AWARENESS PERCEPTIONS AMONG MANAGEMENTS, TEACHERS AND SCHOOL STAFFS RELATED TO SAFETY, HEALTH AND ENVIRONMENT ASPECTS IN SPECIAL EDUCATION PRIMARY SCHOOLS

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FACULTY OF ENGINEERING
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RESEARCH REPORT SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF SAFETY, HEALTH AND ENVIRONMENTAL ENGINEERING

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ABSTRACT

Safety in school is the most important key issue around the world that has been discussed without ending. Recent studies show that there is lack of awareness about safety in this public service, especially for students and teachers. The purpose of this study is to evaluate awareness among management, teachers and school staff on safety, health and environmental practices; to identify the high-risk accident area in school and to recognize the main factors that contribute to accidents at school. This study use questionnaire, onsite observations and informal interview as instruments for collecting data and information. The data collected has been analyzed using Microsoft Excel to evaluate awareness safety practices of respondent. Respondent for this study consist of 88 persons from school staff including management, teachers, and staffs. This study are limited to five (5) school special education primary school in Selangor, Wilayah Persekutuan Kuala Lumpur and Wilayah Persekutuan Putrajaya. The results show that school staff had middle stages of awareness of safety, health, and environment due to low knowledge about safety practices among them. The study also found the high-risk accident occurs are at toilet and stairs area. Meanwhile, from the respondent feedback, it is agreed that the main factor that contribute accident according to safety physical environment at school; safety during teaching lesson; and safety during outdoor activities is different by school according to type disability of the student, school condition and environment of the surrounding of school. At the end of this study, some recommendation has been suggested in this study i.e. require safety course attendance in key performance indicator (KPI) to all staff to enhance awareness safety practices to all school staffs.

ABSTRAK

Keselamatan di sekolah adalah isu utama yang paling penting di seluruh dunia yang dibincangkan oleh semua pihak. Kebanyakkan kajian menunjukkan kurangnya kesedaran mengenai perkhidmatan awam terutamanya bagi pelajar dan guru. Tujuan kajian ini adalah untuk menilai tahap kesedaran di kalangan pengurusan, guru dan kakitangan sekolah mengenai amalan keselamatan, kesihatan dan persekitaran; untuk mengenal pasti kawasan kemalangan berisiko tinggi di sekolah dan untuk mengenali faktor utama yang menyumbang kemalangan di sekolah. Kajian ini menggunakan soal selidik, pemerhatian dan temuduga sebagai instrumen untuk mengumpul data dan maklumat. Data yang diperolehi dianalisa menggunakan Microsoft Excel untuk mengetahui tahap kesedaran responden berkaitan amalan keselamatan. Responden bagi kajian ini terdiri daripada 88 orang iaitu kakitangan sekolah termasuk pengurusan, guru dan pekerja. Kajian ini hanya terhad kepada lima (5) buah sekolah pendidikan khas sekolah rendah di Selangor, Wilayah Persekutuan Kuala Lumpur dan Putrajaya. Keputusan menunjukkan bahawa kakitangan sekolah mempunyai tahap kesedaran keselamatan, kesihatan dan alam sekitar pada tahap pertengahan kerana pengetahuan yang rendah mengenai amalan keselamatan di kalangan mereka. Kajian juga mendapati kemalangan berisiko tinggi berlaku di kawasan tandas dan tangga. Sementara itu, faktor utama yang menyumbang kemalangan mengikut persekitaran fizikal keselamatan di sekolah; keselamatan semasa pengajaran; dan keselamatan semasa aktiviti luaran adalah berbeza mengikut sekolah dengan berdasarkan jenis ketidakupayaan pelajar, keadaan sekolah dan persekitaran di sekitar sekolah. Oleh itu, beberapa cadangan telah dicadangkan dalam kajian ini dan salah satunya adalah mewajibkan kehadiran kursus keselamatan dalam penunjuk prestasi utama (KPI) kepada semua kakitangan untuk meningkatkan amalan keselamatan kesedaran kepada semua kakitangan sekolah.

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LIST OF SYMBOLS AND ABBREVIATIONS

For examples:

WMSDs	:	Work-Related Musculoskeletal Disorders
OSHA 1994	:	Occupational Safety and Health Act 1994
WHO	:	World Health Organization
DOSH	:	Department of Occupational Safety and Health
PPE	:	Personal Protective Equipment
HIRARC	:	Hazard Identification, Risk Assessment and Risk Control

LIST OF APPENDICES

CHAPTER 1: INTRODUCTION

1.1 Background of the Study

Safety, health, and environmental aspects are important for every organization to avoid undesirable things. School is defined a workplace, comprising teachers, school staffs, and students as stated in the Occupational Safety and Health Act (OSHA) 1994 by Law of Malaysia (1994). It is important to ensure that safety and health of the students in school are guaranteed. In addition to providing education, parents also trusted the school's commitment toward safeguarding the safety and health, physical and mental well-being of their children.

Special Education is the unit under the management of the Special Education Department of the Ministry of Education Malaysia established in October 1995 by website Ministry of Education Malaysia (2018). This department is responsible for professional matters for all Special Education Programs, including integration programs and inclusive programs. One of the functions of this department is to plan, implement and monitor special schools for visually impaired and hearing-impaired students. While an integration education program is provided for students with special needs of learning, listening and visual lessons. The program is embedded in mainstream primary and secondary school as well as high school technical or Vocational education using isolated and semi-inclusive teaching and learning approaches. The special education section is very important where the success of performing their functions will result in special students getting educational opportunities and skills to enter an appropriate career field.

Based on the Department of Occupational Safety and Health records, as many as 31 accidents in school were reported in the last five years including student deaths due to hit by goalposts and ceiling fans Jiffar (2017, 21 April). These accidents should not be

viewed lightly and should be dealt with urgently. All relevant parties must act to prevent accidents involving students and provide an effective action plan to guarantee students safety. Therefore, safety awareness needs to be trained among students, teachers and other school staffs, such as canteen workers, laboratory assistants, security guards, gardeners, cleaners and road-crossing guards. If everyone realizes the importance of safety, many accidents can be avoided. Through safety and health training, every school will be able to deal with emergencies that may occur.

A new awareness safety program OSH in School was introduced by NIOSH in 2002 by Ministry of Health Malaysia (2016). This program is a collaboration between the Department of Occupational Safety and Health (DOSH) with the National Institute of Occupational Safety and Health (NIOSH) under the Ministry of Human Resources. This program is specially designed for educators and students aimed at educating and raising awareness on safety and health aspects both inside and outside of school. It is also to foster a safe and healthy culture among school children from the very beginning so that they will be a source of manpower that cares for occupational safety and health. Thus, this program will be a platform for the implementation and emphasize of safety and health aspects in schools as well as to foster a safe and healthy culture among students and teachers across the country. Over 50 schools nationwide have joined the Occupational Safety and Health (OSH) program in collaboration through the Ministry of Human Resources and the Ministry of Education, stated by Jiffar (2017, 21 April).

In this field, an investigation was conducted to evaluate the learning facilities based on accessibility, spatial and other support for the students to live comfortably and perfectly as the other students.

1.2 Problem Statement

Safety plays an important role in ensuring a good teaching and learning process. It is therefore important that special education classes are well designed and meet the needs of a safe learning environment. There are various aspects of safety that are always neglected by some organizations, especially in terms of safe environment. Thus, this study is carried out to ensure all aspects of safety during learning can be implemented to avoid unwanted things in which the problem stated as follows:

1. What kind of awareness perceptions contributing to safety, health and environment aspect in special education primary school among management, teachers and staff with different impaired students (visual, hearing and learning problems)?
2. In which the high risks accident area so far in special education primary schools with impaired students (visual, hearing and learning problems)?
3. What is a potential factor that associated with the high-risk accident area among the different special education schools with impaired students (visual, hearing and learning problems)?

1.3 Aim of the study

The aim at this study is to evaluate the awareness perceptions of safety practices among managements, teachers and staff in special education primary school with visual impaired, hearing impaired and learning problems students.

1.4 Objectives of the study

Following is the objectives of the study:

i. To evaluate awareness among management, teachers and school staff on safety, health and environmental practices;

ii. To identify the high-risk accidents area in special education primary school; and

iii. To recognize the main factor that associated with the accident among the impaired student.

1.5 Scope of Study

The aim of this study is to investigate the level of perceptions on awareness among management, teachers and school staff on safety aspects during the school session. The evaluation of perceptions is analyzed by the knowledge about safety policies, procedures, and program; understanding safety information; practices on safety basic equipment and awareness about type and frequency of accident happen at school.

This study also to identify the high-risk accident area in special education primary school and to recognize the factor that contributes to accidents according to safety physical environment at school; safety during teaching sessions and safety during outdoor activities. The aspect of safety investigation involves facilities provided, learning tools and the classroom environment during learning (e.g. lighting and learning space).

The scope of the study is to identify the existing safety aspects of learning at primary schools in Special Education and to suggest possible solutions for improvement in safety environment at school. This study using quantitative survey responses from school such as questionnaire, informal interviews, and onsite observation.

The most important thing is that all staff including management, teachers and school staff must be aware and able to expect and identify hazard and risks at all the area in school. To achieve the objective, the scope of this study are limited to:

i. Respondent involved are school staff at primary special needs education school;
ii. Type of disability of student are vision, hearing and learning problem;
iii. This study area restricted to Selangor, Wilayah Persekutuan Kuala Lumpur and Wilayah Persekutuan Putrajaya.
iv. This study focuses in ergonomic concept for enhancing safety at school.

1.5.1 Report Outline

This project consists of five (5) chapters as follow:

Chapter 1 – Introduction about the background of the project regarding the safety, health an environment in school and special education in Malaysia. This chapter also discusses the problem statement, research objectives, and scope of research.

Chapter 2 – Literature review based on the past and current finding of safety in special education school in Malaysia and other countries has been discussed. The information regarding safety, health and environment issues in school and the strategy to implement.

Chapter 3 – In this chapter, the materials and methodology were explained. The method that will be using is a questionnaire, onsite observation, and informal interview.

Chapter 4 – The data obtained was analyzed and result been discussed.

Chapter 5 – Conclusion of the finding reflected the objectives have been obtained and recommendation for future work was summarized.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

Literature review is one of the important chapters in conducting research because this chapter can determine the extent to which the research has been done encourage researchers to conduct this study. In this chapter, some things in relation to safety aspects namely safety awareness in Malaysia, safety at school, type of accidents happen at school, high-risk accident area in school and factor that always contribute to school accident discussed. In addition, it was also discussed on the Occupational Safety and Health Act (OSHA) 1994, solution and improvement related to avoid accident in school and some information about Special Education School in Malaysia and ergonomic concept for enhancing safety at school. Definition for hazard is anything that can cause harm; and risk is a probability of harm actually being done. Meanwhile, danger is the relative exposure to a hazard.

