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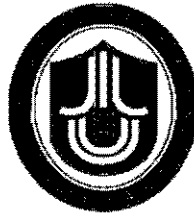# DETERMINING THE AWARENESS LEVEL ON CAUSES OF ACCIDENTS AND DISEASES IN SELECTED SECONDARY SCHOOLS IN SABAK BERNAM SELANGOR

By

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Research Paper Submitted to
Othman Yeop Abdullah Graduate School of Business,
Universiti Utara Malaysia,
In Partial Fulfillment of the Requirement for the Master of Science
(Occupational Safety and Health Management)

**Othman Yeop Abdullah
Graduate School of Business**

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ABSTRACT

Recently, many accidents and diseases occurred in educational institutions in Malaysia that involving teachers, staff and students. Most of government organizations and public services do not have a competent person of occupational safety and health to manage and monitor OSH issues in their premises and activities.. Hence this quantitative study was conducted to identify the awareness level on causes of accidents and diseases among employees in selected secondary schools in Sabak Bernam Selangor. Moreover, the objective of this study is to investigate the relationship between three factors (human, behaviour and environment) and the awareness level on cause of accidents and diseases. In addition, the instruments that distributed to the 221 employees in selected schools are self-reported questionnaires by using the quota stratified sampling. Most of the respondents are teachers, general and technical employees as well as administration employees involved in data collection that conducted in May until June 2017. The SPSS version 20.0 was used to analyze descriptive, Pearson Correlation and Multiple Linear Regression analysis to fulfill the research objectives. The awareness level are high with approximately M=4.06. Furthermore the most significant relationship among three factors is environment (r=0.347) while the human and behaviour factors are r=0.297 and r=0.300 respectively. These three relationships are positive significant with 0.000 less than p-value<0.01. Result from the analysis conducted by multiple linear regression, the environment factors has high relationship with the dependent variables of the high beta (β=0.228 p=0.01). As a nutshell, the awareness level should be identifying with other factors that potential to improve the OSH issue in the educational institutions in Malaysia. Besides that, the improvement through OSH training and program and enforcement of OSH Act 1994 in public sector must be implement for the safety and health of young generation.

Keywords: Human, Behaviour, Environment, Awareness Level, Accidents, Diseases

ABSTRAK

Kebelakangan ini, banyak kemalangan dan penyakit yang berlaku di institusi pendidikan di Malaysia yang melibatkan guru, staf dan pelajar. Kebanyakkan agensi kerajaan dan perkhidmatan awam tidak mempunyai orang yang kompeten dalam keselamatan dan kesihatan pekerjaan bagi menguruskan dan memantau isu KKP di dalam premis dan aktiviti mereka. Oleh itu, kajian kuantitatif ini dijalankan untuk mengenalpasti tahap kesedaran terhadap penyebab kemalangan dan penyakit dalam kalangan pekerja di sekolah menengah yang terpilih di Sabak Bernam Selangor. Tambahan lagi, objektif kajian adalah untuk mengkaji hubungan antara tiga faktor (manusia, tingkah laku dan alam sekitar) dan tahap kesedaran terhadap penyebab kemalangan dan penyakit. Seterusnya, instrumen yang digunakan kepada 221 pekerja di sekolah yang terpilih adalah soal selidik dengan menggunakan persampelan kuota berstrata. Kebanyakan responden adalah guru, pekerja am dan teknikal serta pekerja pentadbiran yang terlibat semasa pengumpulan data pada bulan Mei hingga Jun 2017. Perisian SPSS versi 20.0 telah digunakan untuk menganalisa data menggunakan analisis deskriptif, Korelasi Pearson dan Regrasi Pelbagai untuk memenuhi objektif kajian. Tahap kesedaran terhadap penyebab kemalangan dan penyakit adalah tinggi dengan nilai min 4.06. Di samping itu hubungan yang paling kuat diantara tiga faktor tidak bersandar adalah alam sekitar ($r=0.347$) manakala faktor manusia dan tingkah laku adalah $r=0.297$ dan $r=0.300$. Ketiga-tiga hubungan ini mempunyai signifikan dengan nilai 0.000 kurang daripada nilai p iaitu 0.01. Keputusan dari analisis yang dijalankan oleh regrasi pelbagai mendapati faktor alam sekitar mempunyai hubungan yang kuat dalam menunjukkan hubungan tahap kesedaran dengan nilai beta yang tinggi iaitu ($\beta = 0.228$, $p = 0.01$). Secara ringkasnya, tahap kesedaran terhadap punca kemalangan dan penyakit perlu mengenalpasti faktor-faktor lain yang lebih berpotensi untuk memperbaiki isu OSH di institusi pendidikan di Malaysia. Selain itu, langkah peningkatan melalui latihan dan program OSH serta penguatkuasaan Akta KKP 1994 di sektor awam mesti dilaksanakan untuk keselamatan dan kesihatan generasi muda.

Kata Kunci: Manusia, Tingkah laku, Alam sekitar, Tahap Kesedaran, Kemalangan, Penyakit

ACKNOWLEDGEMENT

بِسْمِ اللهِ الرَّحْمٰنِ الرَّحِيْمِ

Foremost, I would like to express my deepest appreciation to all those who provided me the possibility to complete this research paper.

My deepest appreciation goes to my research paper's supervisor, Madam Norizan Haji Azizan, whose contribution in stimulating suggestions and encouragement helped me to coordinate my research especially in writing this report. I have been extremely lucky to have a supervisor who cared so much about my work, and who responded to my questions and queries so promptly. She is a wonderful and generous lecturer and I admire her positive outlook in any situation.

I would also like to thank Ahmmad Romzay Mastor, my awesome and superb dad and Latipah Hj Abdul Majid, my gorgeous and understanding mom for their endless love as well as moral support. Special thanks goes to my MOSH classmates (Sept 2015 Intake) that we have been quarreled and laughed together almost one years of classes.

I am particularly grateful for the assistance given by UUM due to prepared a lot of my official letters to the related parties regarding my research paper, Ministry of Education Malaysia, *Jabatan Pendidikan Selangor, Pejabat Pendidikan Daerah* Sabak Bernam and all selected schools that involved by gave statistic and specific information that related to my research paper. Moreover, I would also like to express my gratitude to MyBrain for their financial support throughout my studies in UUM.

Last but not least, many thanks go to the other supervisors as well as the examiners especially in my VIVA presentation that has improved my presentation skills and confidence level. Thanks again for their encouragement, insightful comments, and hard questions during research making.

Without the love and support of all the above mentioned people, none of my dreams for the completion of an OSH master degree would have ever come true.

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2 August 2017
Universiti Utara Malaysia Kuala Lumpur

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LIST OF ABBREVIATION

ABC	Antecedent, Behaviour and Consequences
ATAH	Akademik Tahfiz Al-Hidayah
BBS	Behavior Based Safety
BOMBA	Fire and Rescue Department
EQA	Environment Quality Act
HIRARC	Hazards Identification, Risk Assessment and Risk Control
JKR	*Jabatan Kerja Raya*
JPN	*Jabatan Pendidikan Negeri*
JPS	*Jabatan Pendidikan Selangor*
KKP	*Keselamatan dan Kesihatan Pekerjaan*
KPM	*Kementerian Pendidikan Malaysia*
MIROS	Malaysia Institute of Road Safety Research
MOE	Ministry of Education
MOH	Ministry of Health
NIOSH	National Institute of Occupational Safety and Health
OSH	Occupational Safety and Health
OSH-MS	OSH Management System
PIBG	*Persatuan Ibubapa dan Guru*
PPD	*Pejabat Pendidikan Daerah*
PPE	Personal Protective Equipment
PPE	Personal Protective Equipment
RO	Research Objectives

RQ	Research Questions
SABK	*Sekolah Agama Bantuan Kerajaan*
SBP	*Sekolah Berasrama Penuh*
SEMSAS	Sekolah Menengah Sains Sultan Haji Ahmad Shah
SJK (T)	*Sekolah Jenis Kebangsaan Tamil*
SJK(C)	*Sekolah Jenis Kebangsaan Cina*
SK	*Sekolah Kebangsaan*
SM	*Sekolah Menengah*
SMA	SMK Munshi Abdullah
SMK	*Selah Menengah Kebangsaan*
SMKA	*Sekolah Menengah Kebangssan Agama*
SMT	*Sekolah Menengah Teknik*
SOP	Safe Operating Procedures
SPSS	Statistical Package for Social Science
SR	*Sekolah Rendah*
SRA	*Sekolah Rendah Agama*
SSB	SMK Seri Bedena
SUA	SMK Ungku Aziz
TUDM	*Tentera Udara Diraja Malaysia*
UMP	Universiti Malaysia Pahang
UNESCO	United Nations Educational, Scientific and Cultural Organization
UUM	Universiti Utara Malaysia

CHAPTER 1

INTRODUCTION

1.1   Introduction

This chapter discusses about the background of study, problem statement, research questions and objectives, scope and limitations of study. Besides that, the significant of study, definition of key terms and organization of thesis also are explained in this chapter.

1.2   Background of Study

Malaysia is one of the developing countries in the world that is highly committed in providing education to all level of community. The education system in Malaysia was formally setup in 1955 that was helmed by Tun Abdul Razak who was the Minister of Education (MOE) under the country's first cabinet. The history of education system in Malaysia can be summarized in **Figure 1.1.** This figure reflects the improvement and development that were done on the education system.

Education
Bill 1995

Education
Act 1961

Rahman
Talib
Report

Education
Ordinance
1957

Razak
Report
1956
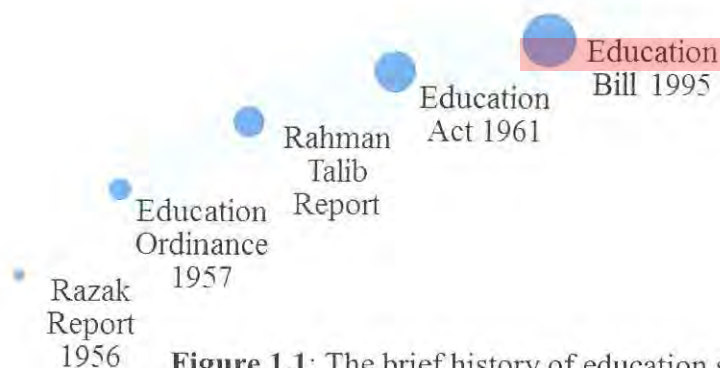
Figure 1.1: The brief history of education system in Malaysia
(Malaysia Ministry of Education Website, 2016)

The rapid population growth is one of the major factors that influence the development of education system in Malaysia. The increasing number of students' enrollment also contributes to the increase of hiring new staff and teachers in education institutions. **Figure 1.2** and **1.3** show the increasing number of students and teachers' enrollment for pre-school, primary and secondary between male and female. This statistic was published by the Educational Planning and Research Division, Ministry of Education Malaysia 2014 until 2016. However, there is a decrease number of students due to several factors such as study in private schools, low income of family and other factors.

	Male	Female	Male	Female	Male	Female
	Student 2014		Student 2015		Student 2016	
Secondary	1,114,593	1,120,028	1,096,719	1,127,479	1,068,442	1,076,856
Primary	1,387,360	1,311,523	1,382,653	1,308,318	1,378,193	1,306,780
Pre school	98,479	95,746	100,288	98,286	101,370	99,152
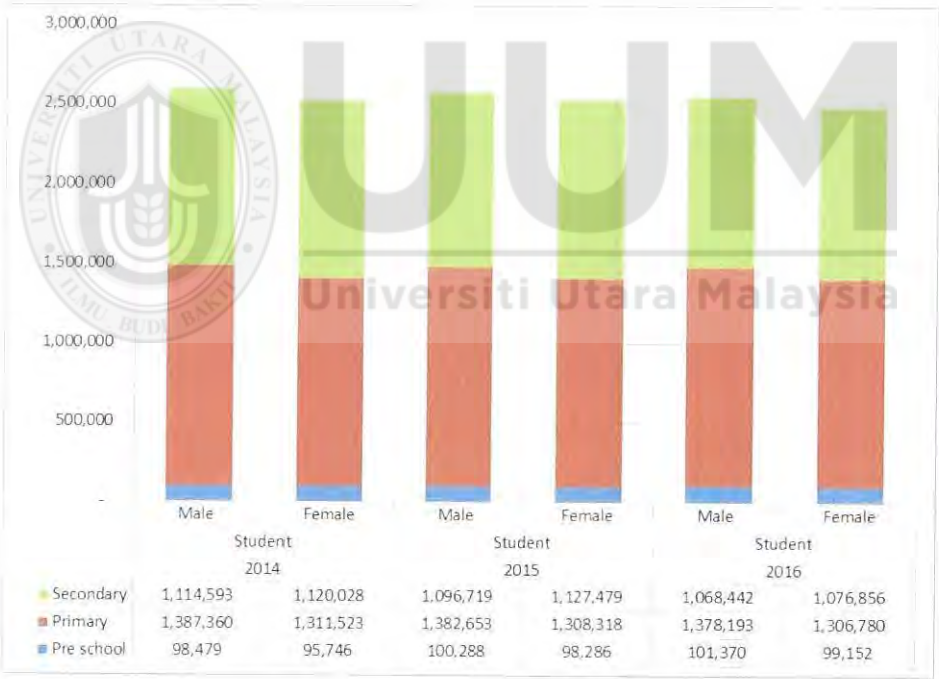
Figure 1.2: The statistic of students in educational institutions under MOE for 2014 until 2016

(Quick Fact 2016 Malaysia Educational Statistic, 2016)

	Male	Female	Male	Female	Male	Female
Secondary	55,457	125,012	54,607	127,831	54,527	127,071
Primary	72,701	167,684	72,198	169,339	71,826	168,593
Pre school	996	7,590	1,005	8,034	1,010	8,077

Figure 1.3: The statistic of teachers in educational institutions under MOE for 2014 until 2016

(Quick Fact 2016 Malaysia Educational Statistic, 2016)

In line with the increasing number of students and teachers, there are many factors that must be considered to ensure the quality of education performance among students and teachers in education institutions. For instance, the facilities in educational institutions, the teaching materials that need to be used, and also the procedure that has been developed for teaching and learning process need to be considered from the safety aspect to ensure the students and teachers are safe, healthy and secured in the educational institutions. Therefore the school leaders and management, parents, authorized departments such as *Jabatan Pendidikan Negeri* (JPN), *Pejabat Pendidikan Daerah* (PPD) and MOE should put safety issues as the upmost priority to avoid any accidents to happen in educational institutions.

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1.3 Problem Statement

Recently, there are many cases and accidents involving students as well teachers that are related to safety issues happened in the school areas. Most of the major accidents happened in educational institutions are fire incident, road accident, chemical spillage, snakebites, food poisoning and many more. One of the factors that contribute to the increasing of accidents and diseases is the increasing population in the educational institutions. A higher population in schools equals to higher probability of accidents that will happen if the administrations of educational institutions are not concerned about the safety issues. When they do not provide safe and conducive facilities and develop a proper OSH procedure the potential hazards could lead to accidents and diseases to occur. Besides that, they also have to face financial issue if the population increases in order to provide the safe facilities for better teaching and learning environment due to the low budget allocation from the government.

Besides of increasing number of population, the responsibility and focus of the government also play a prominent role in order to reduce accidents and diseases rate in educational institutions that commonly involved fatality and major injury. Generally they always focus on heavy industry and private sectors only instead of educational institutions. There are some irresponsible people selected by the government cut the allocation for the cost to provide safe and conducive facilities and environment as to gain more profit. For instance, a fatal accident was happened in a school area in Tanjung Karang, Selangor on 26 September 2008. A Form Five male student of SMK Dato Harun

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died immediately due to a major head injury after a wall of a reading room collapsed and crushed him (Utusan Online, 2008).

