SAFETY AWARENESS AT WORKPLACE

A CASE STUDY AT CELCOM AXIATA BERHAD

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ABSTRACT

The need to ensure that places of work are free from accidents is obvious and it has been found that accident could contribute to trauma, low productivity and high staff turnover, which in turn leads to medical claims and compensation claims that needs to be paid by the employer. The purpose of this research is to examine the relationship between safety culture, Occupational Safety and Health (OSH) training, employee involvement and safety awareness at workplace. Safety awareness considered vital element in every organization to enhance their employees' performance. The research applied quantitative methodology to examine the relationship between independent variables and dependent variable. The questionnaire consists of 31 questions that are divided into 5 sections, covering areas of demographic factors, safety culture, OSH training, employee involvement and safety awareness at workplace. A total of 104 employees from Celcom Axiata Berhad were selected randomly as a sample of the study. The research indicates that safety culture, Occupational Safety and Health (OSH) training and employee involvement have a significant positive relationship on safety awareness at workplace.

ABSTRAK

Perlunya tempat kerja yang bebas dari kemalangan adalah amat jelas kerana kemalangan boleh menyumbang kepada truma, produktiviti yang rendah, kadar berhenti kerja yang tinggi, tuntutan perubatan dan pampasan yang perlu dibayar oleh majikan. Tujuan kajian ini dijalankan untuk menentukan hubungan antara budaya keselamatan, latihan kesihatan dan keselamatan pekerjaan, penglibatan pekerja dan kesedaran keselamatan di tempat kerja. Kesedaran keselamatan dianggap elemen penting bagi setiap organisasi untuk meningkatkan prestasi para pekerja. Kajian ini mengapplikasikan metodologi kuantitatif bagi menentukan hubungan diantara pembolehubah tidak bersandar dan pembolehubah bersandar. Sampel kajian telah diberikan set soal selidik yang mengandungi 31 soalan dan terdiri dari 5 bahagian iaitu faktor demografi, budaya keselamatan, latihan keselamatan dan kesihatan pekerjaan, penglibatan pekerja dan kesedaran keselamatan di tempat kerja. Kajian yang dijalankan telah menunjukkan budaya keselamatan, latihan keselamatan dan kesihatan pekerjaan, penglibatan pekerja mempunyai perhubungan yang positif dengan kesedaran keselamatan di tempat kerja.

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Last but not least, this research is dedicated to my beloved wife and parents who have given me their staunch support. To my wonderful family, thank you for your unfailing belief in me.

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INTRODUCTION

1.1. Research Background

A safe and healthy workplace is an injury and illness free workplace. Safety is assured by providing: (1) plant or equipment which is fit for purpose; (2) systems and procedures for operation and maintenance of plant, and management of all associated activities; and as well as (3) people who are competent to operate the plant and equipment and to implement the systems and procedures (Van Steen, 1996).

Safety awareness at workplace is an issue affecting all kind of businesses globally now days. Implementing an Occupational Safety and Health (OSH) management system is now a legal requirement in many countries. Occupational safety has in recent years become an increasingly important aspect in both private and public sectors. Occupational safety is a key component of social responsibility (Mika, 2003). Safety's aim is to reduce the accidents among employees at the workplace. According to McSween (2003), unsafe work behavior is according to the result of (1) physical environment, (2) the social environment and (3) workers' experience within these environments.

As telecommunication is the most rapid developed industry in the country and one of the major industries that contribute the highest Malaysia GDP, it plays an important role in generating the country's income. Statistics released by worker's safety and health related

agencies such as SOCSO, Labor Department and Department of Safety and Health Occupational shows that accidents that occur in workplaces are still of a concern.

In year 2006, Deputy Prime Minister had addressed in his speech on a report from SOCSO (Social Security Organization) that there were reductions of 40 percent of the accidents in the workplace with 43,885 cases reported in 2005. Even though the number has dropped, employers and employees were reminded that they still must be cautious rather than being complacent upon the good sign (The Star, 2006). This speech took place in the opening ceremony of Occupational Safety and Heath Conference 2006, Petaling Jaya, by the National Institute of Occupational Safety and Health.

Table 1.1: Number of Incidents by SOCSO in Public Sector

Year	Death	Permanent disabilities	Reported Cases
2002	141	1147	8140
2003	108	1023	7743
2004	147	1073	8325
2005	97	1141	8248
2006	145	1301	8146
2007	134	1543	8309
2008	269	2032	8978

Source: Aziz (2009)

From the SOCSO report from year 2002 until 2008 that was presented by Aziz (2009) at the Seminar of Occupational Safety and Health in SME sectors, ASSET Bangi in Selangor, Malaysia as above, cost of per death of employee is estimated to be RM 1.2 million. By looking at the number of deaths in 2008, the total cost was RM 1.17 billion. This will have a large impact on the company's operational cost and great grievances to the family and relatives who lost their loved ones.

The latest statistics of total employees engaged in the Manufacturing sector in March 2011 were 1,028,085, an increase of 9,366 persons or 0.9% compared with the preceding month. Year by year, the number of employees employed also increased by 71,206 persons or 7.4%, as compared to 956,879 persons in March 2010. Total employees in February 2011 were a revised positive 7.0% year-on-year to record 1,018,719 employees.

1.2. Problem statement

Starting in the 80's, a study on safety climate was done by a researcher to explore employee's perceptions about the importance of occupational safe conduct (Zohar, 2002). The research in that study includes perceived management towards safety, perceived effects of safe conduct on promotion, perceived effects of safe conduct on social status, perceived organization status of safety officer, perceived importance and effectiveness of safety training, perceived risk level at workplace and finally, perceived effectiveness of enforcement versus guidance in promoting safety.

Since then, there are many advanced researchers who indicated that perceptions surveys were important to determine the employees' behavior in their workplace. All those studies had been extended to other variables such as job satisfaction and perceived organizational supports that related to safety performance.

Safety behavior of the employees needs to be actively managed. This is because the standard of safety within any organization is not only dependent on the presence of good systems and engineering control, but also on the attitudes of the operating business. Dan Petersen in the proceedings of American Society of Safety Engineer (ASSE) Seminar in 1998 had addressed the definition of worker-focused behavior based on safety as a process of getting workers to define, from their own perspective the way they are most to get hurt, hence, getting involved in preventing it along with other worker's participation in the reduction of unsafe behavior (Manuele, 2003).

A previous study among manufacturing worker was done at a wide spectrum in term of safety behavior and awareness level. By deriving from this research, this study attempts to determine the other factors that reflect the level of safety awareness among workers.

In telecommunication's scenario, a lot of precautions and measurement had been made to decrease the number of accidents. Training, awareness programs, safety alert and policy had been implemented aggressively to improve employees' concern over safety. However, accidents at workplace is still of high occurrence and the statistics fluctuates annually. Accident in the workplace do happen when the "people" elements tend to engage in safe and unsafe behavior according to their interpretation (Ali et al.,2009). Somehow, few proactive measures can be set up to identify and eliminate hazards before they establish and some investment in equipment might be useful to meet up the current and future requirements on safety and health concerns (Clark, 2006).

By looking into the previous studies done in the telecommunication industry and safety concerns, there were limited numbers of research which compared the origin/culture of the workers that could affect safety awareness level among them. Most of the researches conducted their studies towards the demographic factors and behavior on safety (Yang et al. 2009). However, there are other factors to be determined that needs equal attention. This is because the origin or culture of the workers may affect how they handle risks and hazards in workplace, which in turn affects their safety in performing their tasks.

iv. To identify which independent variables is the most important factor towards implementing safety awareness at workplace.

1.5. Significant of the research

The significance of this study is divided into two which is practitioner (telecommunication industry) and theoretical contribution (safety behavior). This study is also believed to be useful and act as a guideline for telecommunication industry players in dealing with safety awareness among employees.

Besides, this study could act as reference for the future researches. The need for looking into the employee's awareness towards occupational safety and health at workplace are:

i. To develop awareness among employees about the importance of occupational safety and health at workplace.
ii. To help organization to identify the lack of safety precaution among employees.
iii. To improve occupational safety and health training and avoid accident occurrence.

1.6. Research outline

This study consists of five chapters, as illustrated in Figure 1.1. The first chapter of this report discusses on the overall relevance and implementation of safety awareness at workplaces, as well as current problems and causes of accidents. The second chapter

further clarifies on the theoretical part of the relevance of occupational safety and health at workplace. The third chapter explains on the research methodology. The fourth chapter presents the research results and findings. Finally, the fifth chapter proposes possible recommendations for implementation as well as suggestions for future researches.

1.7. Organization of the study

Celcom Axiata Berhad is one of the largest telecommunication service providers in Malaysia. Its core business consists of prepaid and postpaid mobile voice services. Celcom also provides service and growth in mobile broadband, m-commerce, enterprise solutions and bulk wholesale services. The company continues to have the widest network coverage in the country. Through ongoing investments in network coverage, capacity and performance, Celcom intends to maintain its technology leadership and position as the country's best mobile service provider.