2.2 Occupational Safety and Health Act (OSHA) 1994

This Act (Department of Occupational Safety and Health (DOSH), 2008) was enacted on 25 February 1994 and was intended to ensure the safety, health and well-being of everyone at work. It has been enacted based on the concept of self-regulation with the main responsibility for conforming safety and health at workplace lying with those who create the risks and work with the risks. Guiding principles for this Act was self-regulation, engagements and cooperation between employees and employers. Objectives of OSHA 1994 which are:

i. To secure the safety, health and welfare of persons at work against risks out of the activities at work;
ii. To protect person at a place of work;

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

iv. To maintain or improve the standards of safety and health.

This Act shall apply throughout Malaysia for the specified industries in the First Schedule which are:

i. Manufacturing

ii. Mining and Quarrying;

iii. Construction;

iv. Agriculture, Forestry and Fishing;

v. Utilities;

vi. Transport, Storage and Communications;

vii. Wholesale and Retails Trade;

viii. Hotel and Restaurants;

ix. Finance, Insurance, Real Estate and Business Services; and

x. Public Services and Statutory Authorities.

For school it related with public services that known as education services. Based on this OSHA 1994 describes the responsibilities of the employer fall to the headmaster or school principal to fulfill three (3) section which are:

i. Section 15- The employer's general obligation (e.g. school management) is to ensure that the safety, health and welfare of workers (teachers and staff) are practiced.

ii. Section 16- Duty to formulate occupational safety health policy at school.

iii. Section 17 – Ensure that employees practices and people that are not its employees (students and visitors) not to be exposed to safety and health risks.

Meanwhile, OSHA 1994 also describes the responsibilities of the employees that fall to teachers and school staffs to fulfill Section 24 which are:

i. Reasonable attention to safety and health of himself and of others person who may be affected by his acts or omissions at work;
ii. Cooperate with employers or any other person given responsibility;
iii. Wear or use Personal Protection Equipment (PPE); and
iv. Follow the instructions or standard operational procedure related occupational safety and health that was introduced by employer.

Implementing the OSHA regulations at school is important to ensure that schools are safe and to avoid any hazard that can affect the safety and health of teachers, school staffs, students and visitors. Most of accidents occur at workplace are due to personal negligence in compliance of safety guideline or regulation (Abdul Rahim Abdul Hamid, 2008). Then, safety awareness is the most important aspect of the organization to ensure compliance with safety guideline and reduce accident rates among employees.

2.3 Safety Awareness in Malaysia

From Cambridge Dictionary, awareness means knowledge that something exists, or understanding of a situation or subject at the present time based on information or experience(Cambridge Dictionary Online, 2018). Safety awareness is important in our life to avoid unexpected things happening in our environment.

Minister of Human Resource Malaysia (Utusan Online, 2017) said the level of awareness on occupational safety and health, especially the dangers of exposure to illness and occupational poisoning among employers and industry in Malaysia is still low. Safe and healthy work culture practices at work must be implemented and practiced by all parties to ensure and prevent accidents and occupational diseases from occurring in our

country. Figure 2.1 shows the statistic occupational accident of investigated case in Malaysia by sector until October 2017 from (Department of Occupational Safety and Health (DOSH), 2017).

There are various studies that have been implemented to determine the level of safety awareness in the industry, institutions and school. Research by Baharudin (2014) figured out that safety awareness among employee in automotive industry in Malaysia is high level. Study from Ssekamanya S.A. (2016) identified that awareness about school safety activities was notably predicted by school location (rural or urban area). Meanwhile, Kamal (2010) have showed the secondary students from form one (1) until form three (3) have moderate level of awareness on the laboratory rules and safety.

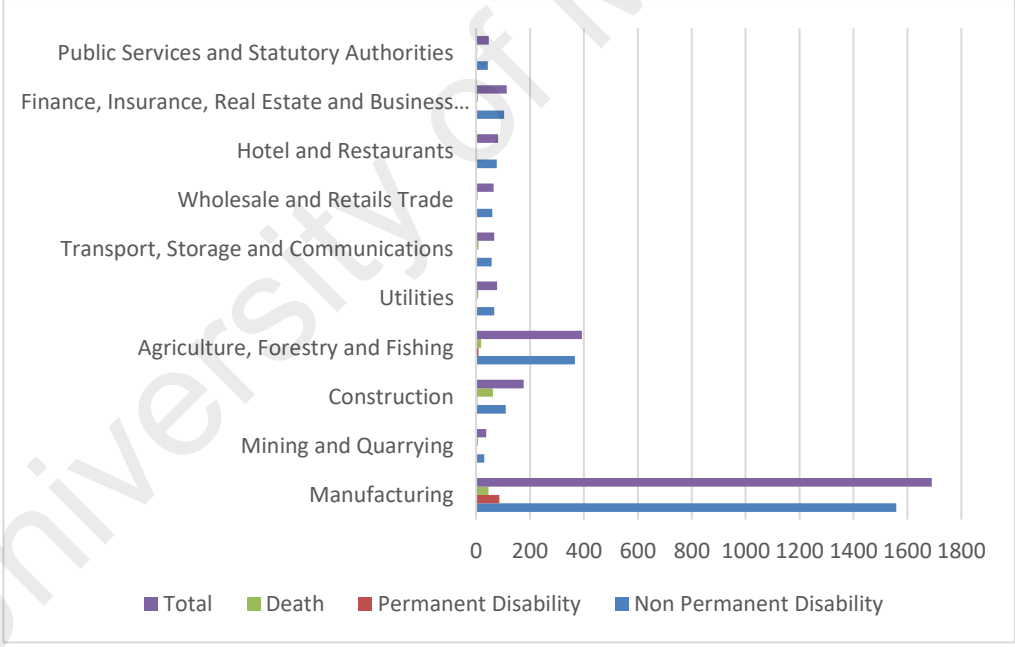

Figure 2.1: Statistics Occupational accident by Sector until October 2017

Noor Aina Amirah (2013) highlighted on the lack of safety culture among workers on the Malaysian manufacturing sectors. Safety culture in the organization will help to reduce the accident rate but before that the organization need to think on how to create safety culture among the workers. With good safety behaviour, believes in safety and the safety practice will create good safety culture at workplace. However, safety awareness

between employer and employee still need to be improved. According to the study by Khoo Teng Hong (2011a), which focus on the Small and Medium Enterprise (SME) , found a lot of the SME workplace are not safe and safety awareness between the workers are still at the low level and similar findings by Anuar I (2009) about the low level of awareness among worker at the medical laboratories. However, safety behaviour among the workers can be improved by implementation of Safety Management practice in the organization (Khoo Teng Hong, 2011b). According to Udoh (2013), science student in Akwa Ibom State of Nigeria had just fair knowledge of their safety in school. Based in this result, it shows that student exposed themselves to hazard during doing work in the school laboratory. Author in this research recommended that seminars should be organized to help on the school safety awareness.

Many of the research regarding safety practice in Malaysia addresses more to the manufacturing industries rather than safety practice in school. However, safety is applied to all organization and most of the findings still can be implemented by school management. A study by Khamsiah Ismail (2016) on the implementation of safety education in Malaysia primary school found that school administrator had positive attitude in the school safety management implementation. However, this study revealed that 1.4% of the teachers, staff and students certainly not received any training in handling the fire extinguisher. The percentage still can be considered as low but safety cannot be compromised and need more attention on the basic education or training related to the safety. As mentioned in the study by Noor Aina Amirah (2013), the employees should have positive safety behavior to lead a positive safety culture in the organization.

2.4 Safety at School

Workplace is the place where people doing their activities, not only at the office or factory, but it is also applicable for school area. Teachers, students and other associated

school workers “work together” in the same place to teach and learn of knowledge every day and because of that, safety plays an important part in school especially for teachers and students. According to the Act 514 Occupational Safety and Health 1994, every employer so considerably as is practicable to ensure the health and safety of employees and others such as visitors and students. The responsible is not only on employer shoulder but it is similar to the employee and others as stated in the same Act, every employee to take rational attention for the safety and health himself and of other person. Now, it is clear that safety at the workplace are all responsibility.

Safety in school not only focus at the school compound area such as in classes, canteen or laboratory, but it also covers area outside of the school area especially at the main entrance or at the students drop off area. According Simo Salminen (2013), 49.7% of school injuries occurred outdoor and 39.7% of injuries due to the school environment factors for example, slipping and falling due to sand on the asphalt and falling down during using the stair case. All area in the school have similar potential to cause accident and cause injuries. Based on the research paper by Nearkasen Chau (2007), students with ages below the 15 years old tend to have school injuries normally happened due to lack safety awareness, lack of attention and also because of lack of knowledge. Besides that, 21.8% injuries happened due to collision with other person and 7.50% collision with the motionless object were observed in the study.

A study by Eilert-Petersson (1998) divided the school injuries cases by location which is outdoor with 600 cases and indoor with 656 cases. All those data were collected from 1-year period in a Swedish country. Based on the result, it shows that no significant different of injuries cases between outdoor and indoor. Similar percentage of probability of accident to happen between these two locations. Safety practice should be implemented 24 hours a day to ensure safe environment not only for student, but also for teachers and

visitors within the school area. According to Menckel (1997), injuries happened frequently at the recreational and sports area whereas playground is the high risk area for young students.

2.4.1 Safety Physical Environment at School.

Wargo (2013) in WHO document indicated that the physical school environment involved the school building and all its contents including physical structures, infrastructure, furniture, the use and presence of chemical and biological agents; the area of school located; and the surrounding environment including the air, water, and materials with which student may come into contact, as well as nearby land uses, roadways and other hazard. In this document said physical school environment important to student health because (1) one of the primary determinants of student health, e.g. air pollution can worsen acute respiratory infections and trigger asthma attacks; (2) they may be more susceptible to the adverse health effects of chemical, physical and biological hazards than adults because of their low immunity, low body weight and they also spend their time at school. Besides that, the student behavior pattern and lack of experience to judge risks such as climbing and jumping at unstable structures.

Meanwhile, school infrastructure must have a minimum standard should provide for the convenience and safe of students and teachers in the daily teaching and learning process. Poor infrastructure requires immediate maintenance including wiring, overhaul of old buildings and new infrastructure construction. However, for this study its limited to factor of physical environment such old facilities, the barn with no cover; slipping on a smooth surface and unsafety environment.