Furthermore, the unclear and improper safety procedures and practices implementation are also one of the factors that contributes to the accidents involving people in the school areas. However, most employees who are working in the educational institutions are lacking of knowledge and skills to response to any potential incidents during emergency. Commonly, the accidents in educational institutions happened in high risk areas like science laboratory that includes hazardous chemical substances, kitchen area that uses gas and ignition during cooking, high level area of building, bushes area and others. Other than that, those locations commonly are not well maintained with the proper safety appliances such as fire extinguishers, first aid boxes, hose reel and many more.

Moreover, the behaviour and attitude of students is another problem that should be encountered by the parents from the beginning. The students need to be monitored and taught by their parents on how to differentiate between good and bad behaviour in order to prevent any accidents and diseases to happen. As an example, on May 27, 2016 in Bukit Mertajam Pulau Pinang, a Form Four student from SMK Guar Perahu brought 50 ml of mercury without the parents' permission to the school. His action caused 56 students from two classes to be quarantined in other classes for safety precautions. The school management contacted BOMBA immediately when they found 56 students suffered from breathing problem (Utusan Online, 2016). Based on the investigation, the

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mercury spillage had happened one day before the school management realized the accident. Therefore, parents should play an important role to monitor their children from bringing any hazardous or dangerous items to school illegally. The main factor of this kind of accident is caused by human behaviour.

As a solution for this problem, there is a need to increase the awareness on causes of accident and diseases among employees in the educational institutions. These causes must be identified to determine the most significant factor that contributes to the accidents and diseases in the workplace.

1.4 Research Questions (RQ)

The research questions for this study are:

RQ1: What is the awareness level on the causes of accidents and diseases among employees working in the selected secondary schools in Sabak Bernam Selangor?

RQ2: Is there a relationship between human factors and the awareness level on causes of accidents and diseases among employees working in the selected schools?

RQ3: Is there a relationship between behavioral factors and the awareness level on causes of accidents and diseases among employees working in the selected schools?

RQ4: Is there a relationship between environmental factors and the awareness level on causes of accidents and diseases among employees working in the selected schools?

1.5   Research Objectives (RO)

The research objectives for this study are:

RO1: To identify the awareness level on causes of accidents and diseases among employees working in the selected secondary schools in Sabak Bernam Selangor.

RO2: To investigate the relationship between human factors and the awareness level on causes of accidents and diseases among employees working in the selected schools.

RO3: To investigate the relationship between behavioural factors and the awareness level on causes of accidents and diseases among employees working in the selected schools.

RO4: To investigate the relationship between environmental factors and the awareness level on causes of accidents and diseases among employees working in the selected schools.

1.6   Scope and Limitations of the Study

The scope of this study is focused on three considerations that have their own limitation and delimitation that are related to this study. They are the specific location of sampling, the type of educational institutions involved in this study and the parameter of the study that is related to the objectives.

1.6.1 The specific location of sampling

The sampling stage of this study was carried out at the four different secondary schools that have been selected in Sabak Bernam Selangor as stated in **Table 1.1**. The questionnaires were given to the administration office of the chosen secondary schools for the purpose of distribution to the target respondents.

Table 1.1
The list of selected secondary schools

NO.	LIST OF SELECTED SECONDARY SCHOOLS
1.	SMK Ungku Aziz (SUA)
2.	SMK Munshi Abdullah (SMA)
3.	SMK Sungai Besar
4.	SMK Seri Bedena (SSB)

(JPN Selangor Official Website, 2015)

In the early stage of the study, there were seven secondary schools selected in as respondents. However, only four secondary schools responded positively by returning the completed questionnaires. The other three secondary schools rejected to participate in this study.

1.6.2 The type of educational institutions that were involved

There are many types of educational institutions under MOE as shown in Table 1.2.

Table 1.2
The list of types of educational institutions under MOE

NO.	TYPES OF EDUCATIONAL INSTITUITION
1.	*Sekolah Kebangsaan (SK)*
2.	*Sekolah Jenis Kebangsaan Cina (SJK (C))*
3.	*Sekolah Jenis Kebangsaan Tamil (SJK (T))*
4.	*Sekolah Kebangsaan Khas (SK Khas)*
5.	*Sekolah Rendah Agama (SABK)*
6.	*Sekolah Rendah Model Khas Komprehensif K9*
7.	***Sekolah Menengah Kebangsaan (SMK)***
8.	*Sekolah Menengah Teknik (SMT)*
9.	*Sekolah Menengah Kebangsaan Agama (SMKA)*
10.	*Sekolah Menengah Khas (SM Khas)*
11.	*Sekolah Menengah Berasrama Penuh (SBP)*
12.	*Sekolah Menengah + Sekolah Rendah Model Khas (SM + SR Model Khas)*
13.	*Sekolah Sukan*
14.	*Sekolah Menengah Agama (SABK)*
15.	*Sekolah Seni*
16.	*Sekolah Bimbingan Jalinan Kasih*
17.	*Kolej Vokasiaonal*

(MOE Official Website, 2016)

However, this study focuses on secondary schools that are known as *Sekolah Menengah Kebangsaan* (SMK) only. The main reason of choosing SMK in Selangor as target sampling is because Selangor and Sarawak have the highest number of secondary schools which are 231 schools respectively. (MOE Official Website, 2016)

1.6.3 The parameter of the study that is related to the objectives

In this study, there are three factors that are used to examine the awareness level on causes of accidents and diseases in the secondary schools in Sabak Bernam Selangor as shown in **Figure 1.4**. Each factor has its own elements that are important to influence the awareness level on the causes of accidents and diseases among employees working in the selected secondary schools in Sabak Bernam Selangor.
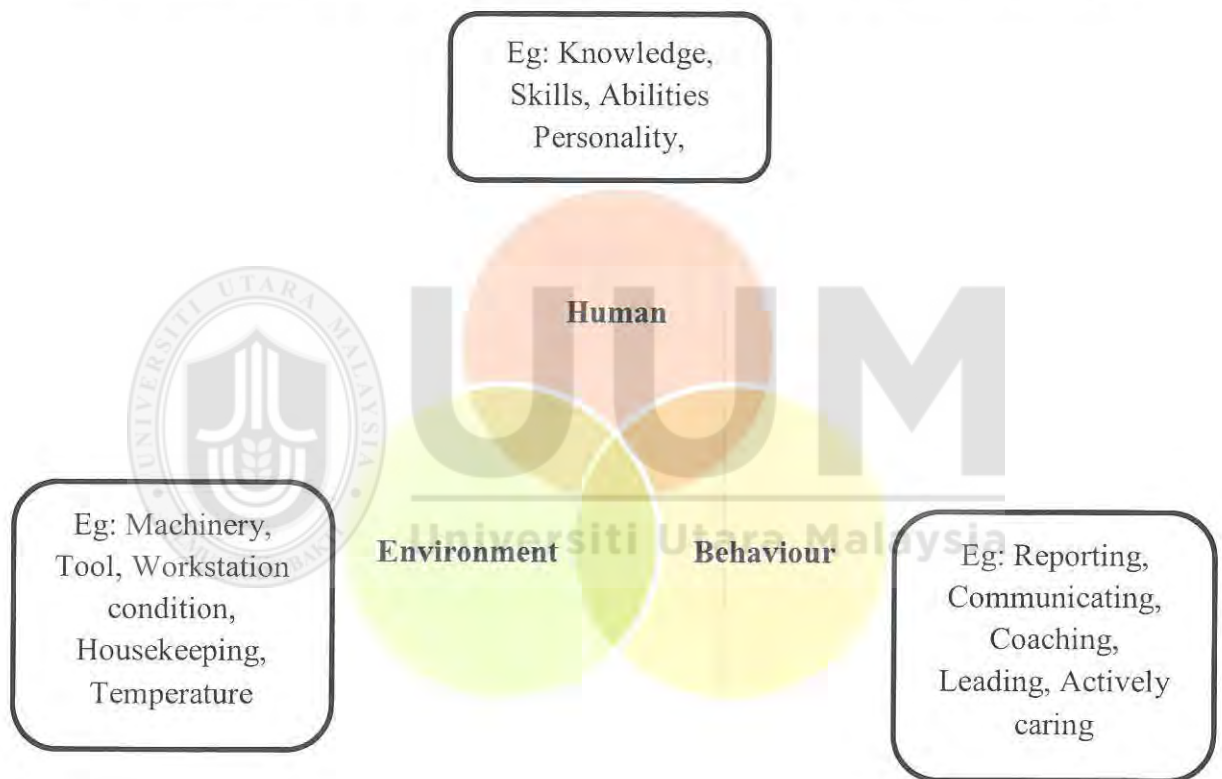
Figure 1.4: Three factors that influence the awareness level on causes accidents and diseases

1.7   Significance of Study

Basically there are many significances of this study that are very useful for the government agencies such as MOE, JPN, PPD, schools and also public community like parents.

Firstly, this study is empowering employees working in the educational institutions on the awareness of OSH. Besides that, they are educate indirectly when they are involved in this study as a respondent. Hence, they can be more aware to all hazards that they are exposed in their daily life either at workplace or home. When people realize about the importance of safety, the process of fostering safety culture in the workplace can also become easier.

Secondly, the school administration such as the principles, headmasters and the head of *Persatuan Ibubapa dan Guru* (PIBG) should provide the proper procedures and programs that are related to the OSH as they are employer of the people who are working in the educational institutions. By doing this, they can overcome the low basic factors that lead to the OSH awareness through the conduct the OSH programs in schools. They also need to provide the adequate safety protection equipment like PPE and fire extinguishers as well as to educate their employees to handle the emergency cases that involve students.

Thirdly, the government can give more attention to the low factor that influence the awareness of OSH. For instance, the poor facility environments like cracks on the wall due to the low quality of building materials and the poor wiring condition must

repair and maintain to prevent any accident. The government like MOE, JPN, and PPD need to focus more on the potential high risk schools in Malaysia based on this study as a baseline for them to improve the safety and health issues in those schools.

In short, there are many benefits that can be obtained through this study. Through this study the OSH awareness can be promoted in order to prevent any accidents and diseases that involve students as well as the employees working in the educational institutions starting now.

1.8   Definition of Key Terms

Accident is defined as an unplanned and uncontrolled event in which the action or reaction of an object, substance, person or radiation results in personal injury or the probability thereof. (Heinrich, 1931)

Behaviour is defined as the acts or actions by individuals that can be observed by others. (Geller, 1994)

Disease is defined as any disease contracted as a result of an exposure to risk factors arising from work activity. (Ahmad Fitri, 2016)

Employee is defined as the people who are working permanently in the selected secondary schools such as laboratory assistants, teachers, headmasters, clerk, librarians and others.

Environment is defined as the physical factors of the surroundings of the human beings including land, water, atmosphere, climate, sound, odour, taste, the biological factors of animals and plants and the social factor of aesthetics (EQA, 1974).

Human is defined the person who has ability, skill and knowledge in order to performe the task that has been given properly.

Pre School is defined as the education for children from age four to six which is center-based that served ten or more children in one time.

Primary School is defined as the education for children from age seven to twelve that divided into three categories based on medium of instruction which is SK, SJK(C) and SJK(T).

Secondary School is defined as the education for teenagers from age 13 to 17 that consist of two levels which are junior and senior secondary school.

1.9 Organization of the Thesis

By referring the **Figure 1.5**, the flow process of this study can be described clearly. In order to achieve the objectives of this study, the study followed the proper process to this figure.

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2. Problem Statement
3. Research Question
4. Research Objectives
5. Scope and Limitations of the Study
   - *The specific location of sampling*
   - *The type of education institutions involved*
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4. Suggestions for Future Research
5. Summary

PROPOSAL STAGE

RESEARCH PAPER STAGE

Figure 1.5: The flow process of study

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1.10 Summary

In the nutshell, this chapter helps to understand the main point of the study such as objectives, problem statement, scope and limitation of study and flow process of the study. The accident and disease rates that happened in educational institutions especially in secondary schools must be taken into consideration to reduce the number of fatality and major injury, increase the teaching and learning performance and prevent the losts and damage of school properties due to the accidents.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This chapter provides the review from the previous researchers that are related to this study. The contents that are discussed in this chapter include the definitions, contributing factors and theories of the causes accidents and diseases and accidents and diseases cases in the schools in Malaysia that are related to this study.

2.2 Theory of Accident Causation

The increasing number of accidents and diseases is the main reason of why there are many theories have been developed in order to explain why accidents and diseases happened.

2.2.1. Heinrich's Domino Theory

Based on the Heinrich's Domino Theory as shown in **Figure 2.1** it was concluded that 95% of accidents in the workplace are caused by the unsafe acts (Henrich, 1931; Roslizah et al., 2015).
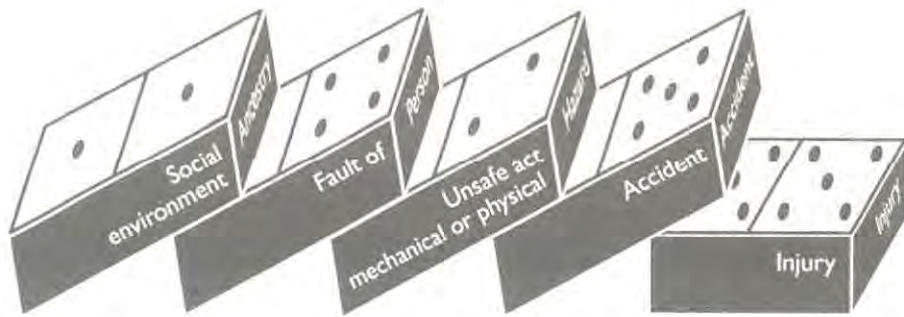
Figure 2.1: Five factors in Heinrich's Domino Theory

Based on the first three factors in this theory which are social environment/ ancestry, fault of person and unsafe act and mechanical or physical hazard, Henrich emphasized that these three factors are caused by humans themselves. He was working in Travellers Insurance Company in 1929 before he developed this theory. He realized the accident rate were kept increasing during that time and many people came to claim their insurance once an accident happened. The Heinrich's Domino Theory was developed when he found every accident that causes a major injury; there are 29 accidents that cause minor injuries and 300 accidents that cause no injury (Henrich, 1931). According to the same researcher, the actuarial analysis of 75,000 insurance claims attributed that 88% of preventable accidents are caused by unsafe human acts, 10% them are due to unsafe mechanical or physical conditions, and with the last 2% of the accidents are being acknowledged as being unpreventable.

