to the environmental factors that result in physiological tension or pressure (Makie, 2006).

- **Workload**

The term workload generally refers to the quantity of physical and cognitive work that workers can perform without endangering their own health and safety or that of others (Bouzi, et al., 2002).

- **Work environment**

Research shows that workstation environment that characterized by extreme heat, dim lighting, and congested works area can be associated to stress at the workplace (Sutton and Rafaeli, 1987).

- **Co-worker relationship**

Selye (1974) stated that learning to live with other people is one of the most stressful aspects of life because good relationships between members of a group are a key factor in individual and organizational health. Inadequate

leaderships, a breakdown in the interpersonal climate and resultant conflict can be very stressful within the confines of a capsule environment.

- **Social support**

Social support has been broadly defined as social transactions that are perceived by the recipient or intended by the provider to facilitate the coping daily life, especially in response to stressful conditions (Pierce & Sarason, 1990).



CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This chapter explains on the previous and relevant literature regarding the study from the various sources. The literature review discussed on all the information that is needed in the study. The literature review of the work load, work environment, co-worker relationship and social support and also job stress were discussed in depth in this chapter.

2.2 Job Stress

It is important to perceive and address job stress, because its elements badly affect employee mental as well as physical health (Rana & Munir, 2011). Modern societies face widely increasing in the number and size of organizations that provide services to the community, these organizations employ and rely on specialists and professionals whom supposed provided a suitable work environment to perform their roles effectively. Since we live in an environment dominated by different stimulus and motivations (physical, moral and psychological), which in turn have an impact on the individual, not only at home but also surpassed to work environment, these stresses make individual lives in a state of anxiety, tension and emotion which affects the duties, functions, and relationship with workers in the organization and even on his health and safety (Revati, 2012; Soran, 2014).

Stress is a status which happens when individuals recognize that the conditions or strains facing them may be more than their endurance. The term job stress can be defined as a group of external harmful factors in the work environment, which may be psychological, physical or social (Greenberg & Baron, 2007; Arnold & Feldman, 2000). While Ivancevich (2002) and Jamal (2005) defined job stress as an individual's reactions and interactions to characteristics of the work environment that seem morally, emotionally and physically threatening, mediated by individual differences and psychological actions. Job stress will be experience, when the imbalance between demands of work environment and the individual's abilities increases, so at work, stress may be an awareness indicated by ambiguity, conflict and overload arising from the work environment and the characteristics of the individual.

According to Rizwan, Waseem, & Bukhari (2014), job stress can be classified into two types which are eustress or positive stress. It is beneficial in case we may feel challenge, but the reasons of stress will be opportunities that are meaningful to us, they help in providing us with energy and impulse in meeting our responsibilities and achieving our goals. This model supposes that at a low level or non-exist of stress, the individual does not face any challenge so they are not likely to offer any good performance, but at medium level of stress individuals will offer a high performance. For example, as the manager puts the deadline earlier or shorter because of stress employees will work hardly and effectively to accomplish their organizational goals.

There are many different sources of job stress such as for individuals working in a factory environment, stress is an outcome of having to work in a dangerous work environment that may cause harm to the individual while employees working in an office experience stress from dealing with other people of characters and behaviors different from theirs. Meneze (2005) stated that all these factors are a cause of alarm for employers. This is because high stress levels impact on the job performance of the employee at work negatively as portrayed by increased absenteeism, lack of innovation, lower concentration and productivity.

In manufacturing company, sometimes, organization gives an unrealistic expectations, especially in the time of corporate reorganizations, puts unhealthy and unreasonable pressures on the employees. Automatically it can be a great source of stress and suffering. Increased workload, extremely long work hours and intense pressure to perform at peak levels all the time leave an employee physically and emotionally drained. Jane & Alyssa (2005) stated the Health, Safety and the Environment (HSE) brought in tough rules that require monitoring and tackling stress at work. If an organization fails to meet the requirements, they will face harsh financial penalties. It can cause the level of stress in the workplace.

According to Mohamad Khan (2005), manufacturing sector is reported the highest number of industrial accidents from 1999 to 2003 compared to others industries. Janes (2005) examined job stress and cardiovascular reactivity in blue worker. The three indicators were used to measure job stress such as cumulated

workload, worsening of job condition and high demand and low demand job security. Malaysia, as a developing country that relies on manufacturing industries is facing the similar issues. To survive in the competitive industries, companies can't afford anything less. Creating a high performance organization requires companies understand what factors influence employee's work performance. Thus, an evaluation on stress among the blue collar worker is really important.

2.3 Workload

Workload refers to the intensity of job assignments. It is a source of mental stress for employees. As defined by Robbins & Judge (2014), change in workload tends to change the stress level of employees, which ultimately affect the performance of employees. This aspect refers to the degree of stress experienced by individuals due to the conception that they are unable to adapt or be active with the amount of work assigned to them (Idris, 2011). Workload can be classified into two categories which are the role overload and role lower load.

Role overload is when individuals are expected to do over than available time, resources and their capabilities, individuals face many expectations from direct boss, subordinates, colleagues, top management, local community and so on (Ammar, 2006). Role overload can be qualitative or quantitative (Trayambak et al., 2012), qualitative takes place when individual does not have sufficient abilities to do work, while quantitative task happens when individual has huge tasks to do or too time and duties of the role are less than the level of individual capabilities, which generates bored feelings or stress, in both last cases,

individuals face job stress, in the first case they may be afraid, tensed and fear not lead their expected duties, and in the second they feel small work or lack of its importance, so this will lead to job stress.

According to French (1972), work will create pressures when it exceeds an individual's capacity level. It perceived as a very serious and obvious problem among manufacturing sectors workers. This is because worker stress can affect individual's job performance and thus the achievement of the company. While The Keil Centre (2002) on the Management Standards for Preventing and Resolving Workload Problems Causing Stress stated that workloads can become excessive and therefore harmful in a number of ways. Exactly how this happens is likely to vary from job to job. However, there are some general processes such as working very hard within normal hours can cause tiredness, working very long hours for prolonged periods can lead to fatigue and further problems outside work, repeatedly trying to complete tasks that are impossible within time limits or available resources may cause anxiety and frustration, regularly failing to meet deadlines may lead to a sense of helplessness or depression, not being given clear guidance about what a particular task involves can lead to frustration and confusion, accidents and mistakes are more likely to occur when people are tired or working very quickly to meet deadlines.

In related into this study, most of manufacturing companies do not have constant flows of orders. This often leads to a varying queue of customers. Despite the uncertainty in both arrival and service of orders, customers request tight due dates, and they are also resentful of late deliveries. The companies

cannot use an inventory buffer to compensate for the variations in order frequency, however, a good practical solution is to try to match the production rate to the actual workload or, when orders are statistically identical, to the length of the queue (Mincsovcics and Dellaert, 2009).

2.3.1 Relationship between workload and job stress

Previous study by Wilkes (1998) found that workload was significant affected on job stress. Workload happens when assigned work exceeds one's capability (French and Caplan, 1972). It is a case when people feels pressure on themselves, or when the demands of a situation are larger than they can handle, and if it continues for a long time without any pauses or breaks, the different physical, behavioral and mental problems may occur and can lead to death. This result also supported by Al-Aameri (2003) which mentioned in his study that workload is one of six factors affects job stress. Besides, a study in United Kingdom by Townley (2000) showed that the large amount of workers were dissatisfy when they were required to work overtimes and deal with big workloads while meeting production targets and deadlines.

If an individual have much work to do in insufficient time and unreasonable pressure to finish on deadline, they is going to feel stress. Health and Safety Executive (HSE, 2001) has stated that worker stress is a situation where a person feels pressure, or when the demands of situation are much larger than what someone can handle and if it continues for the long time without stop or pauses, then various behavioral, mental and physical problem may arise. Unrealistic

deadlines and expectations, and unmanageable workloads will create worker stress even to the most capable employee. While under recruitment of staff will feel stress if they got the complex task that they do not know how to do it. Hart and Staveland (1988) described workload as the perceived relationship between the amount of mental processing capability or resources and the amount required by the task.

2.4 Work Environment

A physical workstation environment includes many aspects like humidity system, lighting, work area design, acoustic system and etc. Research shows that workstation environment that characterized by extreme heat, dim lighting, and congested works area can be associated to stress at the work place (Sutton & Rafaeli, 1987). So, in the process of designing a workstation, several factors especially ergonomics factors must be taken into consideration (Mohamad Khan, 2005; Yeow & Nath Sen, 2003). The failure to implement the ergonomic principles at the workplaces can lead to emotional depression, physical exhaustive, productivity and products quality declining (Shikdar & Sawaged, 2003). Is the environment where this job is completed suitable for human beings to work in? This may seem like a basic question, but it is too often left unanswered. Lighting, ventilation, and temperature are all factors that can have an impact on how well people perform.

In many cases, environmental factors can be easily controlled with minimal investment. In such cases it is an extremely good investment to make

changes to the physical environment so that people are more comfortable, safer, happier, and can perform at a higher level. In other circumstances, the investment needed to alter the environment which it might be too high, or production requirements might require the environment to be uncomfortable for humans. Correct workplace lighting contributes to lower worker absenteeism, higher quality and safety improvements (Occupational Hazards, 2000; Tooling & Production, 1997).

Physical stress factors include poor indoor air quality (IAQ), noise, vibration, inadequate lighting, excessive standing, poor seating, awkward movements, repetitive motion and other ergonomics problems (Dalbokova & Krzyzanowski, 2002; Walker, 1993). Suited workplace conditions helps worker to work productively and effectively. Human cannot perform well and be satisfied in less-than-ideal environments. Workplace environmental conditions, such as lighting, indoor air quality, and ergonomics have gained attention as part of the growth in interest for employee's satisfaction.

Poor working environment include monotonous work, outdated management practices, the lack of possibilities to influence decision-making and a poor atmosphere or conditions at work. The poor organizational climate will influence and affect the performance of the employees (Michael, 2000). Improving the work environment can decrease the illness of all employees thereby reducing the rate of stress. Autocratic leadership that cracks down on the entrepreneurial spirit, a negative work atmosphere charged with politics, back biting, turf guiding, lack of recognition both monetary and non-monetary, and

lack of flexibility. There are some of the factors that contribute to an unfulfilling work environment. The best applicants out there will not last long in an environment where they cannot flourish professionally and personally.