2.4.2 Safety During Teaching Sessions

During the teaching session, the safety aspects need to be implemented by the teacher during teaching in classroom, laboratory and workshop as teachers and student will spend a lot of time in the classroom for teaching and learning process. HSE have develop checklist safety and health in the classroom for guideline by Health and Safety Executive (2011). Classroom conditions should be safe, comfortable and the lighting and ventilation inside the classroom must be in good standard or condition to avoid any unexpected accidents.

Appropriate furniture arrangement also important for easily movement of student to doing activities in classroom. Meanwhile, furniture, equipment and tools must not be dangerous to student such as not sharp, non-toxic and harmless to student. Dangerous equipment in the classroom need to be stored in appropriate place such as storage cabinet to avoid it being misused.

It is also important to ensure that the safety in the laboratory are being practiced to avoid exposure of harmful chemicals to the students as it may contribute to possible serious injuries. There are also many hazards in the workshop that should be identified and informed to students before doing the activities in the workshop. In this study, the factor analyzed will be limited to the following factors which includes the lighting, furniture layout, size of space, sharp equipment and injuries caused by classmate.

2.4.3 Safety During Outdoor Activities

According to M Ramirez (2004) the researcher figured out that injury occurred more during outdoor activities than in indoor classroom. Outdoor activity such as school trips and sport activity in the school field has played an important role in context of general safety awareness attention. Even though in this study involving primary schools whose

students have inability in visual, hearing and learning problems, outdoor activities need to be disclose to them because learning outside the classroom can helps student to increase self-confidence and they also get real experience and new knowledge. Factor that will analyze for this study limited to covered by equipment; no teacher supervision; no environmental investigation before performing activities; unsuitable sports equipment for students and dangerous animal.

2.4.4 Solution and improvement

Everyone in this world talk and discuss about safety. Safety is a global topic which is applicable everywhere, every time and every second. School is the place where children and adolescent spend their time learning for almost 9 hours per day, 5days a week. School which is considered as a workplace need to focus on hazard identification around the school area to ensure conducive learning. Besides student, safety aspect of teacher and staff should also be given attention. In the implementation of safety practice at school, headmaster and school management need to be equipped with safety management practice in order to have safety culture. Ugwulashi (2017) stated that hazard is everywhere in the school area and hazards is created by poor states of the school facilities. To ensure this issue can be solve, school management need to ensure effective school facilities management in place.

According to the research by Antonella Bena (2016) the school injuries cases in the indoor premise reduce in the intervention unit of Italian school. The general objective of the study is to evaluate the impact of prevention intervention on school injuries and Antonella Bena (2016) works helps to promote safety culture in the school management. In the studies by Kitamura (2014) on the possibility of holistic safety education in Japan, the researcher identified the need to provide multiple software support for current safety

education. Many safety educations do not sufficiently merge the perspective of understanding safety in a comprehensive manner but only focus on a particular area. Software support help to sharpen the knowledge and skills about safety education. Besides that, in the same paper by Kitamura (2014), it is mentioned about the parents and teachers regarding their high interest in traffic safety broaden the scope to daily life. There is a large gap between teacher and parents in their recognition of safety education. Involvement of parents in safety education should be considered to raise awareness of parents.

The management of safety in school is a critical feature to assurance the safety of all the students, teachers and other staff from the risk and hazard of the school environment. The entire school staff plays an important role in school safety assurance. Among the factors of an adequate safety management in school are enough administration support, increasing in time and resources and improving the level staff training (Vicario, 2012). In this paper, the author mentioned about the headmaster responsibility and need to actively be involved in preventive maintenance, safety and health surveillance and increase awareness in all of the educational community towards the security area, being responsible for the implementation of arrangement for risk prevention.

According to results of the survey by Erkan Tabancalı (2009) following comments can be concluded:

i. Hiring of a person who knows first aid.
ii. For off school site visits, all the measures should be taken, and insurance policies should be compulsory.
iii. Parent's active involvement in safety measures should be taken.
iv. In service trainings should be planning for teacher and managers on the safety issues.

v. Especially in primary schools, all the materials with rough surfaces, as well as sharp edges should be replaced with child friendly materials.

vi. All schools should have their own emergency plans and practice them.

School safety means different things to different people and varies across national and international scales. While safety in school is considered a critical issue, it is also facilitated and tempered by geography, culture, and perhaps more importantly, the budget provided for the school. Safe schools are usually those with an effective leadership along with an appropriate strategy and vision for a schoolwide approach to safety. Safe schools should ensure the well-being of their students by monitoring safety on a regular basis, responding to parents' concerns, complying with safety policy and regulation, and effectively managing the school budget. The biggest barriers to promote and achieve effective school safety relates to management, and involve cost and bureaucracy, which are two key targets of lean thinking. Lean thinking represents a powerful opportunity to resolve the issues of school safety, and offers the opportunity to cut waste, bureaucracy, and nonvalue-added tasks to ensure safety is efficient and not a burden on a school's budget (Pachernwaat Srichai, 2013).

Research by Kogi (2001) regarding the action-oriented support for occupational safety and health programs listed three (3) action oriented support program. The programs are Work Improvement in Small Enterprise (WISE), which focused for Small Enterprises, Work Improvement in Neighborhood Development (WIND), which established for farmers in Vietnam and POSITIVE in which developed for workers in Pakistan and Thailand. These three (3) programs are not established for the education sectors but all these programs have same objective which is to strengthen the safe and health practice in the workplace. The common steps which can be implemented in school are using participatory training method, to learn from local good examples, to share the sense of

achievement and to build networks for sustained action. The participatory training method will involved teacher and students together on knowledge sharing on the safety related issue. This method will help to increase awareness between students and teacher which can promote on the safety culture. School should start to do benchmarking with other school or any learning education center on the safety practice implementation. This will encourage school management to find the best approach to implement the safety practice.

The most important safety issues in school which parents were concerned are related to the playground equipment, tripping hazard around school area and building material also the road safety (Pachernwaat Srichai, 2013). According to the study, majority of the parents and teachers consider school as safe place with 74% of teachers and 55% of parents judging school as safe or very safe and the remaining percentage judging school as not safe or very unsafe and neither safe nor unsafe. Based on this finding, it shows that misalignment of perception for the school safety between parents and teacher. Because of that parents need to involve in the Parents and Teacher Associations (PTA) to communicate effectively. As highlighted in the previous paragraph, parents also could involve during the safety related training in the school. Besides guideline from teachers, parents also able to remind their children regarding the safety practice and safety culture.

Students who participated in team sports such as football, rugby, hockey or netball had the greatest risk of injury which is about 29% of injuries (D.Sumilo, 2006). Safety aspect during school activities also need to be focused and manage properly. According to this study, there is a need to have an injury prevention program among students for all level of education institution including school. Before the program can be executed, hazard identification need to be establish first. All hazard need to be identified in detail as the risk need to be assessed one by one and measures needs to be taken on how to control the

risk. All the steps involved are not simple as what as people think but leader of the learning institution should lead from scratch until it can help to establish safety culture in school.

2.5 Special Education School

Special Education School define by in official website Ministry of Education Malaysia (2018) as a school providing special education for students with special needs at all school level. This Special Education School is managed by the Special Education Division, Ministry of Education Malaysia.

Special Education for students with special education needs in three (3) school setting option, i.e. special education schools, or in mainstream schools that implement the Integrated Special Education Program, or an Inclusive Education Program, at pre-school, primary, secondary, or after secondary education. (Ministry of Education Malaysia, 2018). Table 2.1 shows the program offered at special education school from (Ministry of Education Malaysia, 2018).

All special education primary schools follow the academic stream. Facilities provided at the primary level include free hostel and meals. Students who follow the Special Education Integration Program can follow the national curriculum or alternative curriculum. Secondary education provides two (2) types of streams i.e. academic and vocational. This period can be extended up to a maximum of two (2) years at any level i.e. whether it is primary or secondary according to the needs of the students.

Meanwhile, special need students are a student certified by a medical practitioner, or an optician, audiologist or psychologist, whether in government or private services as a student with visual impairment, hearing impairment, speech disability, disability physical, learning problems or any combination of disabilities.

Table 2.1: The program offered at Special Education School.

No.	Type	Entry Requirements	Duration of Study
1.	Pre- School	• Aged at five (5) years old; • Certified by a medical practitioner; and • Can manage themselves without the help of others.	
2.	Primary	• Aged at six plus (6+) to fourteen plus (14+) years old; • Certified by a medical practitioner; and • Can manage themselves without the help of others.	Six (6) years
3.	Secondary	• Aged at thirteen plus (13+) to nineteen plus (19+) years old; • Certified by a medical practitioner; and • Can manage themselves without the help of others.	Five (5) years

So far there has been no serious accidental news involving students in special education schools. This is because of the accident that occurred just a mild injury, such as fall at toilet and stairs. However, this does not mean that there will be no serious accident can happen, so preventive measures and safety practices should be practiced by all staffs in Special Education School to avoid major accidents.

Most studies involving Special Education School in Malaysia are aimed at the level of knowledge when managing the behaviors of students (Hanifah, 2015), modifying the subject curriculum to meet the disabilities of students (Mahamod, 2015), teachers perspectives on academic engagement with disabilities student studied by (Hassan, 2014) and research about the suitability of the classroom (H. T. Mohd Hanafi Mohd Yasin, Mohd Mokhtar Tahar, Safani Bari, Siti Nur Nadirah Ibrahim and Rozniza Zaharudin, 2013) and the infrastructure at the Special Education School(H. T. Mohd Hanafi Mohd Yasin, Mohd Mokhtar Tahar, Noraini Mohd Salleh and Rabishah Azirun, 2011).

Many of the research regarding Special Education School addresses more to improve subject curriculum and infrastructure rather than safety practice in school.

N. M. S. Mohd Hanafi Mohd Yasin, Hasnah Toran, Mohd Mokhtar Tahar, & Siti Nur Nadirah Ibrahim (2012) figured out that the implementation of safety plans at the Special education school is only limited to have emergency plan, sharp equipment stored in a special place, supervision of students going to the toilet and safety aspect when doing outdoor activities.

2.6 Ergonomic concept for enhancing safety at school

Ergonomic is the study of the connection between human, the apparatus they use and the physical environment in which they work on (Dohrmann Consulting, 2018). It also about the application of the knowledge of this relationship to benefit well-being, performance and improve both short and long term of health and safety aspect. Bad design contributes to work-related ill-health and has been found to be a root cause of accidents including major accidents. To achieve best practice design in special education school, ergonomists use the data and techniques of several disciplines:

i. anthropometry: body sizes, shapes; populations and variations of students for design table and chairs at the classroom;
ii. biomechanics: muscles, levers, forces, strength for the teachers or student when doing specific activity; and
iii. environmental physics: lighting, ventilation, facilities layout and environment of the surrounding of school and environment in the classroom.