2.2.2. Human Factor Theory

This theory is based on the concept that accident is the result of three broad factors that lead by human error as illustrated in **Figure 2.2.**
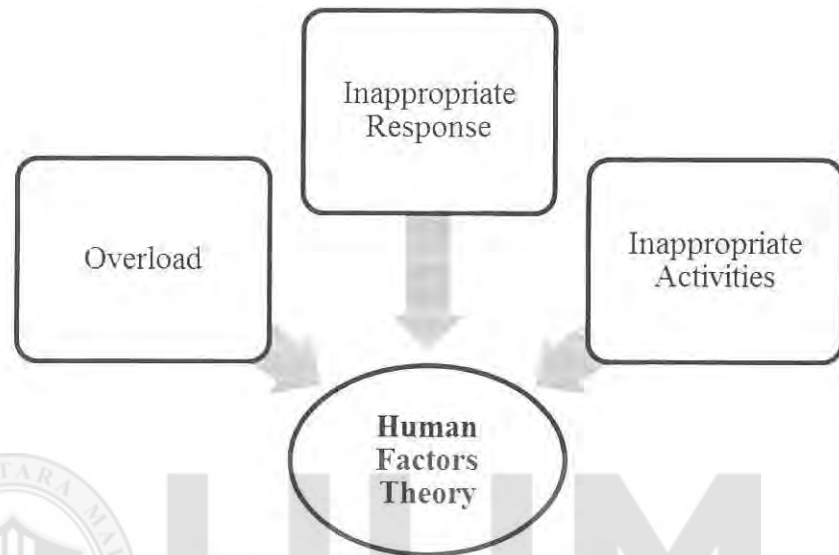
Figure 2.2: Human Factor Theory
(Theories of Accident Causation, n.d)

According to this theory, overload is defined as a task that is given to the workers which is beyond their capability in the workplace. This overload could be influenced by several factors such as environmental, internal and situational factors. Besides that, inappropriate response can be defined on how employees respond in a certain conditions such as poor building structures. Moreover, inappropriate activities could be explained when employees are doing a high risk task without any training provided by employers as well as misjudging the degree of risk during working.

2.2.3. Accident and Incident Theory

Accident and Incident Theory is the extension of the Human Factors Theory that introduces new element as shown in **Figure 2.3.** This theory was developed by Dan Petersen by adding the ergonomic traps as the new element. This theory is also known as Petersen's Accident and Incident Theory.
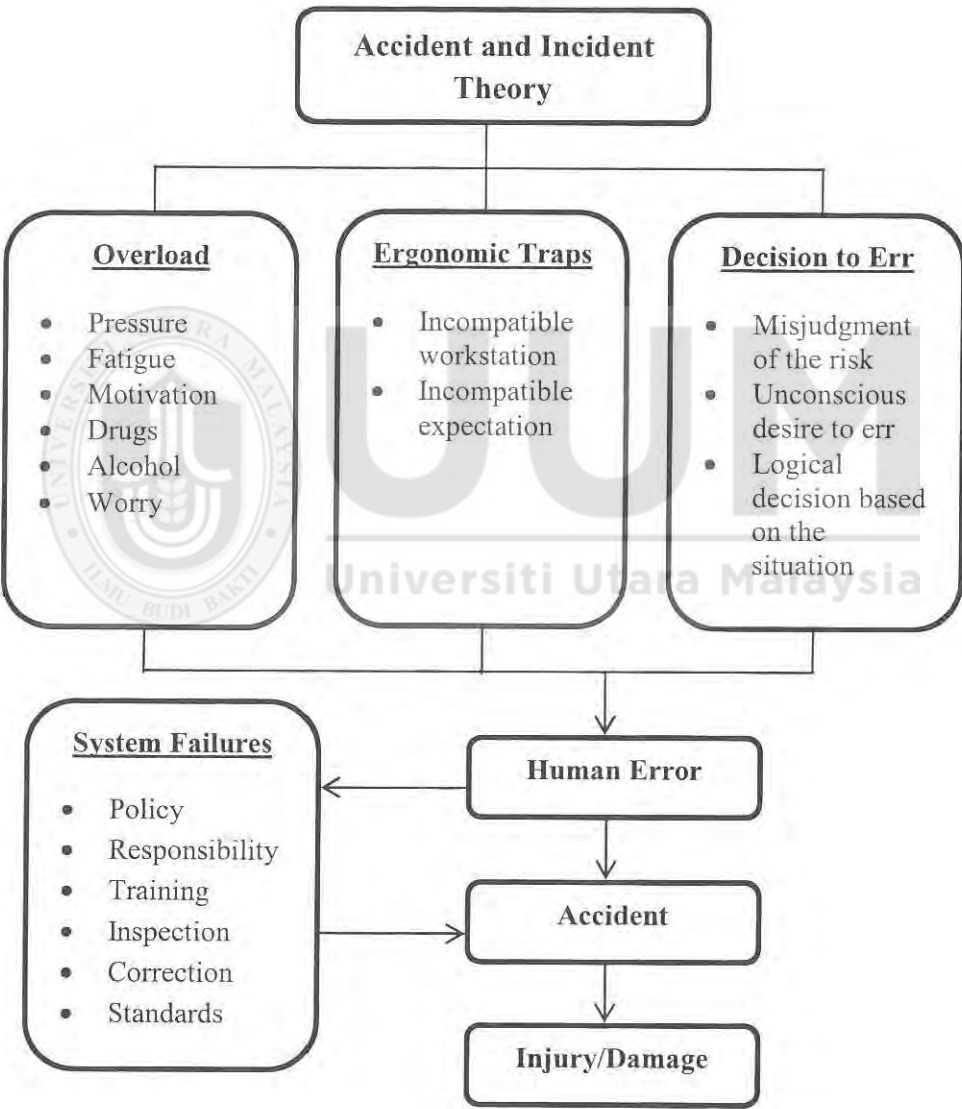
Figure 2.3: Accident and Incident Theory
(Theories of Accident Causation, n.d)

2.2.4. Epidemiology Theory

Traditionally, most theories that have been developed are related to the accidents and injuries in the workplace. However, there are many cases related to the health effects, sickness and diseases that occur due to the working environment. This issue is concern by industrial hygiene that covers on the noise, airborne, wastewater, soil and many more in the workplace. Hence, the Epidemiology Theory was developed to study and determine the relationship between environmental factors and diseases as illustrated in **Figure 2. 4.**
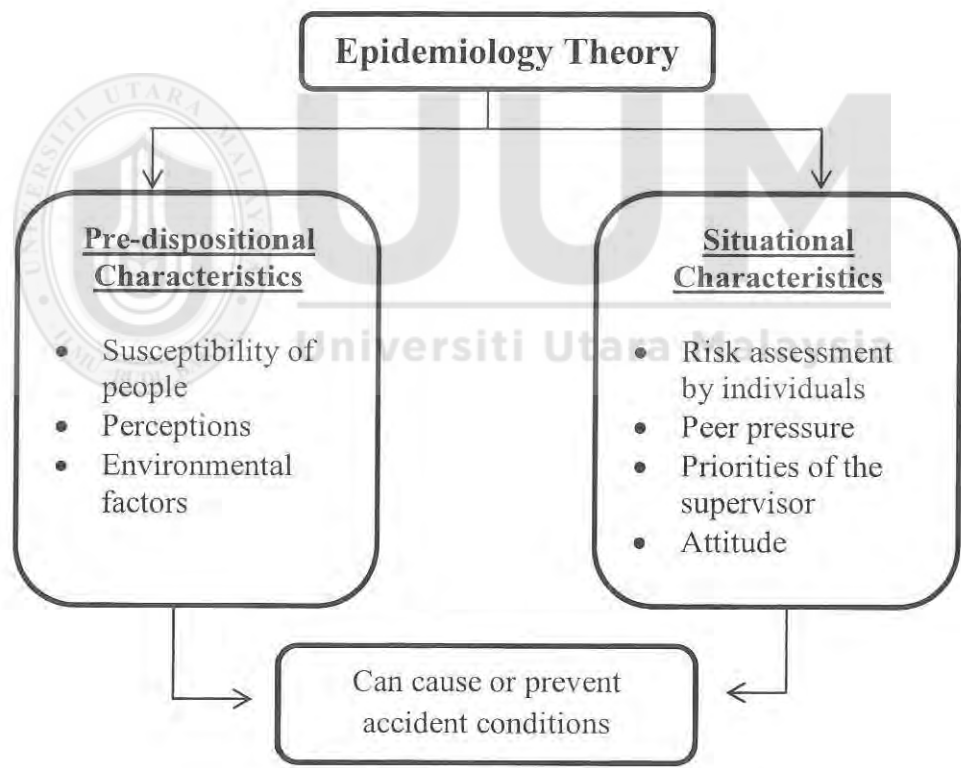
Figure 2.4: Epidemiology Theory
(Theories of Accident Causation, n.d)

2.2.5. Behaviour Theory

The Behaviour Theory of accident causation and prevention is often referred to as behaviour based safety (BBS). Geller (1994) defined BBS as an approach or process in order to improve the safety and health performance in the workplaces through the observations and feedbacks to the human to change their behaviour. Siti Nasyrah et al. (2015) stated that BBS is the application of psychological research on behaviour applied to safety in order to reduce accidents and injuries in the workplace. In spite of that, there are many terms that share the same definition with BBS which are behavioural safety, behaviour modification, behavioural safety management systems and safety observation systems (Fleming and Ladner, 2001). BBS has derived from behavioural learning principles conceived by behaviourist during the late 19th century and developed into theory and approach through integrating organizational development with quality and safety management (Anam, n.d).

Most companies nowadays use Behaviour Theory when they practice and monitor the safety and health of their employees. Based on Kathirgamanathan and Wong (2005), safety performance is contributed by Behaviour Theory in Malaysia. However, most companies in Malaysia are not practicing the Behaviour Theory completely but they do practice the prevention method involving behavior. Meanwhile, some companies that have another branch or parent company in other countries which have already practiced and implemented this Behaviour Theory

system there, most probably will try to adopt and practice the system here in Malaysia.

Much of current literature use familiar behaviour model that is related to the Behaviour Theory which is ABC Behavioural Model as illustrated in **Figure 2.5** like in Arnold et al's study (1998). ABC is defined as Antecedents, Behaviour and Consequences. Lehman and Geller (2004) stated that behaviours are directed by the antecedent's stimuli that preceded them and announce the availability of a positive or negative consequence. The effect of consequence that is directed by the antecedent's stimuli will determined the further occurrence of behaviour of that person.

Antecedents	**Behaviour**	**Consequences**
Causal event (trigger) preceding the behavior	Observable thing that someone does or doesn't do	Outcome of the behaviour for the individual that influences the likelihood that the behaviour will be repeated
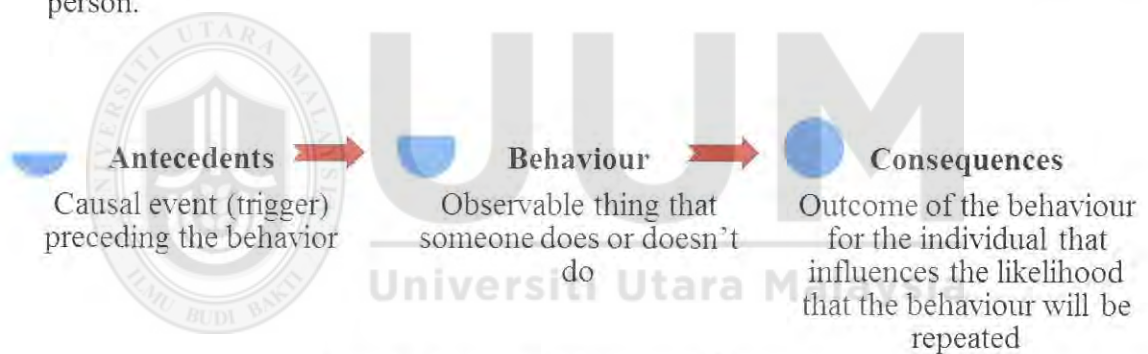
Figure 2.5: ABC Behavioural Model

Antecedent triggers the behaviour by using several strategies such as rules and procedures, suitable tools and equipment, information, signs, skills and knowledge, trainings and knowledge of other people's expectations. However, the antecedents are necessary to help in triggering the behaviour but their existences do not guarantee the behaviour to change (Fleming and Lardner, 2002). As an example, the safety regulations are not ensuring the safe behaviour in the high noise workplace. However, by providing the workers with adequate antecedents like earplugs to be worn during working hour, knowledge about health effect of working in high noise

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area and signs indicating where ear protection should be worn are important in helping to trigger the desired safe behaviour in a workplace. In order to ensure the safe behaviour is maintained over the time, the consequences are also required in this process.

Several previous studies found that the likelihood of behaviour will be repeated depend on the consequences. Hence, if there is reinforcement of the consequences the individuals, their behaviour will keep repeating. Fleming and Lardner (2001) mentioned it is possible to change the behaviour by altering the consequences. Through the study of the same literature, there are three main types of consequences that can influence a person's behaviour like positive reinforcement, negative reinforcement and punishment. However, Daniel (1999) reviews the types of consequences that influence one's behaviour as explained in **Table 2.1**.

Table 2.1
Type of consequences

TYPE	EFFECTS	METHOD
Positive Reinforcement	Increase behaviour	Receive something that you want
Negative Reinforcement	Increase behaviour	Avoid something you do not want
Punishment	Decrease behaviour	Receive something you do not want
	Decrease behaviour	Loose something you have or want

By referring to the above table, the consequences can be used together or separately to influenced the behaviour changing. For an instance, the frequency of safety practitioners in implementing safety programs in the workplace could be increased by using these following methods as described in **Table 2.2**.

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Table 2.2
Example of consequences in safety practices

TYPE	METHOD
Positive Reinforcement	Superior praises safety practitioners after they have conducted safety program
Negative Reinforcement	Participants do not cooperate during the safety programs
Punishment	Safety practitioner's bonus is reduced if they do not conduct safety program

2.3 Main Factors of Accidents and Diseases Causation

2.5.1. Human

According to Roslizah et al. (2015), humans refer to the individuals that have knowledge, experiences, ability, motivation and personality. Human factor is influenced by many elements such as safety training received, workload and level of understanding (Geller, 1994). In 1994, Cooper and Philip stated that all occupational safety and health (OSH) measures might become unsuccessful if the workers do not have the right knowledge, attitude and behaviour towards the practice of OSH in the workplace. Sneddon (2004) clarified the employees that have adequate knowledge of OSH does not mean they have no potential to make decision error while working. Sneddon (2004) and Laurence (2005) describe there are various factors that can influence employees to make decision error even though they have knowledge in OSH. This happens when they have low awareness towards the OSH in the workplace. To support the importance of OSH knowledge, Busch (2000) emphasized knowledge and understanding are the most significant element to increase the awareness level among employees

2.5.2. Behaviour

Behaviour refers to compliance, coaching, recognition, communication and action. Behavioural factors are mostly influenced by culture and practices that are used in daily life (Geller, 1994). Behaviour is simply anything that someone does or says. Psychologically, behaviours are actions or reactions of persons or things in response to external or internal stimuli. According to Abd Aziz and Intan (2002) the main three factors in contributing to the accidents are employee's behaviour, workplace environment and employers. The factor that contributes to the accidents is the employee's behaviour such as careless, horseplay and concern on OSH issue in workplace. The other researcher like Ahmad Tulka et al (2012) highlighted the behaviour is influenced by the awareness level of staff in polytechnic in perspective of OSH.

2.5.3. Environment

Environment refers to equipment, machinery, housekeeping, weather and temperature changes, and engineering (Geller, 1994). Durrishah et al. (2004) described the examples of environment factors that contribute to accidents and diseases are messy and dirty workplace, many open pits and holes on the walkway, inadequate lighting, high noise, exposure to dusty and hazardous chemical substances and poor housekeeping. Based on Mohamad Khan Jamal Khan(2005), safe environment is required to produce a good profile of an industry.

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2.4 The Awareness Level on Cause of Accidents and Diseases

Hwang et. al (2000) defined safety awareness as the internal element of human that is influence by their actions and response towards the view of safety and health. The awareness level can also be described as the ability to figure out the unsafe action in the workplace, having the right behaviour in term of safety and ability to handle and manage the emergency situations effectively (Chang and Liao, 2010). Moreover, Smalwood (2008) defined safety awareness level as having knowledge of risk, hazards and consequences.

