

IMPACT OF STRESSORS ON WORKERS ON CONSTRUCTION SITES

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Specially dedicated to my parents.

For their endless love, support and encouragement

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ABSTRACT

Construction workers have been long recognized as stressful occupation. Comparing to other industries, their injury rate of accidents is always exceed and they are recognized as a high-risk workers. This research is to study the stressors on construction workers and to find solution to reduce the impacts of stressors. This research was carried out by reviewing published journals, books, articles and conference paper. 50 questionnaires were distributed among the construction workers and 38 of them have responded. The data was analysed by using Cronbach's Alpha, Risk Assessment and average index analysis. The results showed that the task stressor is the highest among the construction workers and the extremely affected factors affecting stressors are workplace condition, inadequate risk management and material and equipment. While the impact of stressors which is extremely impacted to the construction workers are difficulties in thinking logically and making decision, become unable to relax and burnout. Based on the analysis and findings, suggestions are proposed to reduce the impact of stressors by Administrative, Engineering and Behaviour Control.

ABSTRAK

Pekerja binaan telah lama dikenai sebagai pekerjaan yang mempunyai tekanan yang tinggi. Jika dibandingkan kepada industri lain, kadar kecederaan pekerja binaan sentiasa mendahului dan ia juga dikenali sebagai pekerja yang berisiko tinggi. Penyelidikan ini bertujuan untuk mengkaji tekanan yang dialami oleh pekerja binaan dan untuk mencari penyelesaian di dalam mengurangkan kesan tekanan tersebut. Penyelidikan ini telah dijalankan dengan merujuk kepada terbitan jurnal, buku-buku, artikel, dan kertas persidangan. 50 soal selidik telah diedarkan di kalangan pekerja binaan dan 38 daripada mereka telah memberikan maklumbalas . Data di analisis dengan menggunakan Cronbach Alpha, penilaian risiko (HIRARC) dan purata analisis indeks. Hasil kajian menunjukkan bahawa tekanan kerja adalah yang tertinggi di kalangan pekerja binaan. Manakala faktor-faktor yang amat memberi kesan terhadap tekanan mereka adalah keadaan tempat kerja, kurang pengurusan risiko dan faktor bahan serta peralatan. Manakala kesan tekanan yang amat memberi kesan kepada pekerja binaan adalah kesukaran untuk berfikir secara logik dan membuat keputusan, sukar untuk tenang dan mengalami keletihan dalam jangka panjang . Berdasarkan analisis dan penemuan, cadangan telah dikemukakan untuk mengurangkan kesan tekanan dengan melaksanakan kawalan Pentadbiran, Kejuruteraan dan Kawalan Kelakuan.

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LIST OF ABBREVIATION

DOSH	Department of Occupational Safety and Health
HIRARC	Hazard Identification, Risk Assessment and Risk Controls
SPSS	Statistical Package for Social Science

CHAPTER 1

INTRODUCTION

Stress is a term that widely use on everyday life and the globally major challenge to worker's health is the work related stress (Workplace Health and Safety Queensland, 2012). Nowadays, stress has become an integral part of jobs in every sector due to the growing competition day by day thus increasing the levels of stress among employees (Manzoor et al., 2012).A stressful working environment will not only increase the risk of physical illness or distress but will also increase the probability of workplace accidents. (Clarke and Cooper, 2004). Feeling of being overloaded, wound-up, tight, tense and worried is often described as stress. Stress sometimes can help us to motivate in order to finish the task given or perform well, however, it can also be harmful when the over-stress happens and could interfere our ability to get on with our normal life for too long (Australian Psychological Society, 2012). In addition, in a modern society, stress at work is an inescapable phenomenon which mostly caused by the environment, workplace conditions and negatively affect the achievement, capacities, mental and physical health. The consequences of excessive stress are fatigue, depression and could spheres the family, partner relations, parenthood, and social life role (Stojanovic *et al.*, 2012).

For the normal person, challenge is essential to health, work performance and enjoyment of life. However, insufficient and too much challenge could produce discomfort, impaired performance and produce stress. We also experience much more excessive stress in today's modern and fast moving society rather than too little stress. Hence, different people experiencing stress in for different reasons, different ways, and what works for one individual may not work for another (Ferdinand, 1988).