The important ergonomic concept used to reduce injuries and health issues and creating safe environment in school. Reduce injuries and health issues such as use suitable chair and desk for special need students according size body and type of disability. With

good illumination and ventilation in classroom will avoided unexpected things. Meanwhile, safe environment when in the school is shown by having a proper furniture layout and adequate tool or facilities. It will reduce the chance of any accident to occur such as by placing e anti-slip material at area that have the tendency to caused accident. Zainal (2017) figured out that collected anthropometric data from special need students and found out that some of the existing furniture dimensions do not match to the anthropometric data collected. Meanwhile, there are multiple risk factor that lead to Work- Related Musculoskeletal Disorders (WMSDs) among teacher and student assistant management at Special Education School (Argenan, 2017) and study by K.Munusamy (2017) shows that importance of ergonomic facilities in Special Education School.

2.7 Summary

Through this literature review has acknowledged the main issue of safety practice among school in Malaysia with references of others related safety issue. All the learning institution actually already have basic safety measure but still need to have improvement and lack of conscious effort aiming on creating safe and secure environment.

CHAPTER 3: METHODOLOGY

This chapter will discuss the methods used in carrying out of this research. Through this chapter, an explanation covers the key research questions, the research design, sampling, data collection method and data analysis method. To achieve the purposed research flowchart has been done is simplified in Figure 3.1.

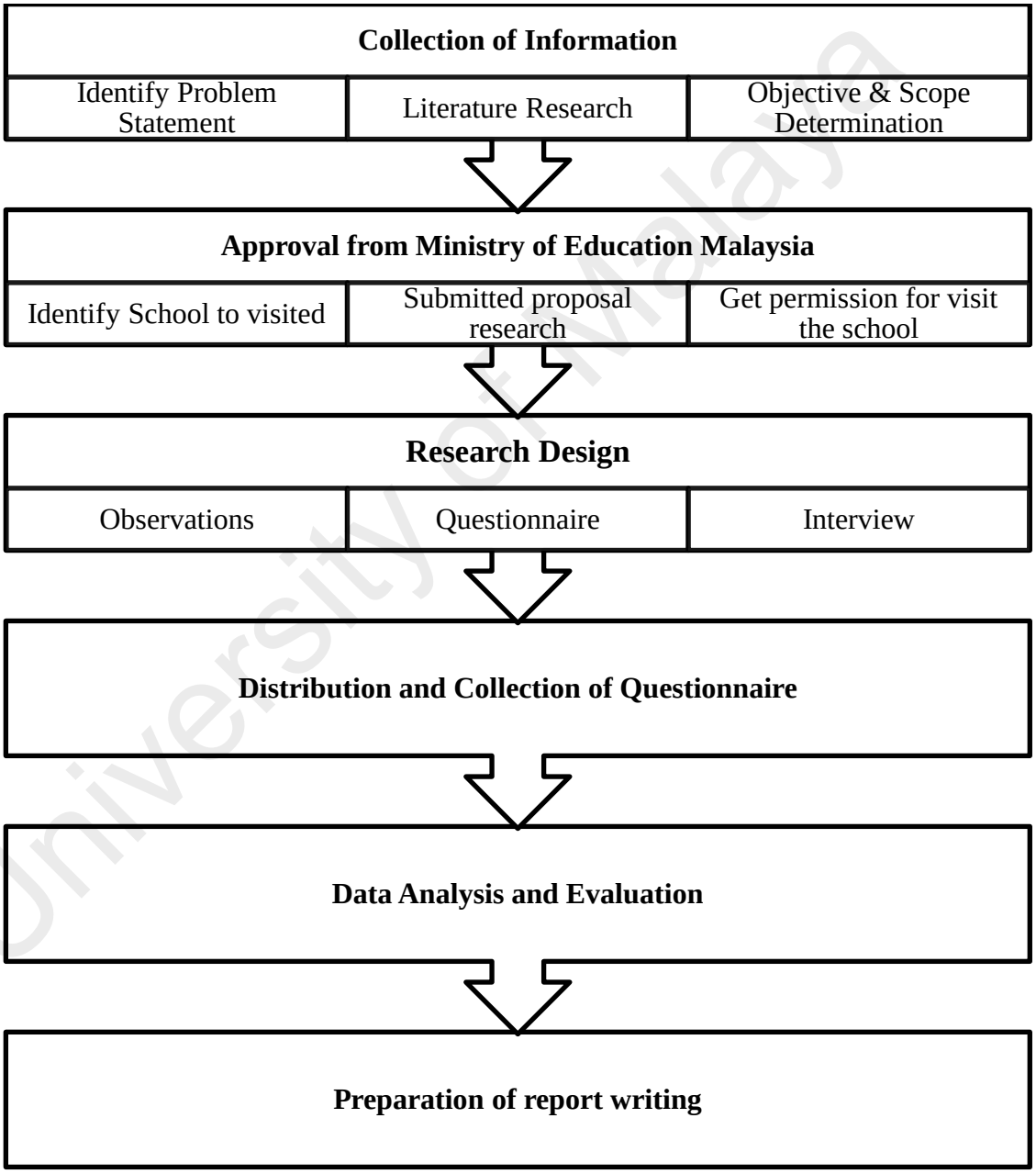

Figure 3.1: Research Flow Chart

3.1 Introduction

This study was conducted in group involving four (4) students in Master of Safety, Health and Environment Engineering. Each student has their respective topics related to the Ergonomic Study at Primary School of Special Education. The topics involved are as follows:

i. Anthropometric Measurement for Disabled Student;
ii. Ergonomic Facilities in Special Education School;
iii. Work-Related Musculoskeletal Disorders (WMSDs) among Teachers and Student's Management Assistants in Special Education School in Malaysia; and
iv. Awareness Perceptions Among Managements, Teachers and School Staffs related to Safety, Health and Environment Aspects in Special Education Primary Schools.

3.2 Selection of school

School selection involves all impairment namely visual, hearing and learning problems. The scope of this study only focuses on primary school level only. The area involved is limited to Selangor, Federal Territory of Kuala Lumpur and Federal Territory of Putrajaya only. The selection of this school based on type of impairment of student, and easy access area school for this study. The type of school is also taken into consideration in the selection of schools for this study, that there are three (3) types of special schools for special education implemented under the Ministry of Education such as:

i. Special school for hearing impaired and visual impaired students;
ii. The Special Education Integration or Inclusive Program is provided for students with special need of problematic learning, hearing impaired and visual

impairments. It at daily primary school using isolated and semi-inclusive teaching and learning approaches.

The number of school is five (5) such as the detail listed in Table 3.1.

Table 3.1: Detail of Selected Schools

No.	Name of School	Category	Number of Student
1	Sekolah Kebangsaan Putrajaya Presint 9 (2), Wilayah Persekututuan Putrajaya **(School A)**	Learning Disability (Special Education Integration Program)	81
2	Sekolah Kebangsaan Pendidikan Khas Jalan Peel (P), Kuala Lumpur **(School B)**	Hearing Disability (Special School)	42
3	Sekolah Kebangsaan Pendidikan Khas Puchong Utama 1, Selangor **(School C)**	Learning Disability (Special Education Integration Program)	88
4	Sekolah Kebangsaan Pendidikan Khas Jalan Batu (B), Kuala Lumpur **(School D)**	Vision Disability (Special School)	35
5	Sekolah Kebangsaan Pendidikan Khas Selangor **(School E)**	Hearing Disability (Special School)	82

3.3 Approval from Ministry of Education Malaysia

Before the study was conducted, the permission should be obtained from Ministry of Education of Malaysia. Application papers are extended to the Special Education Division and Educational Research and Planning Division, Ministry of Education of Malaysia to obtain the permission to implement this study.

Approval for conducting studies in special education schools under Ministry of Education was obtained on 14 August and valid from 23 August 2017 to 30 November 2017. The planning of the study tour was conducted after obtaining the letter of approval. All schools identified for this study are contacted to obtain the date for conducting studies at their respective schools after the approval letter is received. The approval letter from Ministry of Education attached at Appendix A.

3.4 Selection of sampling

In this study, the sample used is individual who work in school which consists of management, teachers and school staffs. This is to identify their level of awareness regarding to safety, health and environment of primary special education school. It is important as these school students require a safe environment for their learning because of their inability factor for makes it difficult for them to identify the hazards and dangers surrounding of their environment. Therefore, the responsibility falls to those around them such as management, teachers and school staff to ensure that the environment of school is safe.

3.5 Research design

Survey research is one of the most popular non-experimental research method in various fields of studies (Piaw, 2012). This study is a survey of perceptions of managements, teachers and school staffs on their awareness of safety, health and environment in special education school was developed. A survey perception includes the aspect of knowledge, understanding, opinion, acceptance and awareness of the respondents on targeted aspects of the study. The design of this study is based on three (3) methods i.e. onsite observation, distribution of questionnaire and informal interviews of school representatives.

3.5.1 Onsite observation

According to Piaw (2012) field study or onsite observations is the research method of observing events in their natural setting as they occur like monitor and notation human actions and behaviors. For this study, onsite observations are conducted during a site visit for each listed school. Site visit was held after a brief discussion was held together with the Principal, Senior Assistant of Co-Curricular, Senior Administrative Assistant and

Teacher. This discussion was conducted to provide some information to school on process on how the research are carried out. Every site visit was accompanied by a school representative to explain on the equipment, facilities and guideline used to ensure the safety of disabled student while in school. Observation has been carried out on such as:

i. Physical structure of school facilities;
ii. Classroom;
iii. Field;
iv. Toilet;
v. Library;
vi. Activities room;
vii. Student route to canteen and
viii. All surrounding environment in school.

This observation also included the equipment being used by students during outdoor activities. Some schools gave permission to take pictures of the facilities and the school environment that are related to this study which can be made as evidence but there were some schools that do not allow any pictures to be taken in school area for confidential purpose. Photo and identities of the student from all the school were not taken as part of the request of school for remain private and confidential.

3.5.2 Questionnaire

This questionnaire form is used to identify the level of awareness of management, teachers and school staffs on safety, health and by environment in special education school. This questionnaire were distributed once to the respondents and this means that no control group in this study. Piaw (2012) also said the advantages characteristic of survey research are:

i. It can be used widely;

ii. It is easy to conducts;

iii. Data can be quickly conducted;

iv. Large sample can be used;

v. Direct information; and

vi. Results can be generalized.

