

A STUDY ON STRESS LEVEL AND ITS IMPLICATION ON PRODUCTIVITY
AMONG WOMEN ENGINEERS IN ORGANIZATIONS

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DEDICATION

For my Mom and Dad, thanks for your love and support. This final year project is dedicated to show my truly appreciation for both of you.

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ABSTRACT

The occurrence of work stress is quite widespread in manufacturing organizations. As we know, stress level can give negative impact to the productivity among workers. Stress can reduce the productivity and work performance of the workers. Thus, this study aims to examine the relationship between the stress level and its implication on productivity among workers especially to women engineers at the workplace. Other than that, this study also proposed to provide the best way in order to prevent the stress level among workers. The implications on productivity and work performance were being investigated as well as to find out the best solution to the stress level problem. Questionnaires were used for the data collections process. A quantitative study using questionnaires survey was distributed to 50 respondents. The correlation analysis shows health, work area design, shift work, and working hours factors have significant relationship with work stress outcomes. Overall, the findings of this research are important to organizations which are in need of healthy and competent human resources in line with the aspiration of a dynamic human capital development. This research found that workplace or job stress is the most dominant factors that influence to stress, followed by the personal or family relationship.

ABSTRAK

Tekanan kerja berlaku dengan agak meluas dalam organisasi pembuatan. Seperti yang kita tahu, tahap stres boleh memberi kesan negatif kepada produktiviti di kalangan pekerja. Tekanan boleh mengurangkan produktiviti dan juga prestasi kerja pekerja. Oleh itu, kajian ini bertujuan untuk mengkaji hubungan antara tahap tekanan dan implikasinya kepada produktiviti di kalangan pekerja terutama kepada jurutera wanita di tempat kerja. Selain daripada itu, kajian ini juga mencadangkan untuk menyediakan cara terbaik untuk mengelakkan tahap tekanan di kalangan pekerja. Implikasi ke atas produktiviti dan prestasi kerja telah disiasat serta untuk mengetahui penyelesaian terbaik kepada masalah tahap tekanan. Soal selidik telah digunakan untuk koleksi proses data. Satu kajian kuantitatif dengan menggunakan borang soal selidik telah diedarkan kepada 50 orang responden. Analisis korelasi menunjukkan kesihatan, reka bentuk ruang kerja, kerja syif, dan waktu kerja yang mempunyai hubungan signifikan dengan akibat stres. Secara keseluruhannya, dapatan kajian ini adalah penting untuk organisasi yang memerlukan sumber manusia yang sihat dan cekap selaras dengan aspirasi pembangunan modal insan yang dinamik. Kajian ini mendapati bahawa di tempat kerja atau tekanan kerja adalah faktor yang paling dominan yang mempengaruhi tekanan, diikuti oleh hubungan peribadi atau keluarga.

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CHAPTER 1

INTRODUCTION

1.1 Introduction

People nowadays tend to have a high level of stress at the workplace as a result of the hectic working schedule and due to other commitments. Generally, the way of responding to any kind of demand or pressure of your body is called stress. There are two main factors that can contribute to stress which are good and also bad experiences. Basically, human bodies will react by releasing some chemicals into the blood of a person. These chemicals will then converted into energy and supply the human being with extra strength. If their stress is caused by physical danger, it might be a good thing. Otherwise, if their stress is related to something emotional and they have no medium to express this extra strength and energies could lead to something bad. In other words, stress can be described as a feeling when you are uncomfortable or worried about something around you. This feeling of worry in your mind can change your emotion to feel bad such as angry, scared, frustrated or afraid. This kind of feeling can lead to bad physical condition such as headache or stomachache. Stress could cause by many different forces that are likely came from physical to emotional issues. In order to learn on how to manage with your stress, you must first identify what may be the cause to your stress? There are four most common sources of stress which are survival stress, internal stress, environmental stress, and fatigue and overwork. Based on this research,

environmental stress and also fatigue and overwork are commonly related to this research undertaken.

Productivity can be defined as the quantity or value of output that can be produced by a unit of input where output is the product or service that was produced by the organization. In other words, productivity is a concept that explains the relationship between the outputs produced by an organization with the input that was used. Productivity is important in an organization because this will allow the business of an organization to be more cost effective. There is no specific concept for the productivity. If a business managed to achieve a higher productivity level, then it is good for their organization profit and success. Michac (1997) stated that reasons for low productivity are as follows; poor training in the company, machine break downs, non-established performance standards, lack of planning and motivation, poor atmosphere and environment, inadequate communication and non-identification with company goals.

Stress that is linked with work activities has been simultaneously related to many bad effects especially in terms of productivity and work performance. When a person is too stressed, it will lead to physical and mental problems. In addition, the problems of stress can also drive to lack of productivity of a worker especially among women. As we are aware, women have more responsibilities as a wife, mother and also worker at their workplace. Therefore, the purpose of this study is to evaluate the stress level among women at engineering sectors and its relationship in influencing their productivity and work performance.