Celcom is part of Axiata Group, one of the largest Asian telecommunication companies, focused on high growth low penetration emerging markets. Apart from Celcom, Axiata has controlling interests in mobile operators in Indonesia, Sri Lanka, Bangladesh and Cambodia with significant strategic stakes in India, Singapore, Pakistan and Thailand through its various subsidiaries and affiliates.

1.8. Conclusion

This chapter discussed on a few aspects that include background of study, research statement, research objective, research question, conceptual definition and research contribution. The next chapter of this study will discuss the literature review done on related theories and relevance literature on independent and dependent variable.

CHAPTER 2

LITERATURE REVIEW

2.1. Introduction

This chapter looks at the related topics regarding safety awareness and the importance of implementing it in industry and included of Occupational Safety and Health Act 1994 (OSHA), safety training and work attitudes. Studies from previous researches related to safety awareness will also be highlighted as well as the importance of the issues related, theory and theoretical framework on the area of this study.

2.2. Studies from previous researchers

A well known researcher in safety, Zohar had written a study on The Effects of the Leadership Dimensions, Safety Climate and Assigned Priorities on Minor Injuries in Work Groups (Zohar, 2002). The objective of the study was to explore the connections between safety climate and leadership, to construct a relation to leadership behavior albeit dissimilar perspectives. This study was derived from two previous studies that integrated leadership and climate as factors of occupational safety. A group of 411 production workers in a metal processing plant of a company was chosen as the respondents to answer on safety climate and leadership questionnaires that were administered during working hours. Independent variables were grouped into three categories; group level safety climate, leadership and assigned priorities, while the

dependent variable were number of injuries recorded by the medical staff of the company. Group level safety climate was projected by a 10-item questionnaire that used 5-point rating scale ranging from 'completely agree' to 'completely disagree'. The whole findings indicated that leadership dimension that includes group member's welfare from closer relationship together with promotion of supervisory safety practices had created higher safety climates and also safer behavior.

A study by Clarke (2006) in an automobile manufacturing plant on safety climates had look into the effects of work environment, job communication and safety attitudes also upon accidents and unsafe behavior. This study was established in 2006 with the initial purpose is to examine the safety attitudes of workers, supervisors and managers in a UK-based car manufacturing plant towards their unsafe behavior and accidents. A set of questionnaire that was originally designed for offshore oil industry (OSQ) by Flin *et* al. (1996), with some changes to accommodate the study, was used among the 185 respondents due to its previous successful use and wide range of measures. A few additions such as demographic information and subsections had been included in the questionnaire. The subsections consist of work environment, job communication, assessment of safety, safety climate, safety behavior and not to forget the past accident history. Independent variables of the study were work environment, job communications and safety attitudes. On the other hand, dependent variables chosen were number of accidents and unsafe behaviors. The findings revealed that factors of safety climate are not significant to accidents in the plant. It was discovered that ambiguous perception of the work environment significantly related to accident involvement. The findings then

suggested that perceptions of work pressure and work clarity are connected to accident involvement but not towards workers' attitudes on safety.

An empirical investigation on ethical climates and workplace safety behaviors later was extensively studied by a pair of researches by Parboteeah & Kapp (2007). The study was done on one hundred and thirty seven employees from five manufacturing plants in Midwest, United States of America. The objective of the study was to look into how specific local ethical climate are linked to incidences of injuries with two types of safety-enhancing behaviours that are safety compliance and safety participation. The independent variables were local ethical climates namely egoist-local, benevolent-local and principled local. The dependent variables were safety compliance and safety participation.

2.3. Occupational Safety and Health (OSH)

Occupational safety and health is the discipline concerned with preserving and protecting human and facility resources in the workplace. It can be defined as cross-disciplinary with protecting the safety, health and welfare of people engaged in work or employment. As a secondary effect, OSH may also protect co-worker, family members, employers, customer, supplier and public communities who are impacted by the workplace environment. The primary aims of the act to promote safety and health awareness among the community of people is to make sure they are able to have a safe and healthy living not even at the workplace but also in their daily living. This is focused not only on the lower level workers but also towards the top management, hence making sure that

manager and staff will have more responsibility and accountability in their efforts to provide the safe environment.

Accidents frequently occur in manufacturing industries. The percentage of an accident occurring in the manufacturing industry sector is always higher compare to other sectors. The accidents are usually due to poor or lack of performance in maintaining the Occupational Safety and Health (OSH) routine in some company. OSH standards are mandatory rules and standards, set and enforced to eliminate or reduce OSH hazards in the workplace. OSH standards aim to provide at least the minimum acceptable degree of protection that must be afforded to every worker in relation to the working conditions and dangers of injury, sickness or death that may arise by reason of his or her occupation.

As Malaysia is fast becoming a developing country, it is essential for each individual to gain the information required and increase their knowledge of safety. Without the knowledge about the Occupational Safety and Health, the potential injury in the organization in Malaysia will increase yearly. Due to the benefits of knowledge towards the Occupational Safety and Health rules and regulations, it will give a positive impact towards work culture. Therefore, when safety becomes a priority issue in the organization, it will increase the productivity of a company and lower the need to spend a lot of money on compensation to employees.