The design of this questionnaires followed Abdul Rahim Abdul Hamid (2008) research. The Questionnaire attached at **Appendix B** consists of two (2) sections namely Part A and Part B. Part A of this questionnaire is to find out the respondents' background and general information such as:

i. Gender;

ii. Age;

iii. Designation;

iv. Highest Academic Qualification;

v. Attended safety, health and environment courses; and

vi. Number of students.

While, Part B play a role to examine the perceptions of respondents on:

i. Understand about safety policies and procedures;

ii. Knowledge of basic equipment such as extinguishers, First Aid Kits and Personal Protective Equipment;

iii. Awareness about accident in school;

iv. Knowledge about which high-risk accidents area and type of accident;

v. Opinion on factors that contributes to school accidents; and

vi. Proposed improvement of accident prevention method in high-risk accident areas.

3.5.3 Interview session

The interview method is one of the main methods of collecting data for survey research (Piaw, 2012). The author also defined an interview as a two-way conservation with the objective of gathering information. This interview was an informal interview with a school representative during a site visit. It similar with the questionnaire method but conducted orally and answers are normally recorded in writing. The shared information was general information such as:

i. Safety precaution has been done in the school;
ii. Type of accident usually happens in the school;
iii. How they manage and handled the accidents occurs; and
iv. What improvement they did to avoid the accident.

This session various answers were obtained and vary by category of student disability. Where such as for learning problem student the main accident is by being slandered by friends and many more that will discussed at chapter 4.

3.6 Distributions and collection of questionnaires

Twenty (20) set of questionnaires were distributed at each school was listed for this study. The questionnaire was distributed among the managements, teachers and school staffs. Questionnaire distribution is carried out during first site visits. While, the collection of questionnaire was held during the second site visit or another date set by the school after all questionnaire have been answered and ready to be collected.

3.7 Data analysis and evaluation

In this research raw data took from observation, questionnaires and informal interview and according to Piaw (2012), it is the main methods of collecting data for survey research. The data was analyzed using Microsoft Excel to perform raw data and analysis

and to create table, charts and graphs to justify the information from questionnaire. From the observations and informal interview, the information from the session will be discussed in this study with textual write ups of the information. Table 3.3 shows the distribution of questions to meet the objectives from respondents' feedback and opinion from the questionnaires.

Table 3.2:The distribution of questions.

Question	Analysis	Objective
Part A No. 1- 4 & 6	Demographic information.	Knowing background of respondents.
No.5	Attending the safety courses.	Evaluation awareness on safety practices.
Part B No. 1-3	The knowledge of school safety program, safety policies and safety procedure.	
No.4 - 6	Safety practices using basic equipment when accident or emergency occurs.	
No.7 – 9	Understanding about safety information.	
11 12	Frequency of accident. Type of accident	
No. 10	High-risk accident area	Identify the high risks accident area and type of accident.
No. 13 -15	According to: i. safety physical environment at School; ii. safety during teaching lessons; and iii. safety during outdoor activities.	Recognize the main factor that contribute to school accident.
No. 16 -17	Information about equipment provided by school to address safety aspects and proposed improvement of accident prevention methods	Recommendation

CHAPTER 4: RESULT ANALYSIS AND DISCUSSION

4.1 Introduction

This chapter presents the results of data analysis obtained from the questionnaire of school management, teachers and staff awareness raising on school safety. From 100 distributed questionnaire forms, only 88 were returned. Therefore, this analysis is based on 88 respondents only. Data analysis is divided into several partitions namely demographic data, evaluation awareness among management, teachers and school staff on safety practices, identifying the high-risk accidents area in special education primary school; and recognizing the main factor that associated to the accident among the impaired student. According to M Ramirez (2004) students with mental, multiple disabilities were often injured often in the playground or field (20%) and classroom (13%), meanwhile those with developmental disabilities suffered more injuries in classroom (23%) than (9%) in the playground or field. Meanwhile from Health and Safety Executive (HSE) (2018) figured out 55% of all accidents in education are caused by a slip or a trip.

4.2 Distributions and collection of questionnaires

Total set have been distributed was 100 set, but total feedback was only 88 set of questionnaires received only. There were the distribution and collection data respondents from listed school in Table 4.1 and Figure 4.1 shows the percentage of distribution and collection from listed school.

Table 4.1: Distribution and Collection the Questionnaire.

School	Distribution	Management	Teachers	Staffs	Total
A	20	3	12	5	20
B	20	3	5	5	13
C	20	0	13	5	18
D	20	1	16	0	17
E	20	3	12	5	20
Total	**100**	**10**	**58**	**20**	**88**

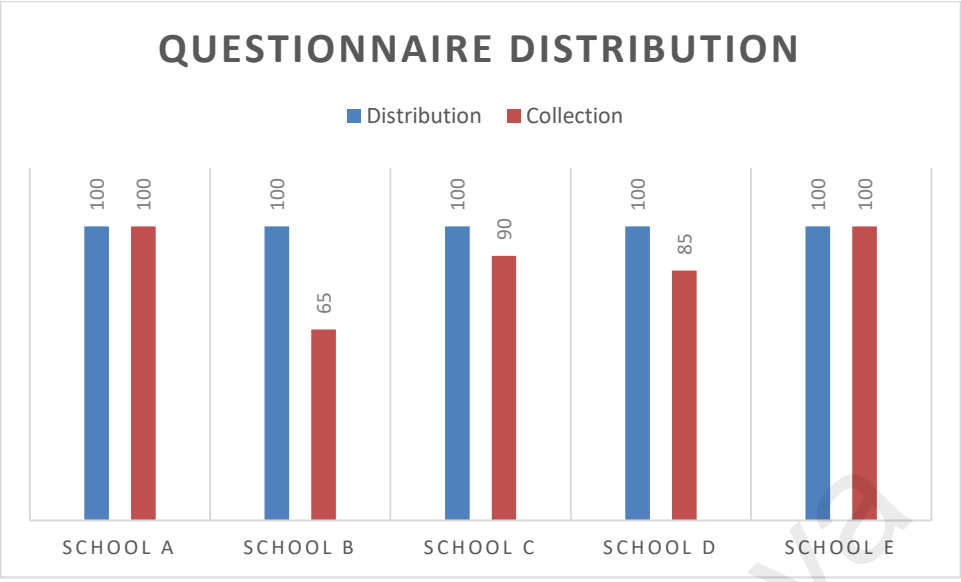

Figure 4.1:Percentages of Distributions and Collections Questionnaire.

Insufficient collection of one hundred (100) sets of questionnaires is due to the absence of managements, teachers and staff during the questionnaire collection session due to vacation and attend the outdoor course. Ratio for this study is 5 Management: 10 Teachers: 5 School staff. This ratio cannot have fulfilled is due there are constraints in terms of:

i. insufficient number of required category respondents available during this study; and
ii. limited number of category at that school such as there are only three (3) persons in management special education primary school.

4.3 Demographic information of respondents

Demographics are characteristics of a population (Susan.E.DeFranzo, 2012). Characteristics such as race, ethnicity, gender, age, education, profession, occupation, income level, and marital status, are all typical examples of demographics that are used in surveys. For this study, demographics information used is to identify background of the respondents are as follows:

i. Gender

ii. Age

iii. Designation; and

iv. Highest Academic qualification.

There are several results of research findings that have been made based on the demographic factors of the employee. In terms of age factor, Anuar I (2009) found that the level of knowledge and awareness about the risk of working among the respondents of medical lab workers showed significant differences according to the age group. Meanwhile, Hashim (2013) stated that there is significant difference in the level of forklift hazard awareness in the workplace based on age, education level, work experience and training attendance.

4.3.1 Gender of Respondents

Table 4.2 shows the total percentage of respondents by gender. This means all collecting information is more from female categories than male. From this study also shows in Table 4.1 indicate that amongst the respondent who participated in this study across all the listed school, 81% were female while the other 19% were male.

Table 4.2: Respondents by Gender

Gender	School A	School B	School C	School D	School E	Quantity (n)	Percentage (%)
Female	17	12	14	15	13	**71**	**81**
Male	3	1	4	2	7	**17**	**19**
Total	**20**	**13**	**18**	**17**	**20**	**88**	**100**

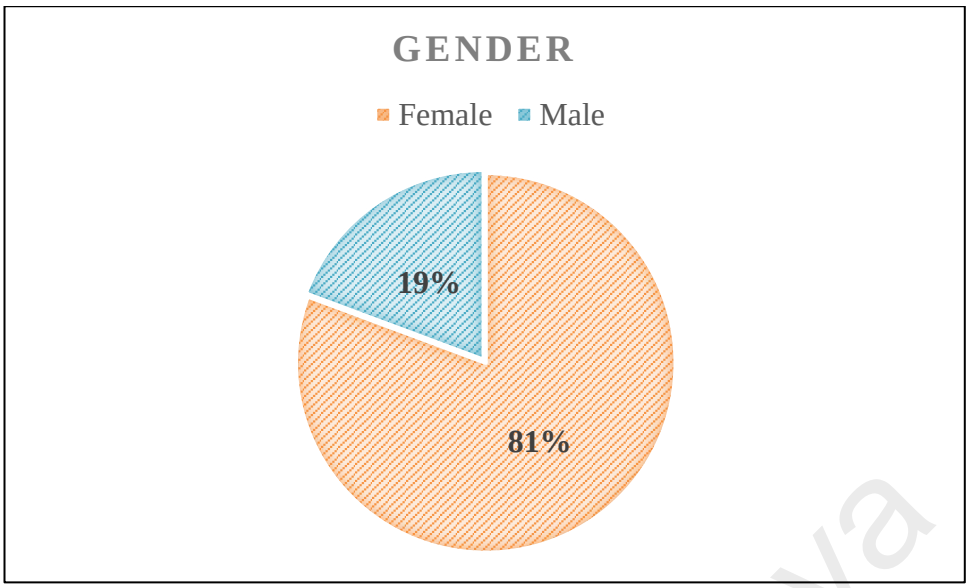

Figure 4.2: Percentage of Respondents by Gender

According to Mansor (2014), the researcher figured out the ratio of female and male teachers is unbalanced which was 70 women teacher of 10 men teachers.

4.3.2 Age of Respondents

Table 4.3 shows that majority of the respondents which is about 87% were within the age group 21-40 years while 13% were within the age of group 41-51+ years. This study found out that the age group of 41-51+ is from management position, meanwhile for age group 21-40 is from teachers and staff position.