Fadzil et al.'s study (2002) has shown that the awareness level towards safety and health among employees in rubber plantation is satisfied. Due to the low level of non-compliance of instruction, regulation and corrective and preventive action of employees in his study indicate that this behaviour factor could affect the level of awareness.

Next, Overheul (2001) conducted a research titled "20 Year of Safety" found the best awareness level is required to succeed in a global challenging industry. His study also explained that the last 20 years, most organizations assume that concerning more about OSH is a huge burden in terms of cost and time. However, the mind set of these organizations has been changed towards the OSH nowadays. They are aware that by concerning more about OSH in the organization means that they actually have a good investment in the future. In spite of that, Abba et al., (2004) considered the awareness level is the main criteria to prevent accidents and injuries in the workplace.

2.5 Safety and Health in Educational Institutions

Under Section 1 (2) in OSH Act 1994, educational institutions are included in the First Schedule under the public services and statutory authorities that shall apply this act (OSH Act, 1994). The objectives of OSH Act 1994 explained under Section 4 are as followed.

a) To secure the safety, health and welfare of persons at work against risks to safety or health arising out of the activities of persons at work

b) To protect persons at a place of work other than persons at work against risks to safety or health arising out of the activities of persons at work

c) To promote an occupational environment for person at work which is adapted to their physiological and psychological needs

d) 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.

The concept of school safety can be defined as the behaviour and practices that protect children and adults (Mastura, 2013). Mastura (2013) highlighted that the safety of children need a special concern because they have no sense at all about danger and the impacts from their action. In spite of that she also stated that school's environment or school's climate has a direct impact on people's well-being especially students. According to Seekamanya et al., (2016), safety is a concern about physical and emotional

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security. This concern is important to setting the physical that provide protection and minimizes the chances to be attacked or hurt. The United Nations Educational, Scientific and Cultural Organization (UNESCO) (2012) perceived safety as a school environment which children are safe from all types of hazards and risks. A safe school is one where teachers can teach and students can learn in a warm, encouraging, and nurturing environment without any threat and fear of violence occurring at any moment (Carbino, 2010).

In the recent past, there have been perpetual reports on violence, accidents and fire outbreaks across the schools in this country. Based on the survey among public, there is a growing perception that schools are not safe as they were before. Nevertheless, MOE had conducted one study on "Gangsterism in day school" and found 30% of secondary schools in Malaysia are threatened by gangsters. Out of 1641 schools, 459 have been classified as high-risk with Penang being the worst affected state (Kaur, 2009). Seekamanya et al., (2016) mentioned that learning and teaching cannot take place in the unsafe environment. Moreover, many researchers agreed that poor physical and psychosocial environment will gives bad impacts on student's achievements and well-being, as they affect teaching and creates barriers to learning (Edmondson et al., 2008).

According to the chairman of National Institute of Occupational Safety and Health (NIOSH) Tan Sri Lee Lam Thye through Astro Awani Online (2013), safety and health are of paramount importance in schools. Such accidents are unacceptable especially in schools where parents believe their children can be safe. In addition, the

application of the OSH Act 1994 to schools as places of work aims to make it safe and healthy for teachers, students and visitors. A fire incident happened in Malaysia in 1989 as showed in **Figure 2.6** and **2.7** can be an example of the importance of OSH implementation in schools. This accident caused 27 deaths and 6 students to suffer from severe burns and broken hips. As a learnt lesson, Astro had produced a true based telefilm titled "*Pondok Pak Ya*" by Wan Hasliza as the director in 2014. (Astro Awani Online, 2014)

Figure 2.6 and **2.7** Condition of SMA Taufiqiah Khairiat Al- Halimiah after fire

incident

(Astro Awani Online, 2014)

2.5.1. Safety in School Program

Recently, the national educations is eager to produce and equip the new generations with various discipline and knowledge in school especially in meeting the demand of vision 2020 of becoming a developed, industrialized and innovative country. Nurturing the OSH knowledge, skill and attitude should start earlier from school either elementary or secondary. Unfortunately in Malaysia they will know and hear about OSH once they get into the working world.

In order to reduce the statistic of accidents, provide OSH exposure as well as to foster safety culture among students, teacher, staff and visitors in the school, NIOSH make their effort with complement of MOE's initiative to make school safe for everyone by introducing and conducting the "Safety in School Program" in schools in Malaysia (The Star Online, 2016). The aims of this programme are as follow.

a) Ensure safety, health and welfare for those at work.
b) Protect the students against risk to safety and health in connection with the activities of persons at work.
c) Establish a safe and healthy working environment in schools including the office, laboratory, canteen, toilet, hostel, and fields.

Through this program, there are many aims that need to be fulfilled by all people in school such as teachers, students and staff as described in **Table 2. 3.**

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Table 2.3
Aims of safety in school program according to the target groups

TARGET GROUPS	AIMS
Teachers	a) Understand the OSH Act 1994 b) Establish the Safety and Health Committee to discuss all OSH related issues c) Understand the hazards identification, risk assessment and risk control (HIRARC) concept d) Learn on the usage of Personal Protective Equipment (PPE) e) Implement an OSH Management System (OSH-MS)
Staffs	a) Understand the workers' responsibility under the OSH Act 1994 b) Learn on developing the HIRARC c) Learn on the usage of PPE d) Experience the fire safety demonstration and fire drill practice
Students	a) Embrace the safety culture through these activities ✓ OSH quizzes ✓ Hazard Hunt (Identifying hazards) ✓ OSH poster competition ✓ Formation of OSH clubs in schools

(NIOSH, 2011)

Nowadays, there are many schools involved in "Safety in School Program" organized by NIOSH, educational institutions like Universiti Malaysia Pahang (UMP), Universiti Utara Malaysia (UUM), DOSH and many more agencies. This programme is also conducted by through collaboration with either public or private organization such as Fire and Rescue Department (BOMBA), Ministry of Health (MOH) and Malaysia Institute of Road Safety Research (MIROS) to ensure the effectiveness of the program as well as the achievement of the aims. **Figure 2.8** until **2.11** illustrated the "Safety in School Program" that has been conducted by some educational institutions.

Figure 2.8 and 2.9 Activities during "Safety in School Program" in Akademik
Tahfiz Al-Hidayah (ATAH)
(UUM, 2016)

Figure 2.10 and 2.11 Activities during "Safety in School Program" in Sekolah
Menengah Sains Sultan Haji Ahmad Shah (SEMSAS)
(UMP, 2016)

2.6   Accidents and Diseases in Educational Institutions In Malaysia

Recently, there are many accidents and diseases occurred in education institutions
in Malaysia that involved teachers, employees as well as students. A summary of several
accidents has been described in **Table 2. 4** based on newspaper articles.

Table 2. 4
A summary of several accidents in educational institutions

NO.	DATE	LOCATION	TYPE	DESCRIPTIONS	SOURCES
1	22/09/89	Guar Chempedak	Fire incident and fatality	Female dormitory in the school SMA Taufiqiah Khairiat Al-Halimiah (*Pondok Pak Ya*) was burned by candles while the students were studying at night. It is understood that the students were asleep and the candle used was totally melted and burned the mattresses. The fire incident has caused 27 deaths and 6 students to suffer severe burns and broken hips.	Astro Awani Online (2014)
2	26/09/08	Tanjung Karang	Building structure and fatality	A Form Five student of SMK Dato Harun died after being crushed by a wall of a reading room while studying with his two friends. The victim was pronounced dead on the way to hospital due to severe bleeding in the head.	Utusan Online (2008)
3	24/07/09	Shah Alam	Road accident	A total of 85% of the 9,586 schools in the country is considered as high risk schools because the students are exposed to road accidents. Until 2007 *Jabatan Kerja Raya* (JKR) had indicated a total of 507 accidents involving school students in the country. Among 330 cases of motorcycle, pillion 99 cases, 14 cases of bicycle and 64 cases involving pedestrians.	Utusan Online (2009)
4	04/11/09	Pasir Puteh	Fire and Explosion	A building block that houses two classrooms and a science laboratory at SMK Kamil was charred after two fire incidents on the same day. The second fire occurred as a result of either some chemicals were exposed to water or the weather is too hot on that day, causing an explosion and fire. The incident did not injure anyone but there was some damage to the school's property.	Bernama Online (2009)

Table 2. 4 *(Continued)*

NO.	DATE	LOCATION	TYPE	DESCRIPTIONS	SOURCES
5	01/02/16	Jasin	Died after falling	A student of the SRA Parit Penghulu Fortress, Sungai Rambai died after falling into a sewage tank while playing in the area. The victim had fallen with a male student but the student survived after clinging to the rod pipe in the hole. The tank was only covered by fiberglass containers only. The victim was pronounced dead after falling into the tank to a depth of 3.6 meters.	Berita Harian Online (2016)
6	27/02/16	Seremban	Suffocation	A Form Five student SM King George V was drowned while bathing in the school pool. The victim was swimming with 12 other students and a teacher found the victim to be unconscious when all of the other students rose from the pool.	Astro Awani Online (2016)
7	04/03/16	Tapah	Food poisoning	A total of 43 students and a teacher from SM Sains Tapah have suffered food poisoning after eating bread and chicken curry that believed to be contaminated in the school dining hall. All the victims were rushed to hospital after suffering vomiting, diarrhea and abdominal pain. This incident is the second case of food poisoning that occurred in this school but with different food operators.	Astro Awani Online (2016)
8	10/03/16	Ayer Molek	Slapped and threatened	A male teacher of physical education subjects was attacked and slapped by a father of the school student due to dissatisfaction with the teacher who slapped his five year old son. The teacher has lodged a police report immediately after the incident occurred.	Berita Harian Online (2016)

Table 2. 4 *(Continued)*

NO.	DATE	LOCATION	TYPE	DESCRIPTIONS	SOURCES
9	10/04/16	Tawau	Helicopter accident	A *Tentera Udara Diraja Malaysia* (TUDM) Nuri helicopter made an emergency landing at SMK Balung. The incident caused 22 people to be injured. The victims were 13 members of the TUDM, 8 students and a school cleaning worker.	Sinar Online (2016)
10	19/04/16	Kota Bharu	Died due to snakebites	A female student of SK 1 Datu Hashim was believed to be killed by a snake bite while playing with her friends during a break in the park area near the mini class. Once bitten, the student was believed to collapsed and lost consciousness. She was then taken to the Pengkalan Chepa clinic and pronounced dead.	Utusan Online (2016)
11	20/04/16	Rembau	Snakebites	A standard 2 student SK Chembong was believed fainted after being bitten by a snake while playing in the school field.	Sinar Online (2016)
12	27/04/16	Pasir Gudang	Snakebites	A student in the SK Kota Masai was bitten by a snake on the hands while he was in the toilet. However, there was no serious injury because the snake was not venomous.	Utusan Online (2016)
13	20/05/16	Seremban	Died due to physical accident	A student of Institute Alor Gajah Melaka died after he was crushed by three roadside electricity poles in City Park Acres, Region while installing electrical poles. The victim was laying down a pole using a crane. The other two poles were on the crane also fallen and struck the victim. The victim was pronounced dead at the scene	Kosmo Online (2016)

Table 2. 4 *(Continued)*

NO.	DATE	LOCATION	TYPE	DESCRIPTIONS	SOURCES
14	27/05/16	Bukit Mertajam	Chemical spillage	A total of 56 students of SMK Guar Perahu Beautiful were quarantined due to mercury spills in the classroom. The liquid was brought by one of the students from his home and he spilled it on the floor while they were playing in class.	Utusan Online (2016)
15	28/07/16	Kepala Batas	Chemical spillage	Two boys of standard five from SK Pokok Sena had to be quarantined immediately after allegedly touched the mercury thermometer that was broken. This was noticed by the laboratory assistant school after seeing the mercury spill on the floor	Kosmo Online (2016)
16	15/08/16	Bintulu	Fire	A dormitory block at SK Long Busang, Belaga scorched by fire caused by a short circuit. The firemen arrived late at the scene due to the location of schools is in a rural area. However the firemen managed to save 20% of the buildings from being further destroyed. Fire has caused documents and belongings destroyed but students did not have any injuries. This case is the second case happened in this school.	Utusan Online (2016)
17	29/08/16	Putrajaya	Died after falling	A Form Three student in SMK Precinct 9 (2) has died after falling from the third floor of the school building. The victim fell when he wanted to take his bag that was discarded by other students in his class at the of an edge adjacent building. The victim had jumped to take the bag but he could not stabilized himself and fell.	Berita Harian Online (2016)

Table 2. 4 *(Continued)*

NO.	DATE	LOCATION	TYPE	DESCRIPTIONS	SOURCES
18	01/09/16	Kuala Lumpur	Chemical spillage	Some teachers and staff of a private company of Sekolah Menengah Islam IQ were doing disposal of items and found a jar of 2.5 liters of nitric acid which was cracked and broken. No injury occurred as a result of the incident.	Bernama.com (2016)
19	28/09/16	Kota Bharu	Chemical spillage	A thermometer was broken and caused a mercury spill in a science lab of SMK Long Ghafar II when a group of students were doing an experiment in the laboratory. A student who inhaled the substances was taken to hospital for further treatment. The incident was brought under control and no injury or health effect occurred.	Sinar Harian (2016)
20	29/09/16	Labuan	Chemical spillage	Three students of SM Sains Labuan have suffered an injury due to the mercury spill after falling while they perform experiments in the school laboratory. A student was wounded in the eye, while another was wounded on the hand. Only the third students who experienced some irritation on the skin.	Bernama.com (2016)
21	13/10/16	Kota Bharu	Chemical spillage	A group of Form 1 students from SMKA Naim Lil Banat was anxious after a thermometer used by a student fell and caused mercury spill.	Harian Metro (2016)
22	18/10/16	Kota Bharu	Chemical spillage	A 20 year old laboratory assistant of SMK Zainab I was on duty before thermometer that he held fell on the floor. However, there was no injury and health effect caused by the incident.	Harian Metro (2016)

Table 2. 4 *(Continued)*

NO.	DATE	LOCATION	TYPE	DESCRIPTIONS	SOURCES
23	18/10/16	Machang	Chemical spillage	Two girls of SMK Sri Intan Kampung Pek were making their experiments before a thermometer fell and broke on the floor. However, there was no injury and health effects caused by the incident.	Harian Metro (2016)
24	18/10/16	Sabak Bernam	Punctured into the eye	A 6-year student at SK Khir Johari was stabbed with a pair of scissors while running art activities in the laboratory. He was believed to want to get up and run while carrying the scissors but hit the table leg and fell. Thus, impaling his own eyes.	Berita Harian Online (2016)
25	19/10/16	Kuala Terengganu	Food poisoning	A total of 62 students SMKA Sheikh Abdul Malik suffered from food poisoning after eating egg sandwiches in the hostel cafeteria.	Utusan Online (2016)
26	07/12/16	Gua Musang	Died due to physical accident	A male student of SMK Tengku Indra Petra 2 died after hitting goalposts while playing football with his 11 friends during the Physical Education subject. The incident occurred when the victim was trying to score, but he fell face down and crushed his head to the goalposts due to the slippery pitch. The victim was pronounced dead at the scene due to a severe head injury.	Astro Awani Online (2016)
27	09/01/17	Kinabatangan	Fire Incident	A dormitory building at SK Pekan Tongod was destroyed by a fire outbreak. However, there was no injury but it affected 61 students.	Berita Harian Online (2017)

Table 2. 4 *(Continued)*

NO.	DATE	LOCATION	TYPE	DESCRIPTIONS	SOURCES
28	08/02/17	Bandar Baru Bangi	Facility structure accident	Five students from SK Jalan 4 suffered minor injuries due to the debris of an unsound and dilapidated gazebo. They were rushed to the hospital for further treatment. Assistance was provided by the BOMBA after a call from the school.	Sinar Online (2017)
29	25/02/17	Jasin	Facility structure accident	A standard 2 student of SK Jasin was injured at the hand and waist when a wood wall of a classroom fell on him during an occurrence of strong wind. The wood wall was said measuring 1.5 meters by 2 meters width fell while the victim was walking alone near to the classroom. The victim was taken to the Jasin Hospital for further treatment.	Utusan Online (2017)
30	07/02/17	Maran	Fire Incident	A hostel in SMA Maran that put 73 girls was on fire. There was no injury and deaths occurred.	Berita Harian (2017)
31	24/05/17	Perak	Bully	Ten male students from MRSM Parit were suspended and some of them were transferred to other MRSM because they bullied six junior students for not allowing them to borrow their soccer shoes. The ten students beat up their juniors in the school area. All the bully victims made a police report after the incidents.	Harian Metro (2017)

2.7 Summary

In short, OSH issues in educational institutions should be given an upmost priority as in the industrial areas because the new generation who are exposed on the OSH issue at the early stages will contribute many improvement and benefit regarding OSH issues in the future. By identifying the awareness level on the causes of accidents and diseases is also one of the steps to foster safety culture in educational institutions. The related agencies including the government should provide better facilities and environments to people in the educational institutions such as teachers, employees and students. Most of accidents and diseases that happen among people in the educational institutions are caused by these three main factors which are human, behaviour and environment.