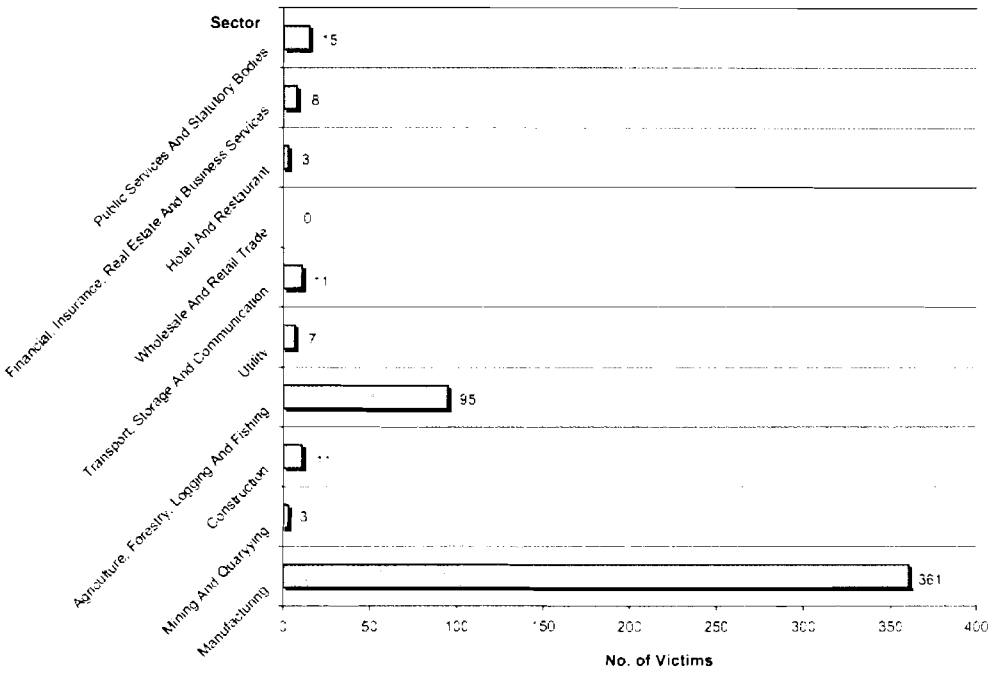

Figure 2.1: Accident by Sector for the category of NPD until March 2011

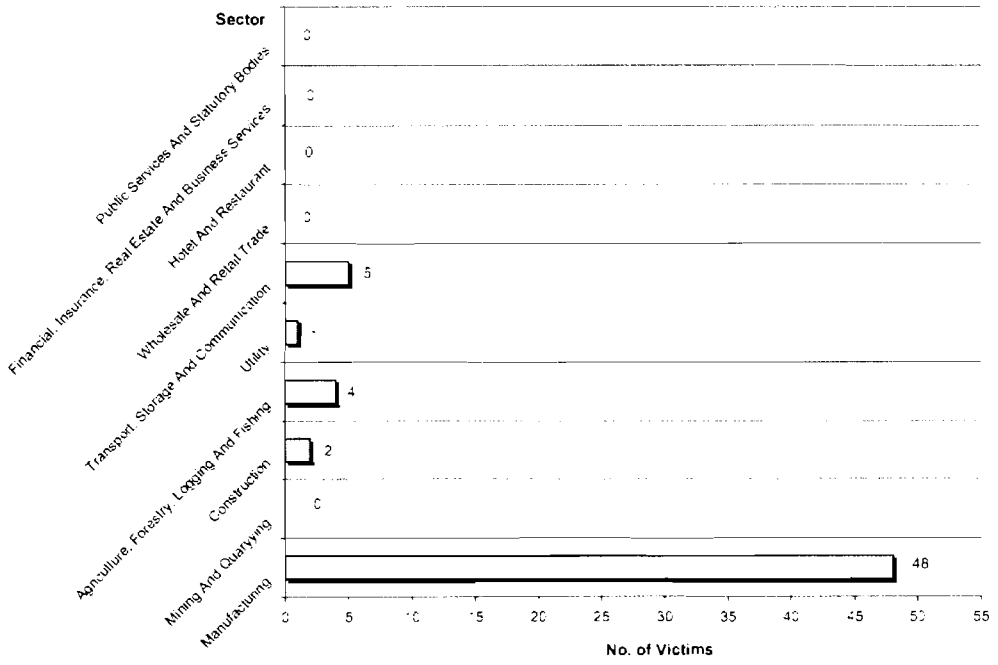

Figure 2.2: Accident by Sector for the category of PD until March 2011

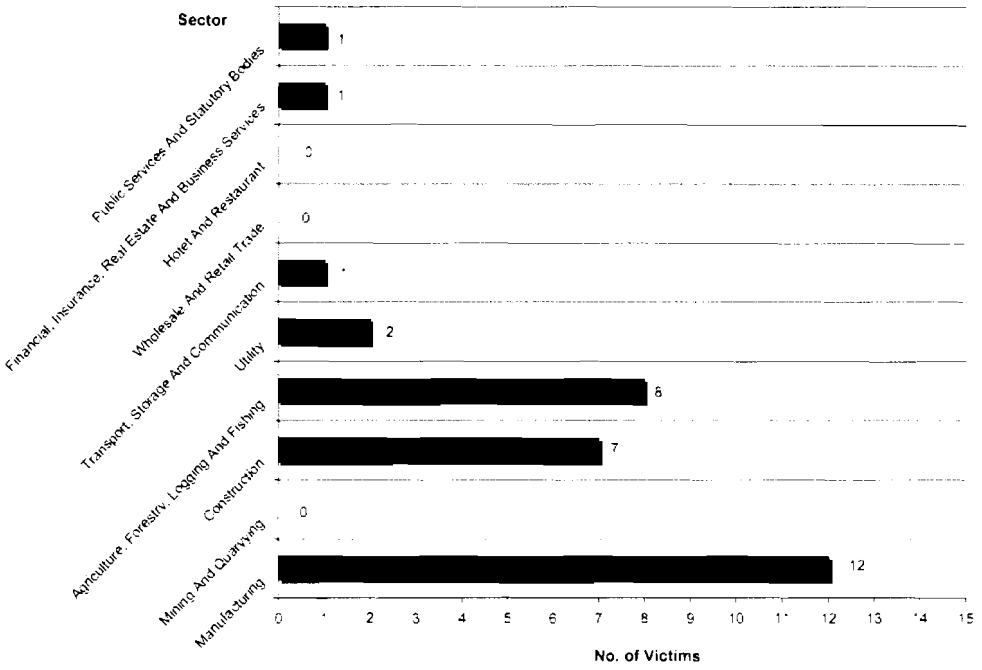

Figure 2.3: Accident by Sector for the category of death until March 2011

Figure 2.1, Figure 2.2 and Figure 2.3 shows the latest statistics of accidents until March 2011. Based on the data taken from the Malaysian Department of Safety and Health (DOSH), three categories of accidents have been classified, which are accident cause until death (D), nonpermanent damage (NPD) and permanent damage (PD). The accidents recorded in ten sectors consist of:

i. Public service and statutory bodies,

ii. Financial, insurance, real estate and business services

iii. Hotel and restaurant

iv. Wholesale and retail trade

v. Transport, storage and communication

vi. Utility

vii. Agricultures, forestry, logging and fishing

viii. Construction

ix. Mining and quarrying

x. Manufacturing

2.3.1 Regulation/guidelines under Occupational Safety and Health Act 1994

The Occupational Safety and Health Act (OSHA) 1994 or Act 514 was gazette on 25 February 1994 and the Act has brought tremendous changes in the development of safety and health in a workplace. The Act requires the employees, employers, societies and government to be involved in ensuring a safe and conducive working environment in the work place against risk to safety or health arising out of the activities of persons at work. The Act as affirmed in Section 4, Occupational Safety and Health Act 1994 endeavor:

i. To secure the safety, health and welfare of persons at work against risks to safety or health arising out of activities of person at work;

ii. To protect persons at a place of work against risks to safety or health arising out of the activities of persons at work;

iii. To promote an occupational environment for persons at work which is adapted to their physiological and psychological needs;

iv. To provide the means whereby the associated occupational safety and health legislations may be progressively replaced by a system of regulations and

approved industry codes of practice operating in combination with the provisions of this Act designed to maintain or improve the standards of safety and health.

This Act applies throughout Malaysia to the industries specified below:

i. Manufacturing
ii. Mining and Quarrying
iii. Construction
iv. Agriculture, Forestry and Fishing
v. Utilities – Electricity; Gas; Water; and Sanitary Services
vi. Transportation, Storage and Communications
vii. Hotels and Restaurants
viii. Finance, Insurance, Real Estate and Business Services
ix. Public Services and Statutory Authorities including Universities

The "Occupational Safety and Health Act 1994" aims to secure the safety, health and welfare of persons at work, and to protect them against risks to safety or health in connection to their activities at work. Employers must meet certain standards and ensure the safety, health and welfare of their employees. To comply, employers must:

- Provide or maintain equipments and systems of work that are safe and without risks to health.
- Ensure that equipment and substances are used, stored and transported safely without risks to health.
- Provide information, instruction, training and supervision that ensure the safety and health of employees.

- Maintain their place of work in a safe condition including entrances and exits.

2.3.2 Social Security Organization (SOCSO)

In Malaysia, the Social Security Organization (SOCSO) was set up in 1971 to implement, administer and enforce the employees' Social Security Act, 1969, and the Employees' Social Security (General) Regulation 1971. The protection given by SOCSO covers medical care, cash benefits, provision of artificial aids and rehabilitation. SOCSO, in order to facilitate the provision of employees, has established forty-five local offices throughout the country (SOCSO Annual Report, 2009). SOCSO has ensured universal coverage of employees through the principal of co-operation with employees and employers.

In view of increasing incidence of occupational diseases at workplace, it is very important to give awareness not only to the employee but also to the employer and the employee needs to be further assessed before allowed to return to work. Government involvement in OSH is important to ensure welfares and employees' rights are not manipulated by greedy organizations that try to hide their responsibility to the employees. Smile (1987:89) in his PHD thesis about "*Why Does Government Regulate Occupational Safety?*" stated:

> *"From a legal an economic standpoint, a case can be made that government has no business regulating safe working conditions or being involved in compensating workers who are injured on the job. Since employers have economic interest I keeping workers on the job and*

> *there are legal remedies to compensate citizens who are injured through the negligence of others, occupational safety would not appear to be a matter for government intervention.*
>
> ..... *Beside the views that the free market will ensure safety by imposing economic sanctions on unsafe occupation, it is also claimed that safety enforcement is part of social audit performed on business by outside groups. A further theory is that serve human values beyond just the provision of goods and services. To understand the importance of dependable incidence rates, it is appropriate to consider the economics, political and societal issues involved in occupational safety management. The extent to which each state leans towards the economic, political, or societal needs dedicating financial and manpower resources to studying and regulating workplace safety."*

2.4. Safety Culture

The aim of creating positive culture is to create an atmosphere in which employees are aware of the risks that they face in their workplace and to avoid the unexpected conditions. Positive culture is defined by Beatriz et al. (2007) as a set of values, perceptions, attitudes and pattern of behavior with regards to safety shared by members of the organization; as well as a set of policies, practices and procedure relating to the reductions of employees' exposure to occupational risk, implemented at every level of

the organization and reflecting high level of concern and commitment to the prevention of accidents and illness.

Culture is the atmosphere created by those beliefs and attitudes which shape our behavior (MacDonald, 2006). Safety culture consists of shared beliefs, value and behavior, and attitude in an organization as 'safety culture' may be perceived as a subset of organizational culture where the beliefs and values refer specifically to the matter of health and safety (Clarke, 1999). Safety culture is an organization's norm, employee beliefs, roles, attitude and practice concerning on with minimizing exposure of employees to workplace hazards (Vrendenburgh, 2002).

Every organization has a culture which has expected impact on safety (Hopkins, 2006). The goal of safety culture is to develop a norm in which employees are aware of the risks in their workplace and are continually on the lookout for hazards. Changing a company's culture is more difficult then issuing a new policy statement (Vendenburgh, 2002). Kletz (1993) does not believe that such a statement will impact a company's accident records. He believes that the culture has more influence compared to the policy statement that is made by the organization.