Table 4.3: Distribution of Respondents by Age.

Age	School A	School B	School C	School D	School E	Quantity (n)	Percentage (%)
21-30	3	1	5	3	0	**12**	**14**
31-40	13	12	11	11	17	**64**	**73**
41-50	2	0	2	2	3	**9**	**10**
≥ 51	2	0	0	1	0	**3**	**3**
Total	**20**	**13**	**18**	**17**	**20**	**88**	**100**

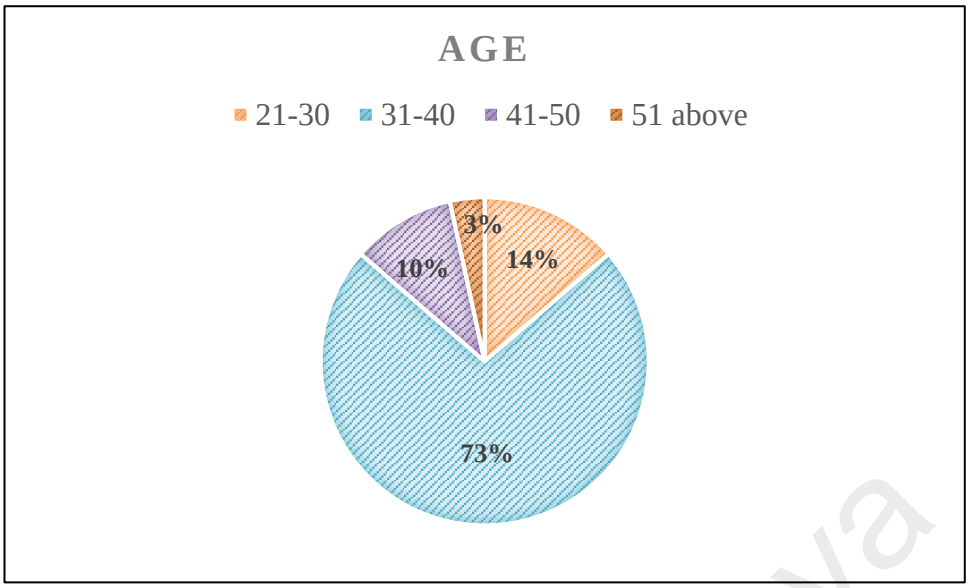

Figure 4.3:Percentage of Respondents by Age

4.3.3 Designation of Respondents

Table 4.4 shows the distribution of respondents by designation at listed school for this study. From result Figure 4.4 indicate 66% of respondents are teachers, 23% is among staff and 11% is among management of school. These results show the distribution of respondents in designation category. In this study, it is shown that the respondents for this study is more from teachers, followed by staffs and lastly management. It is because in Special Education School, there are less staff in management position. It is identified from this that for each school there are only three (3) person at management position.

Table 4.4: Distribution of Respondents by Designation.

Designation	School A	School B	School C	School D	School E	Quantity (n)	Percentage (%)
Management	3	3	0	1	3	**10**	**11**
Teacher	12	5	13	16	12	**58**	**66**
Staff	5	5	5	0	5	**20**	**23**
Total	**20**	**13**	**18**	**17**	**20**	**88**	**100**

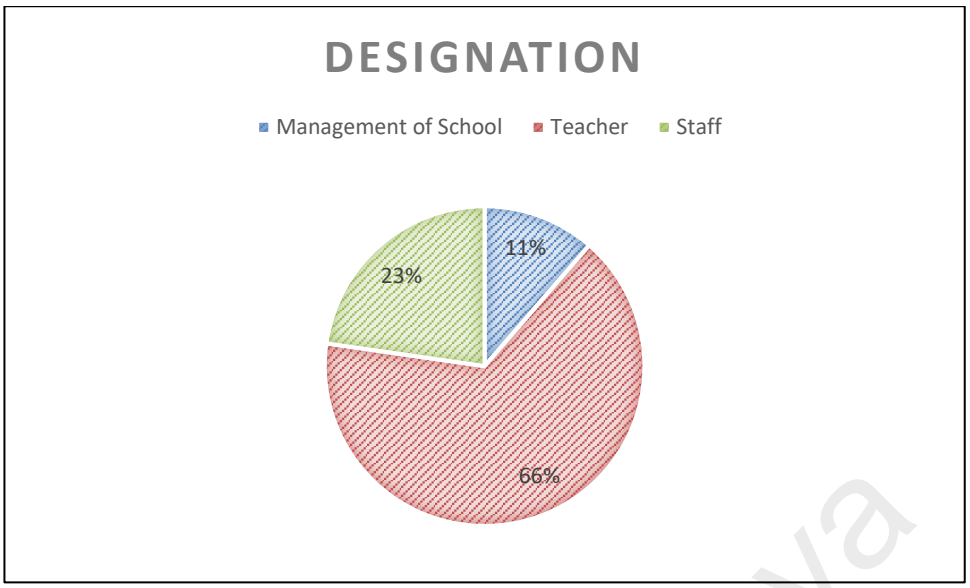

Figure 4.4: Percentage of Respondents by Designation.

4.3.4 Highest Academic Qualification of Respondents

Table 4.5 shows the distribution of respondents by highest academic qualification in which majority of the respondents which is about 73% have bachelor degree. It can be related that majority of respondents are teachers as the teachers have bachelor degree in education as their academic qualification. As for another 23% of the respondents, they have academic education in PMR until Diploma. This shows that all of staff working in this selected school are educated person. Only 4% of respondent have Master Degree for this study. Figure 4.5 shows the percentage of respondents by academic qualification clearly.

Through this demographic data study, can be summarized is more female respondents than male, many respondents aged between 31-40, respondents many from among teachers, and the highest education respondents have is Bachelor Degree. For this study, demographic information is only to knowing background of the respondents.

Table 4.5: Distribution of Respondents by Academic Qualification.

Academic Qualification	School A	School B	School C	School D	School E	Quantity (n)	Percentage (%)
PMR/SRP	3	2	3	0	4	**12**	**14**
Diploma	0	3	3	1	1	**8**	**9**
Bachelor	17	8	10	15	14	**64**	**73**
Master	0	0	2	1	1	**4**	**4**
PHD	0	0	0	0	0	**0**	**0**
Total	**20**	**13**	**18**	**17**	**20**	**88**	**100**

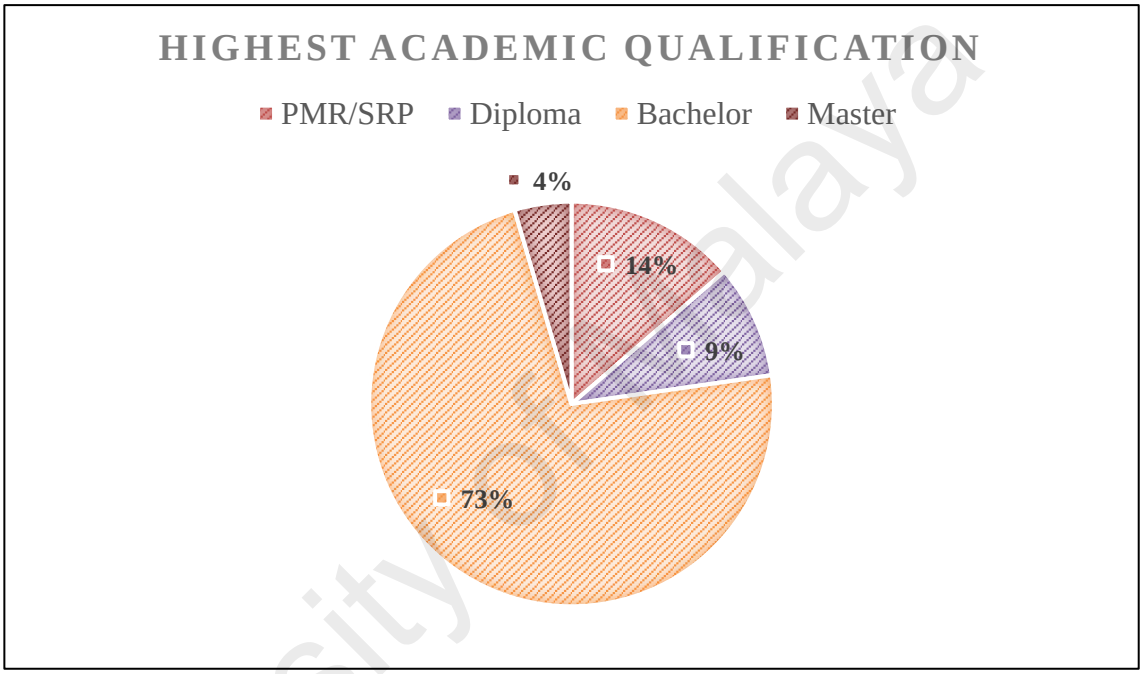

Figure 4.5: Percentage of Respondents by Academic Qualification.

The study by Hashim (2013) indicate that employee demographics information has significant differences with the level of awareness amongst the employee. According to Anuar I (2009), education of the respondents is very important in cultural practices of safety through a preventive approach so that self-employment among workers can be implemented effectively. This data can be fulfilled because all staff working in school area is educated person, so they can identify any hazard that can contribute to accidents. They are also the closest person to the students at school and those who are more responsible for ensuring the safety of students in school especially in the classroom and during outdoor activities.

4.4 Evaluation awareness on safety practices.

The evaluation awareness among managements, teacher and school staff is analyzed by the questions about:

i. attending the safety courses;

ii. the knowledge of school safety program, safety policies and safety procedure;

iii. safety practices using basic equipment when accident or emergency occurs; and

iv. understanding about safety information.

v. knowledge about frequency and type of accident in school.

Table 4.6: Distribution of Respondents by attending safety courses.

