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SAFETY CLIMATE AMONG CONTRACTOR ORGANIZATIONS

MUHAMAD FIRDAUZ BIN A. KADIR

A report submitted in partial fulfillment of the
requirements for the award of the degree of
Bachelor of Civil Engineering

Faculty of Civil Engineering
Universiti Teknologi Malaysia

APRIL 2009

SUASANA KESELAMATAN DIKALANGAN ORGANISASI KONTRAKTOR

MUHAMAD FIRDAUZ BIN A. KADIR

Laporan projek ini dikemukakan sebagai
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Name : MUHAMAD FIRDAUZ BIN A. KADIR
Date : APRIL 2009

To my beloved father and mother...

A. Kadir bin Hadar

and

Badariah Binti Abd. Razak

My lovely family

Also to all my fellow friends

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In the name of Allah The Most Gracious and The Most Merciful, and the Selawat and Salam to Prophet Muhammad S.A.W.

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MUHAMAD FIRDAUZ BIN A. KADIR

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ABSTRACT

Understanding the safety climate of a contractor organization with regarding to safety and risk in the workplace. The perceptions and attitudes of the workforce are important factors in assessing safety needs. Safety performance may fail if they do not take into account these current attitudes and perceptions. The aim of this project is to study the factors and assessment of safety climate in contractor organizations. There are many factors and indicators of safety climate that had been found from the review of literature. There is no agreement on the number of factors required in the safety climate measurements, or which factors are the most effective. From the review of safety climate factors, the most frequently measured dimensions are related to management, safety systems, risk, followed by work pressure and competence and rules/procedures. This study utilizes questionnaires survey to asses' employee attitudes and perceptions using several general attitudes dimensions. The full employee attitude survey questionnaire are divided into two sections consists of 49 statements. The responses of this study are quiet encouraging with 60% of total rate responses. However only 38 valid questionnaires sets which represent a response rate of 47.5 % those were subject to analysis. From the finding all the total average scores each of dimensions are in level of satisfactory with score ranging from 6.48 to 8.04. And also all the safety climate dimensions scores give the satisfactory values with score above six (6) for the system interfaces of the contractor organizations by safety climate matrix. So those contractor organizations have the positive safety climate toward safety in their workplace.

ABSTRAK

Pemahaman tentang suasana keselamatan dikalangan organisasi kontraktor berhubung dengan keselamatan dan risiko di tempat kerja. Tanggapan dan tingkahlaku pekerja adalah faktor penting dalam menilai keperluan keselamatan. Amalan keselamatan boleh gagal sekiranya mereka tidak menitikberatkan tanggapan dan tingkahlaku pekerja. Matlamat projek ini adalah untuk mengkaji faktor-faktor dan penilaian suasana keselamatan di kalangan organisasi kontraktor. Terdapat banyak factor-faktor dan petunjuk-petunjuk tentang suasana keselamatan yang dikenalpasti melalui kajian literatur. Tiada persetujuan dalam penentuan bilangan faktor diperlukan dalam pengukuran suasana keselamatan, ataupun yang paling berkesan diantaranya. Daripada kajian literatur mengenai faktor-faktor suasana keselamatan, petunjuk yang selalu dinilai adalah berkaitan dengan pengurusan, sistem keselamatan, risiko, tekanan kerja, kompeten, dan juga prosedur dan peraturan. Kajian ini menggunakan borang soal selidik untuk mengukur tingkahlaku dan tanggapan pekerja dengan menggunakan beberapa petunjuk tingkahlaku. Borang soal selidik ini dibahagikan kepada dua (2) bahagian yang terdiri daripada 49 soalan. Malumbalas untuk kajian ini agak menggalakkan dengan jumlah peratusan sebanyak 60%. Walaubagaimanapun, hanya 38 borang dengan peratusan sebanyak 47.5% yang sah digunakan untuk di analisa. Hasil daripada kajian menunjukkan jumlah purata skor untuk setiap petunjuk adalah ditahap yang memuaskan iaitu antara julat 6.48 - 8.04. Juga kesemua petunjuk suasana keselamatan memberikan nilai yang memuaskan iaitu skor melebihi daripada enam (6) untuk system interaksi (interfaces) bagi organisasi kontraktor dengan menggunakan matrik suasana keselamatan. Oleh itu, kesemua organisasi kontraktor mempunyai suasana keselamatan yang positif di tempat kerja mereka.