Conversely, a weak culture results when people at all levels of the hierarchy fail to share the values exposed by the management (Vrendenburgh, 2002). Safety culture can be viewed as a component of the organization's culture that refers to the individuals, jobs and organization characteristic that affect employees' health (Beatriz et al. 2007). This is the challenge that an organization has to face whereby there are many external potential factors that make it difficult to define a strong safety culture.

2.5. Employee's Attitude

Employee attitude is a very difficult aspect to handle for a manager or top management and it varies according to individuality. Even the word attitude has a general use which is simple but complicated to explain. Most sociologist define attitude as a synonym for habit. Habit is recurrent behaviors that cause a repetition. Habit is a behavior which is done without the conscious mind.

Furthermore, some would say habit is, in terms of psychology, any regularly repeated behavior that requires little or no thought and is learned rather than innate. Some habits may conserve higher mental processes for more demanding tasks, but others promote behavioral inflexibility or are unhealthy. Five methods are commonly used to break unwanted habits: replacing the old response with a new one, repeating the behavior until it becomes unpleasant, separating the individual from the stimulus that prompts the response, habituation, and punishment.

Theoretically, when the employees take their own safety at work for granted, it may cause a large number of accidents in an organization. As a result, the manager and supervisor will instantly and onerously point fingers when there are human errors and unsafe actions would be deemed as the ultimate cause without investigating in deep into the root cause of the accident. The first thing to consider when placing an employee for a job is to find out whether the worker has the necessary knowledge regarding the operation and how well-suited is his or her mental attitude (Morel R.J, 2000). More

recently, however, research is beginning to suggest that job insecurity may also have a detrimental effect on employee's safety attitude and behavior outcomes.

Attitude represents an individual's degree of like and dislike. Attitude not only reflects the human perception but it includes motivation and reaction towards the specific things. Attitude is important when certain rules and regulation are being implemented by the organization. Continuous improvement in the process of increasing safety at the workplace is not feasible without a positive reaction from the employees. Manager's attitude and behavior may also influence employee's attitudes as well as their behavior (Rundmo & Hale, 2003).

Attitude may also affect top and middle management decisions, which also exerts influence on the conditions under which employer's individual decision-making takes place. According to Rundmo (2003), one reason for studying risk perception is the assumption that perception affects behavior. Therefore some researchers concluded that it is not easy to describe an ideal attitude which contributes to safety (Rundmo & Hale, 2003).

2.6. Training

Every company or organization provides training to all levels of employees. Training is used to increase the employees' and managers' knowledge and skills. Training should be followed by a program based on goal setting and performance feedback. Safety training provides the means for making accidents more predictable (Vrendenburgh, 2002). Therefore, the organization can measure OHS by implementing Training Program Evaluation to the employees. This evaluation consists of three stages, namely input, output and outcomes (William M., 1999).

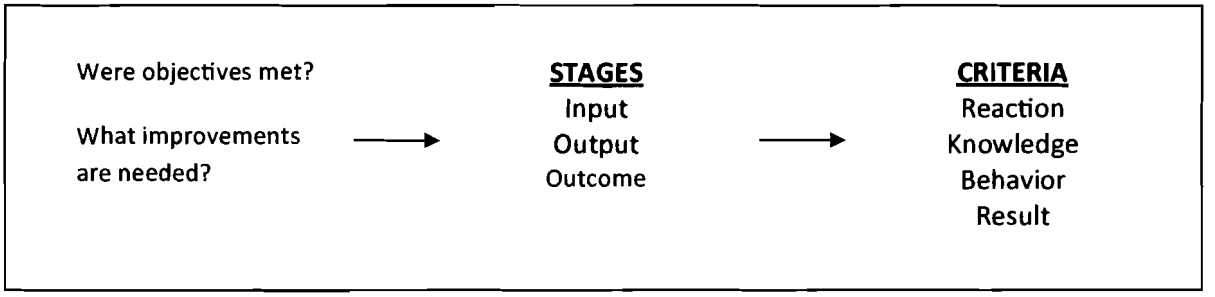

Figure 2.4: The training evaluation process

According to Figure 2.4 above, input is the cost and time used to develop the training. This can be represented by planning or budget figures. On the other hand, output can be assessed in terms of the number of people trained over a period of time. Lastly, the most crucial stage, which is the outcome, can be measured and evaluated by four criteria, namely reaction, knowledge, behavior and results.

.

The reaction of an employee can be gathered by conducting a one-to-one interview immediately after training. This intends to gauge the emotional response of a participant.

Knowledge

Knowledge involves before and after test of knowledge gained or understanding of the employees in respect to their understanding regarding the training.

Behavior

Behavior may involve proficiency tests, direct observation or self reports of skill performance.

Results

Results can be accomplished by make direct calculation of losses, claims, or rates in waste, productivity, quality, and cost performance. It is designed to measure the effects of training or the management system.

2.7. Employees Involvement

An effective safety and health program cannot succeed without the active participation of all organization elements. The variables play a crucial part in successfully implementing OSHA in the organization. It is important for the employees to be actively involved in the

safety program because they are the backbones of the company and they are closely connected to the operations in the organization. Every operational activity will have a concurrent affect on the employees as they are the one s handling the tasks daily.

Working in an area full of dangerous elements such as machines, and other hazardous equipments may bring short or long term affect to the employees. Working for eight hours a day may lead to a drop of work agility and in turn increasing the risks of an accident. Long working hours not just causes the employees to become less focused but also gradually de-motivated in terms of quality of working performance. (Morel R.J, 2000). The safety and health in an organization not only depends on the employers to make sure the safety of their employees are secured, but also depends on the employees themselves to avoid the injury. Without both participation and responsiveness towards safety in workplace, the government's effort to provide rules and regulation pertaining Occupational Safety and Health (OSH) Act will be wasted. Therefore, specific employee rights include the following:

- Employees who believe unsafe conditions exist may request an OSHA inspection by filing a complaint at the nearest OSHA office. OSHA will keep the employee's identity confidential. Employees can also file formal complaints on the Internet by using the "Workers' Page" available on OSHA's homepage at www.osha.gov. Complainants must enter their details as required and the form is then automatically transmitted for follow-up to the appropriate OSHA office.
- Employees or their representative can accompany OSHA inspectors on the inspection of the workplace.

- Employees may participate in OSHA conferences, OSHRC and court proceedings, or other activities. Employees may also respond to employer applications for variances, modifications of abatement, and contest of citations.
- Employers cannot discharge or discriminate against employees for exercising their rights under the act, including the right to file a complaint charging unsafe or unhealthy conditions in the workplace. Labor Unions have the right to comment on proposed OSHA standards, challenging the validity of standards, and sue on behalf of employees in cases of unresolved imminent danger situations

Employee participation is a behavioral-oriented technique that involves individuals or group in the upward communication flow and decision making process within the organization (Vredenburgh, 2002). A key component of intervention success is the establishment of a joint committee, comprising employees, union representatives and management that has the responsibility and authority to identify safety and health needs and develop strategies for addressing them (Barbara et al., 1996) (Barbara, Elizabeth, Linda, Catherine and Susan, 1996). There are three types of employee involvement in the organization namely permanent employees, part time employees and also newly hired employees.

2.8. Conceptual framework

The framework of the study consists of three independent variables of safety awareness among employees that are: (1) safety culture, (2) Occupational Safety and Health (OSH) training and (3) employee involvement. All the independent variables will be measured as a factor on the safety awareness among employees at a workplace (dependent variable). Figure 2.5 shows the conceptual framework of this study.

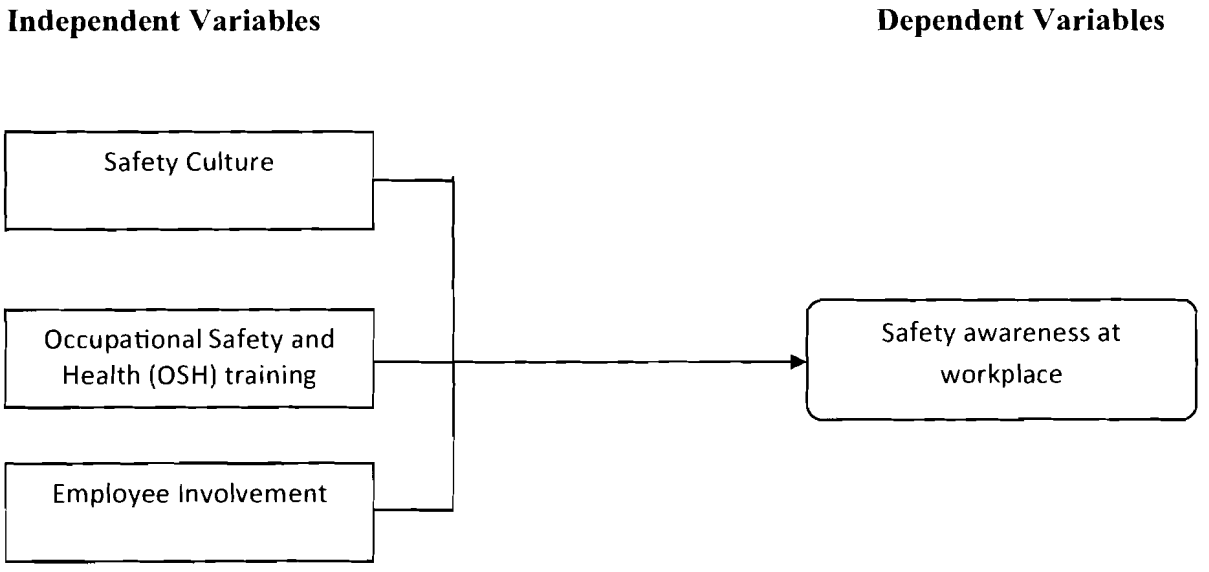

Figure 2.5: Conceptual framework

2.9. Hypothesis

H_1 There is a positive relationship between safety culture and safety awareness at workplace.