2.4.1 Relationship between work environment and job stress

In a working environment, dangerous tasks or work setting, high noise level, toxic chemicals, dust, overcooling, unpleasant odours, and other stressful factors can lead to job stress. Assembly line work is associated with stress because it is repetitious, monotonous, noisy, lacks challenge and control (Lapierre, 2006). A study of 662 blue collar workers in the Netherlands found that 30% of the workers in factory jobs, farming, and highway transport dealing with physical stressors, such as excessive noise (Siegall, 2000).

According to Hagberg (1995), work environment has an emotional connotation for workers and managers, and that results in stress and strain. Assembly line work is often performed in a workplace environment with physical problems which can be the important factors in stress. Besides that, Hagberg (1995) also added that the feeling that supervisors do not care about creating a good work environment is another important factor of stress. Furthermore, technical development in assembly line work, especially in large companies, has often resulted in more complicated tasks for the workers, who may have difficulty in maintaining an overview of all the steps in production, which also may in turn result in more stress.

While Kvarnstrom (1997) proposed that what an individual considers to constitute a risk can cause as much stress as a real risk. If danger has been eliminated, it is very important to convince the worker that this has been done. Even a slight suspicion that all is not faultless can develop into a stressful situation. The magnitude of stress in manual work, and especially assembly line work, can involve extremely high costs. It has, for example, been estimated in Sweden that work related muscular and back disorders cost more than the national military defence, and around half of these types of disorders are generally considered to be due to stress.

Yeow (2014) in his studies concluded that almost 90% of accident happens in manufacturing industries due to human errors. Human errors are define as unsafe act that carried by a person that can produce negative impact to the workplace. They also identified repetition, fatigue, and poor work environment are major factor for human errors in manufacturing industries. As manufacturing industries require major interaction between human and machine, an ergonomic system should be in to prevent gap between workers characteristics and functional requirement of their job which may prevent mishandling.

2.5 Co-worker Relationship

Co-workers are individuals who work alongside each other in the workplace and who hold positions or ranks similar to each other (Yoon & Thye, 2000). In the majority of organizations, people interact with co-worker on a continual basis. However, with the onset of the computer age, a greater number of people are

working with others in a virtual environment. Co-workers in either a face-to-face or virtual environment interact regularly with each other and experience both positive and negative interpersonal relations (Avolio, Kahai, Dumdum & Sivasubramaniam, 2001).

Co-worker relationships refer to the informal and voluntary relationships among employees in a workplace (Berman, West, & Richter, 2002). They are distinguished from other types of relationships at work by two aspects: that they are voluntary and holistic. Taking the first of these, friendships develop between coworkers because these individuals willingly put time and effort into the relationship, regardless of whether there is any formal requirement to interact to complete work (Sias, Smith, & Avdeyeva, 2003). Second, they are holistic, or call personalistic. That is, in work relationships, coworkers recognize each other as a whole individual with an existence that encompasses activities outside of work, and not just as occupants of a work role.

Selye (1974) suggested that learning to live with other people is one of the most stressful aspects of life as well as good relationships between members of a group are key factors in individual and organizational health. Inadequate leadership, a breakdown in the interpersonal climate and the resultant conflict can be very stressful within the confines of a capsule environment (Suedfeld and Steel, 2000). Misunderstand in communication and action could convey stress. Communication and teamwork suffer, the exchange of information is minimized and the employees may become defensive of their duties, knowledge, and even their workspace.

It is apparent that the pattern of interactions among co-workers serves important organizational functions. Hodson (1997), using ethnographic observations, determined that co-worker relationships have four main purposes. First, co-worker relations are important for occupational socialization, for example co-workers can screen apprentices and approve their membership into an occupation. Second, when positive co-worker relationships exist, co-workers contribute to solidarity within an organization, for instance co-workers defend each other against managers, customers, or other work groups. Third, supportive co-worker relationships are essential if co-workers feel the necessity to resist those in authority. Last, by engaging in rituals surrounding events such as birthdays, co-worker relationships can affirm group identities. Summarizing the ethnographic evidence, Hodson (1997) stated that co-worker conflict and solidarity are extremely important in determining job satisfaction, management relationships, and the sense of having meaningful work. In fact, Hodson (1997) also reported solidarity among co-workers can actually lead to better relationships with management.

2.5.1 Relationship between co-worker relationship and job stress

Previous research suggests that poor co-worker interactions may be a workplace stressor that puts employees at risk for stress (Sauter, 1990). Given such previous findings it seemed logical to examine a model relating coworker relationships to job stress. This is supported by Kelloway and Barling (1994), in their research on stressors prevalent in the Canadian military, identified poor interpersonal relations with co-workers and members of the public as a stressor. Koeske (1989) stated

that building a socially supportive work environment among co-workers could forestall worker burnout, provide emotional relief, and reduce turnover. Hepburn (1997) also noted that interpersonal relationships in the workplace could affect a person's mental and physical health. Co-worker relationship then listed as an effective coping strategy for job stress.

Fortunately, strong support from co-workers improves work environments by relieving employee's stress (Sloan, 2012) as for example, co-workers can successfully finish work tasks and reducing job stress (Goulner, 1960). Cummins (1990) reported that employees that had good relationship with co-workers are usually successful and productive at work, even when job stress is severe. However, there are some contradictory views regarding to the positive effects of co-worker relationship among employees, where, co-worker behaviours may be viewed as political or self-enhancing and therefore it may not always be associated with constructive work attitudes. Accepting support from co-workers may also suggest incompetence on behalf of the person accepting the support (Bateman, 2009).

2.6 Social Support

Albercht & Adelman (1987) defined social support as verbal and nonverbal communication between recipients and providers that reduced uncertainty about the situation, the self, the other, or the relationship, and the functions to enhance a perception of personal control in one's life experience. While Schumaker and Brownell (2010) defined social support as an interchange of resources between

two individuals perceived by the supplier of the recipient to be designated to enhance the welfare of the recipient.

Albercht and Adelman (1987) stated that social support can be divided into the key features, which is communication, uncertainty reduction, and enhanced control. In terms of communication, it's helped individuals more certain about the situation, and therefore, feels as if they have control over the situation. The information communicated will help to reduce uncertainty and consequently will enhanced control. A similar definite from Schumaker and Brownell (2010), indicates that the interchange of the resource between two parties to enhance the understanding of the recipient. The definitions above have the same goals to help the individual or parties who have a good and clear understanding.

These support can be emotional (nurturance), tangible (financial assistance), information (advice) or companionship (sense of belonging) and intangible (personal advice). Social support can be assessed as the perception that one has available assistance, the actual received assistance, or the degree to which a person is incorporated into a societal network. Support can come from many origins, such as folk, friends, pets, neighbours, coworkers, and organizations. Social support studies across a wide range of disciplines including psychology (Zhang, 2003).

In stress research, the inclusion of social support has been common. Workplace social support has been defined as the actions of others that are either helpful or intended to be helpful (Macdonald, 2003; Muhonen & Torkelson,

2003). It includes a variety of interpersonal behaviours among workers that enhance individual psychological or behaviours functioning (Muhonen & Torkelson, 2003).

2.6.1 Relationship between Social support and Job Stress

Social support can have a main effect, either alleviates stress directly or act as a buffer in interaction with the stressors (Muhonen & Torkelson, 2003). Support is usually negatively related to stress, as if it might be calming for employees. Beehr, Jex, Stacy, and Murray (2000) have stated that support can be structural (i.e., the employee is embedded in a social network) or functional (people in the support network perform supportive functions for the employee. According to Beehr *et.al* (2000), two functions have been studied most are instrumental support or helping people get something done, and emotional support or providing sympathy. Emotional support is operationalized, for example, by asking employees general questions, such as whether someone listens to their problems. Instrumental support might refer to co-workers helping employees get their jobs done.

Employees who have good relationships at work will receive timely feedback and support from supervisor and co-workers, which can serve as a social resource to contribute to employee's goal achievement via informational or instrumental support and help buffer their stress via emotional support (House, 1981; Edwards & Rothbard, 1999). The research finding of Buunk, Doseje, Jans and Hopstakenseem (1993) asserted that, with regard to stress at work, the amount

of support received in proportion to the amount of support given may be important. They also underline the importance of differentiating between various types of role relationships, suggesting that in relationships with peers there is a stronger tendency toward reciprocity than in relationships between individuals of unequal social status (Buunk et. al, 1993).

The functions of instrumental support and emotional support provided by high-quality relationships at work could facilitate employee's coping with stress, which accounts for the good state of work attitudes and well-being (Edwards & Rothbard, 1999). Evidence suggests that work-based support is central to preventing and reducing the adverse effects of work-related stress (House, 1981; Beehr, King, 1990; Noblet & Rodwell, 2008). A study conducted by Quick (1979) in an insurance company also reported a significant declines in stress when the managerial and staff employees with their supervisors improve significantly in goal behaviors after a training of goal setting.

2.7 Person-Environment Fit Theory

According to the Person-Environment Fir (P-E fit) theory, stress and stressors are not defined in terms of either the individual or environment, but rather in terms of the degree to which there is 'misfit' between the two (Edwards et al., 1988). P-E Fit Theory incorporates three basic distinctions. The first and the most basic is that between the person, their abilities and needs, their environment and the demands it makes on them and that which their environment supplies to them. The second distinction is that between the subjective and objective representations

of the person and their environment. The subjective representation includes the person's perceptions of themselves and their environment as they actually exist. The third distinction in P-E Fit Theory incorporates two types of P-E fit, or misfit.

The first type of fit or misfit is that between the demands the environment places on the individual in terms of job requirements, role, and group norms, and their ability to fulfill those demands in terms of their skill, energy, training, and time perceptions. The second is the fit or misfit between the needs of the individual in terms of their physiological requirements (Herzberg & Mausner, 1959; Maslow, 1943), and the ability of the environment to supply those needs in terms of extrinsic rewards such as pay and conditions and intrinsic rewards, such as involvement and the ability to achieve (Herzberg & Mausner, 1959). Therefore, when there is a mismatch between the person and their environment, stressors exist and stress results.

In the context of the P-E fit theory, stress and strain in the work settings are attributed to the interaction of an individual with her/his environment. Occupational stress results from an incompatible person-environment fit that produces psychological strain and stress-related stress physical disorder (French, 1982).

CHAPTER 3

METHODOLOGY

3.1 Introduction

This chapter is basically discussing on the research method adopted in this study. It begins with the framework of the study, in order to illustrate the relationship between independent variables (work load, work environment, co-worker relationship and social support) and dependent variable (job stress). Next is followed by hypotheses, research design, and measurement of variables, data collection and sampling.