Attend	School A	School B	School C	School D	School E	Quantity (n)	Percentage (%)
Yes	10	6	7	8	12	**43**	**49**
No	10	7	11	9	8	**45**	**51**
Total	**20**	**13**	**18**	**17**	**20**	**88**	**100**

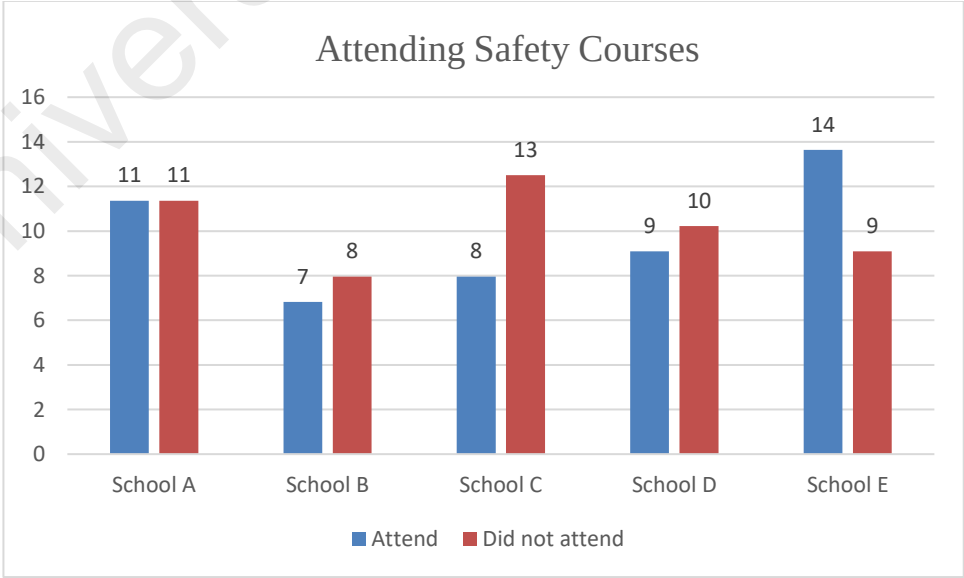

Figure 4.6: Percentage of respondent attending safety courses by school.

Table 4.6 shows the distribution of respondent attending the safety courses by selected school. Meanwhile, Figure 4.6 figured outs that 49 % of respondents attended the safety courses and 51% did not attend the safety courses. The percentage shows the level of awareness on safety knowledge of all parties is still in the low stage. It is because 51% of the respondents for this study do not have comprehensive knowledge on safety practices.

It proven by Minister of Human Resource Malaysia (Utusan Online, 2017) who stated that the level of awareness on occupational safety and health, especially the dangers of exposure to illness and occupational poisoning among employers and industry in Malaysia is still low. Noor Aina Amirah (2013) stated that safety culture in the organization will help to reduce the accident rate but before that the organization need to think on how to create safety culture among the workers. With good safety behavior, believes in safety and the safety practice will create good safety culture at workplace. However, safety awareness between employer and employee still need to be improved.

Knowledge about safety, health and environment must be educated to all staffs in the school to ensure the safety of student in school is guaranteed. Based on OSHA 1994, employer (management schools) must ensure the employees (teachers and school staff) practices on safety and ensure students and visitors not to be exposed to safety and health risks. It is important because for this study the student have their disability to recognize hazard which can cause the accident.

Thus, it is the role of all staffs in the school for ensure the surrounding of the students are safe from any hazard. OSHA 1994 also stated that responsibilities of employees (teachers and school staffs) follow the instructions or standard operational procedure related occupational safety and health that was introduced by employer. This is important in creating safety culture at Special Education School to have cooperation from management, teachers and school staffs. Research by Vicario (2012) indicated that

improving the level on staff training is one of the factors of an adequate safety management in school.

4.4.1 Knowledge of school safety program, policies and procedure.

This section focuses on respondent knowledge of school safety program, safety policies and safety procedure. From the analysis, it is shown that all parties have positive feedback on the question such as follows:

i. Table 4.7 shows 99% of respondent agreed that their school involved with the School of Safety and Health Program;
ii. Table 4.8 indicates that 94% of respondent agreed that the policies and safety policies are communicated and displayed to all at schools; and
iii. Table 4.9 shows 92% of respondent agreed that there are safety procedures provided by schools in areas with potential accident.

Based on this result indicates that all parties aware about safety program, safety policies and safety procedure is communicated perfectly. It is also supported by the observations conducted at each school indicating that there are safety policies and procedures that are displayed for all parties' information and applied.

Its proves that school management have fulfilled OSHA 1994 by formulate safety policies and procedures to demonstrates the organizations concern and commitment to ensure safety and health of the employees. Meanwhile, from the informal interview, many have informed that school have a safety-related program such as fire drill and safety awareness program involving all parties including students. However, the program OSH in School (Ministry of Health Malaysia, 2016) is still not familiar by the listed school for this study. This is because the school's involvement with this program is still being implemented in phases by Ministry of Education Malaysia.

Table 4.7: School involve with the School of Safety and Health Program.

	School A	School B	School C	School D	School E	Quantity (n)	Percentage (%)
Yes	19	13	18	17	20	**87**	**99**
No	1	0	0	0	0	**1**	**1**
Total	**20**	**13**	**18**	**17**	**20**	**88**	**100**

Table 4.8: Safety policies are communicated and displayed to all at schools.

	School A	School B	School C	School D	School E	Quantity (n)	Percentage (%)
Yes	19	11	18	17	18	**83**	**94**
No	1	2	0	0	2	**5**	**6**
Total	**20**	**13**	**18**	**17**	**20**	**88**	**100**

Table 4.9: Safety procedures provided by schools in areas with potential accident.

	School A	School B	School C	School D	School E	Quantity (n)	Percentage (%)
Yes	20	10	17	17	17	**81**	**92**
No	0	3	1	0	3	**7**	**8**
Total	**20**	**13**	**18**	**17**	**20**	**88**	**100**

4.4.2 Safety practices using basic equipment when accident or emergency occurs.

This section analyzed respondent safety practices using basic equipment when accident or emergency occurs. The basic equipment used such as fire extinguishers during the fire, first aids kits when there is injury happened, and Personal Protective Equipment(PPE) (Health and Safety Executive (HSE)) is equipment worn to minimize exposure to a variety of hazards. It can include item such as gloves, foot and eye protection, safety helmets, protective hearing devices (ear plug, muffs), respirators and full body suits. The opinion of respondents about this section were:

i. Table 4.10 shows only 89% of respondents know how to be used fire extinguishers and 11% respondent did not know how to use it.

ii. Table 4.11 shows 93% of respondents give feedback that they know how to use First Aids Kits and only 7% respondent did not know how to use it.

iii. Meanwhile, Table 4.12 shows that 65% of respondents know how to use PPE and 35% of respondent did not know how to use it.

Table 4.10: Knowing the use of fire extinguishers

	School A	**School B**	**School C**	**School D**	**School E**	**Quantity (n)**	**Percentage (%)**
Yes	15	13	15	17	18	**78**	**89**
No	5	0	3	0	2	**10**	**11**
Total	**20**	**13**	**18**	**17**	**20**	**88**	**100**

Table 4.11: Knowing the use of First Aids Kits

	School A	**School B**	**School C**	**School D**	**School E**	**Quantity (n)**	**Percentage (%)**
Yes	19	11	16	17	19	**82**	**93**
No	1	2	2	0	1	**6**	**7**
Total	**20**	**13**	**18**	**17**	**20**	**88**	**100**

Table 4.12: Knowing the use of Personal Protective Equipment (PPE).

	School A	**School B**	**School C**	**School D**	**School E**	**Quantity (n)**	**Percentage (%)**
Yes	14	9	9	10	15	**57**	**65**
No	6	4	9	7	5	**31**	**35**
Total	**20**	**13**	**18**	**17**	**20**	**88**	**100**

Based on results this analysis indicates that the knowledge and practices of using all of the equipment were not fully educated to everyone and at the middle stage. This also shows the percentage of PPE usage knowledge is still low than the percentage of fire

extinguishers and first aids kits. It is shows that the use of PPE is rarely exposed to the school. From informal interview many of respondents also did not know what the PPE is and unfamiliar with PPE. The use of PPE are of in industry (U.S. Department of Labor, 2004) such as in constructions, safety helmets is important to protect head from injury and laboratory industries, eye, skin and face protection must be applied to make work place is safe and prevent from the risk. PPE also can be used in school when the education at workshops and laboratory such as gloves, mask and eye protection.

Research by Khamsiah Ismail (2016) revealed that 1.4% of the teachers, staff and students never received any training in handling the fire extinguisher. In OSHA 1994 also mention that employee must wear or use PPE for the purpose preventing risks to his safety and health. PPE is important because even where engineering controls and safe systems of work have been utilized, some hazard might remain such as the lungs, e.g. from breathing in contaminated air or the skin, e.g. from contact with corrosive materials at laboratory.

4.4.3 Understanding about safety information.

The awareness of safety practices can be analyzed by knowing the respondent understanding about safety information such as HIRARC and warning signage and safety training. The result from respondents' feedback for this analysis were:

i. Table 4.13 indicates only 28% of respondent understand the concept of HIRARC and 72% of respondents do not understand about it.
ii. Table 4.14 shows 67% of respondent agreed that there are warning signage in areas of high risk of accidents and 33% of respondent did not agreed with it.
iii. Table 4.15 shows that 99% of respondent agreed that there is a safety training in school such as fire training.

Table 4.13: Understand the concept of HIRARC.

	School A	School B	School C	School D	School E	Quantity (n)	Percentage (%)
Yes	7	6	2	3	7	**25**	**28**
No	13	7	16	14	13	**63**	**72**
Total	**20**	**13**	**18**	**17**	**20**	**88**	**100**

Table 4.14: The warning signage in areas of high risk of accidents.

	School A	School B	School C	School D	School E	Quantity (n)	Percentage (%)
Yes	15	8	9	10	17	**59**	**67**
No	5	5	9	7	3	**29**	**33**
Total	**20**	**13**	**18**	**17**	**20**	**88**	**100**

Table 4.15: Safety training in school e.g. fire training.

	School A	School B	School C	School D	School E	Quantity (n)	Percentage (%)
Yes	19	13	18	17	20	**87**	**99**
No	1	0	0	0	0	**1**	**1**
Total	**20**	**13**	**18**	**17**	**20**	**88**	**100**

This analysis shows that all the parties are not familiar with safety information about HIRARC and warning signage. It proves that in school, the HIRARC concept and warning signage not implemented among them. It is supported by the attendance of respondents to safety courses in which only 49% attend the courses because the knowledge to apply HIRARC and warning signage is educated in the safety courses. Meanwhile, 99% respondents give feedback that school have fire training, it is a good sign because fire is the most difficult accident to handle and it requires a lot of training to handle the following situations. However, this also shows that safety training held at the school is just a fire training course.

Department of Occupational Safety and Health (DOSH) (2008) stated Hazard Identification, Risk Assessment and Risk Control (HIRARC) is a fundamental to the practice of planning, management and the operation of a business as a basic of risk management. The purpose of HIRARC also stated are as follows: -

i. to identify all the factors that may cause harm to employees and others (the hazards);
ii. to consider what the chances are of that harm be falling anyone in the circumstances of a case and the possible severity that could come from it (the risks); and
iii. to enable employers to plan, introduce and monitor preventive measures to ensure that the risks are adequately controlled always.