H_2 There is a positive relationship between OSH training and safety awareness at workplace.

H_3 There is a positive relationship between employee involvement and safety awareness at workplace.

2.10. Conclusion

This chapter has discussed on safety in general and the importance of safety awareness implementation at workplace. There are many theories and measures that were useful to examine the perceptions on safety from the employees' perspectives and this will present good determinants on safety in workplace. Literatures on the factors that affect employee's awareness towards safety awareness have an impact on the contribution to further understanding of this study. Therefore this study will help to understand the extent of an employee's awareness towards safety at workplace.

CHAPTER 3

RESEARCH METHODOLOGY

3.1. Introduction

This chapter touches on the approaches used in this research study. This includes data collection, research design, questionnaire design, research instrument, pilot test and data analysis, as well as the conclusion of the overall chapter.

3.2. Sources of data

In this study, data is obtained through two sources. Close-ended questionnaires act as the primary data collection method while secondary data is retrieved from related documents and records.

3.2.1. Primary Data

According to Uma Sekaran (2000), primary data is the information that is initially obtained from the researcher on the variables of interest for the specific purpose of a study. To obtain the information, the researcher has distributed a set of questionnaires to selected employees in Celcom Axiata Berhad. Questionnaire distribution is an efficient data collection method because it provides an opportunity for the researcher to administer the distribution personally (Uma Sekaran, 2000).

3.2.2. Secondary Data

Secondary data refers to the information gathered by someone other than the researcher conducting the current study such as company record, publication, industry analysis offered by the media, web publications and so on (Uma Sekaran, 2000). It is less time consuming and cheap to obtain the secondary data as it is already prepared by other experts or researchers. The secondary data is used to get more information that could support the primary data, strengthen the information and also assist to interpret the primary data correctly. At times, secondary data can also give an insight to the researcher on the subject matters from a difference perspective.

In this study, the secondary data is gathered from Celcom Axiata's official website, annual reports, articles, magazines and previous research reports which are relevant and able to support the literature review. This secondary data consists of both internal and external data sources.

3.3. Research design

A research design is a frame work or blue print for conducting the research. It specifies the details or the procedures necessary for obtaining the information needed to structure and to solve research problem (Malhotra, 2005). The purpose of this study is to describe and to determine the success factor in safety awareness of employees at workplace. In order to achieve the objective of the study, a survey design is developed. Survey design is the best method to describe existing characteristics of a large group of people. A survey is a way to obtain self-reported information about the attitudes, beliefs, opinions, behavior

and other characters of the population. This study was done by using cross sectional research whereby survey method was implemented.

3.3.1. Location

Research was carried out at Celcom Axiata Berhad, Menara Celcom, Kuala Lumpur. The survey was done at the Department of IN Planning & Development, IT & Transformation Group, which is located at the 16th floor, Menara Celcom, Kuala Lumpur.

3.3.2. Population

The population of this study involved both executives and non-executive employees at IN Planning and Billing department, Celcom Axiata Berhad. The total employees at the said department are 108. The questionnaires have been distributed to all of the employees. Details of data collection based on position level and grade are as in Table 3.1 below:-

Table 3.1: respondent's population

Position / designation	Total
manager	7
executive	57
Non-executive	56
Grand Total	**120**

3.4. Measurement Items

In gathering complete data, a set of questionnaire has been distributed randomly to the respondent that is the male and female employees of Celcom Axiata Berhad. They included managerial, executive and non-executive level employees working under IN Planning & Development department. The instrument used in this research was a set of questionnaire developed by Hasmah Alan (2000). The measures used were retrieved from past researches and some of them are modified to suite the present research.

The questionnaire was divided into five sections namely section A, sections B section C, section D and section E which are illustrated in Table 3.2. Section A focused on demographic items which will gather the profile information of the respondents. Section B consists of items of independent variables on safety culture, while section C emphasized on occupational safety and health training. Section D contained items for employee involvement and the final section, which is Section E contained items of safety awareness implementation at workplace.

Table 3.2: Questionnaires Layout Design

Section	Variables	No of items
A	Demographics factor of respondent • Gender • Age group • Educational level • Length of service	4
B	Safety Culture	11
C	Occupational Safety and Health training	6

D	Employees involvement	7
E	Safety awareness implementation	3

Two scales were used which are nominal scale used in section A, and Likert scale used for sections B, C, D, and E. Likert scale is used when responses to various items that measure a variable can be tapped on 5 points scale which can thereafter be summated across the item.

The scale below show the measure used in the Likert scale designated instrument using Likert scale with score from 1 to 5. Every score shown as follows:

1	2	3	4	5
Strongly disagree	disagree	uncertain	agree	Strongly agree

3.4.1. Demography

Section A consists of questionnaires regarding the respondent's demographics background. This section contains four items, which has dichotomous and multiple choice answer. Examples of these measurements are shown in Table 3.3.

Table 3.3: Questionnaire Design for demography

No	Dimension	items
1	Gender	Male or female
2	Age	Less than 25 years old; 25 - 35 years old; 36 - 45 years old; more than 45 years old
3	Educational level	PMR; SPM; STPM/Diploma; Degree; Master

		Degree; PhD
4	Length of services	Specific number of years

3.4.2. Safety Culture

Section B asked about questions which are related to dependent variable related to safety culture. The questions are in the form of Likert Scale of 5 points to show the level of work safety culture. Examples of questions are as below:

Table 3.4: Questionnaires design for safety culture

No	Dimension	Scale
1	The manager and employee participate safety training regularly.	Likert Scale 5 Points: 1= strongly disagree 2=disagree 3= uncertain 4= agree 5= strongly agree
2	Accidents and illness are appropriately reported to the relevant authority	
3	The safety training provides a good knowledge to employee.	
4	The whole organization seen as work together to create safety work environment	
5	Manager and employees communicate freely in safety issue.	
6	There are informal systems of communication in addition to the traditional channels.	
7	worker and management meet together to formulate behavior oriented safety goals	
8	Does two ways safety communication is effective in the	

	organization.
9	Safety rules are enforced even when no accidents has occurred.
10	Management is willing to provide the necessary resource to achieve safety performance.
11	Company takes responsibility for the safety, health and welfare of employees.

3.4.3. Occupational Safety and Health Training

Section C asked questions related to safety training. The questions are also in the form of Likert Scale of 5 points (1= strongly disagree, 2=disagree, 3=neutral, 4= agree and 5= strongly agree) to show the level of effectiveness of training in safety awareness. Examples of questions are as below:

Table 3.5: Questionnaires design for OSH Training

No	Dimension	Scale
1	Do employees feel that they receive adequate training in how to work safely?	Likert Scale 5 Points: 1= strongly disagree
2	Employee attend safety and health training before commencing the job	2=disagree 3=neutral
3	Training tools and technique used for safety and health Effectively.	4= agree 5= strongly agree
4	Employer and employee received safety and health training regularly.	
5	Do you think safety training is unproductive	
6	Do employees understand how to work safely	

3.4.4. Employee involvement

Section D consists of questions related to employee involvement which consists of daily involvements at workplace. In this section the questions are also in the form of Likert Scale of 5 points (1= strongly disagree, 2=disagree, 3=neutral, 4= agree and 5= strongly agree) to show the level of employees' safety involvement. Questions in this section are stated as below:

Table 3.6: Questionnaires design for employees' involvement

No	Dimension	Scale
1	are the employee is given the opportunity to make contribute idea in improving safety	Likert Scale 5 Points: 1= strongly disagree
2	Are new employees thoroughly trained in safety	2=disagree
3	Does the training continue on the job with help to reinforce from experience employees?	3=neutral 4= agree
4	Disciplinary actions are taken almost immediately when safety and health violation takes place	5= strongly agree
5	Does employee have a communities that represent employee in safety awareness	
6	Does the community being give a privilege to speak out for the employee	
7	Does the community helps to improve the OHSA	

3.4.5. Safety Awareness Implementation

Section E consists of questions related to safety awareness implementation at workplace. In this section, the questions are also in the form of Likert Scale of 5 points (1= strongly disagree, 2=disagree, 3=neutral, 4= agree and 5= strongly agree) to show the level of employees' safety awareness implementation at workplace. Questions in this section are stated as below:

Table 3.7: Questionnaires design for safety awareness

No	Dimension	Scale
1	Safety culture implemented in my workplace makes me aware on my safety.	Likert Scale 5 Points: 1= strongly disagree
2	Safety and health training increased my awareness on safety at workplace.	2=disagree 3=neutral
3	My safety awareness level increased when my colleagues and community also involved in safety awareness at workplace.	4= agree 5= strongly agree

3.5. Data collection method

The type of data collection method used in a research depends on the facilities available, degree of accuracy required, the expertise of the research, time span of the study and the availability of other costs and resources required for data gathering (Zaidatun & Mohd Salleh, 2003). In this study, two types of data collection method were used, specifically through close-ended questionnaires as the primary data collection method and extraction

from related documents and records as the secondary data. Primary data was collected using a structured questionnaire which consisted of 31 items. The questionnaire was distributed to 120 employees in Celcom Axiata Berhad. The respondents were required to answer instantly and return the questionnaire to the researcher by hand.