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CHAPTER 1

INTRODUCTION

1.1 Introduction

Construction industry in Malaysia is one of the most vital sector that has contributes in economic growth and progression of the country. Many construction workers are killed or injured every year as a result of construction operations. Others suffer ill health. The hazards are not restricted to those working on site. Children and members of the general public are also killed or injured due to inadequate control of construction activities. The construction industry's performance has improved over the years but the rates of death, serious injury and ill health are still too high. A construction site is more dangerous than other places of work according to the UK Health and Safety Executive (HSE), those who spend their working lives on construction sites have a 1 in 300 chance of being killed at work.

Even though our country has good safety law and regulations compare to other neighborhood country, safety in the construction industry is lagging behind other industries. This is especially so in developing countries where, safety is a

major concern because of the lack of Safety Acts. The lack of statutory regulations and legislation to protect construction workers, low standards in corporate systems and governance, high labor intensive character and inadequate infrastructure are other major factors that combine to work against safety in most developing countries.

The safety of workers is a complex phenomenon. Construction is always risky because of outdoor operations, work-at heights, complicated on-site plants and equipment operation coupled with workers attitudes and behaviors towards safety. The nature of the construction industry's rapidly changing conditions, associated work hazards, and the characteristics of construction organizations further aggravate the situation.

To reduce construction accidents and deaths, many researchers and practitioners have explored various techniques, including some practices in other industries. Although they may be well developed, it is still difficult to apply these practices in the construction industry. This means that the construction industry, as a sector, demands more specific safety practices. Improvements in working conditions and innovations in the equipment used in the industry are not enough to improve safety performance because organizational culture and human factors also play critical roles. In this regard, the influence of safety climate has attracted more and more attention in the development of safety practices.

1.2 Problem Statement

Nowadays, people always considered accident statistics and regular workplace audits as the expression for effective safety management. But actually

safety performances often ignore the people side of safety."Incident statistics tell us where systems have failed," says NSCA Melbourne consultant Lidia Ferraro. But this information is retrospective and often about infrequent or 'chance' events not necessarily representative of how the various aspects of the health and safety program are operating. Audits can also give an incomplete picture of the level of risk within an organization and what is supposed to be happening. What is actually happening and how employees perceive the management of safety is not necessarily addressed through the audit approach.

In recent years there has been increasing evidence to suggest that more attention should be focused on ‘leading indicators’, measures that predict safety outcomes and indicate the impact of human, organizational and managerial factors on safety performance. It is no longer sufficient to be collecting information on injuries or failures that have occurred in the workplace; there needs to be a proactive approach to safety which requires reliable ‘leading indicators’ that can provide information before risks materialize into accidents.

Yet, very little work has been undertaken systematically to measure expectations and attitudes toward occupational health and safety at various levels of organizations. For that matter, there has been little research aimed at determining whether identifying attitudinal problem areas within an organization will be of any benefit as far as occupational health and safety is concerned. International safety experts have suggested that a valid climate survey provides rich information about the strengths and weaknesses of the elements of the safety system. Importantly, the information is obtained anonymously from the people entrusted to implement and use the systems.

Safety climate measurement tools is a important tools that can be used to measure employees' perceptions, beliefs and attitudes regarding issues of safety and risk in the workplace. These measures will give you some indication of how

people feel overall, that is, to what degree certain views and beliefs are shared among the workforce.

Furthermore, people's attitudes will affect, to some degree, how they behave at work; gauging attitudes to safety will give us an important indicator of an organization's safety climate. Through identifying an organization's safety climate within a workplace, this will enable managers gain an opportunity to identify the state of safety within that workplace without having to wait for the system to fail.