CHAPTER 3

METHODOLOGY

3.1 Introduction

This chapter explains the study area and the methodology of the study. Both elements are related in order to gain the accurate data by using specific method. Besides that, this chapter consists on how the study was carried out from the initial until the final process.

3.2 Research Framework

The research framework of this study involves three independent variables and one dependent variable as showed in **Figure 3.1.**
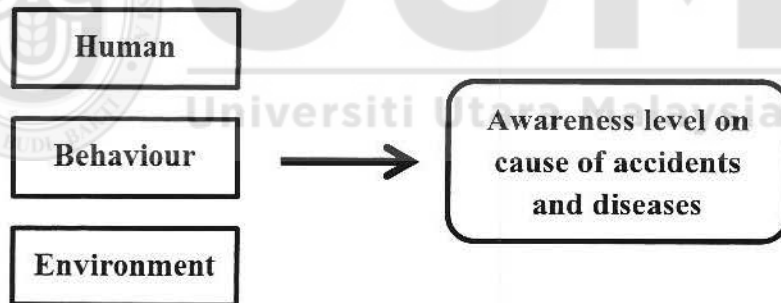
Figure 3.1: Research Framework

3.3 Research Design

Research design is the most important element to ensure the study progresses effectively by integrating several components to achieve the objectives of the study. In this study, the research design is divided into several parts which are the types of the study, sources of the data, unit of analysis and time horizon.

3.3.1   Types of the study

This study is a quantitative study that focuses on the survey research method.

3.3.2   Sources of the data

In order to gain the reliable data, this study has two types of sources to obtain the valid information which is primary and secondary data.

3.3.2.1   Primary data

The primary data for this study was obtained from the questionnaires that were distributed to the employees in the selected secondary schools in Sabak Bernam Selangor as the respondents. Besides that, informal interviews were done to guide the respondents when they were answering the questionnaires.

3.3.2.2   Secondary data

The information that comes from the journals, books, articles and other reading materials were also used to support this study. Besides that, the data and information that come from several agencies such MOE, JPS, PPD Sabak Bernam and others are known as secondary data.

3.3.3   Unit of analysis

The unit of analysis for this study is individual that is also called as respondents. The respondents for this study are the employees working in the selected secondary schools in Sabak Bernam Selangor. The characteristics of the respondents are they

must be a permanent employee and still in service with the selected secondary schools in Sabak Bernam Selangor.

3.3.4 Time horizon

This study was conducted in one shot time that is known as cross-sectional study. Besides that, the sampling process was also conducted during school holiday from May 2017 until June 2017. In this duration the target respondents have an ample time to fill up the form and give adequate response to this study.

3.4 Operational Definition

Accident is defined as an unplanned and uncontrolled event in which the action or reaction of an object, substance, person or radiation results in personal injury or the probability thereof. (Heinrich, 1931) In the context of this study, the definition of accident is the unplanned and uncontrolled events that occur in the school areas involving teachers, staff and students. Examples of accidents that happened in school are as listed following.

a) Slip, trip and fall

b) Road accidents

c) Natural disasters

d) Chemical spillage

e) Bully and fighting

f) Venomous animals

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Behaviour is defined as the acts or actions by individuals that can be observed by others. (Geller, 1994) Therefore, the behaviour that is used in this study is the actions and responses of teachers, staff and students when they manage the OSH issues like accidents, programme and others.

Disease is defined as any disease contracted as a result of an exposure to risk factors arising from work activity. (Ahmad Fitri, 2016) The disease in this study refers to any illness or sickness that is suffered by teachers, staff and students that is caused by factors in school area or school activities. Examples of diseases or illness that commonly happened in school are as listed below.

a) Dengue

b) Skin diseases

c) Hot fever

d) Slip disc and back pain

Employee is defined as the person who is employed for wages under contract of service on or in connection with the work of an industry (OSH Act, 1994) However, the people who are working permanently and still in service with the selected secondary schools are covered in this study as following.

a) Laboratory assistants

b) Teachers

c) Headmasters

d) Clerk

Environment is defined as the physical factors of the surroundings which include land, water, atmosphere, climate, sound, odour, taste, the biological factors of animals and

plants and the social factor of aesthetics. (EQA, 1974) The term environment that is used in this study focuses on the school area that consists of the following areas.

a) Field

b) Laboratory

c) Classroom

d) Library

e) Workshop

f) Office

Human is defined as the person who has ability, skill and knowledge in order to perform the task that was given properly. Hence, the definition of human that is used in this study is the ability, skill and knowledge of teachers, staff and students about OSH issues in school.

3.5   Operational Measurement of Variables

Operational measurement is used to measure the variables in the study. It is also used to guide the respondents to understand the meaning and objectives of each question. **Table 3.1** describes the operational measurement for each variable of this study.

Table 3.1

The operational measurement for each variable of this study.

LIST OF VARIABLES	ITEMS	OPERATIONAL MEASUREMENT OF ITEM VARIABLES
	1	I think the safety procedure can reduce the risk and hazard
	2	I understand what are the effect from each hazards
	3	I think safety instruction can increase safety awareness
	4	I understand the process of fire drill
	5	I understand medical checkup identifies any sign and symptoms of disease
Human	6	I understand all the element in OSH policy
	7	I think each of OSH committee member has his/her own responsibility
	8	I think OSH program can increase OSH awareness
	9	I think the physical activity is safer if conducted by a trained sports teacher
	10	I understand all teachers and staff must be fit to reduce accident

Table 3.1*(Continued)*

LIST OF VARIABLES	ITEMS	OPERATIONAL MEASUREMENT OF ITEM VARIABLES
	1	I understand the act of smoking in the laboratories should be reported immediately
	2	I understand the bite of venomous animals can cause fatality
	3	I think the rewards will increase the passion and enthusiasm of employee
Behavior	4	I realized accident can be prevented by advising people
	5	I understand the importance of guide and encouragement of safety awareness to officemate
	6	I understand meeting is one of mediums to discuss on OSH issues
	7	I understand that school is one of the workplaces that must comply OSHA 1994

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Table 3.1*(Continued)*

LIST OF VARIABLES	ITEMS	OPERATIONAL MEASUREMENT OF ITEM VARIABLES
	1	I understand that conducting physical session in the field during early morning is good
	2	I understand the optimum lighting will prevent dizziness
	3	I understand dusty condition can cause breathing problem
Environment	4	I understand noisy sound can cause hearing impairment
	5	I understand the messy workstation can cause slip, trip and fall
	6	I understand the broken mirror will causes injury
	7	I understand all people that used toilet should flush after they have used it

Table 3.1*(Continued)*

LIST OF VARIABLES	ITEMS	OPERATIONAL MEASUREMENT OF ITEM VARIABLES
Accident Causes	1	I think road accident can increase if the employers do not provide a traffic warden in front of school
	2	I think fire cannot be extinguished quickly if the fire equipment are not serviced regularly
	3	I think minor injury will happen if there is no appropriate SOP used
	4	I think the slip trip and fall always happen if the walkway area is damaged
	5	I think fire and explosion will happen if there is no budget allocate to repair the old and damaged wiring of school building
Disease Causes	1	I think dengue can be infected if the employers do not implement any precaution such as fogging regularly
	2	I think dirty canteen can cause diarrhea
	3	I think breathing problem can happened if they are not handle vaporize chemical in fumes cupboard
	4	I think dizziness and fatigue will happen when working near to the noisy main road area
	5	I think infectious disease will happened if there is no budget allocated for vaccine

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3.6   Instrumentation

Close-ended questionnaires were used in this study. The close-ended questionnaires are used to limit the respondents with a list of answer choices that are related to each question. Other than that, the questionnaire was divided into several sections as shown in **Table 3.2**.

Table 3.2
List of Section in Questionnaires

SECTION	LIST OF PARAMETER	NO. OF ITEMS
A	Demography	5
B	School Information	4
C	Factors	
	Human	11
	Behavior	7
	Environment	7
D	Accidents	5
	Diseases	5
	TOTAL QUESTIONS	**44**

The questionnaires was adapted from The Awareness Level of BBS in Construction Industry (Siti Nasyrah et al., 2015) and Level of Awareness in Behaviour-Based Safety (BBS) in Manufacturing Industry Towards Reducing Workplace Incidents (Rosliza et al., 2015), that have Cronbach's Alpha value as shown in **Table 3.3**.

Table 3.3
List of Cronbach's Alpha value based on previous study

LIST OF PARAMETER	CRONBACH'S ALPHA VALUE	NO.OF ITEMS
Human	0.978	33
Behaviour	0.981	24
Environment	0.965	15

The Cronbach's Alpha value was developed by Lee Cronbach in 1951 (Mohsen and Dennick, 2011) was used to determine the reliability of each item in questionnaires as shown in **Table 3.4**.

Table 3.4
The Cronbach's Alpha Value and internal consistency

CRONBACH'S ALPHA VALUE	INTERNAL CONSISTENCY
< 0.50	Unacceptable
0.60 – 0.50	Poor
0.7 – 0.6	Questionable
0.80 – 0.70	Acceptable
0.80 - 0.90	Good
≥ 0.90	Excellent

Furthermore, the questionnaires was modified into bilingual (Bahasa Malaysia and English) to ensure the understanding of respondents during the sampling process. **(Refer the Appendix B)**

In spite of that, the measurement scale that was used in the questionnaires was nominal scale for Section A while ordinal scale (5-point Likert scale) was used for others sections. The Likert scale that was use in this questionnaire is listed in **Table 3.5** and **Table 3.6**.

Table 3.5
List of Likert scale that use in questions Section C

SCORE/ SKOR	DESCRIPTION /*KETERANGAN*
1	Poor/*Tidak Tahu*
2	Intermediate/*Kurang Tahu*
3	Moderate/*Sederhana Tahu*
4	Good/*Tahu*
5	Excellent/*Sangat Tahu*

Table 3.6

List of Likert scale that use in questions Section D

LIKERT SCALE REFERENCE	
Reference */Rujukan*	Scale */Skala*
1	Highly disagree */Sangat tidak setuju*
2	Disagree */Tidak setuju*
3	Uncertain */Tiada pasti*
4	Agree */Setuju*
5	Highly Agree */Sangat setuju*

3.7   Data Collection

Data collection is a process of gathering information and data by using systematic steps that involved the respondents or samples. In this study, there are two significant parts of data collection which are sample size and sampling method.

3.7.1   Sample Size

The sample size of this study is based on the Krejcie and Morgan's equation (1970) that is shown as following.

$$s = \frac{X^2 N P (1-P)}{d^2 (N-1) + X^2 P (1-P)} \tag{3.1}$$

s *– Required sample size*
X^2 *– The chi-square value for 1 degree of freedom at the desired confidence level   (3.841)*
N *– Population size*
P *– Population proportion (0.50)*
d *– Degree of accuracy (0.05)*

Based on the statistic from PPD Sabak Bernam until February 2017, the total population of employees working in all selected secondary schools in Sabak Bernam

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Selangor is 518. The total of that population can be categorized in **Table 3.7**. Out of this population number, a total of 221 people were selected as respondents for this study.

Table 3.7
Total number of people who were working in all selected secondary schools in Sabak Bernam Selangor

LIST OF SMK	TOTAL POPULATION	PERCENTAGES (%)	TOTAL RESPONDENTS
SMK Ungku Aziz	155	29.92	66
SMK Munshi Abdullah	96	18.53	41
SMK Sungai Besar	158	30.50	67
SMK Seri Bedena	109	21.04	47
Total	**518**	**100**	**221**

(PPD Sabak Bernam, 2017)

3.7.2 Sampling Method

In this study, the respondents were selected by using quota stratified sampling method based on the percentages in **Table 3.7**. In order to distribute questionnaires to the government employees in the chosen secondary schools, an approval to the MOE, JPN and PPD Sabak Bernam was granted from the respective department such as Educational Planning and Research Division of Ministry of Education Malaysia (EPRD). The approval process took about two months before the data collection process began.

Moreover, 350 self-reported questionnaires were distributed to the respondents with the assistance of administration staff of secondary schools in Sabak Bernam Selangor. After one month distributing the questionnaires, only 221 completed questionnaires were returned through personal collection and all of them were valid for final data analysis.

3.8 Data Analysis

Data analysis is the process to interpret raw data that is collected to examine the objectives of this study. In this study, there are several tests that are used to analyze the raw data. In order to analyses data for this study, the Statistical Package for Social Science (SPSS) version 20.0 is used in these analyses.

3.8.1 Descriptive Analysis

The raw data in Section A (*Respondent Information*) and Section B (*School Information*) used descriptive analysis to identify the frequency and percentage of the demographic information. The mean score that was used to determine the level awareness on cause of accidents and diseases for this study was adapted from Moidunny (2009) study as shown in **Table 3.8**.

Table 3.8
The Mean Score Interpretation

MEAN SCORE	INTERPRETATION
1.00-1.80	Very Low
1.81-2.60	Low
2.61-3.20	Medium
3.21-4.20	High
4.21-5.00	Very High

3.8.2 Inferential Analysis

3.8.2.1 Correlation Test

The Pearson Correlation test was used to describe the relationship between the variables and the characteristic of the selected samples from the population. In order to integrate the relationship of correlation the Guilford's Rule of Thumb was used by using the five categories as shown in **Table 3.9.**

CHAPTER 4

RESULT AND DISCUSSION

4.1 Introduction

In this chapter, the collected data were presented by using the descriptive and inferential analysis for better interpretation of the raw data of the study. The descriptive analysis highlighted the demographic information of the respondents while the inferential analysis was used to fulfill the research objectives of this study by using the correlation and regression test.

4.2 Demographic Analysis

As **Table 4.1** shows the demographic information that is related to the respondents. The total respondents for this study are 221 employees who were working in the selected secondary schools in Sabak Bernam Selangor.