3.6. Data analysis

Data collected from the respondents have been analyzed by using the Statistics Package for Social Science, version 17 (SPSS). The analysis of data begins with reliability test for the scales through Cronbach's Alpha. In Cronbach's Alpha reliability analysis, the closer the value is to 1.0, the higher the internal consistency reliability. (Cronbach's Alpha; Cronbach, 1946). Cronbach's measurements are as follows:

i. Reliability less than 0.6 considered poor.
ii. Reliability in the range of 0.7 is considered to be acceptable.
iii. Reliability more than 0.8 is considered to be good

Frequency distribution analysis was carried out to obtain a count of number of responses in demographic factors associated with different values of one variable and to express these counts into percentage terms.

Pearson Correlation was used to examine the strength of the relationship between independent variables and the dependent variables. The scale model suggested by Davies (1971) was used to describe the relationship between the independent variables and the dependent variables, as shown:

i. 0.7 and above – very strong relationship

ii. 0.50 to 0.69 – strong relationship

iii. 0.30 to 0.49 – moderate relationship

iv. 0.10 to 0.29 – low relationships and

v. 0.01 to 0.09 – very low relationship.

3.7. Conclusion

This chapter is important to describe the method used to collect and analyze the data. This research is based on quantitative research where data is gathered through questionnaire. Descriptive and inferential statistics are used to analyze the data. This chapter can help the researcher to further proceed to the next chapter which will focus on the findings and discussion.

CHAPTER 4

FINDINGS

4.1. Introduction

This chapter outlines the results of data analysis obtained from data collected from respondents. The main purpose of this study is to determine the relationship between the independent variables namely safety culture, occupational safety and health training and employee involvement with the dependent variables namely safety awareness implementation.

This study aims to achieve the research objectives as well as answer the research questions highlighted in chapter one. In addition, this study intends to verify the hypotheses made in chapter two.

4.2. Reliability test

Reliability test was done to test the reliability of both independent and dependent variables through pilot test. The questionnaire was pre-tested on 30 employees of Celcom Axiata Berhad located at Wisma Celcom, Petaling Jaya. For each section of the questionnaire, reliability test was conducted. The reliability test indicated the extent of the measures without bias and thus offers a consistent measurement across time and across the various items in the instrument (Uma Sekaran, 2000). Cronbach's alpha was the reliability coefficient that indicated how well the items in the set are positively correlated to one another. If the Cronbach's alpha was nearest to 1, it was better because

it meant that the internal consistency reliability of factors is high. If Cronbach's alpha is less than 0.6 it was considered poor. The Cronbach's alpha of each section was above 0.6 showing good internal consistency of the questionnaire. Therefore, the questionnaire was considered reliable.

The pilot test was done to observe whether all instructions in the questionnaires are understandable, details of questionnaires were homogeneous, the instructions were explicit and concise and also to ensure all respondents understood the research objectives. The results of the reliability test were as in Table 4.1.

Table 4.1: Reliability test result

	Variables	N of Item	Alpha Value (N=30)
(a)	Safety culture	11	.945
(b)	OSH training	6	.951
(c)	Employee involvement	7	.948
(d)	Safety awareness	3	.779

Cronbach's Alpha was used to test all the independent variables (safety culture, OSH training and employee involvement) and dependent variable (safety awareness). Results depicted that the value was more than 0.6. It is considered to be good because it is not less than 0.6 which signified that the instrument used is assumed to not be reliable (Zaidatun & Mohd Salleh, 2003). The reliability test result shows that there were consistencies and stability of the answers from the questionnaires.

4.3. Respondents' demographic profile

The respondents who participated in this study were selected employees from the department IN Planning & Development, IT & Transformation Group, Celcom Axiata Berhad, Kuala Lumpur. The demography factor analysis was carried out according to respondent gender, age, educational level and length of service.

Out of a total of 120 sets of questionnaires distributed to the respondents, only 104 sets were returned to the researcher. The researcher found that all questions were answered by the respondents. This means that there were no un-useable questionnaire nor any questionnaires were being discarded.

4.3.1. Gender

Table 4.2: Gender frequency distribution analysis

Gender	Frequency	Percentage (%)
Male	46	44.2
Female	58	55.8
Total	104	100

Table 4.2 above shows that female employees covered 55.8% of the total participants, being the majority of the participants for this study, while male employees only comprised of 44.2%. The questionnaire has been distributed to 120 respondents and only 104 were returned.

4.3.2. Age

Table 4.3: Age frequency distribution analysis

Age Group	Frequency	Percentage (%)
Below 25 years old	9	8.7
25 – 35 years old	61	58.7
36 – 45 years old	33	31.7
More than 45 years old	1	1
Total	**104**	**100**

The result of the frequency distribution analysis is shown as in Table 4.3 above. The study indicated that more than half of the respondents were within the age of 25 – 34 (58.7%), while about one third of the respondents were within the age of 35 – 44. Respondents between 36 to 45 years presented 31.7 percent as the second largest group of respondents. This was followed by those who were below than 25 years old which were 8.7 percent. The oldest group was those who were more than 45 years old, and had the least participant, which represented 1 percent only.

4.3.3. Educational level

Table 4.4: Educational level distribution analysis

Level of education	Frequency	Percentage (%)
SPM	5	4.8
STPM / Diploma	14	13.5
Degree	79	76.0
Master / PhD	6	5.8
Total	**104**	**100**

Table 4.4 showed that more than three quarter of the respondents are degree holder which represented 76.0 percent and STPM/Diploma holder made up 13.5 percent from the total of participants. Higher educational level namely master / PhD consisted of 5.8 percent and the lowest frequency came from respondents who were of SPM level (4.8%).

The analysis showed that most of the respondents were from the Degree background. This is because the executive position in Celcom Axiata required a minimum of Degree qualification.

4.3.4. Length of Service

Table 4.5: Length of services distribution analysis

Length of service	Frequency	Percentage (%)
Below 5 years	48	46.2
6 – 10 years	20	19.2
11 – 15 years	19	18.3
More than 16 years	17	16.3
Total	**104**	**100**

Table 4.5 above showed that the majority of the respondents were those who served in Celcom Axiata below 5 years as represented by 46.2%. There were quite similar percentage of respondents who worked between 6 to 10 years and 11 to 15 years, which were 19.2% and 18.3% respectively. Respondents who worked more than 15 years were the smallest group (16.3%) of employees in Celcom Axiata Berhad.

4.4. Descriptive Analysis

Descriptive analysis such as means, variance and standard deviations were obtained for the interval-scaled independent and dependent variables. The means and standard deviations for all variables used in this study are shown in Table 4.6.

Table 4.6: Descriptive Statistics of the Dependent and Independent Variables

Variable	N	Mean	Standard deviation
Safety culture	104	3.48	0.63
OSH training	104	3.17	0.74
Employee involvement	104	3.17	0.70
Safety awareness	104	3.38	0.68

All variables were evaluated based on a 5-point scale. The results showed that the mean on occupational safety and health training (3.17) and employee involvement (3.17) were fair, while mean for safety culture was strong (3.48). The mean score for independent variables (safety awareness) was 3.38.

The mean or the average is a measure of central tendency that offers a general picture of the data without unnecessarily inundating one with each of the observations in the data set. In addition, the standard deviation, which is another measure of dispersion for interval and ratio scale data, offers an index of the spread of a distribution or the variability in the data. Both mean and standard deviation are very common descriptive statistics. The standard deviation, in conjunction with the mean, is a very useful tool because of the flowing statistical rules, in a normal distribution (Uma Sekaran, 2000):

i. Practically all observations fall within three standard deviations of the average or the mean.

ii. More than 90% of the observations are within two standard deviations of the mean.

iii. More than half of the observations are within one standard deviation of the mean.