Besides that, these tools can be used in monitoring and control system regarding to safety management system and set the benchmark or baseline for the organization's safety climate to improve their safety management system.

Thus, this study have been conducted to measure the safety climate among contractor organization that could indicate the area of improvement that need to be focused in term of safety and health in workplace.

1.3 Aim and Objectives of the Study

The aim of this project is to study the factors and assessment of safety climate in contractor organizations. To achieve the aim of this study, several objectives have been identified as follows:

1. To identify the safety climate factors and indicators

2. To measure safety attitudes and perceptions among contractors organizations
3. To determine strength and weakness of system interfaces among contractor organizations.

1.4 Scope of the Study

Firstly, the scope for the literature review of safety climate in contractor organization has considered the literature surrounding safety climate and safety culture. Effort also done on seeking and browsing through the internet to seek extra information with exploring the following key topics, safety climate, safety culture, safety climate factors, perceptions and attitudes.

The target population for this study is only involves contractor construction firms that their employees have working experience with construction environment. Office-based employees tend to be less exposed to physical risks and therefore have a different perspective of safety than site construction personnel. Similarly, supervisors and managers tend to report more favorable opinion than other employees. Thus the target populations for this study are project managers, engineers and supervisory staff, safety personal (safety manager and safety officer) and others employees on that firm which involved directly in construction project around Johor Bahru district.

The structure of the toolkits with the assessment suggested using a triangulation approach to assess safety climate. But for this study only one of the proposed methods which is an attitude survey by questionnaires form will be utilized.

1.5 Significant of the Study

The purpose of this study is to assess employees' perceptions, beliefs and attitudes regarding issues of safety and risk in the workplace. The exposure of this study will benefit to such organizations and peoples in our construction industries. It is because of, the tendency to view safety climate as a more accurate indicator of safety culture within the workplace. Though it is expected that if an organization has good safety management practices, there will be a better safety climate within the workforce.

In addition, this study is carried out to identify the suitability of such tools that we use are valid to use for construction environment in Malaysia. A valid safety climate survey is valuable tools for helping managers understand this. It offers an opportunity to ask employees what they think about how safety is managed in the organization and allows a much closer and more proactive approach to safety management. Managers gain information that can help them predict problems and continuously improve their safety systems.

Although there is some confusion in the literature around the concept of safety climate and safety culture, for the purpose of this study the term safety climate will be applied clearly from safety culture although the concepts will remain interrelated.

As such, safety climate will refer to workers' perceptions of how safety is managed in the workplace and the possibility that those perceptions will contribute to a workplace accident, while safety culture will refer to "the product of individual and group values, attitudes, perceptions, competencies, and patterns of behavior that determine the commitment to, and style and proficiency of, an organizations health and safety management" (HSC, 1993).

1.6 Methodology of the Study

In order to conduct this study successfully. This study is being divided by four (4) phase:

Phase 1

For the first phase, the determination of aim and objectives of the study need to be state exactly, so that the processes of finding of the objectives are being focus. Besides that, Literature review needs to be conducted in order to understand the nature of problem to be studied and identifying the related area of knowledge.

Phase 2

In this phase the development of administering instruments, recording data, scoring and tabulating for analysis need to be specified according to the propose study. And it is acquire capabilities of selecting and applying appropriate statistical methods for handling and analyzing the collected data appropriate to the problem, so as to arrive at valid conclusions

Phase 3

This phase are included writing report (discussion, conclusion and recommendation) corresponding to the result of the finding. The entire format is specified according to the format of writing Universiti Teknologi Malaysia (UTM) Thesis Manual.

Phase 4

Lastly, all the project results need to be present to the selective panel in order to passable this project report. The content of the presentation needed as follows:

- Introduction
- Describe approach and methods are being uses.
- Present the results ,focus on the main points or ideas
- Discuss the implication or results for the discipline of study
- conclusion