3.2 Research Framework

The research framework of this study is to examine the relationship and effect on of the factors influencing job stress among production operators of manufacturing company in Gelang Patah, Johor. The research framework is based on the literature as previous discussion on chapter two. The independent variables as the factors influencing on job stress are work load, work environment, co-worker relationship, and social support. Meanwhile the dependent variable is employee's job stress as in figure 3.1 below:

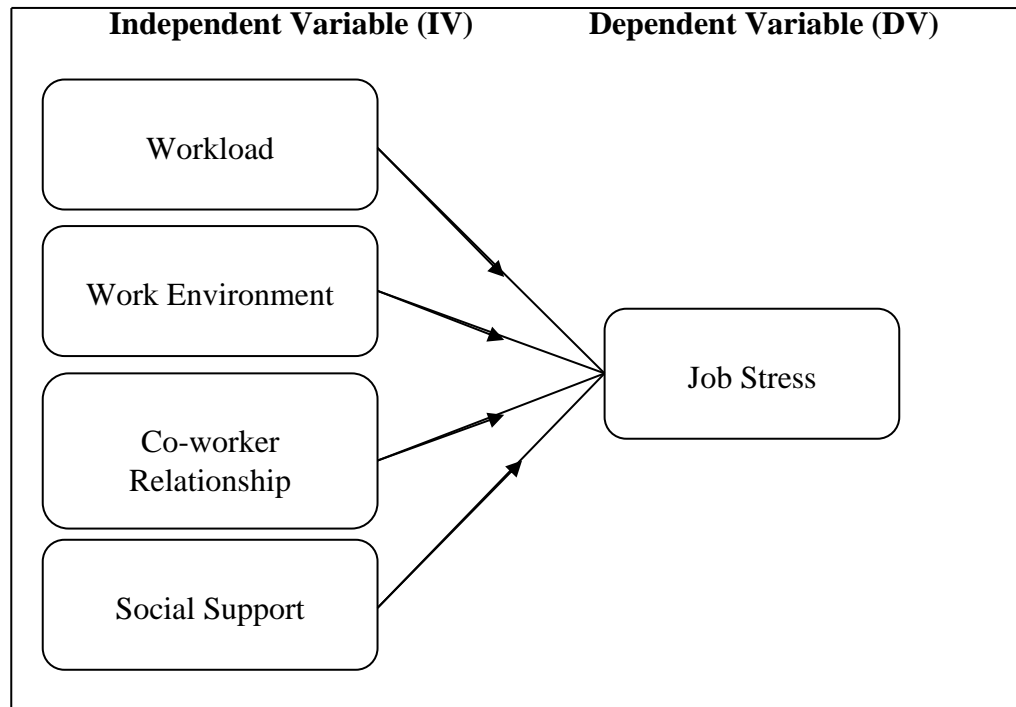


Figure 3.1:
Research Framework

3.3 Hypothesis Statement

The hypothesis developed and to be tested in analyzing the relationships among variables based on the research framework. The hypothesis for this study is as follows:

H1: There is significant relationship between workload and job stress.

H2: There is significant relationship between work environment and job stress.

H3: There is significant relationship between co-worker relationship and job stress.

H4: There is significant relationship between social support and job stress.

3.4 Research Design

In a research framework, the research design denotes the blueprint that guideline for collecting, measuring and analyzing data aimed at addressing the research questions (Sekaran & Bougie, 2013). One of the research strategies that can be used is a survey research. A survey research includes a system that sets the objective to collect data, research design, propping for valid and reliable research instrument, executing and monitoring the survey as well as conducting the eventual analysis of data obtained before reporting the findings (Fink, 2003).

This research adopts a descriptive study and was designed as a one-shot cross-sectional study that involved the collection of quantitative data including demographic data from the organization at a single point in time. A quantitative research is used for this purpose to determine the quantity or extent of the investigated phenomenon as the application of statistics and science will be able to provide better accuracy to the conclusions derived from the results (Sekaran and Bougie, 2013).

In this study, the independent variables are (i) workload, (ii) work environment, (iii) co-worker relationship, and (iv) social support. These four factors were tested and analyzed to determine whether they have an influence on the dependent variable, namely, the employees' job stress. In view of the targeted population is 140 production operators in one department at the manufacturing company, the strategy was to use a survey research to collect the information from the employees on factors influencing their job stress.

A survey or questionnaire was deployed as a tool to obtain the primary data for this study, especially to determine the relationship between the independent and dependent variables. The unit analysis is the individual employee in manufacturing company at Gelang Patah, Johor. As such, the questionnaires were distributed to individual respondents who were selected randomly. This method was found to be convenient, characterized by its wide coverage in terms of reaching out to the intended respondents in a relatively shorter time and minimal costs.

The questionnaire included the demographic information of the participants. It consists of four sections according to the main constructs developed in the initial research framework. In order to measure the variables, the survey form uses a Likert Scale requiring the respondents to indicate their degree of respond. Each item was assessed on a five-point scale which ranges from 'strongly disagree' at 1 to 'strongly agree' at 5. The method of distribution for the questionnaire was by hand. Valid responses received were then analysed using the Statistical Package for Social Science v22 (SPSS).

3.5 Measurement of variables

This study used the questionnaire instrument and it was adopted and adapted for the purpose of this study. The questionnaire consists of two variables, dependent and independent variables. Dependent variable in this study is the job stress among production operators of manufacturing company in Gelang Patah, Johor, while the independent variables are work load, work environment, co-worker

relationship, and social support. Besides, the demographic information also was included in the questionnaire for this study.

Table 3.1:
Five Point of Likert Scale

| Range of Point Scale | Meaning of Scale |
|----------------------|-------------------|
| 1 | Strongly disagree |
| 2 | Disagree |
| 3 | Fairly |
| 4 | Agree |
| 5 | Strongly agree |

Source: Sekaran (2003)

From the previous literature, the scales of the study of Likert scale were adopted (Sekaran, 2003). Respondents were asked to score each question and indicate their degrees of relative agreement level along a five point, Likert-type scale: strongly disagree=1; disagree=2; fairly=3; agree=4; and strongly agree=5. The Likert scale was used to determine the level of agreement or disagreement the statement on five point scale. Based on Dawes (2008), the statement is usually measure with five, seven or nine response levels to collect data for the research (Cooper, 2008). Each section and instrument was tested using Cronbach's alpha for reliability.

The component of variables and sources of the questionnaire can be shown in Table 3.2 below:

| Section | Items | Source |
|----------------------|--|---|
| A Demographic | 1. Gender 2. Age 3. Marital status 4. Academic qualification 5. Duration of work in this company | |
| B Work load | 1. My supervisor is not helpful enough 2. My colleagues are unfriendly 3. I feel unpleasant with the way of my colleague treated me when do the work 4. I feel that I have too much responsibility 5. I find difficulty in finding enough time to relax 6. I am so depressed when I think about all task that need my attention 7. There is constant pressure to work every minute with limited opportunity to relax | Naemah (2007), Wan Mohd Nasir (2002), Baskaran (2004) |

| | | |
|---------------------------------------|---|--|
| <p>C</p> <p>Work environment</p> | <ol style="list-style-type: none"> 1. The arrangement of work desk is good 2. The size of the work space is very conducive 3. I am satisfied with the temperature at my work place 4. I am satisfied with the lighting at my work place. 5. I am satisfied with the internet access at my work place 6. I am satisfied with the availability of the work gadget 7. The noise at my workplace is very low | <p>Work environment survey from Massey University (2015)</p> |
| <p>D</p> <p>Coworker relationship</p> | <ol style="list-style-type: none"> 1. I have good relationships with my coworkers 2. My coworkers and I cooperate well with each other 3. The more I interact with my coworkers the better I enjoy my job 4. My coworkers positively affect my mood | <p>Hain & Francis (2003)</p> |

| | | |
|--------------------------------|---|--|
| | <p>5. My coworkers and I interact positively on the job</p> <p>6. I enjoy the time I spend on the job with my coworkers</p> <p>7. I feel lucky to be working with the people that I do</p> | |
| <p>E</p> <p>Social support</p> | <p>1. I regularly spend time with my coworkers outside of work hours</p> <p>2. I always discuss important personal problems with my coworkers</p> <p>3. My supervisor is not willing to listen to my job-related problems</p> <p>4. My supervisor can be relied on when things get tough in my job</p> <p>5. My family does not show a lot of concern in my job</p> <p>6. My family gives helpful advice to me in completing the job</p> <p>7. My friends can share the joys and sorrows with me.</p> | <p>Kim, Price, Mueller, & Watson (1996); Pierce et al., (2001); Zimet, Dahlem, & Farley (1988)</p> |
| <p>F</p> <p>Job stress</p> | <p>1. I feel working here makes it hard to spend enough time with my family</p> <p>2. I spend so much time at working</p> | <p>Fields (2002)</p> |

| | | |
|--|---|--|
| | <p>place</p> <p>3. I spend less time for other activities since working here</p> <p>4. I feel like I never have a day off</p> <p>5. Too many of people at my level in the company get burned out by job demand</p> <p>6. Sometimes when I think about my job I feel like myself so burden</p> <p>7. I feel guilty when I take time off from job</p> | |
|--|---|--|

3.6 Data collection

The data is collected via survey questionnaires which were distributed by the researcher personally among production operators at manufacturing company in Gelang Patah, Johor. Each and every respondent was required to answer 6 pages questionnaires, consisting of 6 sections. Explanation regarding the questionnaires was given orally to attain the respondents' cooperation and to give the general idea of the research. The researcher only needs a week to collect the questionnaire from the respondents.

3.7 Sampling

The population of interest for this research consists of production operators at manufacturing company in Gelang Patah, Johor. This population focuses only on one department at this company. Based on population from Human Resource department at that company, total production operators at that department are 140. So, the population size for this research is 140. According to Sekaran (2003), population can be defined as the entire group of people, the events and things that the researcher wishes to investigate. Sekaran (2003) highlighted that the researcher must ensure that the population consists of those entities which are actually the information sought by the survey.

A sample is a subset of the population (Sekaran, 2003). It includes some members selected in the study (Malhotra, 2004). So from the total 140 of production operators, sample of 103 selected to answer the questionnaire.