The inconsistency between one's expected ability and actual ability to deal with the work task is called as the work stress. This is refers to the work stressor they face from the cognitive evaluation of an individual's such as the degree of task difficulty, the number of work tasks to be handled, the degree of skills required and others. Even though an excessive stress has been found could be affecting the performance of an individual, however, it is not necessarily harmful. Unlike workers on other industries, the performance of construction workers is not limited to productivity and quality itself. It is because the concern towards the safety performance is essential where the injury incidents are used to indicate the safety performance. An injury incidents is where any incidents causing an injury or excessive stressors to the construction workers such as being hit by moving objects, falling, forcing to put an extra effort into the workers task to speed up the progress and to enhance productivity. In these situations, the focus of individuals towards the safety can be distracted and increasing the chance stress as well as contribute to being injured (Leunget *al.*, 2010).

In a modern society, stress at work is considered as inescapable phenomenon and mostly it is caused by the workplace condition and the work environment which then affect negatively to the achievement, capacities and to their mental and physical health (Stojanovic *et al.*, 2012). Workers experiences of stress are more likely to be poorly motivated, unhealthy, less productive and less safe at work. In addition, work related stress will also having of losing productivity, health care and the national economy staggering the amount in sick pay (Park, 2007)

1.1 Problem statement

The identifying the sources of job stress are importance due to the changing nature of the world. It is highly likely that work issues will significantly influence how they feel as most people spend more than half their waking lives at work. It is important to optimize workplace condition and stress related problems to prevent stressors in the workplace as it is vital reason to reduce the injuries or even fatal incidents. Gaining knowledge on how work related stressors may contribute to employee well-being and could help the organization in reducing the negative impact of stressors in order to give the best cope or to reduce with the workplace stressors (Clarke and Cooper, 2004).

In many parts of the world, it has been identified that the construction industry is the one of the most hazardous industries leading to cause of fatalities in construction operations (Chia Fen Chi *et al*, 2004). In construction industry, the projects seldom run smoothly due to the complexity, dynamic nature together with the participant attitudes often confrontational. Thus, this will result in the occurrence of frequent major problems where in such conditions it can be harmful physically or mentally to the individuals involved. These are seen to be a negative influence which the stress will be experience (Ng *et al.*, 2005).

In the Hong Kong construction industry, due to economic recession has cause a high stress level on construction project participants as the project need to be finished within a very tight budget and time in order to attain maximum savings. While, the clients demand in terms of quality, safety and environmental awareness had increasingly in the industry. In order to survive, many projects participants have to work extremely cautious through extra-long hours at a low income. This condition had caused a stress by the project participants in Hong Kong. (Ng *et al.*, 2005).

The uniqueness of construction industry compared to other industries is due to its complexity where each project has a different nature of work, located at different workplace; different parties involve and produce different type of product (Leung *et al.*, 2009). Due to the complexity of task, tight time frames, complicated workgroup relationships among different parties and the poor working environments, the construction industry has been long recognized as a stressful industry.

For construction work, stress has become a general phenomenon which nearly 70% suffering from stress, anxiety or depression due to the work nature (Leung *et al.*, 2010).

Stress is not limited to any particular profession but when comparing to other profession, construction work is the third most stressful profession after mining and police work. It is because the nature of construction industry which involve to the process of production and these contribute to dangerous and stressful occupation (Ibem *et al.*, 2011).

Furthermore, the construction industry has been witnessed tremendous institutional and organizational transformation across the world and there is a continuous modification of building process, pace, increasing demand for higher productivity. This has become common features in the industry in respond to the economy and markets, technological advancement and the changing of preference by the consumer. Due to this situation, professional and also the work force operate their work in an extremely competitive environment where the project are designed, constructed and delivered within the tight budgets and time frames. All of this makes the construction work mentally and emotionally demanding and stressful (Ibem *et al.*, 2011).

In addition, construction industry also contributes to the process of development and it is important in any nation's economy. It is most frequently applied to major works such as buildings, civil works and related to the process of erection and assembly of large structure where all of these variables contribute to stress throughout the project life cycle because it involve a lot of physical activities especially the artisans who occupy the lower part in the pyramid.(Agwu and Tiemo, 2012).

A group of frontline force who contribute to the various work trades involved in various construction projects including work, machine and crane operation, plumbing and piping, painting, electrical work and carpentry is called as construction workers. The construction workers work in a crisis-ridden environment and have the most significant on the project outcomes such as time, cost, quality and also the most valuable employees in every company. Due to this, they are more susceptible to stress. Their occupation also has been recognized as one of the most dangerous work in terms of both annual industrial accident and fatality rates (Leung *et al.*, 2012).