From Table 4.6, the standard deviation for the first independent value safety culture is 0.63, followed by OSH training which is 0.74. The value of standard deviation for third independent variable which is employee involvement is 0.70. The dependent variable, which is safety awareness, shows the value of standard deviation is 0.68.

4.5. Hypothesis test

4.5.1. Pearson Correlation

The analysis of Pearson correlation matrix was carried out to indicate the relationship between factors impacting safety awareness (safety culture, OSH training and employee involvement) and safety awareness at workplace. According to Uma Sekaran (2000), in a research project that includes several variables, beyond knowing the means and standard deviations of the dependent and independent variables, the researcher would also need to know how one variable is related to another.

Theoretically, there could be a perfect positive correlation between two variables, which is represented by 1.0 (plus 1), or a perfect negative correlation which is represented by -1.0 (minus 1). While correlation could range between -1.0 and +1.0, the researcher would need to know whether the correlation found between two variables is significant (i.e. if it

has occurred solely by chance or if there is a high probability of its actual existence). A significance of p=0.05 is the generally accepted conventional level in social sciences research. This indicates that 95 times out of 100, the researcher can be sure that there is a true or significant correlation between two variables, and there is only a 5% chance that the relationship does not truly exist.

Hypothesis that postulates a significant positive or negative relationship between two variables can be tested by examining the correlation between the two. The scale model suggested by David (1989) which is used to describe the relationship between the independent variables are as follows:

i. 0.70 and above – very strong relationship
ii. 0.50 to 0.69 – strong relationship
iii. 0.30 to 0.49 – moderate relationship
iv. 0.10 to 0.29 – low relationship
v. 0.01 to 0.09 – very low relationship

H_1 There is a positive relationship between safety culture and safety awareness at workplace.

Dependent Variable	Independent variable	r	Sig.
Safety awareness	Safety culture	0.577*	0.000

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

The above table shows the result of Pearson correlation matrix of the relationship between safety culture and safety awareness at workplace. The results indicated that safety culture is positively ($P = 0.000 < 0.01$) correlated to safety awareness ($r = 0.577$). Therefore, hypothesis H1 is substantiated. This result explained that there is a correlation between safety culture and safety awareness implementation at a workplace.

H_2 There is a positive relationship between OSH training and safety awareness at workplace.

Dependent Variable	Independent variable	r	Sig.
Safety awareness	OSH training	0.627*	0.000

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

The above table shows the result of Pearson correlation matrix of the relationship between occupational safety and health (OSH) training and safety awareness at workplace. The results indicated that safety and health (OSH) training is positively ($P = 0.000 < 0.01$) correlated to safety awareness ($r = 0.627$). Therefore, hypothesis H2 is substantiated. This result explained that there is a correlation between occupational safety and health (OSH) training and safety awareness implementation at a workplace.

H_3 There is a positive relationship between employee involvement and safety awareness at workplace.

Dependent Variable	Independent variable	r	Sig.
Safety awareness	employee involvement	0.647*	0.000

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

The above table shows the result of Pearson correlation matrix of the relationship between employee involvement and safety awareness at workplace. The results indicated that employee involvement is positively ($P = 0.000 < 0.01$) correlated to safety awareness ($r = 0.647$). Therefore, hypothesis H3 is substantiated. This result explained that there is a correlation between employee involvement and safety awareness implementation at a workplace.

4.5.2. Regression Analysis

The Multiple Regression Analysis (MRA) treated the dimension of dependent variables and independent variables separately. This is a way to recognize whether there is a significant relationship between independent variables and dependent variables. The model sufficiently explained the variance or coefficient of determination or the R Squared in the effect of control variables relations. Three independent variables that are recognized in this research are employee communication, rewards and recognition and employee development. The result is illustrated in Table 4.7.

Table 4.7: Results of Regression Analysis

Variables	Coefficients	Standardization Coefficients	t	Sig
Safety culture	0.107	0.199	2.035	0.000
OSH training	0.098	0.275	2.579	0.000
Employee involvement	0.109	0.319	2.854	0.000
F Value	32.469			
R	0.702			
R Square	0.493			
Adjusted R Square	0.478			

Refer to the table 4.7, the Multiple R shows a substantial correlation between the three independent variables and the dependent variables which is employee safety awareness (R= 0.702).

The R-square value identifies the portion of the variance accounted for by the independent variable that is approximately 49.3% of the variance in the safety awareness is accounted for by safety culture, OSH training and employee involvement. This value indicates that those three factors explained safety awareness by 49.3%. Its mean that there are also some other factors which not be considered.

The Adjusted R Square is considered a better population estimate and is useful when comparing the R Square values between models with different number of independent variables. The value of Adjusted R Square obtained is 0.478, illustrate that 47.8% changes of dependent variable which is the safety awareness can be explained by the three independent variables which are safety culture, OSH training and employee

involvement. The other 52.2% are explaining by other factors. The results also shown that all three independent variables are significantly correlated to safety awareness with coefficient alpha < .0001.

The beta (β) value for safety culture (β = .119), OSH training (β =.273), and employee involvement (β =.319) explain the significance of the three independent variables to safety awareness. Among all three variable, employee involvement (β =.319) is the strongest variables, followed by OSH training (β =.273) and safety culture (β = .119).

4.6. Findings summary

The summary of the analysis is exhibited in Table 4.8.

Table 4.8: Summary of Findings

	Hypothesis	Results
H_1	There is a positive relationship between safety culture and safety awareness at workplace.	accepted
H_2	There is a positive relationship between OSH training and safety awareness at workplace.	accepted
H_3	There is a positive relationship between employee involvement and safety awareness at workplace.	accepted

4.7. Conclusion

From the above findings, correlation analysis concludes that all three independent variables are significantly related to safety awareness implementation at workplace. Among all three independent variables, employee involvement has the most influence on safety awareness.

CHAPTER 5

DISCUSSION, RECOMMENDATION AND CONCLUSION

5.1. Introduction

This chapter will discuss about the research overview, findings, summary of findings and limitations of research. Besides that, this chapter will also include the recommendations given to organizations and future researchers for further exploration on the topics.

5.2. Discussion

The purpose of this study is to determine the factors in implementing safety awareness at workplace namely safety culture, occupational safety and health training and employee involvement as independent variables and safety awareness as dependent variable in Celcom Axiata Berhad. Results of each objective are reviewed and compared with previous literatures.

Objective 1: To examine the relationship between safety culture and safety awareness at workplace.

Every organization has its own set of culture. Different culture has different implementation of working hours, task delegating or break hours. An organization must be highly aware of safety culture since negligence could bring detrimental effect to the whole operation as well as the employees. The results of this study indicated a positive

relationship between safety culture and safety awareness at workplace. This result was validated by a previous study by A. Hopkins (2006) which stated that every organization has a culture and that culture can be expected to have impact on safety.

Objective 2: To examine the relationship between occupational safety and health (OSH) training and safety awareness at workplace.

The result of this study indicated a positive relationship between occupational safety and health (OSH) training and safety awareness at workplace. OSH training is one of the important keys for the success of safety awareness. This result validated statement from previous researcher which stated that safety training provides the means for making accidents more predictable (Vrendenburgh, 2002). When an organization delivers effective safety training, the employees would increase their level of safety awareness and this in turn will make accidents more predictable. In the context of Celcom Axiata Berhad, the organization should organize such training frequently so that the employees are more attentive towards the safety awareness at the working environment.

Objective 3: To examine the relationship between employee involvement and safety awareness at workplace.

Employee involvement is a very important factor that a company should not take lightly for the implementation of safety awareness. Without involvement of employees, work and operation in an organization are paralyzed. The result of this study indicated a positive relationship between employee involvement and safety awareness at workplace. This result was validated by a study conducted by Nurul Huda Hussain (2009), which stated that employee involvement created a positive relationship in implementing occupational safety and health awareness. In the context of Celcom Axiata Berhad, employees were looking forward for the employer to enhance the employees' medium of voice and take into consideration the recommendations from employees to increase the awareness of safety at workplace.

Objective 4: To identify which among the independent variables is the most important factor towards implementing safety awareness at workplace.

Among the independent variables, employee involvement is the most important factor towards implementing safety awareness at workplace. This result parallel with research made by Colmar Brunton, Social Research Agency (2004) found that three quarters of companies in New Zealand believe employee participation in health and safety to be beneficial. The main benefit of employee participation is the general importance of involving employees in health and safety matters. Besides, it also decreased accident rates and it also leads to a better working environment.

5.3. Limitation

The study conducted has produced some interesting findings, however its interpretation and application to other field or organization is limited by some constrains. First, the study is limited to one organization, thus the research should be expanded by doing a comparison between a few organizations in an industry. Besides that, in the future the researcher should also focus on the health awareness at workplace. The research was based on one location of the company and did not include the staffs at other location as a whole population.