CHAPTER 4

DATA ANALYSIS

4.1 INTRODUCTION

This chapter reflects on the finding underlying the research and provides a detailed description of the analysis and interpretation of data. All data were analyzed using the Statistical Package for Science (SPSS) version 22.0. Demographic data analysis of the respondent included gender, age, marital status, academic qualification and duration of work. The measure of this study is tested for its construct validity and internal consistency by using reliability analysis. Pearson's Correlation coefficient was used to identify the existence of any significant relationship between the independent variables and dependent variables. Additionally, regression analysis is conducted to examine the most significant of relationship between the independent variable and dependent variable.

4.2 NUMBER OF RETURNS

Questionnaire was distributed to all production operators at one department of manufacturing company at GelangPatah, Johor. Clerical and administrative staff excluded from this study due to different job nature. Approximately, 120 set of questionnaire distributed, 100 questionnaire were returned which is 83.33%

respond rate from the respondents. All 100 questionnaire returned are being use for data analysis. The results is shown in table 4.1.

Table 4.1
Survey Response Result

| | Total | Percentage (%) |
|---------------------------|--------------|-----------------------|
| Distributed Questionnaire | 120 | 100 |
| Collected Questionnaire | 100 | 83.33 |
| Uncollected Questionnaire | 20 | 16.67 |

4.3 DESCRIPTIVE ANALYSIS

The discussion on descriptive analysis is divided in two main sections. The first section discuss on the demographic of the respondents. The second section will be discuss on the descriptive analysis of each of the variables.

4.3.1 Demographic of the Respondents

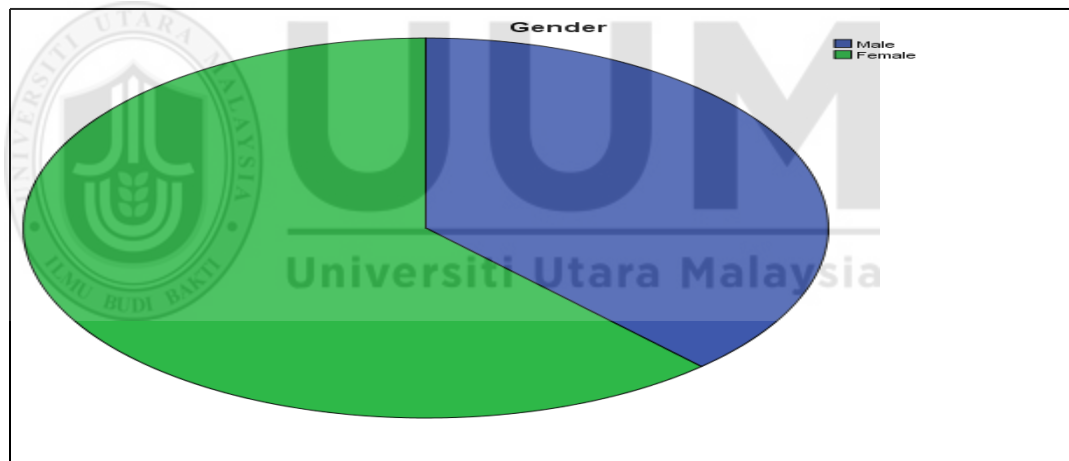
4.3.1.1 Gender

The total feedback for this study represents 100 respondents for the manufacturing company. There are 38 male respondents (38.0%) and 62 female respondents (62.0%). This result showed in table 4.2 and figure 4.1 that female respondent contribute the major feedback for the survey.

Table 4.2
Gender of Respondents

| Gender | Frequency | % |
|---------------|------------------|---------------|
| Male | 38 | 38% |
| Female | 62 | 62% |
| Total | 100 | 100.00 |

Figure 4.1
Gender of Respondents



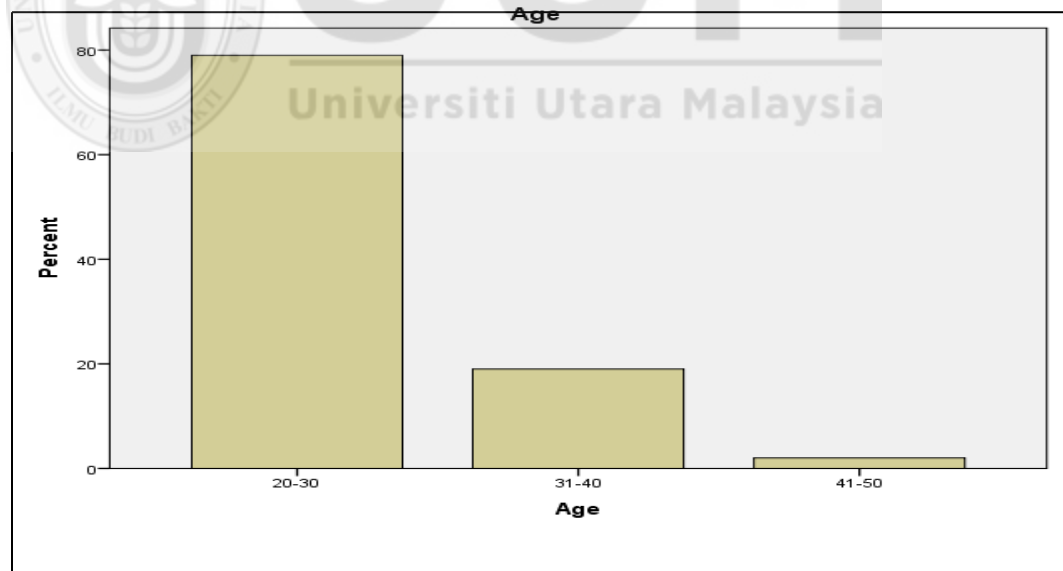
4.3.1.2 Age

Table 4.3 and figure 4.2 below shows that there are 79 (79.0%) age 20 to 30 years old involved in participation for the survey. For the age 31 to 40 years old, there are about 19 (19.0%), followed by age 41 to 50 years old about 2 (2.0%), and there's no respondents for the age more than 50 years old.

Table 4.3
Age of Respondents

| Age | Frequency | % |
|--------------|------------|--------------|
| 20-30 | 79 | 79.0 |
| 31-40 | 19 | 19.0 |
| 41-50 | 2 | 2.0 |
| >50 | 0 | 0 |
| Total | 100 | 100.0 |

Figure 4.2
Age of Respondents



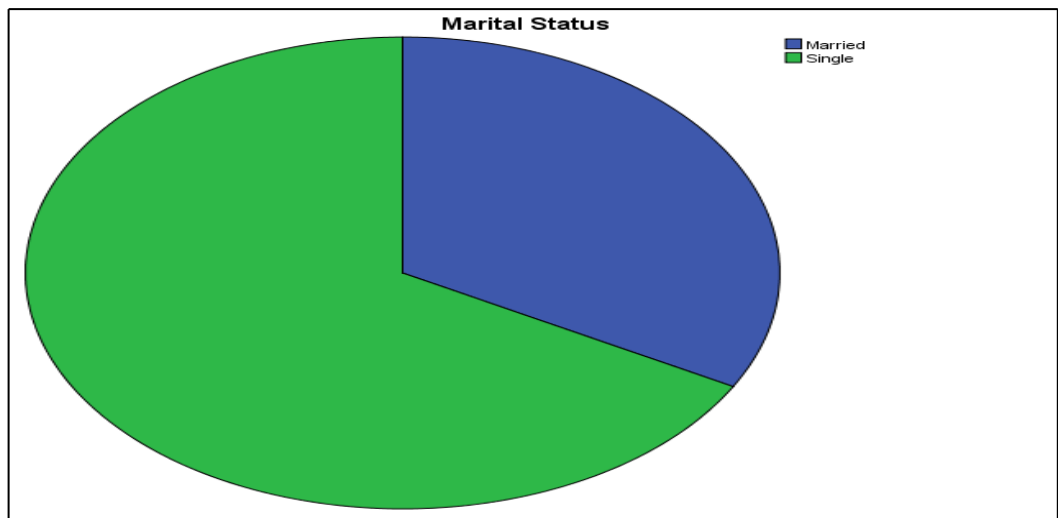
4.3.1.3 Marital Status

Based on table 4.4 and figure 4.3, the most respondent are single, 67 out of 100 which represents 67.0%. While the rest is 33 respondents (33.0%) for married respondents.

Table 4.4
Marital Status of Respondents

| Marital Status | Frequency | % |
|----------------|------------|--------------|
| Single | 67 | 67.0 |
| Married | 33 | 33.0 |
| Total | 100 | 100.0 |

Figure 4.3
Marital Status of Respondents



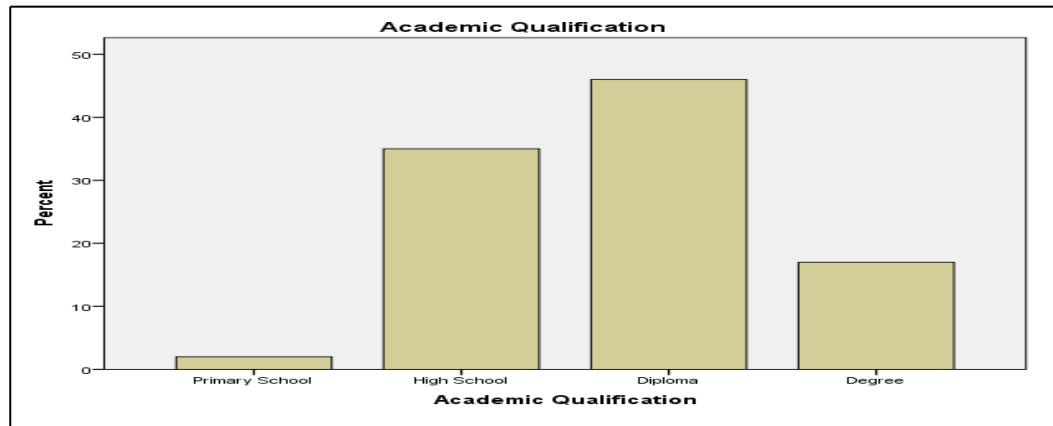
4.3.1.4 Academic Qualification

For the result for the academic frequency analysis, the table 4.5 and figure 4.4 shows that 2 (2.0%) respondent qualified from Primary School, 35 (35.0%) respondent qualified from High School, next is 46 (46.0%) respondent qualified from Diploma level, and lastly 17 (17.0%) respondent qualified from Degree level.