Besides, construction workers has been long recognized as a group of stress and comparing to other industries, their injury rate of accidents is always exceed and they are recognized as a high-risk workers.They also had a limited power in organisation, positioned at the lowest level and work at the crisis ridden site environment so that they are prone to suffer a higher stress compared to other industries and other professional or managerial levels. (Leung *et al.*, 2012).

Construction workers 1.7 times more likely to have psychological health problem including emotional and stress related problem than the workers from other industries. Stressors could affect the construction workers awareness and compliance with safety measures which this could lead to a major cause of occupational injury incidents or accidents. (Leung *et al.*, 2012)

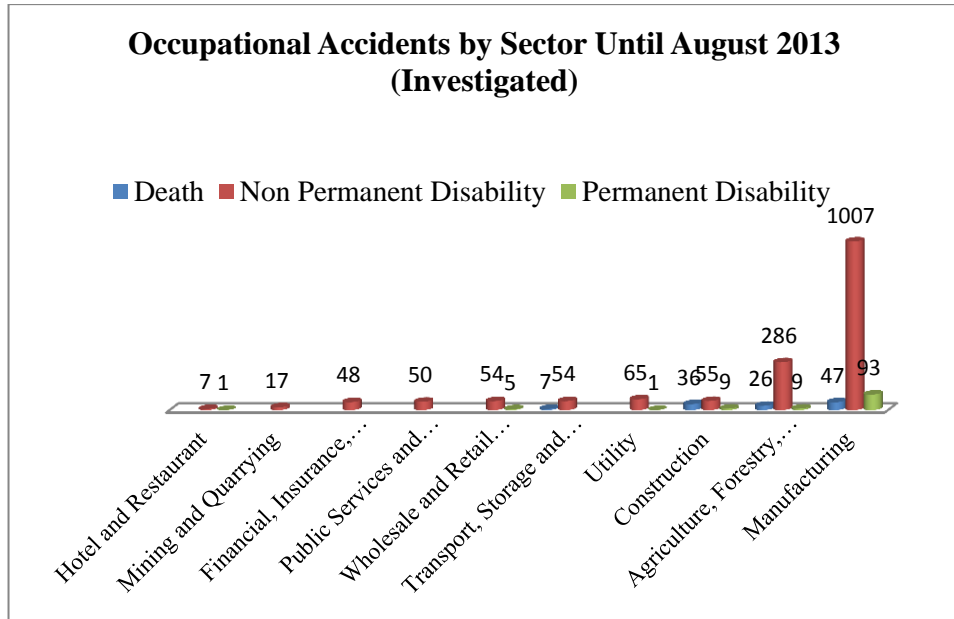


Figure 1.1: Occupational accidents by sector until August(2013)
Sources: Department of Occupational Safety and health(DOSH)

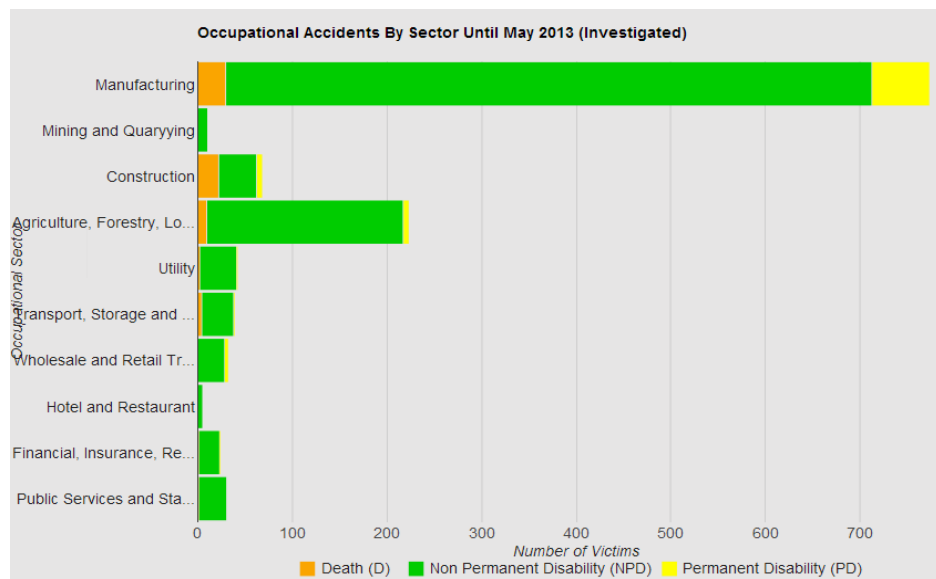


Figure 1.2: Occupational accidents by sector until May (2013)
Sources: Department of Occupational Safety and health(DOSH)