Out of 221 respondents, about 35.5% were 30 to 40 years old and majority were female (71%). Most of the respondents were a degree holder with approximately 70.6%. As expected the teachers (87.3%) are the highest number of respondent who participated and about 58.8% had worked more than 10 years. In spite of that, most of the selected schools are consisted of more than 900 people except for SMK Munshi Abdullah. The number of accidents and diseases happened in school was less than 5 times (64.3%) while the most type of hazard prone were mainly physical (75.6%) and psychosocial (14.5%).

Table 4.1

The demographic information of respondents

CHARACTERISTIC	FREQ.	PER. (%)	CHARACTERISTIC	FREQ.	PER. (%)
Age			**Name of school**		
20 years old and below	-	-	SMK Ungku Aziz	66	29.9
20-30 years old	48	21.7	SMK Munshi Abdullah	41	18.6
30-40 years old	78	35.3	SMK Sungai Besar	67	30.3
40-50 years old	56	25.3	SMK Seri Bedena	47	21.3
51 years old and above	39	17.6			
			Total population in school		
Gender					
Male	64	29.0	Less than 500 orang	-	-
Female	157	71.0	501-700 people	-	-
			701-900 people	41	18.6
Education Level			More than 901 people	180	81.4
PMR/SPM/STPM/STAM	18	8.1			
Diploma, Certificate	10	4.5	**Number of accidents and/or disease which occurred in school**		
Degree	156	70.6			
Master Degree	36	16.3			
Doctor of Philosophy (PHD)	1	0.5	Never	24	10.9
			Less than 5 times	142	64.3
			6-10 times	37	16.7
Type of designation			More than 10 times	18	8.1
General and technical employee	13	5.9			
Administration employee	15	6.8	**Type of hazard prone**		
Teacher	193	87.3	Physical	167	75.6
			Biological	9	4.1
			Chemical	11	5.0
Period of working experiences			Ergonomic	2	0.9
			Psychosocial	32	14.5
Less than one year	22	10.0			
1-5 years	27	12.2			
6-10 years	42	19.0			
Over 10 years	130	58.8			

n = 221

4.3   Reliability Analysis

The reliability analysis of each variable for this study is illustrated in **Table 4. 2.**

Table 4.2
The reliability analysis of each variable

LIST OF VARIABLES	CRONBACH'S ALPHA	NO OF ITEM
Human	0.966	11
Behaviour	0.970	7
Environment	0.959	7
Awareness Level	0.949	10
ALL	0.972	35

According to the above table, the behaviour is the most excellent of reliability result among others variables approximately 0.970 that represent 7 questions. However, the human, environment and cause of accidents and diseases are categorized in excellent in reliability test when their values are 0.966, 0.959 and 0.949 respectively. The number of questions for these three factors are 11,7 and 10. Zikmund (2003) also stated that if the values are near to +1.00 the items in the questionnaires are reliable to use.

4.4 Result

4.4.1. Descriptive Statistic - The Awareness Level *(RO 1)*

Table 4.3

The Mean Score of the Awareness Level on Cause of Accidents and Diseases

LIST OF VARIABLES	MEAN	STD. DEVIATION
Human	3.22	.933
Behaviour	3.36	.989
Environment	3.49	.994
Awareness Level	4.06	.763

Table 4.3 summarizes the mean score of all variables for this study. It shows the environmental factor has the highest mean which is 3.49 and standard deviation 0.994 among the two others factors that contributed to the awareness level on cause of accidents and diseases. The mean of human and behavioural factors for this study are 3.22 (SD=0.933) and 3.36 (SD=0.989) respectively. However, the mean of three factors are still classified as high based on the mean score interpretation table in **Table 3.8**.

In short, the awareness level on cause of accidents and diseases among employees in selected secondary school for this study is 4.06 (SD=0.763) that is also classified as high based on the Mean Score Interpretation Table.

4.4.2. Pearson Correlation Test

Table 4.4

Pearson Correlation between human, behavioural and environmental factors and awareness level on cause of accidents and diseases

		H	B	E	AL
HUMAN	Pearson Correlation	1			
	Sig.(2-tailed)				
	N	221			
BEHAVIOUR	Pearson Correlation	$.866^{**}$	1		
	Sig.(2-tailed)	.000			
	N	221	221		
ENVIRONMENT	Pearson Correlation	$.773^{**}$	$.824^{**}$	1	
	Sig.(2-tailed)	.000	.000		
	N	221	221	221	
AWARENESS LEVEL	Pearson Correlation	$.297^{**}$	$.300^{**}$	$.347^{**}$	1
	Sig.(2-tailed)	.000	.000	.000	
	N	221	221	221	221

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

4.4.2.1. Human *(RO 2)*

The second research objective is to investigate the relationship between human factors and the awareness level on cause of accidents and diseases among employees working in the selected schools. From the data in **Table 4.4,** it is apparent that the human factor has 0.297 correlations with the awareness level on cause of accidents and diseases. This shows that it is a weak relationship but there is still positive correlation. Plus, the relationship is significant because the p-value 0.000 is less than the alpha level at 0.01. The correlation between human and other dependent variable (behavior and environment) is about 0.866 and 0.773 respectively. It shows a strong relationship among them.

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4.4.2.2. Behaviour *(RO 3)*

The third research objective is to investigate the relationship between behavioural factors and the awareness level on cause of accidents and diseases among employees working in the selected schools. At 0.01 level of significant, the human factor has positive correlation (0.300) with a significant level 0.000 (p-value <0.01) as illustrated in **Table 4.5**. Plus, the correlation between behavioral and environmental factors is classified as a strong relationship with coefficient 0.824.

4.4.2.3. Environment *(RO 4)*

The fourth research objective is to investigate the relationship between environmental factors and the awareness level on cause of accidents and diseases among employees working in the selected schools. From **Table 4.6**, it can be seen that this factor has the most significant relationship between the other two relationships with the dependent variable that is 3.47. This positive correlation is a significant level at p-value 0.000 is less than the alpha level at 0.01.

4.4.3. Multiple Linear Regression Test

Table 4.5
The coefficient of multiple linear regression test

MODEL	STANDARDIZED COEFFICIENTS[a]	t	SIG.
	B		
Constant		16.616	.000
Human	.081	.619	.536
Behaviour	-.014	-.097	.923
Environment	.296	2.581	.010

a.Dependant variable : Awareness Level

Table 4.5 clearly describes the beta of environment is the best among the other with the value 0.296 with significant 0.010. The human and behavioral factors obtain the value of beta of 0.81 and -0.14. In addition, both factors also do not have significant relation with approximately 0.536 and 0.923 respectively.

Table 4.6
The Model Summary of Multiple Linear Regression Test

MODEL	R	R SQUARE	ADJUSTED R SQUARE	STD. ERROR OF THE ESTIMATE
1	.350[a]	.123	.110	.71955

a.Dependant variable : Constant, Human, Behaviour, Environment

By referring to **Table 4.6**, the value of R is 0.350. The R value is the correlation coefficient between dependent and independent variables that were taken together. It shows that there is a positive and low correlation between dependent (awareness level on cause of accidents and diseases) and independent variables (human, behaviour and environment).

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In addition, the R square is indicates the percentages of independent variables that can influence the variation in dependent variable. Through this study, it is found that the independent variables (human, behaviour and environment) can influence 12.3% of the variations to the dependent variable (awareness level on cause of accidents and diseases). In short, there is almost 87.7% which is cannot be explained in this study. Other than that, there are other additional variables that are more important in explaining awareness level on cause of accidents and diseases that have not been considered in this study.

4.5   Discussion

4.5.1.   The Awareness Level *(RO 1)*

Based on the finding of this study, the first research objective was completed by obtaining the high range of awareness level on cause of accidents and diseases with the mean value approximately 4.06. Even though the awareness level is classified as high the improvement of OSH should be considered to ensure the sustainability of safety culture in educational institutions. This mean value shows that the employees working in the selected schools in Sabak Bernam have high awareness level on cause of accidents and diseases that is clearly influenced by the environment factors instead of the human and behavioural factors. They are quite aware with any hazards and risk at their working environment that might be physical, biological, chemical, ergonomic or psychosocial hazards. In Funmilola et al.'s study (2014), they found almost 58.5% of awareness level from their respondent towards the occupational hazards. In spite of that, about 85% of

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accidents are happened because of the low awareness level of employer to provide OSH program for their employees. (Mohd Yusof, 2000). Mazliah (2012) indicated that awareness level could also reduce the cost of accidents and diseases directly that is covered by employers. Besides that, Abd Aziz and Intan (2002) agreed that the cost that supposedly spend after accident could be allocated to the OSH programs cost if the number of accidents can be reduce because of the awareness.. They said the prevention of accidents is better than paying the cost of accidents. Furthermore Catherie (2003) stated that there are cases like falling, choking and food poisoning involving children in the nursery. This is happens because of the low awareness of nursery owner to provide better facilities and procedure for the children.

4.5.2.   Human *(RO 2)*

In response to the second research objective that is related to the human factor, it is found that there is a low significant of influence between human factors and awareness level on cause of accidents and diseases among employees in selected school in Sabak Bernam. The correlation shows the low significant with value of about 0.297. This means human factor is not important to increase the awareness level on cause of accidents and diseases. However, there are many theories of accidents and diseases causation which found the human factors is one of the factors of accidents and diseases happened as summarized in **Table 4.7**.

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Table 4.7

The Human Factors that Consist in Theories of Accidents and Diseases Causation

THEORIES OF ACCIDENT AND DISEASES CAUSATION	ELEMENTS THAT RELATED TO THE HUMAN FACTORS
Heirich Domino Theory	Fault of Person
Human Factor Theory	Overload
Accident and Incident Theory	Overload
Epidemiology Theory	Situational Characteristic –Peer Pressure

Based on the above table, the elements that are related are highlighting human factors as the cause of accident which specifically mentioned about one's ability, knowledge, condition and so on. In Saurin et al., (2008) highlighted that most accidents occurred due to human errors, improper interaction of human and machine and organizational faults. In order to related with this study, the ability, knowledge and skill of teacher, staff and students about OSH issues is low significant to increase the awareness level towards accidents and diseases causes because the main factor of accidents and diseases is contribute by human themselves.

4.5.3. Behaviour *(RO 3)*

According to the finding, the relationships of behavioural factors and awareness level on cause of accidents and diseases among employees in selected schools in Sabak Bernam fulfilled the third research objectives in this study. The correlation for the significant is 0.300. It means that the behavioural factors has low significant to influence the awareness level on cause of accidents and diseases. Toole (2002) stated that occupational accidents occur either due to lack of means to carry out the task safely, a lack of knowledge or training, lack of management,

or alternatively, due to an error of judgment, carelessness, apathy or downright recklessness. In addition, Fleming (2001) found approximately 80% of accidents is contribute from the human behaviour. He added by changing the behaviour of employees is does not mean that the human will change but it will change their environment towards the prevention of accidents. Therefore, the significance of behaviour factors is the second highest after the environmental factors that influence the awareness level on cause of accidents and diseases. Moreover, **Table 4.8** emphasizes the elements that are related to the behavioural factors in most of theories of accidents and disease causation.

Table 4.8
The Behavioural Factors that Consist in Theories of Accidents and Diseases Causation

THEORIES OF ACCIDENT AND DISEASES CAUSATION	ELEMENTS THAT RELATED TO THE BEHAVIOUR FACTORS
Heirich Domino Theory	Unsafe Act
Human Factor Theory	Inappropriate Response
Accident and Incident Theory	Decision to Err
Epidemiology Theory	Situational Characteristic - Attitude

4.5.4. Environment *(RO 4)*

Returning to the forth research objective that was mentioned at the beginning of this study, the relationship between environmental factors and awareness level on cause of accidents and diseases among employees in selected schools in Sabak Bernam is about 3.47. Despite, the value is classified as weak significant but it is the highest among the other factors (human and behaviour). Hence, the environmental factor is most contributing factor that increases the awareness level on cause of accidents and diseases. Theories of accidents and

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diseases causation also consist of environmental factors to predict the accidents and diseases causation as illustrated in **Table 4.9**.

Table 4.9

The Environment Factors that Consist in Theories of Accidents and Diseases Causation

THEORIES OF ACCIDENT AND DISEASES CAUSATION	ELEMENTS THAT RELATED TO THE ENVIRONMNT FACTORS
Heirich Domino Theory	Social Environment Ancestry
Human Factor Theory	Overload - Environment
Accident and Incident Theory	Ergonomic Traps –Workstation
Epidemiology Theory	Pre-dispositional Characteristics – Environment

The examples of environmental factors that influence the accidents and diseases in the school are uneven floor, open pits at walkway, poor sanitation facilities, natural disaster and so on. However, the significance between environmental factors and awareness level on cause of accidents and diseases for this study was quite high compared to the others. This might be because of the hazards that are related to the environments can be recognized by most people in the school. Hence they will immediately take any preventive and corrective action to encounter the hazards.

4.6   Summary

As to sum up the main findings and of the discussion provided in this chapter, the awareness level on causes accident and diseases was determined in high range of mean which is 4.06. Moreover, the environmental factor is the most significant factor compared to human and behavioural factors to influence the awareness level. These three factors have similarity with the elements in most of theories of accidents and diseases causation. On the other hand, there are only 12.3% of independent variables that can influence the dependent variable for this study.

CHAPTER 5

CONCLUSION AND RECOMMENDATION

5.1   Introduction

This chapter presents the summary of this study including the conclusion drawn, the recommendation made as well as the suggestion for future research as an outgrowth of this study.

5.2   Conclusion

5.2.1. The Awareness Level

Overall, the awareness level on cause of accidents and diseases among employee in selected secondary school in Sabak Bernam is quite high with the mean value of 4.06. It shows that most of the employees are aware about hazards and risks when they are working. Based on this study, the finding indicates that they are aware about the OSH importance in the workplace in order to prevent any incidents and accidents.

5.2.2. Human

The findings on the relationship between human factors and the awareness level on cause of accidents and diseases among employee in selected secondary schools in Sabak Bernam is low significant but still show positive relationship (r=2.97 p-value=0.000). This is because the employees participated and attended

the same OSH programs and training every year. Therefore, the management of school should improve the skill, knowledge and ability of employee regarding the OSH issues and practices in order to foster the safety culture in educational institutions

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5.2.3. Behaviour

The relationship between behavioural factors and the awareness level on cause of accidents and diseases among employee in the selected secondary schools in Sabak Bernam also shows low significant but it still indicates positive relationship (r=3.00 p-value=0.000). Thus, the improvement should be taken to educate the employees to behave on safety and health practices.

5.2.4. Environment

Last but not least, the relationship between behavioural factors and the awareness level on cause of accidents and diseases among employees in the selected secondary schools in Sabak Bernam is positive relationship but low significant (r=3.47 p-value=0.000) based on the rule of thumb. However, the environmental factors correlation is highest among the human and behaviour.

5.3   Recommendation

Due to the results that have been discussed based on facts and figures, there are some recommendations to ensure a better improvement of OSH issues in the schools for in the future.

5.3.1. Organize and participate in OSH program actively

The management of school should organize the OSH program for their teachers, staff and students to increase their awareness level towards the risk and hazards in their surrounding that might cause accidents and incidents. Commonly, the schools in Malaysia must conduct a fire drill twice per year that involve all people who are in the school area. According to the Liu Hy (1993) and Tsai (1995), the employees that do not have OSH knowledge and do not participate in OSH program is a group of employee that have five times risk to get injured compared to the group of employees that participate the OSH program. Therefore, the management of schools should take any initiative to organize the other OSH program that can be collaborated with the related agencies such as DOSH, NIOSH, universities that offer the OSH programs to expose the OSH issues in the school.