Table 4.5
Academic Qualification of the Respondents

| Academic Qualification | Frequency | % |
|-------------------------------|------------------|--------------|
| Primary School | 2 | 2.0 |
| High School | 35 | 35.0 |
| Diploma | 46 | 46.0 |
| Degree | 17 | 17.0 |
| Total | 100 | 100.0 |

Figure 4.4
Academic Qualification of the Respondents



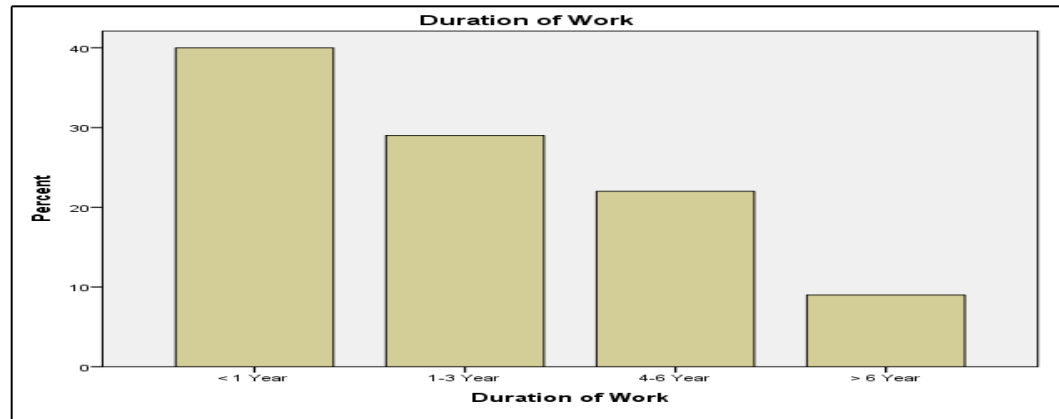
4.3.1.5 Duration of Work

Table 4.6 and figure 4.5 below explained the duration of work's frequency analysis for the total of 100 respondents for the purpose of this study. There are 40 (40.0%) respondent works less than 1 years in the organization, 29 (29.0%) for 1 to 3 years, and 22 (22.0%) for 4 to 6 years, and lastly, there are 9 (9.0%) more than 6 years.

Table 4.6
Duration of Work

| Duration of Work | Frequency | % |
|------------------|------------|--------------|
| <1 year | 40 | 40.0 |
| 1-3 years | 29 | 29.0 |
| 4-6 years | 22 | 22.0 |
| >6 years | 9 | 9.0 |
| Total | 100 | 100.0 |

Figure 4.5
Duration of Work of the Respondents



4.3.2 Dependent and Independent Variables

From descriptive analysis, it can help the researcher to obtain the summarized information about the sample used for the study. This study can be sure and review the mean and standard deviation for each variable.

4.3.2.1 Workload

Table 4.7
Mean and Standard Deviation Statistics for Work Load

| Item Statement | Mean | SD |
|---|------|-------|
| My supervisor is not helpful enough | 2.93 | 1.148 |
| My colleagues are unfriendly. | 2.26 | 1.211 |
| I feel unpleasant with the way of my colleague treated me when do the work. | 2.40 | 1.146 |
| I feel that I have too much responsibility. | 3.24 | 1.173 |
| I find difficulty in finding enough time to relax. | 3.34 | 1.199 |

| | | |
|--|------|-------|
| I am so depressed when I think about all tasks that need my attention. | 3.16 | 1.135 |
| There is constant pressure to work every minute with limited opportunity to relax. | 3.35 | 1.132 |

Table 4.7 above shows the lowest mean is 2.26 and standard deviation is 1.211 which stated that the supervisor is not helpful enough. Meanwhile, the highest mean and standard deviation are respectively 3.35 and 1.132 which stated that the respondent agreed that there is constant pressure to work every minute with limited opportunity to relax.

4.3.2.2 Work Environment

Table 4.8

Mean and Standard Deviation Statistics for Work Environment

| Item Statement | Mean | SD |
|---|-------------|-----------|
| The arrangement of work desk is good. | 3.55 | 1.029 |
| The size of the work space is very conducive. | 3.43 | 1.008 |
| I am satisfied with the temperature at my work place. | 3.42 | 1.093 |
| I am satisfied with the lighting at my work place. | 3.61 | 0.931 |
| I am satisfied with the internet access at my work place. | 2.94 | 1.286 |
| I am satisfied with the availability of the work gadget. | 3.27 | 1.090 |
| The noise at my workplace is very low. | 3.15 | 1.132 |

Table 4.8 shows that the lowest mean and standard deviation are 2.94 and 1.286 which stated that the respondents satisfied with the internet access at their workplace. Meanwhile, the highest mean and standard deviation are 3.61 and 0.931 which stated that the respondents satisfied with the lighting at their work place.

4.3.2.3 Co-worker Relationship

Table 4.9

Mean and Standard Deviation Statistics for Co-worker Relationship

| Item Statement | Mean | SD |
|---|------|-------|
| I have good relationships with my co-workers. | 3.89 | 0.994 |
| My co-workers and I cooperate well with each other. | 3.89 | 0.931 |
| The more I interact with my co-workers the better I enjoy my job. | 3.82 | 1.009 |
| My co-workers positively affect my mood. | 3.76 | 0.922 |
| My co-workers and I interact positively on the job. | 3.72 | 0.986 |
| I enjoy the time I spend on the job with my co-workers. | 3.65 | 0.989 |
| I feel lucky to be working with the people that I do. | 3.82 | 0.978 |

Based on the result of Table 4.9, the lowest mean and standard deviation are 3.65 and 0.989 which stated that the respondents enjoy the time they spend on the job with their co-workers. Meanwhile, the highest mean and standard deviation are

3.89 and 0.931 which stated the respondents and co-workers can cooperate well with each other.

4.3.2.4 Social Support

Table 4.10

Mean and Standard Deviation Statistics for Social Support

| Item Statement | Mean | SD |
|--|------|-------|
| I regularly spend time with my co-workers outside of work hours. | 3.19 | 1.125 |
| I always discuss important personal problems with my co-workers. | 3.82 | 1.009 |
| My supervisor is not willing to listen to my job-related problems. | 3.89 | 0.994 |
| My supervisor can be relied on when things get tough in my job. | 3.89 | 0.931 |
| My family does not show a lot of concern in my job. | 3.82 | 0.978 |
| My family gives helpful advice to me in completing the job. | 3.90 | 1.059 |
| My friends can share the joys and sorrows with me. | 3.75 | 0.975 |

Based on the table 4.10 above, the lowest mean and standard deviation are 3.19 and 1.125 which stated that the respondents regularly spend time with their co-workers outside of work hours. Meanwhile, the highest mean and standard deviation are 3.90 and 1.059 which stated that the respondent's family gives helpful advice to them in completing the job.

4.3.2.5 Job Stress

Table 4.11

Mean and Standard Deviation Statistics for Job Stress

| Item Statement | Mean | SD |
|---|------|-------|
| I feel working here makes it hard to spend enough time with my family. | 3.25 | 1.167 |
| I spend so much time at working place. | 3.38 | 1.090 |
| I spend less time for other activities since working here. | 3.38 | 1.126 |
| I feel like I never have a day off. | 3.40 | 1.198 |
| Too many of people at my level in the company get burned out by job demand. | 3.40 | 1.214 |
| Sometimes when I think about my job I feel like myself so burden. | 3.30 | 1.227 |
| I feel guilty when I take time off from job. | 2.93 | 1.305 |

Table 4.12

Total Mean and Average Mean for Job Stress

| | |
|-----------------------------|-------|
| Total Mean for Job Stress | 23.04 |
| Average Mean for Job Stress | 3.29 |

Based on the result on the table 4.11 above, it shows the lowest mean and standard deviation for job stress are 2.93 and 1.305 which stated that the respondent feels guilty when they take time off from job. Meanwhile, the highest mean and standard deviation are 3.40 and 1.198 which stated that the respondent

feel like they never have a day off. While table 4.12 shows that the total mean for job stress is 23.04 and average mean for job stress is 3.29.

4.4 RELIABILITY TEST

This study used Cronbach's Alpha to test the reliability of the instruments used. Besides that, reliability test enable to indicate how accurate and precise of the measurement made on independent and dependent variables in this study. Meanwhile, the lower the error caused, the higher the reliability of the instrument. The Cronbach's Alpha values of each variable are illustrated in Table 4.13 below.

Table 4.13
Cronbach's Alpha Statistic for Actual Study

| Variable | No. of Items | Cronbach's Alpha |
|------------------------|--------------|------------------|
| Work Load | 7 | 0.809 |
| Work Environment | 7 | 0.855 |
| Co-worker Relationship | 7 | 0.849 |
| Social Support | 7 | 0.786 |
| Job Stress | 7 | 0.722 |

Table 4.13 shows the Cronbach's Alpha values for independent variable (workload, work environment, co-worker relationship and social support) and dependent variable (job stress). This study was used the cronbach's alpha to test the reliability of the instruments in the questionnaire to 120 respondents. The

value for workload is 0.809, work environment is 0.855, co-worker relationship is 0.849, social support 0.786, and lastly for job stress is 0.722. All the result shown above measure all the variables are reliable since it is greater than 0.7 and closer to 1. This is according to Sekaran (2003) that indicates if the Cronbach's Alpha is closer to 1 will consider better and has the higher reliability.

4.5 CORRELATION ANALYSIS

For correlation analysis, the researcher is tried to examine whether the independent variables have the relationship with dependent variables or not.

4.5.1 Correlation Analysis on Work Load and Job Stress

Table 4.14
Correlation for Work Load and Job Stress

| | | Job Stress |
|-----------|---------------------|------------|
| Work Load | Pearson Correlation | .395 |
| | Sig. (2 tailed) | .000 |

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

H1o: There is no relationship between work load and job stress among production operators of manufacturing company.

H1a: There is a relationship between work load and job stress among production operators of manufacturing company.

Table 4.14 above shows the result of correlation between work load and job stress. This result reported that there is a positively significant, with low correlation when ($r = 0.395$, $p < 0.01$) between work load as independent variable and job stress as satisfaction variable. Therefore, this study rejects the null hypothesis, and accepts the alternate hypothesis. This study supported the H1: There is a relationship between work load and job stress among production operators of manufacturing company.

4.5.2 Correlation Analysis on Work Environment and Job Stress

Table 4.15

Correlation for Work Environment and Job Stress

| | | Job Stress |
|------------------|---------------------|------------|
| Work Environment | Pearson Correlation | -0.337 |
| | Sig. (2-tailed) | 0.001 |

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

H2o: There is no relationship between work environment and job stress among production operators of manufacturing company.