1.2 Statement of Problem

Stress at the workplace was considered to be a rising concern in many organizations in Malaysia. As we do know, high level of stress could raise to problems and negative impact especially to the employees' work performance such as low productivity, increased of employees' absenteeism and staff turnover and other health problems including hypertension, drug abuse and alcoholism. Today, most of the people are talking about stress and pressure. We are not only able to hear it through everyday conversation but also through television, radio and newspapers. This statement is supported by many scholars in the state of stress is an inevitable reality in most work environments. Stress is considered as a part of the routine that we had to encounter in life and some say that stress is the spice of life at the present time.

For most women, they may not be able to escape from stress. This happened because women have more responsibilities to be carried either at home or at workplace. As a woman, they would try to carry out their duties as a wife and a mother perfectly but in the same time they also have to deal with other responsibilities that need to be settled at workplace and play their roles with excellent.

In Malaysia, stress among women becomes a popular topic due to family life and work life. The Ministry of Women, Family and Community Development held a numbers of programs to overcome the depression among Malaysian women who seems to be at the concerned rank in a survey on the level of stress faced by women. Another reason why they held the programs is to gain balancing between the women's responsibilities at workplace and their family. As shown in Table 1 below, Malaysia seems to be near to the high level percentage of depressed women rating through the study of 'Women of Tomorrow – A study of Women around the World' in year 2011.

Table 1.1: Rate of Depressed Women by Country

Country	Percentage (%)
India	87
Mexico	74
Brazil	67
Turkey	56
Japan	52
South Korea	45
Malaysia	44

Source: Women of Tomorrow – A study of Women Around the World (2011)

However, not much study has been conducted to look into these issues to overcome the situation. Therefore, this study is done to identify the level of stress among women engineers in manufacturing firm in Malacca.

1.3 Research Objectives

The research objectives of this study are to evaluate the stress level among women at engineering level and also its relationship in influencing their productivity and work performance based on manufacturing firm in Malacca.

- a) To identify what are the key causes leading to stress problems among the women engineers.
- b) To determine to what extent stress influence the productivity of women engineers at workplace.
- c) To propose recommendations to improve stress management among women engineers as to improve productivity.

1.4 Research Questions

Several research questions were constructed as follows:

- a) How high does the level of stress affect women employees' productivity?
- b) What are the key elements that influence stress level?
- c) What are the suitable solutions to reduce the stress level and improve the productivity and work performance among the employees?

1.5 Scope of Study

This research is focusing on the issue of stress level that influences the work performance and productivity of the manufacturing firms in Malacca. Stress level can be categorized as critical issues among women engineers in manufacturing firm and need to improve their work performance and decrease the level of stress to enhance the productivity.

This research focused on women engineers because we know that women have dual responsibilities both at home and at the workplace. These two big responsibilities are the factors that contribute to the existence of stress among these women.

1.6 Limitation of Study

The researcher faced some limitations to complete this study. One of the reasons is because this study only took four months to complete. This means that the researcher only has a short time of period to analyze this study and deal with many challenges. Other than that, this study is also limited in terms of the sampling size. The researcher faced a shortage number of respondents because this research is limited to women

engineers only. As we do know, most of the engineers are amongst the male. This situation of small sampling size could not be avoided.

The next thing is this study also involved two manufacturing firms only. Not all company is being selected to join the survey in order to complete this research. Besides that, this study is also limited due to the financial constraint. The researcher is a student and do not have well financial support in order to finish the task. Besides that, the researcher does not have enough experience to conduct the research because the researcher is still unfamiliar with the research format and also procedures. It was pretty challenging for the researcher to produce a good research. This lack of experience would likely to affect the research outcome.

1.7 Importance of Study

This study was done in order to give the real picture of the major problems encountered in a company especially manufacturing firm. The company will not be able to learn more about the problem if the research was not yet done. When the research is held in their firm, the findings of the case study can be used as references for the company to improve stress management of the company and ultimately improve the productivity of the workers. The company will analyze the problem, identify why the problem happened and try to solve the problem in proper manner and efficiently. These will, indirectly, decreased the stress level among women engineers in this company from time to time if the management look at this problem as a serious matter and consider reducing the level of stress. In addition, this study can work as a reference for other researchers to learn the procedures and methods of this study. This can help them to come out with a better research in the future.

1.8 Summary

This study explores ways to increase the employee productivity and work performance by reducing the high level of stress and propose recommendation by providing a healthier indoor environment through the implementation of interior design research. As we know, the high level of stress can give negative impact to the employee's work performance and also their productivity of work. So, the propose recommendation are needed to make an improvement on how to reduce the level of stress as well as to enhance the productivity of work in manufacturing firm.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This chapter discusses more about the theories and also retrospective based on the previous studies that is related to this study. To get the information about the study, the researcher has used many reference sources such as books, journals, magazines, newspapers, internet, mass media and other printed material as the guideline. These references are used to facilitate research and deepen understanding about topics related to the research and thus help to explain deeper about the methods and procedures used. Other than that, this chapter will also discuss more about the approaches of previous research which are related to stress and its implication to the productivity of the workers in an organization.