5.3.2. Enforcement of OSH Act 1994 in Government Agencies and Public Services

In Malaysia, OSH Act 1994 is compulsory to be applied or practiced in any workplace except on board ships and armed forces. The industries that have listed to implement this Act include public services and statutory authorizes such as educational institutions. Traditionally, the private sectors are most concern about OSH regulations and legislations instead of the public sectors. Hence, this perspective should be changed to ensure the enforcement of OSH Act 1994 in public sectors is also implemented like the private sectors. The most important

part of this new implementation is to set up the document that is related to OSH in school. For example, any accidents and diseases that happened in school must be reported to the DOSH with the effective corrective and preventive actions. Under OSH Act 1994 Section 15(c), the duty of employers is to provide the adequate information, instruction, training, and supervision to ensure the safety and health of employees in the workplace. Therefore, this act is needed to improve the OSH issue in the workplace especially in the educational institutions.

5.3.3. Assign the competent person to manage and monitor OSH issue in educational institutions

In order to manage and monitor the OSH issues in the school, a safety and health officer with a valid green book should be assigned in the educational institutions instead of giving the OSH responsibility to the clerk or teacher of the school. This competent person is more understanding and knowledgeable to handle this kind of OSH issues in the school. For instance the OSH program and training can be managed and organized as well as the maintenance of emergency equipment like first aid boxes and fire protection equipment. Besides that, the OSH documents such as accidents and diseases reports, risk assessment and OSH audit and inspection could be handling by the competent person. Based from Mohd Yusof's findings (2000), 85% of employers are not concerned about OSH issue in the workplace. Thus, by assigning a competent person that is responsible

to manage OSH issues the employers will easy monitor the OSH management in the workplace.

5.3.4. Provide and maintain the facilities and emergency equipment in school area

The management of school must provide and ensure adequate facilities and emergency equipment in the school area. For example, the fire protection equipment such as fire extinguishers, fire alarm, hose reel and fire hydrant must be well maintained. On the other hands, the people in the school area must be given responsibility to maintain the facilities and emergency equipment in the school area. They are not allowed to do any vandalism with the facilities in the school. Instead of providing better and safer facilities, the competent person or management of school also should play their role in conducting regular inspections or audit in the workplace. As mentioned in Mohd Yusof's study (2000), the employers or management that does not conduct any inspection in the workplace will have high risk to have accidents and injury.

5.4   Suggestion for Future Research

According to this study, there are some suggestions for better improvement that should be considered for the future research.

5.4.1. Investigate the other potential factors that contribute to the awareness level on cause of accidents and diseases

Based on the R square value in findings, the factors that are used in this study have a weak significant with the dependent variable. Hence, the other potential factors should be identified and use to indicate the awareness level on cause of accidents and diseases.

5.4.2. Expand the survey to the other population of educational institutions in Malaysia

In this study, the respondents were from four secondary schools in Sabak Bernam. Therefore, the future research can expand the study to other population of educational institutions in Malaysia. A different population might give different findings plus it will help the MOE to take OSH issues in schools in Malaysia more seriously.

5.4.3. Plan the duration of study in order to obtain approval from the respective authority

There is a need to plan the duration of study because this kind of study needs to obtain the approval from the respective authority such as MOE, JPN and related schools. This process takes quite a long period to conduct the data collection. For instance, this study took about two months to get the approval for data collection from MOE.

5.5 Summary

Overall, the research objectives of this study have been achieved even though most of the relationship between all factors and the dependent variables are weak significant. However the high awareness level on cause of accidents and diseases is obtained in this study. In order to improve the findings in the real situations, the respective authority like MOE, JPN, PPD as well as the management of school must play their roles in implement the recommendation that was discussed in this chapter. Hence, the subsequent research must fill in the loopholes of study by implement the suggestions that have been highlighted.

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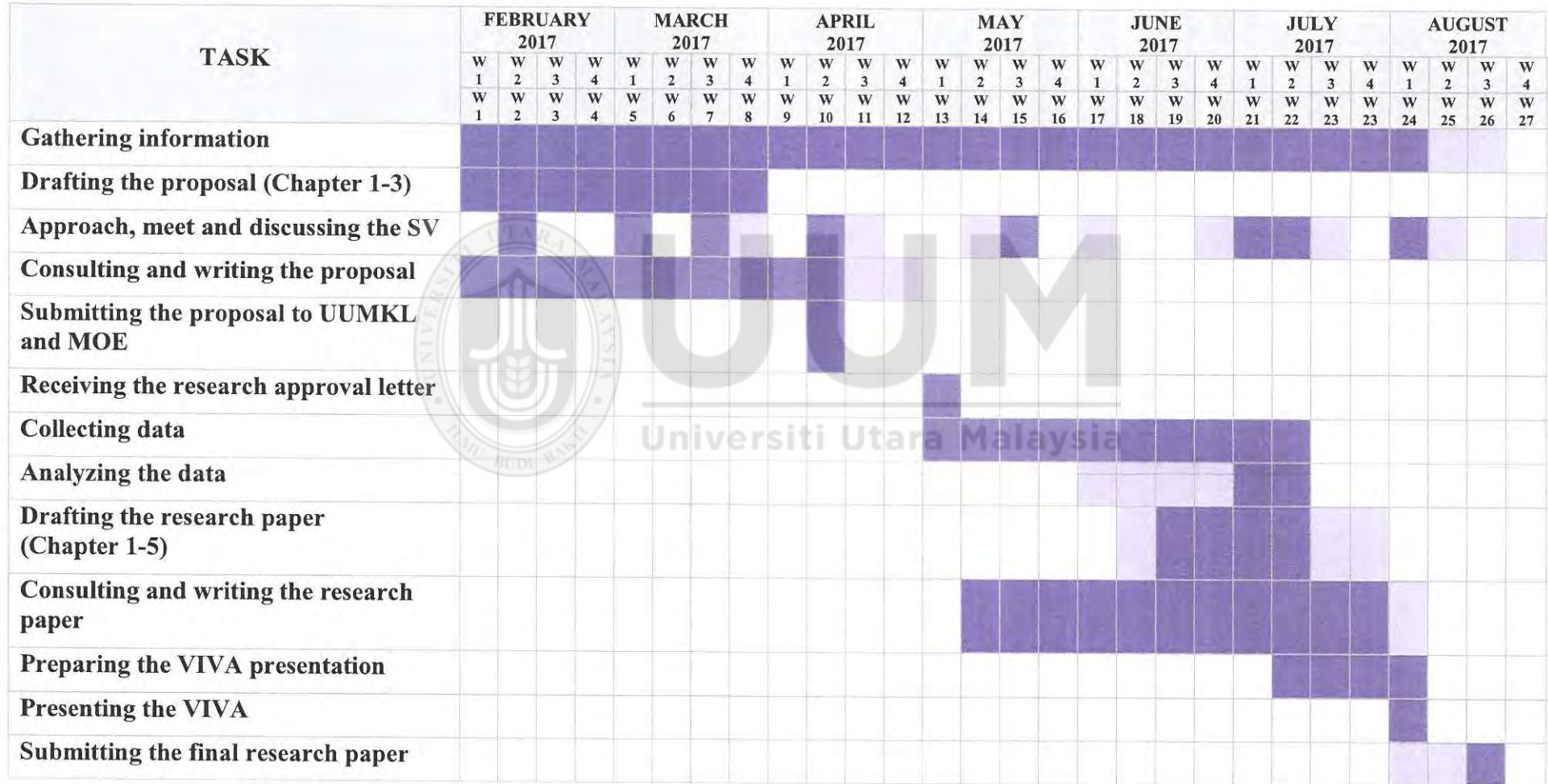Utusan Online. (2016). *Murid Tahun 1 Maut Dipatuk Ular Di Sekolah.* Retrieved from http://www.utusan.com.my/berita/nahas-bencana/murid-tahun-1-maut-dipatuk-ular-di-sekolah-1.277624

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APPENDIX A

GANTT CHART OF DETERMINING THE AWARENESS LEVEL ON CAUSE OF ACCIDENTS AND DISEASES IN SELECTED SECONDARY SCHOOLS IN SABAK BERNAM SELANGOR

TASK	FEBRUARY 2017				MARCH 2017				APRIL 2017				MAY 2017				JUNE 2017				JULY 2017				AUGUST 2017			
	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4
	W1	W2	W3	W4	W5	W6	W7	W8	W9	W10	W11	W12	W13	W14	W15	W16	W17	W18	W19	W20	W21	W22	W23	W23	W24	W25	W26	W27
Gathering information																												
Drafting the proposal (Chapter 1-3)																												
Approach, meet and discussing the SV																												
Consulting and writing the proposal																												
Submitting the proposal to UUMKL and MOE																												
Receiving the research approval letter																												
Collecting data																												
Analyzing the data																												
Drafting the research paper (Chapter 1-5)																												
Consulting and writing the research paper																												
Preparing the VIVA presentation																												
Presenting the VIVA																												
Submitting the final research paper																												

Legend:
- ■ Done
- ■ Plan

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DETERMINING THE AWARENESS LEVEL ON CAUSES OF ACCIDENTS AND DISEASES IN SELECTED SECONDARY SCHOOLS IN SABAK BERNAM, SELANGOR

KAJIAN BAGI MENENTUKAN TAHAP KESEDARAN TERHADAP PENYEBAB KEMALANGAN DAN PENYAKIT DI SEKOLAH MENENGAH YANG TERPILIH DI SABAK BERNAM, SELANGOR

Othman Yeop Abdullah Graduate School of Business

Universiti Utara Malaysia

EXECUTIVE SUMMARY

The purpose of this questionnaire that distribute to the employees working in the secondary schools in Sabak Bernam, Selangor is to determine the awareness level on cause of accidents and diseases among them. The information collected from this questionnaires distribution can be used to identify the most significance factors that contribute to the accidents and diseases such as human, behaviour and environment and awareness level on cause of accidents and diseases in secondary schools in Sabak Bernam, Selangor. The questionnaires output also give benefits to the government authorities such as Malaysia Ministry of Education (MOE), *Jabatan Pendidikan Selangor* (JPS), *Pejabat Pendidikan Daerah* (PPD) Sabak Bernam and others as it gives the updated information on awareness level in schools as a baseline data to take further action in order to improve the safety performance as well as to reduce the accidents and diseases statistics in education institutions in Malaysia. Lastly, the collected data can be used for reference for anyone who interested to study this topic.

Thank you

RINGKASAN EKSEKUTIF

Tujuan soal selidik ini diedarkan kepada orang yang bekerja di sekolah menengah di Sabak Bernam Selangor adalah untuk menentukan tahap kesedaran terhadap penyebab kemalangan dan penyakit dalam kalangan mereka. Maklumat yang dikumpul daripada pengedaran soal selidik ini boleh digunakan untuk mengenalpasti kepentingan faktor yang menyebabkan kemalangan dan penyakit seperti manusia, tingkahlaku dan persekitaran dan tahap kesedaran terhadap penyebab kemalangan dan penyakit di sekolah-sekolah tersebut. Maklumat yang dikumpul juga memberi manfaat kepada agensi-agensi kerajaan yang berkaitan seperti Kementerian Pendididkan Malaysia (KPM), Jabatan Pendidikan Selangor (JPS), Pejabat Pendidikan Daerah (PPD) Sabak Bernam, dan lain-lain kerana ia memberi maklumat terkini mengenai tahap kesedaran tersebut di sekolah sebagai asas tindakan selanjutnya bagi meningkatkan prestasi keselamatan dan juga untuk mengurangkan statistik kemalangan dan penyakit di institusi pendidikan. Akhir sekali , data yang dikumpul boleh digunakan untuk rujukan untuk sesiapa sahaja yang berminat untuk mengkaji topik ini.

Terima kasih

INSTRUCTIONS: This questionnaire consists of eight (8) pages. Please read the questions carefully before answering them.

ARAHAN: Soal selidik ini terdiri daripada lapan (8) muka surat . Sila baca soalan dengan teliti sebelum menjawab.

SECTION A: RESPONDENT INFORMATION
SEKSYEN A: MAKLUMAT RESPONDEN
(Objective: To identify the socio-demographic of employees)

Instruction: Please choose one for the answer for each question by (X) the chosen answers

Arahan: Sila pilih satu jawapan sahaja bagi setiap soalan dengan (X) jawapan pilihan.

1. **Age/*Umur*:**
   - [ ] 20 years old and below /*20 tahun dan ke bawah*
   - [ ] 21-30 years old /*20-30 tahun*
   - [ ] 31-40 years old /*30-40 tahun*
   - [ ] 41-50 years old /*40-50 tahun*
   - [ ] 51 years old and above /*51 tahun dan ke atas*

2. **Gender/*Jantina*:**
   - [ ] Male/*Lelaki*
   - [ ] Female/*Perempuan*

3. **Education level/*Tahap pendidikan***
   - [ ] PMR/SPM/STPM/STAM
   - [ ] Diploma, Certificate /*Diploma, Sijil*
   - [ ] Degree/*Ijazah Sarjana Muda*
   - [ ] Master Degree /*Ijazah Sarjana*
   - [ ] Doctor of Philosophy (PHD)/*Ijazah Kedoktoran*

4. **Type of designation/*Jenis pekerjaan***
   - [ ] General and technical employee/ *Pekerja am dan teknikal*
   - [ ] Administration employee/ *Pekerja pentadbiran*
   - [ ] Teacher /*Guru*

5. **Period of working experiences/*Tempoh pengalaman bekerja***
   - [ ] Less than one year /*Kurang dari setahun*
   - [ ] 1-5 years /*1-5 tahun*
   - [ ] 6-10 years /*6-10 tahun*
   - [ ] Over 10 years /*Lebih 10 tahun*

Instruction: Please choose one for the answer for each question by (X) the chosen answers
Arahan: Sila pilih satu jawapan sahaja bagi setiap soalan dengan (X) jawapan pilihan.