H2a: There is a relationship between work environment and job stress among production operators of manufacturing company.

Table 4.15 shows that there is a negative significant and low correlation between two variables of work environment and job stress when ($r = -0.337$, $p < 0.01$). Therefore, the finding rejects the null hypothesis and accepts the alternate hypothesis. This study supported the H2: There is a relationship between work

environment and job stress among production operators in manufacturing company.

4.5.3 Correlation Analysis on Co-worker and Job Stress

Table 4.16

Correlation for Co-worker Relationship and Job Stress

| | | Job Stress |
|---------------------------|---------------------|------------|
| Co-worker Relationship | Pearson Correlation | 0.051 |
| | Sig. (2-tailed) | 0.614 |

H3o: There is no relationship between co-worker relationship and job stress among production operators of manufacturing company.

H3a: There is a relationship between co-worker and job stress among production operators of manufacturing company.

Based on table 4.16 above, the result shows that ($r = 0.051$, $p > 0.01$) which means that there is no significant and slight correlation between co-worker relationship and job stress. Therefore, the finding accepts null hypothesis and rejects alternate hypothesis. This study support that there is no relationship between co-worker relationship and job stress among production operators in manufacturing company.

4.5.4 Correlation Analysis on Social Support and Job Stress

Table 4.17

Coefficient Correlation for Social Support and Job Stress

| | | Job Stress |
|----------------|---------------------|------------|
| Social Support | Pearson Correlation | .061** |
| | Sig. (2-tailed) | .550 |

H4o: There is no relationship between social support and job stress among production operators in manufacturing company.

H4a: There is a relationship between social support and job stress among production operators in manufacturing company.

The correlation tested social support and job stress as table 4.17 above measures that ($r = 0.061$, $p > 0.01$) which means that there is no significant and slight correlation between social support and job stress. Therefore, this study accepts null hypothesis and reject alternate hypothesis. This study supported that there is no relationship between social support and job stress.

4.6 MULTIPLE REGRESSION ANALYSIS

Regression is the appropriate technique for testing relationship between predictor and criterion variable. Regression analysis was used as it allows the researcher to analyze how independent variables prediction on the value of the dependent variable. According to Bougie and Sekaran (2013), multiple regression analysis is used to identify the significance of the predictors with the dependent variable.

4.6.1 Independent Variables and Job Stress

Multiple regression analysis were conducted to examine the relationship between production operators in manufacturing company at Gelang Patah, Johor. Table 4.17 below shows model summary consisting R squared value.

Table 4.18
Model Summary

| R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------------------|----------|-------------------|----------------------------|
| .500 ^a | .250 | .219 | .76919 |

a. Predictors: (Constant), SS, WE, WL, CR

As shown in table 4.18, there are four predictor variables (work load, work environment, co-worker relationship and social support) are contributing to job stress. As shown in table 4.18, the result of R square is 0.250, which means that 25.0% in dependent variable of job stress is significantly explain of independent

variables which are work load, work environment, co-worker relationship and social support.

Table 4.19
The Anova Model

| Model | Sum of Squares | Df | Mean Square | F | Sig. |
|------------|----------------|----|-------------|-------|-------------------|
| Regression | 18.769 | 4 | 4.692 | 7.931 | .000 ^b |
| Residual | 56.208 | 95 | .592 | | |
| Total | 74.976 | 99 | | | |

a. Dependent Variable: JS

b. Predictors: (Constant), SS, WE, WL, CR

Table 4.20
The Coefficient of the Study Model

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|------------|-----------------------------|------------|---------------------------|--------|------|
| | B | Std. Error | Beta | | |
| (Constant) | 2.050 | .709 | | 2.890 | .005 |
| WL | .382 | .099 | .380 | 3.854 | .000 |
| WE | -.283 | .105 | -.258 | -2.693 | .008 |
| CR | .068 | .202 | .063 | .334 | .739 |
| SS | .214 | .247 | .161 | .863 | .390 |

a. Dependent Variable: JS

The regression analysis on all four dimensions of stress were significant at $p < 0.05$, $F = 7.931$. However, according to table 4.19 above, it was found that only two dimensions were significant which have p -value < 0.05 , namely work load and work environment with p -value of 0.000 and 0.008. Another two which are co-worker relationship and social support were not significant to stress since the p -value was 0.739 and 0.390. It may concluded that at least two dimension of job stress, namely work load and work environment has impact on job stress among production operators in manufacturing company at Gelang Patah, Johor.

4.7 SUMMARY OF THE RESULT

Four independent variables were tested at a five percent (5%) of significant. Result from hypothesis shows work load and work environment has a relationship with job stress. Hypothesis 1 (work load) shows positive relationship to job stress from this study, while hypothesis 2 (work environment) shows negative relationship to job stress, and the others two hypothesis which are hypothesis 3 (co-worker relationship) and hypothesis 4 (social support) shows no relationship to job stress.

CHAPTER 5

DISCUSSION AND CONCLUSION

5.1 INTRODUCTION

This chapter summarizes and discusses the research objective, the finding based on the analysis result and provides identification of factors that related to the stress among production operators. The result of correlation, from each of the hypothesis testing in the previous chapter are examined to provide detailed explanation based on the analysis of the research data. This chapter ends with recommendations as well as directions for future research.

5.2 DISCUSSION

There are four objectives in this study. The first objective is to investigate the relationship between work load and job stress. Second is to investigate the relationship between work environment and job stress. The third objective is to investigate the relationship between co-worker relationship and job stress. And lastly is to investigate the relationship between social support and job stress.

The analysis shows that work load has a positively significant and weak relationship with the job stress which $r = 0.395$, $p = 0.000$ ($p < 0.05$). Therefore, hypothesis 1 is accepted. In other word it is very likely that the production

operators would feel stress when their workload is increase. The finding is similar with past researchers where work load has significant interaction with job stress (Donovan & Kleiner, 1994). This results is also supported by the previous study by Kane (2009) which showed that work load had become a major cause of stress and emotional pressure.

Besides that, the analysis shows that the work environment has a negatively significant and weak relationship with the job stress which $r = -0.337$, $p = 0.001$ ($p < 0.05$). Therefore, hypothesis 2 also accepted. This means that the increasing in work environment will lead to the decreasing in job stress. This result is supported by Michael (2000) in his study that improving work environment can decrease the illness of all employees thereby reducing the rate of stress.

Co-worker relationship analysis shows that it does not have a significant influence on job stress which $r = 0.051$, $p = 0.614$ ($p > 0.05$). Therefore, hypothesis 3 is rejected. This means that the increasing or decreasing in co-worker does not have an impact on job stress. This is different from previous study by Sauter (1990) who suggests that poor co-worker interactions may be a workplace stressor that put employees at risk of job stress.

Lastly, the analysis shows that social supports does not have a significant influence on job stress which $r = 0.061$, $p = 0.550$ ($p > 0.05$). Therefore, hypothesis 5 also rejected. This means that the increasing or decreasing in social support does not have an impact to the job stress. This is different with previous

study by Buunk, Dooseje, Jans and Hopstaken seem (1993) asserted that, with regard to stress at work, the amount of support received in proportion to the amount of support given may be important.

5.3 LIMITATION OF STUDY

The scope of study was limited to one specific department only at one manufacturing company. This could be widened to other department or other manufacturing for a wider scope and generalization of the results. In this study, the data collections are purely competitive. It could be better if this method could be completed with a qualitative method such as interview with the respondent to capture elements of subjectivities in the response given and particularly involving emotion and perception which structured questionnaire fails to capture adequately.

In addition, the study is limited by the number of variable testes. The study only tested four independent variables that are workload, work environment, co-worker relationship and social support. There are many factors such as leadership style, psychological factor, personal factor and others that directly and indirectly contribute to the stress.

5.4 RECOMMENDATION FOR FUTURE STUDY

Future researcher should do more in depth interview in order to understand better the relationship between workload, work environment, co-worker relationship, social support and stress. Besides that, future researcher also should do more studies in the area that could be pursued in the future is examining work related stress factors and in the various department and manufacturing company in manufacturing industries.

In addition, a mixed methodology approach that employs both quantitative and qualitative methods could contribute richer data and provide a more holistic picture of the stress situation among production operators. And hopefully, result of this study would represent valuable feedbacks to the higher management in order to reduce job stress among production operators.

5.5 CONCLUSION

The current chapter has discussed results of the study in the light of literature review and limitations. The purpose of this study was to investigate the variables that may affect stress such as workload, work environment, co-worker relationship and social support. Four research questions have answer by the research finding. Two of the variables such as workload and work environment have a significant relationship with job stress while another two variables such as co-worker relationship and social support do not have a significant relationship

with job stress. Among these four independent variables, workload is the most significant factor that contributes to the stress among production operators.



REFERENCES

- Al-Ameri, A. S. (2003), "Source of Job Stress for Nurses in Public Hospitals", *Saudi Medical Journal*, vol.24, no.11, pp. 1183-1187.
- Ammar, T. (2006), The effects of internal variables on the level of job stress on the employees of Palestinian Universities at Gaza Strip. *Master thesis, Islamic University, Gaza*, 55.
- Arnold, H. J. and Feldman, D. C. (2000), Handbook of psychology, *Industrial and Organizational Psychology*, 304.
- Avolio, B.J., Kahai, S., Dumdum, R. & Sivasubramaniam, N. (2001). Virtual teams: Implications for e-leadership and team development. In M London (Ed.), *How people evaluate others in organizations* (pp. 337-358). Mahwah, NJ, Lawrence Erlbaum Associates.
- Bansi, (2012, August 19). What is Stress? Retrieved March 20, 2018, from Edensgatehypnotherapy:
<http://edensgatehypnotherapy.com/articles/what-is-stress/>
- Bashir & Asad (2007). Employees' Stress and Its Impact on Their Performance. *First Proceedings of International Conference on Business and Technology*, December 17, 2007, Pages 151-161, Iqra University Islamabad.
- Bateman, G. (2009). Employee perceptions of co-worker support and its effect on job satisfaction, work stress and intention to quit. Dissertation, University of Canterbury.
- Beehr, T. A., (1976). Perceived Situational Moderators of the Relationship between Subjective Role Ambiguity and Role Strain. *Journal of Applied Psychology*, 61: 35-40.