Stress at the workplace has increased and gives challenge for the employer. High level of stress will cause low productivity, increased of absenteeism among workers and other problems related to employee such as alcoholism, hypertension, drug abuse and cardiovascular problems (Meneze, 2005). During corporate reorganizations, organization must give realistic expectations instead of unrealistic expectations. In some cases, organization gives an unrealistic expectations and this will puts unhealthy and unreasonable pressures to the employee. This can be a great source to the occurrence of stress. Some of the reasons that influence employees' physically and emotionally

drained are the increase of workload and extreme working hours and pressure to perform at peak levels all the time. Jane and Alyssa, 2005 stated that the Health, Safety and the Environment (HSE) established rules where stress at the workplace need to be monitor and resolved. Organization will face tough financial penalties if they fail to complete the requirements. This can lead the level of stress in the workplace.

2.2 Definition of Stress

Freud (1978) had considered that by reducing the discharge of libidinal energy will cause the stress as the result, either due to internal ones or due to external obstacles. Stress is created when the individual did not trust himself/herself and feel that he/she is not able to meet or achieve the demand of a certain situation, and these situations are an unhealthy threat to the health of the individual. Meanwhile, Aldwin (1994) defines that stress refers to the experiences that arise as a consequence of the mixing or interaction of the individual and their work environment. This mixing or interaction can lead to the psychological and physiological tension. Selye (1964) considers stress as the natural action reflect in the body and to the feedback of any demand that placed on it, stress can be defines as the non-specific response of the body. He himself stated the meaning of stress in positive perspective, that stress can also be used as a factor for the creation and development.

2.3 Factors that Causes Stress

Some of the basic factors that cause stresses to the employee are:

- a) The work or project the employee is called to put into effect in itself.
- b) The limits of initiative taken by the employee, the independence and the margins of control he/she has in the job.
- c) Social relations with seniors, colleagues and subordinates.

All the three factors must be together in order to create stress. It is not enough to create stress if only the presence of just one of these three factors and however, when all the three together, it would certainly affect the employee.

Many scholars stated that environmental, organizational and also individual variables can be factors to create stress (Matteson & Ivancevich, 1999; Cook & Hunsaker, 2001). Azizi (2009), discovered that an organization have to improve their job satisfaction by decrease the occupational stress. The company can decrease the number of intention to leave and also absenteeism by reducing the level of stress.

2.3.1 Health Problem

Stress is considered as a significant factor in many health problems. Early stress studies discovered that regardless of environmental stressor, a common physiological response was activated in the organism called the "fight or flight" or stress response and called the General Adaptation Syndrome by Hans Selye (1987). Besides that, the author of *Take the Stress Out of Your Life* and also the director of the Stress Management Program for Sansum Clinic in Santa Barbara, Calif stated that stress does not only make us feel awful emotionally, but it can also exacerbate just about any health condition you can think of.

There are many health problems associated with stress has been found through studies conducted previously. Stress seems to worsen or increase the risk of conditions like obesity, heart disease, Alzheimer's disease, diabetes, depression, gastrointestinal

problems, and asthma. There are some of the most significant health problems related to stress as listing below.

(i) Heart disease

A person has a higher risk of high blood pressure and heart problems. Stress probably has a direct effect on the heart and blood vessels. It is also possible that stress is associated with the other problems which are the likelihood of increased smoking or obesity that inadvertently raised the heart risk.

(ii) Asthma

Numerous studies have shown that stress can aggravate asthma. Some evidence indicates that a parent's chronic stress might even increase the risk of having asthma in their children. The stressed out person had a substantially higher risk of developing asthma.

(iii) Headache

Stress is thought one of the most general triggers for headache. Not just tension headache, but migraine as well.

(iv) Depression and anxiety

It may not be surprising that chronic stress is associated with higher rates of depression and anxiety. A recent study showed that people who have stress related to their jobs such as demanding work with few rewards have a 80% higher risk of developing depression over the next few years than people with lower pressure.

2.3.2 Workplace / Job Stress

Works well designed, organized and managed work is good for us but when inadequate concern to job design, work organisation and management has taken place, it can cause in workplace stress. Workers in different types of jobs and work environments live with psychological and physical burdens and stress. Workplace stress arises where work demands of various types and combinations exceed the person's capacity and capability to handle. As a consequence, a person is not able to meet with the demands being placed on them. Besides that, workplace stress is an increasing problem around the world that affects the productivity of organizations.

Workplace stress can be caused by various situations. For instance, a person might feel under pressure if the demands of their job like working hours or job responsibilities are greater than they can comfortably manage. Then, the other examples of workplace stress are conflict with co-workers or bosses, constant change, and threats to job safety, like potential surplus. The signs or symptoms of workplace stress can be physical, psychological and behavioural.

(i) Physical symptoms include:

- Fatigue
- Muscular tension
- Headache
- Heart palpitations
- Sleeping difficulties, such as insomnia
- Gastrointestinal upsets, such as diarrhoea or constipation
- Dermatological disorders

(ii) Psychological symptoms include:

- Depression
- Anxiety
- Discouragement
- Irritability