5.4. Recommendation for Future Research

It would be beneficial for future research to consider the following suggestions:

- Future research can expand the study with other organization in the same industry. This can help to obtained better findings as the study would be done in the same population but from different organizations.
- Future research should include other variables to measure safety awareness so that this will increase the accuracy of understanding the factors towards safety awareness at a workplace.
- Diversify the future research instruments. In this study the data was obtained by distributing questionnaire and the feedback is based on the honesty of the respondent in answering the questionnaire. Thus, for more precision, future research should include interviews to obtain better findings.

5.5. Conclusion

All the objectives in this study have been achieved whereby the results had shown that safety culture, occupational safety and health training and employee involvement are related to safety awareness at workplace. Among all the three factors, employee involvement is found to be the strongest variable towards of safety awareness implementation at workplace in the context of Celcom Axiata Berhad. Finally, hope that more research will be conducted in the future in order to gain a whole understanding of employee involvement as other drivers may also contribute to safety awareness at the other telecommunication provider.

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QUESTIONNAIRES

Safety Awareness at Workplace

Dear Respondent,

This is a survey of your views on the safety awareness at workplace. This survey is required for a subject taken to complete my Master Science of Management in University Utara Malaysia. Please be assured that all information collected will be treated with the strictest confidentiality. Feel free to answer the questions honestly and I would like to thank you for your time and cooperation to complete this questionnaire.

PART A: DEMOGRAPHIC FACTORS

Please **tick (√)** the given boxes that represent your most appropriate answer.

(For Softcopy version, please **highlight** related answer. Example: male / Female)

1. Gender

☐ Male ☐ Female

2. Age Group

☐ Less than 25 years old ☐ 25 – 35 years old

☐ 36 – 45 years old ☐ More than 45 years old

3. Educational Level

☐ SPM ☐ STPM/Diploma

☐ Degree ☐ Master Degree

☐ PhD

4. Length of Service:

..... years (Please specify)

PART B: SAFETY CULTURE

Please **circle** your opinion on the following statements by using the given scale.

STRONGLY DISAGREE → STRONGLY AGREE

B	Dimension	Scale				
1	The manager and employee participate safety training regularly.	1	2	3	4	5
2	Accidents and illness are appropriately reported to the relevant authority	1	2	3	4	5
3	The safety training provides a good knowledge to employee.	1	2	3	4	5
4	The whole organization seen as work together to create safety work environment	1	2	3	4	5
5	Manager and employees communicate freely in safety issue.	1	2	3	4	5
6	There are informal systems of communication in addition to the traditional channels.	1	2	3	4	5
7	Worker and management meet together to formulate behavior oriented safety goals	1	2	3	4	5
8	Two ways safety communication is effective in the organization.	1	2	3	4	5
9	Safety rules are enforced even when no accidents has occurred.	1	2	3	4	5
10	Management is willing to provide the necessary resource to achieve safety performance.	1	2	3	4	5
11	Company takes responsibility for the safety, health and welfare of employees.	1	2	3	4	5

PART C: OCCUPATIONAL SAFETY AND HEALTH (OSH) TRAINING

Please **circle** your opinion on the following statements by using the given scale.

STRONGLY DISAGREE → STRONGLY AGREE

C	Dimension	Scale				
1	Employees feel that they receive adequate training in how to work safely.	1	2	3	4	5
2	Employee attends safety and health training before commencing the job.	1	2	3	4	5
3	Training tools and technique used for safety and health Effectively.	1	2	3	4	5
4	Employer and employee received safety and health training regularly.	1	2	3	4	5
5	Safety training is productive effort to prevent accident occur in a workplace.	1	2	3	4	5
6	Employees understand how to work safely	1	2	3	4	5

PART D: EMPLOYEES INVOLVEMENT

Please circle your opinion on the following involvement statements by using the given scale.

STRONGLY DISAGREE → STRONGLY AGREE

D	Dimension	Scale				
1	Employee is given the opportunity to make contribute idea in improving safety.	1	2	3	4	5
2	New employees thoroughly trained in safety awareness.	1	2	3	4	5
3	Training continues on the job with help to reinforce from experience employees.	1	2	3	4	5
4	Disciplinary actions are taken almost immediately when safety and health violation takes place	1	2	3	4	5
5	Employees have a community that represents employees in safety awareness.	1	2	3	4	5
6	The community being gives a privilege to speak out for the employee.	1	2	3	4	5
7	The community helps to improve the Occupational Safety Health Awareness.	1	2	3	4	5

PART E: SAFETY AWARENESS

Please circle your opinion on the following involvement statements by using the given scale.

STRONGLY DISAGREE → STRONGLY AGREE

E	Dimension	Scale				
1	Safety culture implemented in my workplace makes me aware on my safety.	1	2	3	4	5
2	Safety and health training increased my awareness on safety at workplace.	1	2	3	4	5
3	My safety awareness level increased when my colleagues and community also involved in safety awareness at workplace.	1	2	3	4	5

RELIABILITY TEST

Scale: safety culture

Case Processing Summary

		N	%
Cases	Valid	30	100.0
	Excluded[a]	0	.0
	Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.945	11

Item Statistics

	Mean	Std. Deviation	N
B1	3.57	1.104	30
B2	3.77	.626	30
B3	3.87	.776	30
B4	3.70	.794	30
B5	3.53	1.279	30
B6	3.57	.971	30
B7	3.53	1.106	30
B8	3.60	1.003	30
B9	3.70	.837	30
B10	3.90	.803	30
B11	3.83	1.085	30

RELIABILITY TEST

Scale: OSH Training

Case Processing Summary

		N	%
Cases	Valid	30	100.0
	Excluded[a]	0	.0
	Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.951	6

Item Statistics

	Mean	Std. Deviation	N
C1	3.17	1.053	30
C2	3.10	1.155	30
C3	3.33	1.093	30
C4	3.20	1.064	30
C5	3.67	1.184	30
C6	3.47	.681	30

RELIABILITY TEST

Scale: Employee Involvement

Case Processing Summary

		N	%
Cases	Valid	30	100.0
	Excluded[a]	0	.0
	Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.948	7

Item Statistics

	Mean	Std. Deviation	N
D1	3.60	1.070	30
D2	3.53	1.074	30
D3	3.50	1.042	30
D4	3.43	.774	30
D5	3.57	1.104	30
D6	3.67	.844	30
D7	3.77	.858	30

RELIABILITY TEST

Scale: safety awareness

Case Processing Summary

		N	%
Cases	Valid	30	100.0
	Excluded[a]	0	.0
	Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.779	3

Item Statistics

	Mean	Std. Deviation	N
E1	3.57	.971	30
E2	3.67	1.184	30
E3	3.77	.858	30

Demographic Frequency

Statistics

		gender	age	education	LoS
N	Valid	104	104	104	104
	Missing	0	0	0	0
	Mean	1.56	2.25	2.83	2.05
	Median	2.00	2.00	3.00	2.00

Frequency Table

gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	male	46	44.2	44.2	44.2
	female	58	55.8	55.8	100.0
	Total	104	100.0	100.0	

age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	< 25	9	8.7	8.7	8.7
	25 - 35	61	58.7	58.7	67.3
	36 - 45	33	31.7	31.7	99.0
	> 45	1	1.0	1.0	100.0
	Total	104	100.0	100.0	

education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Spm	5	4.8	4.8	4.8
	stpm/diploma	14	13.5	13.5	18.3
	degree	79	76.0	76.0	94.2

	master degree	6	5.8	5.8	100.0
	Total	104	100.0	100.0	

LoS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	< 5 yrs	48	46.2	46.2	46.2
	6 - 10 yrs	20	19.2	19.2	65.4
	11 - 15 yrs	19	18.3	18.3	83.7
	> 16 yrs	17	16.3	16.3	100.0
	Total	104	100.0	100.0	

Descriptives

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
safculture	104	1.73	5.00	3.4773	.62533
OSHtraining	104	1.33	5.00	3.1651	.74227
empinvolvement	104	1.43	5.00	3.1731	.70202
safawareness	104	1.67	5.00	3.3814	.68332
Valid N (listwise)	104				

Correlations

Correlations

		safculture	safawareness
safculture	Pearson Correlation	1	.577**
	Sig. (2-tailed)		.000
	N	104	104

safawareness	Pearson Correlation	.577**	1
	Sig. (2-tailed)	.000	
	N	104	104

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

Correlations

		OSHtraining	safawareness
OSHtraining	Pearson Correlation	1	.627**
	Sig. (2-tailed)		.000
	N	104	104
safawareness	Pearson Correlation	.627**	1
	Sig. (2-tailed)	.000	
	N	104	104

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

Correlations

		empinvolvement	safawareness
empinvolvement	Pearson Correlation	1	.647**
	Sig. (2-tailed)		.000
	N	104	104
safawareness	Pearson Correlation	.647**	1
	Sig. (2-tailed)	.000	
	N	104	104

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