- Bennett, R. (1997). *Organizational Behavior*, (3rd edi.), London Guidhall University: Financial times, Pitman Publishing.
- Bradley, J. R., & Sutherland, V. (1994). Stress management in the workplace: Taking employees' views into account. *Employee Counselling today*, 6(1), 4-9.
- Carr, J., Kelley, B., Keaton, R., & Albrecht, C. (2011). Getting to grips with stress in the workplace: Strategies for promoting a healthier, more productive environment. *Human Resource management International Digest*, 19(4), 32-38.
- Cahn, K.B., Lai, G., Ko, Y.C. & Boey K.W. (2000). "Work stress among six professional groups: the Singapore experience", *Social Science Medicine*, 50(10), pp.1415-1432.
- Coleman, J. C., (1976). *Abnormal Psychology and Modern Life*, Taraporewalla, Bombay.
- Cooper, C. L. & Williams, J. 1991. A validation study of the OSI on a blue-collar sample. *Stress Medicine* 7: 109-112.
- Cummins, R.C. (1990). Job Stress and the Buffering Effect of Supervisory Support. *Group Organ. Manag.* Vol 15, 92-104.
- Deshpande, P. (2010, November 22). Good stress, bad stress. Retrieved March 18, 2018, from mySahana: <http://www.mysahana.org/2010/11/good-stress-bad-stress/>
- Edwards, J. R., & Cooper, C. L. (1988). The impact of positive psychological states on physical health: a review and theoretical framework. *Social Science and medicine*, 27, 1447-1459.

- Fields, D. L. (2002). Taking the measure of work: A guide to validate scales for organizational research and diagnosis. Thousand Oaks, CA: Sage Publications.
- Fink, A. (2003) Classification of Designs for Survey Studies, 2nd ed, 20(7).
- French, J. R. P. (1982). *The mechanism of job stress and strain*. Chichester, England:Wiley.
- French, J. R. P. & Caplan, R. D. (1972). Organizational Stress and Individual Strain, “in The Failure of Success”, Ed. New York: AMACOM.
- Gouldner, A.W. (1960). The Norm of Reciprocity: A preliminary statement. Am. Social.
- Greenberg, J & Baron, R. A. (2007), Behavior in organizations: Understanding and meaning the human side of work, Prentice Hall.
- G. Z. Mincsovcics & N. P. Dellaert (2009) Workload-dependent capacity control in production-to-order systems, IIE Transactions, 41:10, 853-865, DOI: [10.1080/07408170802369391](https://doi.org/10.1080/07408170802369391)
- Hain, C. A., & Francis, L. (2004). *Development and Validation of a Coworker Relationship Scale*. 65th Annual convention, Canadian Psychological Association, Newfoundland, Canada.
- Helvinder Kaur (2003). *Stress dan kepuasan kerja di kalangan guru: Satu kajian di Sekolah Menengah*. Latihan Ilmiah. Universiti Kebangsaan Malaysia.
- Hepburn, C.G. (1997). Coping with chronic work stress. In B.H. Gottlieb (Ed.). Coping with chronic stress (pp. 343-366). New York: Plenum Press.
- Herzberg, F., & Mausner, B. (1959). The motivation to work, 2nd ed., New York: Wiley.

- Hodson, R. (1997). Group relations at work: Solidarity, conflict, and relations with management. *Work and Occupations*, 24, 426-452.
- Idris, M. (2011), Over time effects of role stress on psychological strain among Malaysian Public University Academics. *International Journal of Business and Social Science*, 4(1), 44-48.
- Ivancevich, G. & Matteson, M. T. (2002), *Organizational Behavior and Management*. McGraw Hill companies, North America, 270.
- Jaffe-Gill, E., Smith, M., Larson, H., & Segal J. (2007). Understanding stress: Signs, symptoms, causes, and effects. Retrieved from: http://www.helpguide.org/mental/stress_signs.htm on March 20, 2018.
- Jamal, M. (2005), Burnout among Canadian and Chinese employees: A cross-cultural study. *European Management Review*, 2, 224-230.
- Jane, C. W., & Alyssa, A. (2005). *Organizational Stress*. Palgrave Macmillan, United State.
- Kelloway, E.K. & Barling, J. (1994). *Development of the Canadian Forces Occupational Stress Questionnaire, Working Paper 94-2*. Willowdale, ON: Canadian Forces Personnel Applied Research Unit.
- Khan, M. K. J., Abdullah, N. A. C. & Yusof, A. A. (2005). *Keselamatan dan Kesihatan Pekerjaan dalam Organisasi*. Selangor: Prentice Hall.
- Koeske, G.F. (1989). Work load and burnout: Can social support and perceived accomplishment help? *National Association of Social Workers*, Inc, 37, 243-248.
- Kvarnstrom, S. (1997), Stress prevention for Blue Collar Workers in Assembly Line Production.

- Lapierre, L.M. (2006). Work –supportive family, family supportive supervision, use of organizational benefits, and problem-focused coping: implications for work-family conflict and employee well-being. *J Occupation Health Psychology*. Vol 11, 169-181.
- Liang, Y. & Xiang, Q. (2004). Occupational Health Service in PR China. *Toxicology* 198: 45-54.
- Luthans, F. (1998). Organizational behavior, 8th ed. Boston: Irwin McGraw-Hill.
- M.A, Dollard, M. F., & Winefield, A. H. (2010). Lay theory explanation of occupational stress: The Malaysian context. *Cross Cultural Management: an International Journal*, 17, 135-153.
- Makie, V. V. (2006, November). Stress and coping strategies amongst registered nursed.
- Maslow, A. H. (1954). *Motivation and Personality*: NY: Harper.
- Matteson, M. T., & Ivancevich, J. M. (1987). *Controlling work stress: Effective human resource and management strategies*: Jossey-Bass.
- McLean, A. A. (1974). *Occupational Stress*. Springfield, Illinois: Thomas.
- Meneze (2005). Introducing Stress and Stress Management to Managers, *Journal of Managerial Psychology*, Vol 5 Issue 2.
- Quick, J.C. (1990), “Occupational health psychology: The convergence of health and clinical psychology with public health preventive medicine in an organizational context”, *Professional Psychology: Research and Practice*, 30(2), pp. 123-128.
- Rana, B. & Munir, K. (2011), Impact of stressors on the performance of employees.

- Revati, C. D. (2012), A healthy way to handle work place stress through Yoga, Meditation and Soothing Humor. *International Journal of Environmental Sciences*, 2 (4).
- Rizwan, M., Waseem, A., & Bukhari, S. (2014), Antecedents of Job Stress and its impact on Job Performance and Job Satisfaction. *International Journal of Learning & Development*, 4 (2), 187-203.
- Robbins, S. P., and Judge, T. A., (2014). Organizational Behavior. Twelfth Edition, Pearson Prentice Hall.
- Robbins, S.P. & DeDenzo, D.A. (2001). Supervision today, 3rd ed. New Jersey: Prentice Hall.
- Sauter, S.L. (1990). Prevention of work-related psychological disorders: A national strategy proposed by the National Institute for Occupational Safety and Health (NIOSH). *American Psychologist*, 45 (10), 1146-1158.
- Scott, E. (2012, October 30). What Kind of Stress is Good for You. Retrieve March 20, 2018 from About.com: <http://stress.about.com/od/stressbasics/a/Good-StressWhen-Stress-IsGood-For-You.htm>
- Sekaran, U. & Bougie, R. (2013) *Research Methods for Business: A skill building approach*. 6th ed., John Wiley & Sons Ltd.
- Selye, H. (1974), Stress without Distress, J.B. Lippincott, Philadelphia, PA.
- Siegal, M. (2000). Putting the Stress Back into Role Stress: Improving the Measurement of Role Conflict and Role Ambiguity. *J Manage Psychology*. Vol 15: 5427-5435.
- Soran, S. (2014), Job stress and performance: the mediating effect of emotional intelligence. *European Journal of Business and Social Sciences*, 3 (5), 67-75.

Steve (2011). Managing Workplace Stress: a best practice blueprint. Publisher Wiley, Original from Cornell University, Vol 1,78-84.

Sullivan, E.J. & Decker, P.J. (1985). Effective management in nursing. California: Addison Wesley Publication.

Yeow., J.A., Poh Kiat., N. & Tee Suan., C. (2014). Effect of Stress, Repetition, Fatigue and Poor Work Environment on Human Error in Manufacturing Industries. *Journal of Applied Science*.Multimedia University Issue. ISSN 1812-5654, Vol 24.

Yoon, J. & Thye, S. (2000). Supervisor support in the workplace: legitimacy and positive affectivity. *The Journal of Social Psychology*, 140 (3), 295-316.

Zhou, J., & George, J.M. (2001). When Job Dissatisfaction Leads to Creativity: Encouraging the Expression of Voice. *The Academy of Management Journal*, 44, 682.



UUM
Universiti Utara Malaysia

APPENDIX A

QUESTIONNAIRE DESIGN



UNIVERSITI UTARA MALAYSIA

Dear Respondent,

I am inviting you to participate in a research project which is being conducted as a partial fulfillment to the requirement for the Master of Science (Management) in Universiti Utara Malaysia.

The purpose of this research is to determine the influence of workload, work environment, coworker relationship, and social support towards job stress. Along with this letter is a short questionnaire that asks a variety of questions about workload, work environment, coworker relationship, social support, and job stress. The questionnaire is bilingual (English and Malaysia).

Your honesty and sincerity are required in answering the questions. Please feel free to answer because there is no right or wrong answer. All of your responses will remain confidential and will be used for the research purposes only.

Your time and cooperation are highly appreciated. Thank you.

Sincerely,

UMMU NOOR HABIBAH BT YAHYA

(MSc in Management)

Section A: Demographic Information

Please tick (/) in the appropriate boxes that corresponds to the question below.

Sila tanda (/) di dalam ruang yang disediakan berdasarkan soalan di bawah.