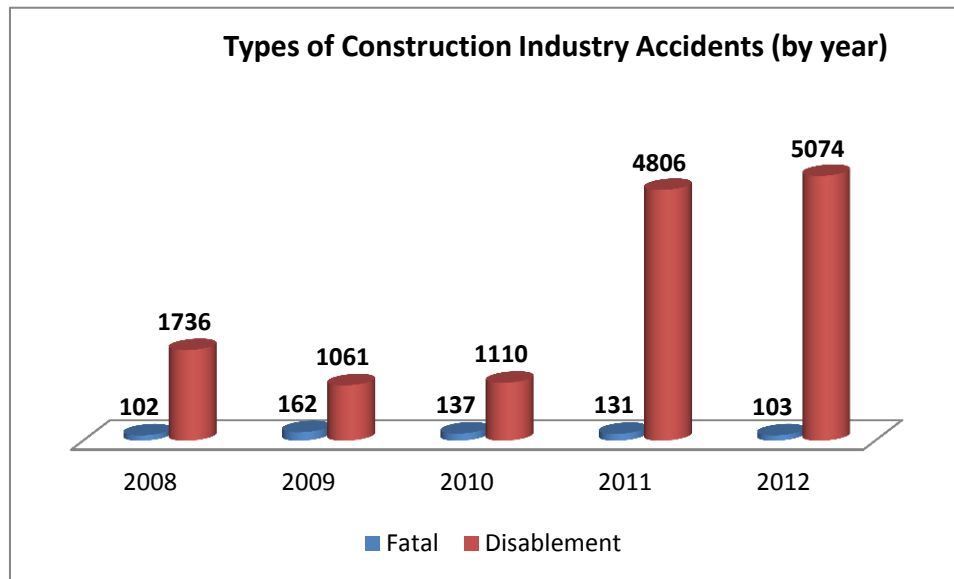


Figure 1.3: Types of accidents in construction Industry

Sources: Department of Occupational Safety and health(DOSH)

From the statistic in Figure 1.1 and 1.2, it shows the occupational accidents in Malaysia construction industry until Mei and August 2013 is the third highest contributes to an accident. The statistic also shows that accidents in construction industry have been contributed to death and permanent disability. While for Figure 1.3 it shows that the accidents in construction was increased from 2008 to 2012. Due to this issue, how the accidents in construction industry could be improved? Thus, it is important to recognize the workplace stressor because it was badly affect people's mental, behavioural as well as physiological health and hence indirectly contribute to the accidents.

Therefore, in response to this, the research is conducted "to study impacts of Stressors on Workers on Construction Sites".

1.2 Aim and Objectives

The aim of this research is to study the stressor on construction workers and to propose suggestion to reduce the impact. To achieve the aim the following objectives have been identified:

1. To study the stressors on construction workers
2. To study the factors affecting stressors
3. To study the impact of stressors on construction workers
4. To propose suggestion to reduce the impact of stressors

1.3 Scope of Study

This study is focused on the impacts of stressors of the workers on construction sites. The questionnaire survey will be distributed amongst construction workers involving class A contractor from different construction sites at Kuala Lumpur and Johor Bahru.

1.4 Significant of Study

The significance of this study will indirectly can assist in reducing the number of accidents due to the impact of stressors by overcoming certain strategit. Besides, this study also will provide an enhancement regarding on the safety on construction worker

1.5 Expected Findings

The results of this research are expected in helping all the participants especially in construction industry to recognize the stressors and the impact of stressors so that they can consider this issue to improve in the future. On the other hand, this research could encourage in proposing solution to reduce the impact of stressors thus could help in reducing the number of accidents in construction.

1.6 Methodology of Study

This study will be carried out in several steps in order to achieve the research objectives. Research methodology approach is adopted to ensure that this study can be executed accordingly.

1.6.1 Preliminary Study

First and foremost, further understanding on the study must be done by identifying the problem or issue of the study. Then, it is followed by the determination of aim and objectives, scope of the study. The exploration of the information through published journals, books and previous thesis has been done in order to get an overview of the study.

1.6.2 Data Collection

All the data either primary or secondary data will be collected by using a collective literature review and questionnaire survey.

1.6.2.1 Questionnaire Survey

In this study, questionnaire surveys were distributed to the construction workers in Malaysia and the data collected from the questionnaire survey is the primary data for this thesis.

1.6.3 Analysis and Results

The data collected from questionnaires is analysed by using Cronbach's Alpha, Risk Assessment (HIRARC) and Average index analysis to form information that will be presented in tables, graphs and charts.

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