1. **Name of school/***Nama sekolah*

   ☐ SMK Ungku Aziz
   ☐ SMK Munshi Abdullah
   ☐ SMK Sungai Besar
   ☐ SMK Seri Bedena

2. **Total population in school/** *Jumlah populasi di sekolah*

   ☐ Less than 500 people */kurang dari 500 orang*
   ☐ 501-700 people/*501-700 orang*
   ☐ 701-900 people/*701-900 orang*
   ☐ More than 901 people/*lebih dari 901 orang*

3. **Number of accidents and/or disease which occurred in your school/** *Bilangan kemalangan dan/atau penyakit yang telah berlaku di sekolah anda.*

   ☐ Never/*Tidak pernah*
   ☐ Less than 5 times/*Kurang dari 5 kali*
   ☐ 6-10 times/*6-10 kali*
   ☐ More than 10 times/*Lebih dari 10 kali*

4. *Type of hazard prone/Jenis bahaya yang kerap terdedah di sekolah*

   ☐ Physical/*Fizikal*
   ☐ Biological/*Biologikal*
   ☐ Chemical/*Kimia*
   ☐ Ergonomic/*Ergonomik*
   ☐ Psychosocial/*Psikososial*

Instruction: Please choose one for the answer for each question by give the appropriate score

Arahan: Sila pilih satu untuk jawapan untuk setiap soalan dengan memberikan nilai yang sesuai

SCORE/*SKOR*	DESCRIPTION/*KETERANGAN*
1	Poor/*Tidak Tahu*
2	Intermediate/ *Kurang Tahu*
3	Moderate/ *Sederhana Tahu*
4	Good/ *Tahu*
5	Excellent/ *Sangat Tahu*

HUMAN/*MANUSIA*		
NO	**ITEM/*PERKARA***	**SCORE/ SKOR**
1.	Comply the safety operating procedure / *Mematuhi prosidur kerja selamat*	
2.	Identify hazards in the workplace /*Mengenalpasti bahaya yang terdapat di tempat kerja*	
3.	Comply the employer's instructions that related to OSH/*Mematuhi arahan majikan yang berkaitan dengan KKP*	
4.	Participate in OSH training provided by employer /*Menghadiri latihan KKP yang disediakan oleh majikan*	
5.	Conduct the continuous medical surveillance / *Melakukan pengawasan perubatan yang berterusan*	
6.	Formulate the OSH policy / *Menggubal dasar KKP*	
7.	Establish the OSH committee in workplace / *Menubuhkan Jawatankuasa KKP di tempat kerja*	
8.	Participate in OSH programme organised by employer/ *Menghadiri aktiviti KKP yang dijalankan oleh majikan*	
9.	Ensure the competent person are conduct the high risk task/ *Memastikan pekerja yang mahir menjalankan tugas yang berisiko tinggi*	
10.	Ensure all employees are fit to work/*Memastikan semua pekerja layak untuk bekerja*	
11.	Formulate the OSH objectives in workplace/*Menggubal objektif KKP di tempat kerja*	

BEHAVIOUR/*TINGKAHLAKU*		
NO	**ITEM/*PERKARA***	**SCORE/ SKOR**
12.	Report any unsafe act even without any incentive/ *Melaporkan sebarang tindakan tidak selamat walaupun tanpa insentif*	
13.	Report any unsafe condition even without any incentive /*Melaporkan sebarang keadaan tidak selamat walaupun tanpa insentif*	
14.	Provide rewards for any OSH improvement and development / *Memberi penghargaan bagi setiap peningkatan dan pembangunan KKP*	
15.	Advise other employees regarding unsafe act and condition in workplace/*Menasihati pekerja lain mengenai tindakan dan keadaan tidak selamat di tempat kerja*	
16.	Guide other employees towards OSH improvement/ *Membimbing pekerja lain ke arah peningkatan KKP*	
17.	Implement the effective communication in managing OSH issues/*Melaksanakan komunikasi yang efektif dalam menangani isu KKP*	
18.	Comply the current OSH legislation/ *Mematuhi perundangan KKP yang terkini*	

ENVIRONMENT/*PERSEKITARAN*		
NO	**ITEM/*PERKARA***	**SCORE/ SKOR**
19.	Conduct the outdoor activities during good weather/ *Menjalankan aktiviti luar kelas ketika cuaca baik*	
20.	Use the optimum lighting during indoor activities/ *Menggunakan cahaya yang optimum semasa aktiviti dalam kelas*	
21.	Exposed with dusty condition/*Terdedah dengan keadaan yang berhabuk*	
22.	Exposed with high noise area/*Terdedah dengan keadaan yang bising*	
23.	Implement the good housekeeping/*Mengamalkan amalan pengemasan yang baik*	
24.	Repair or replace any damages and faulty equipment and facilties immediately/ *Baiki atau tukar sebarang kerosakan alatan dan kemudahan dengan segera*	
25.	Provide the clean and hygiene washroom and canteen/*Menyediakan bilik air dan kantin yang bersih dan higien*	

Instruction: Please choose one for the answer for each question by give the appropriate score

Arahan: Sila pilih satu untuk jawapan untuk setiap soalan dengan memberikan nilai yang sesuai

SCORE/*SKOR*	DESCRIPTION/*KETERANGAN*
1	Highly Disagree/*Sangat Tidak Setuju*
2	Disagree/*Tidak Setuju*
3	Uncertain/*Tidak Pasti*
4	Agree/*Setuju*
5	Highly Agree/*Sangat Setuju*

NO.	CAUSE OF ACCIDENTS/*PUNCA KEMALANGAN*	SCORE/ *SKOR*
26.	The accidents are increase when employers and employees ignore responsibility and accountability for the OSH/ *Kemalangan meningkat apabila majikan dan pekerja mengabaikan tanggungjawab dan akauntabiliti terhadap KKP.*	
27.	The accidents are increase when the facilities and safety protection system are not maintain and handle properly/ *Kemalangan meningkat apabila kemudahan yang ada serta sistem perlindungan keselamatan tidak diselenggara dan dikendalikan dengan baik*	
28.	The accidents are increase when there are no sufficient safety tools / *Kemalangan meningkat apabila tiada perkiraan keselamatan yang mencukupi.*	
29.	The accidents are increase when the working environment is not conducive/*Kemalangan meningkat apabila persekitaran kerja yang tidak kondusif*	
30.	The accidents are increase when the OSH budget allocation is not sufficient/*Kemalangan meningkat apabila peruntukan bajet KKP tidak mencukupi.*	

NO.	CAUSE OF DISEASES/*PUNCA PENYAKIT*	SCORE/ *SKOR*
31.	The diseases are cause when employers and employees ignore responsibility and accountability for the OSH /*Penyakit berlaku apabila apabila majikan dan pekerja mengabaikan tanggungjawab dan akauntabiliti terhadap KKP*	
32.	The diseases are cause when the facilities and safety protection system are not maintain and handle properly/ *Penyakit berlaku apabila kemudahan yang ada serta sistem perlindungan keselamatan tidak diselenggara dan dikendalikan dengan baik*	
33.	The diseases are cause when there are no sufficient safety tools/ *Penyakit berlaku apabila apabila tiada perkiraan keselamatan yang mencukupi.*	
34.	The diseases are cause when the working environment is not conducive/ *Penyakit berlaku apabila persekitaran kerja yang tidak kondusif*	
35.	The diseases are cause when the OSH budget allocation is not sufficient/ *Penyakit berlaku apabila peruntukan bajet KKP tidak mencukupi.*	

Thank You
Terima Kasih

Universiti Utara Malaysia

APPENDIX C

KEMENTERIAN PENDIDIKAN MALAYSIA
MINISTRY OF EDUCATION MALAYSIA
BAHAGIAN PERANCANGAN DAN PENYELIDIKAN DASAR PENDIDIKAN
EDUCATIONAL PLANNING AND RESEARCH DIVISION
ARAS 1-4, BLOK E8
KOMPLEKS KERAJAAN PARCEL E
PUSAT PENTADBIRAN KERAJAAN PERSEKUTUAN
62604 PUTRAJAYA

KEMENTERIAN PENDIDIKAN MALAYSIA

Telefon	: 03-8884 6500
Faks	: 03-8884 6439
Laman Web	: www.moe.gov.my

Ruj. Kami   KPM 600-3/2/3 Jld 41 (२२)

Tarikh   21 April 2017

Rohayu binti Ahmmad Romzay

No 10 Jalan 8 Taman Muhibah
45200 Sabak Bernam
Selangor

Tuan,

KELULUSAN UNTUK MENJALANKAN KAJIAN DI SEKOLAH, INSTITUT PENDIDIKAN GURU, JABATAN PENDIDIKAN NEGERI DAN BAHAGIAN DI BAWAH KEMENTERIAN PENDIDIKAN MALAYSIA

Perkara di atas adalah dirujuk.

2.   Sukacita dimaklumkan bahawa permohonan tuan untuk menjalankan kajian seperti di bawah telah diluluskan.

"Determining The Awareness Level of Behaviour Based Safety (BBS) in Selected Secondary School in Sabak Bernam Selangor"

3.   Kelulusan ini adalah berdasarkan kepada kertas cadangan penyelidikan dan instrumen kajian yang dikemukakan oleh tuan kepada Bahagian ini. Walau bagaimanapun kelulusan ini bergantung kepada kebenaran Jabatan Pendidikan Negeri dan Pengetua / Guru Besar yang berkenaan.

4.   Surat kelulusan ini sah digunakan bermula dari **09 Mei 2017 hingga 31 Oktober 2017.**

5.   Tuan juga mesti menyerahkan senaskhah laporan akhir kajian dalam bentuk *hardcopy* bersama salinan *softcopy* berformat Pdf di dalam CD kepada Bahagian ini. Tuan diingatkan supaya mendapat kebenaran terlebih dahulu daripada Bahagian ini sekiranya sebahagian atau sepenuhnya dapatan kajian tersebut hendak dibentangkan di mana-mana forum, seminar atau diumumkan kepada media massa.

Sekian untuk makluman dan tindakan tuan selanjutnya. Terima kasih.

"BERKHIDMAT UNTUK NEGARA"

Saya yang menurut perintah,

(DR ROSLI BIN ISMAIL)
Ketua Sektor
Sektor Penyelidikan dan Penilaian
b.p. Pengarah
Bahagian Perancangan dan Penyelidikan Dasar Pendidikan
Kementerian Pendidikan Malaysia

QUALITY SYSTEM   STANDARDS
SIRIM
CERTIFIED TO ISO 9001:2008
CERT. NO: AR 3166

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APPENDIX D

JABATAN PENDIDIKAN SELANGOR
Jalan Jambu Bol 4/3E, Seksyen 4,
40604 SHAH ALAM
SELANGOR DARUL EHSAN,
MALAYSIA

Tel : 03 - 5518 6500
Faks : 03 - 5510 2133
Laman Web : http//jpnselangor.moe.gov.my

Rujukan Kami : JPNS.PPN 600-1/49 JLD.71(8)
Tarikh : 19/05/2017

ROHAYU BINTI AHMMAD ROMZAY
NO.10, JALAN 8 TAMAN MUHIBAH
45200 SABAK BERNAM
SELANGOR

Tuan,

"DETERMINING THE AWARENESS LEVEL OF BEHAVIOUR BASED SAFETY (BBS) IN SELECTED SECONDARY SCHOOL IN SABAK BERNAM SELANGOR"

Perkara di atas dengan segala hormatnya dirujuk.

2. Jabatan ini tiada halangan untuk pihak tuan menjalankan kajian/penyelidikan tersebut di sekolah-sekolah dalam Negeri Selangor seperti yang dinyatakan dalam surat permohonan.

3. Pihak tuan diingatkan agar mendapat persetujuan daripada Pengetua/Guru Besar supaya beliau dapat bekerjasama dan seterusnya memastikan bahawa penyelidikan dijalankan hanya bertujuan seperti yang dipohon. Kajian/Penyelidikan yang dijalankan juga tidak mengganggu perjalanan sekolah serta tiada sebarang unsur paksaan.

4. **Surat kelulusan ini sah digunakan bermula dari 09 Mei 2017 hingga 31 Oktober 2017.**

5. Tuan juga diminta menghantar senaskah hasil kajian ke Unit Perhubungan dan Pendaftaran Jabatan Pendidikan Selangor sebaik selesai penyelidikan/kajian.

Sekian, terima kasih.

"BERKHIDMAT UNTUK NEGARA"

Saya yang menurut perintah,

(NOR FARIDAH BINTI A.BAKAR)
Penolong Pendaftar Institusi Pendidikan dan Guru
Jabatan Pendidikan Selangor
b.p. Ketua Pendaftar Institusi Pendidikan dan Guru
Kementerian Pendidikan Malaysia

s.k: - Fail

" Jabatan Pendidikan Selangor Terbilang "

APPENDIX E

PEJABAT PENDIDIKAN DAERAH SABAK BERNAM
LOT 25 & 27, JALAN BESAR
45200 SABAK BERNAM
SELANGOR DARUL EHSAN

Tel : 03-32162079
Faks : 03-32162093
Web : http://www.moe.gov.my/ppdsbernam

"1 MALAYSIA – RAKYAT DIDAHULUKAN PENCAPAIAN DIUTAMAKAN"

Ruj. Tuan :
Ruj. Kami : PPDSB.PPN 100-2/2/26 Jld. 2 (45)
Tarikh : 02.06.2017

ROHAYU BINTI AHMMAD ROMZAY,
No. 10 Jalan 8, Taman Muhibbah,
45200 Sabak Bernam,
Selangor Darul Ehsan.

Tuan,

KEBENARAN DAN KELULUSAN MENJALANKAN KAJIAN

Perkara tersebut di atas adalah dirujuki.

2.   Sukacita dimaklumkan bahawa Pejabat Pendidikan Daerah Sabak Bernam ambil maklum dan tiada halangan untuk pihak tuan menjalankan kajian bertajuk :

> *"Determining the Awarness Level of Behaviour Based Safety (BBS)*
> *In Selected Secondary School in Sabak Bernam, Selangor"*

3.   Sehubungan dengan itu, tuan adalah dikehendaki mematuhi syarat seperti yang terkandung dalam surat seperti berikut :

3.1.   Surat dari BPPDP, KPM (No. Rujukan : KPM.600-3/2/3 Jld. 43 (95) bertarikh 21 April 2017 dan

3.2.   Surat dari Jabatan Pendidikan Selangor (No. Rujukan : JPNS.PPN 600-1/49 Jld. 71 (8) bertarikh 19 Mei 2017.
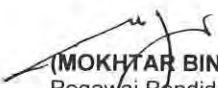
4.   Surat kelulusan ini sah digunakan bermula dari 09 Mei 2017 hingga 31 Oktober 2017.

5.   Sebarang pertanyaan berkaitan perkara di atas, sila berhubung terus dengan Encik Mohamad Zaidi bin Selamat (Penolong PPD Perhubungan dan Pendaftaran) di talian 03-32162541 pada waktu pejabat.

Sekian untuk makluman dan tindakan tuan selanjutnya.
Terima kasih.

" BERKHIDMAT UNTUK NEGARA "
" BERKUALITI DAN UNGGUL "

Saya yang menurut perintah,

(MOKHTAR BIN MANIJO)
Pegawai Pendidikan Daerah,
Pejabat Pendidikan Daerah Sabak Bernam,
Selangor Darul Ehsan.

"BERKUALITI DAN UNGGUL"

APPENDIX F

UUM KUALA LUMPUR
Universiti Utara Malaysia
41-3, Jalan Raja Muda Abdul Aziz
50300 KUALA LUMPUR
MALAYSIA

UUM
Universiti Utara Malaysia

Tel 603-2610 3000
Faks (Fax) 603-2694 9228
Laman Web (Web) http //uumkl uum edu my

"MUAFAKAT KEDAH"

Our Ref : UUM/UUMKL/P-39/133
Date   : 5th March 2017

TO WHOM IT MAY CONCERN

COLLECTION OF DATA FOR RESEARCH PURPOSES

We are pleased to inform you that the following individual is UUM Kuala Lumpur student who is presently pursuing his Master of Science (Occupational Safety and Health Management). She is required to collect data from your organization as a requirement for BPMZ69912 Research Paper courses that she is pursuing this semester.

No.	Name	Matric No.	I/D No.
1.	Rohayu Binti Ahmmad Romzay	820098	

Since she has chosen your organization as her assignment, we would be most grateful if you could render all assistance to her to carry out the project successfully.

Please be informed that the data collected is purely for academic purposes and we assure you that all information or data will be kept strictly confidential.

We really appreciate your kindness and cooperation in the above matter.

Thank you.

"SCHOLARSHIP, VIRTUE AND SERVICE"

Sincerely yours.

DR. AHMAD RIZAL BIN MAZLAN
Director
UniversitiUtara Malaysia
Kuala Lumpur (UUMKL)

Universiti Pengurusan Terkemuka
The Eminent Management University

JN-QA GIFA PRME APUCEN MSC

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