1. Gender / Jantina

☐

Male/ *Lelaki*

☐

Female/ *Perempuan*

2. Age / Umur

☐

20-30

☐

31-40

☐

41-50

☐

>50

3. Marital Status/ *Taraf Perkahwinan*

☐

Married/ *Berkahwin*

☐

Single/ *Belum berkahwin*

4. Academic qualification/ *Kelayakan akademik*

☐

Primary school/ *Sekolah rendah*

☐

High school/ *Sekolah menengah*

☐

Diploma/ *Diploma*

☐

Degree/ *Ijazah*

5. How long have you been working in the company? / *Sudah berapa lama anda bekerja di organisasi ini?*

☐

Less than 1 year/ *Kurang dari 1 tahun*

☐

1 – 3 years/ *1 -3 tahun*

☐

4 – 6 years/ *4 -6 tahun*

☐

More than 6 years/ *Lebih dari 6 tahun*

Section B: Workload

Bahagian B: Beban Kerja

Please tick in the box with the most appropriate answer to you

Sila tanda di dalam kotak dengan jawapan mengikut kesesuaian anda.

| 1 | 2 | 3 | 4 | 5 |
|---|---|-----------------------------------|--------------------------------|--|
| Strongly disagree/ <i>Sangat tidak setuju</i> | Disagree/ <i>Tidak setuju</i> | Neutral/ <i>Neutral</i> | Agree/ <i>Setuju</i> | Strongly agree/ <i>Sangat setuju</i> |

| No. | Question/ Soalan | Answer/ Jawapan | | | | |
|-----|--|-----------------|---|---|---|---|
| 1. | My supervisor is not helpful enough <i>Penyelia saya tidak cukup membantu</i> | 1 | 2 | 3 | 4 | 5 |
| 2. | My colleagues are unfriendly <i>Rakan sekerja saya tidak begitu peramah</i> | 1 | 2 | 3 | 4 | 5 |
| 3. | I feel unpleasant with the way of my colleague treated me when do the work <i>Saya berasa tidak selesa dengan cara rakan sekerja saya melayan saya sewaktu bekerja</i> | 1 | 2 | 3 | 4 | 5 |
| 4. | I feel that I have too much responsibility <i>Saya berasa saya mempunyai terlalu banyak tanggungjawab</i> | 1 | 2 | 3 | 4 | 5 |
| 5. | I find difficulty in finding enough time to relax <i>Saya berasa sukar untuk mendapatkan waktu yang cukup untuk berehat</i> | 1 | 2 | 3 | 4 | 5 |
| 6. | I am so depressed when I think about all task that need my attention <i>Saya berasa tertekan setiap kali memikirkan tugas yang memerlukan perhatian saya</i> | 1 | 2 | 3 | 4 | 5 |
| 7. | There is constant pressure to work every minute with limited opportunity to relax <i>Peluang rehat yang terhad menimbulkan tekanan yang berterusan untuk setiap minit waktu bekerja</i> | 1 | 2 | 3 | 4 | 5 |

Section C: Work Environment

Bahagian C: Persekitaran Kerja

Please tick in the box with the most appropriate answer to you

Sila tanda di dalam kotak dengan jawapan mengikut kesesuaian anda.

| 1 | 2 | 3 | 4 | 5 |
|---|---|-----------------------------------|--------------------------------|--|
| Strongly disagree/ <i>Sangat tidak setuju</i> | Disagree/ <i>Tidak setuju</i> | Neutral/ <i>Neutral</i> | Agree/ <i>Setuju</i> | Strongly agree/ <i>Sangat setuju</i> |

| No. | Question/ Soalan | Answer/ Jawapan | | | | |
|-----|---|-----------------|---|---|---|---|
| 1. | The arrangement of work desk is good <i>Susun atur meja kerja adalah baik</i> | 1 | 2 | 3 | 4 | 5 |
| 2. | The size of the work space is very conducive <i>Saiz ruang kerja adalah bersesuaian</i> | 1 | 2 | 3 | 4 | 5 |
| 3. | I am satisfied with the temperature at my work place <i>Saya berpuas hati dengan suhu di tempat kerja saya</i> | 1 | 2 | 3 | 4 | 5 |
| 4. | I am satisfied with the lighting at my work place <i>Saya berpuas hati dengan pencahayaan di tempat kerja saya</i> | 1 | 2 | 3 | 4 | 5 |
| 5. | I am satisfied with the internet access at my work place <i>Saya berpuas hati dengan kemudahan internet di tempat kerja saya</i> | 1 | 2 | 3 | 4 | 5 |
| 6. | I am satisfied with the availability of the work gadget <i>Saya berpuas hati dengan kemudahan peralatan kerja</i> | 1 | 2 | 3 | 4 | 5 |
| 7. | The noise at my workplace is very low <i>Bunyi bising di tempat kerja saya adalah sangat rendah</i> | 1 | 2 | 3 | 4 | 5 |

Section D: Coworker relationship

Bahagian D: Hubungan rakan sekerja

Please tick in the box with the most appropriate answer to you

Sila tanda di dalam kotak dengan jawapan mengikut kesesuaian anda.

| 1 | 2 | 3 | 4 | 5 |
|---|---|-----------------------------------|--------------------------------|--|
| Strongly disagree/ <i>Sangat tidak setuju</i> | Disagree/ <i>Tidak setuju</i> | Neutral/ <i>Neutral</i> | Agree/ <i>Setuju</i> | Strongly agree/ <i>Sangat setuju</i> |

| No. | Question/ Soalan | Answer/ Jawapan | | | | |
|-----|--|-----------------|---|---|---|---|
| 1. | I have good relationships with my coworkers <i>Saya mempunyai hubungan yang baik dengan rakan sekerja saya</i> | 1 | 2 | 3 | 4 | 5 |
| 2. | My coworkers and I cooperate well with each other <i>Saya dan rakan sekerja dapat bekerjasama dengan baik</i> | 1 | 2 | 3 | 4 | 5 |
| 3. | The more I interact with my coworkers the better I enjoy my job <i>Lebih banyak saya berinteraksi dengan rakan sekerja lebih seronok saya bekerja</i> | 1 | 2 | 3 | 4 | 5 |
| 4. | My coworkers positively affect my mood <i>Rakan sekerja saya memberi pengaruh yang positif kepada emosi saya</i> | 1 | 2 | 3 | 4 | 5 |
| 5. | My coworkers and I interact positively on the job <i>Saya dan rakan sekerja berinteraksi secara positif terhadap hal kerja</i> | 1 | 2 | 3 | 4 | 5 |
| 6. | I enjoy the time I spend on the job with my coworkers <i>Saya seronok menikmati waktu bekerja dengan rakan sekerja saya</i> | 1 | 2 | 3 | 4 | 5 |
| 7. | I feel lucky to be working with the people that I do <i>Saya berasa bertuah dapat bekerja dengan orang yang saya selesa</i> | 1 | 2 | 3 | 4 | 5 |

Section E: Social Support

Bahagian E: Sokongan Sosial

Please tick in the box with the most appropriate answer to you
Sila tanda di dalam kotak dengan jawapan mengikut kesesuaian anda.

| 1 | 2 | 3 | 4 | 5 |
|---|---|-----------------------------------|--------------------------------|--|
| Strongly disagree/ <i>Sangat tidak setuju</i> | Disagree/ <i>Tidak setuju</i> | Neutral/ <i>Neutral</i> | Agree/ <i>Setuju</i> | Strongly agree/ <i>Sangat setuju</i> |

| No. | Question/ Soalan | Answer/Jawapan | | | | |
|-----|---|----------------|---|---|---|---|
| 1. | I regularly spend time with my coworkers outside of work hours <i>Saya selalu meluangkan masa bersama rakan sekerja saya diluar waktu bekerja</i> | 1 | 2 | 3 | 4 | 5 |
| 2. | I always discuss important personal problems with my coworkers <i>Saya selalu berbincang tentang masalah peribadi dengan rakan sekerja saya</i> | 1 | 2 | 3 | 4 | 5 |
| 3. | My supervisor is not willing to listen to my job-related problems <i>Penyelia saya tidak mahu mendengar masalah saya yang berkaitan dengan kerja</i> | 1 | 2 | 3 | 4 | 5 |
| 4. | My supervisor can be relied on when things get tough in my job <i>Penyelia saya boleh bertolak ansur apabila saya menghadapi kesukaran dalam kerja</i> | 1 | 2 | 3 | 4 | 5 |
| 5. | My family does not show a lot of concern in my job <i>Keluarga saya tidak prihatin dengan kerja saya</i> | 1 | 2 | 3 | 4 | 5 |
| 6. | My family gives helpful advice to me in completing the job <i>Keluarga saya memberikan nasihat yang berguna kepada saya dalam melaksanakan kerja</i> | 1 | 2 | 3 | 4 | 5 |
| 7. | My friends can share the joys and sorrows with me <i>Kawan-kawan saya sudi berkongsi suka dan duka</i> | 1 | 2 | 3 | 4 | 5 |

Section F: Job Stress

Bahagian F: Tekanan Kerja

Please tick in the box with the most appropriate answer to you

Sila tanda di dalam kotak dengan jawapan mengikut kesesuaian anda.

| 1 | 2 | 3 | 4 | 5 |
|---|---|-----------------------------------|--------------------------------|--|
| Strongly disagree/ <i>Sangat tidak setuju</i> | Disagree/ <i>Tidak setuju</i> | Neutral/ <i>Neutral</i> | Agree/ <i>Setuju</i> | Strongly agree/ <i>Sangat setuju</i> |

| No. | Question/ Soalan | Answer/ Jawapan | | | | |
|-----|---|-----------------|---|---|---|---|
| 1. | I feel working here makes it hard to spend enough time with my family <i>Saya berasa bekerja disini menyukarkan saya untuk meluangkan waktu dengan keluarga saya</i> | 1 | 2 | 3 | 4 | 5 |
| 2. | I spend so much time at working place <i>Saya meluangkan banyak masa di tempat kerja</i> | 1 | 2 | 3 | 4 | 5 |
| 3. | I spend less time for other activities since working here <i>Saya sukar meluangkan masa untuk aktiviti lain sejak bekerja disini</i> | 1 | 2 | 3 | 4 | 5 |
| 4. | I feel like I never have a day off <i>Saya berasa seolah-olah saya tiada hari cuti</i> | 1 | 2 | 3 | 4 | 5 |
| 5. | Too many of people at my level in the company get burned out by job demand <i>Terlalu ramai rakan sekerja yang lain yang tertekan dengan tugas kerja</i> | 1 | 2 | 3 | 4 | 5 |
| 6. | Sometimes when I think about my job I feel like myself so burden <i>Kadang-kadang apabila saya memikirkan tentang kerja, saya berasa diri saya terlalu dibebani</i> | 1 | 2 | 3 | 4 | 5 |
| 7. | I feel guilty when I take time off from job <i>Saya berasa bersalah setiap kali saya bercuti dari kerja</i> | 1 | 2 | 3 | 4 | 5 |



UUM

Universiti Utara Malaysia