It means that with HIRARC, someone can identify hazards, analyze and assess the risks associated with it and then implement the control measures appropriate. Application of HIRARC always in industries, Ahmadon Bakri (2008) reported the implementation of HIRARC is indeed effective in reducing accidents on construction sites.

Thus, the knowledge and application of the HIRARC concept is important for all parties in the special education primary school. This can prevent unexpected things happening in school as all parties can identify hazards, analyze and assess the risks associated with it and then implement the control measures appropriate.

4.4.4 Frequency and type of accident happened at school

This section analyzed the knowledge regarding the number of frequencies and type of accidents occurring in schools. Based on Figure 4.7, there is a difference in opinion for each respondent regarding the occurrence of accidents happen in their schools. Summarize of this frequencies analysis are:

i. School A, B & D many respondents said less than three (3) times a year accident happened at their school;

ii. Meanwhile at School C many respondents said none accident happen at their school; and

iii. School E many respondents said once a year accident happens at their school.

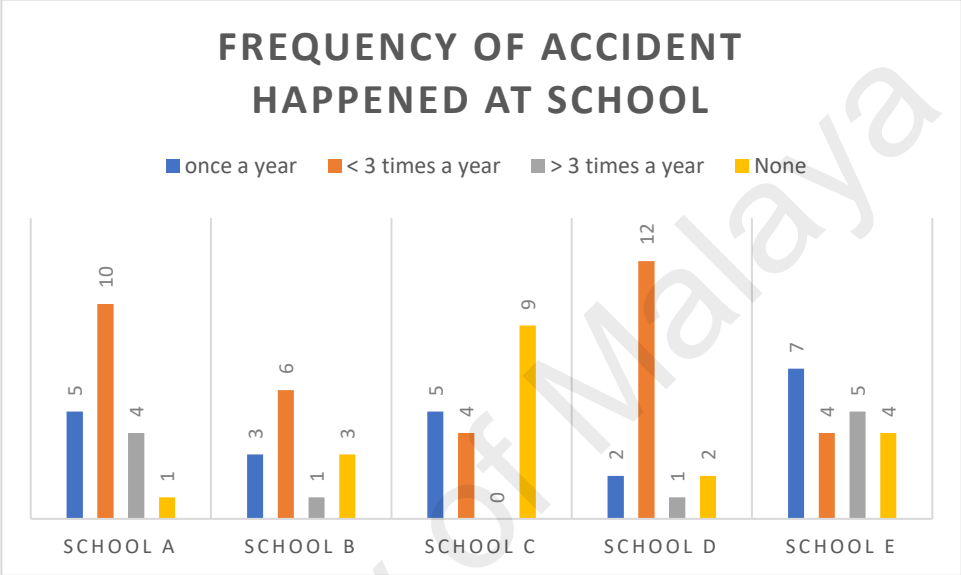

Figure 4.7: Frequency of accident happened at listed school.

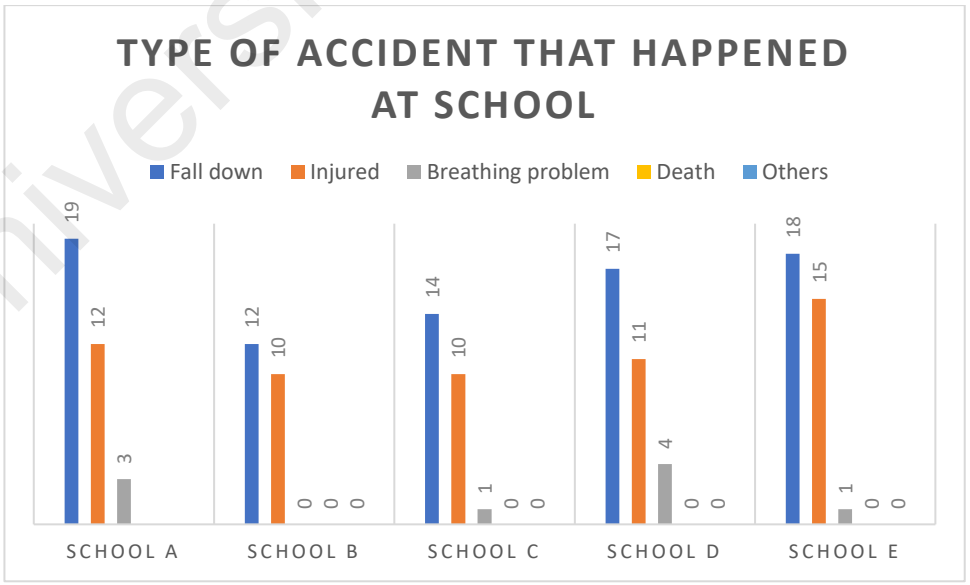

Figure 4.8: Type of accident that happened at listed school.

Meanwhile, from Figure 4.8 indicates that many respondents agreed, fall is the main type of accident that happened frequently in their school and it is followed by student injured. This result also shows that all respondents have their own opinion about the type of the accident that always happened at their schools.

From the observation, maybe it is happening because there is no formal information from management about all accident case happened at their school. It also shows that all parties are not aware about accident in their school.

Information about accident events should be disclosed to all parties in the school. This is to avoid the following accidents and to help all parties to identify and prevent all causes that may cause the accident.

4.4.5 Summary of evaluation on safety awareness

Based on the analysis of several issues assessed regarding the level of safety awareness among management, teachers and staff showed at the middle stage. This is because this study shows that the safety culture in the listed school is still middle stage due to:

i. Attendance in safety courses is low because there is no obligation determined by the management for all employees must to attend the safety courses;
ii. Knowledge and practices related to the safety equipment also founded that not all parties are exposed and have knowledge to their used;
iii. Information and knowledge about prevention of risk method also low among the parties especially in HIRARC concept; and
iv. Information related to frequency and type of accident is also not consistent as there are no formal information or documentations carried out by accident-related management in schools.

Thus, management of school have responsibility and need to involve actively in preventive maintenance, safety and health surveillance and increase awareness on all of the staff to the safety area as well as being responsible for the implementation of arrangement for risk prevention.

4.5 Identifying the high-risk accidents area in special education primary school.

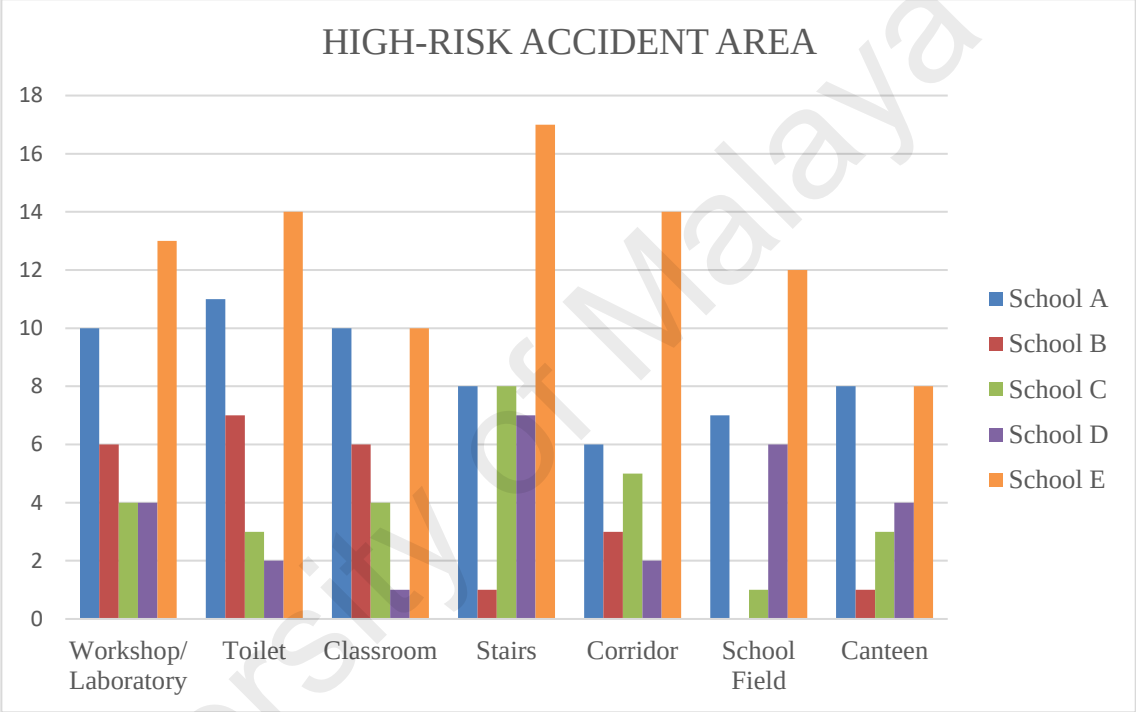

Figure 4.9: Distribution of respondent opinion about high-risk area.

From Figure 4.9 indicates the distribution of respondents' opinion about high-risk area in listed school for this study. The results of this graph show some of the following:

i. Respondent at School E identify all the areas listed are the high-risk area for accidents compared to other schools. It is followed by School A that also give feedback that all the area listed are high-risk area for accidents. This feedback is fulfilled from observation that School A and E are schools with many students and large buildings and areas compared to other schools. School E also the only one school for this study has a hostel for their students.

ii. Stairs is the riskiest area that all respondent at listed school agreed than other area. Only for School B it is not risky area, it is because the buildings for this school is only at ground floor.

iii. It also identifies the stairs, followed by toilet and workshop/laboratory are the risky area in all the listed school.

iv. From the graph can identify School A and B the high-risk accident area is toilet.

v. Meanwhile, for School C, D and E the high-risk area is Stairs.

4.5.1 Discussion on high-risk area in listed school

i. School A

It implements Special Education Integration Program in which this program is implemented at daily primary school using isolated and semi-inclusive teaching and learning approaches. The special education student classroom is placed at ground floor at this school. The school have thirteen (13) classroom, ninety-one (91) student and twenty (20) teachers. The type of disability student in this school is learning problem student.

Respondents from this school give an opinion that a high-risk area for accident in their school is toilet area. It is supported by informal interview with school representatives that students in school A are students difficult to control because of they being hyperactive and less focus when teacher gives instructions. Many accidents happened in this area because of their behavior and instruction letter about safety prevention is displayed at toilet from Department of Education Perak (Alias, 2013) to prevent this accident happen.

From the observation by Figure 4.8, their toilet has safety hand rails to prevent fall or slip but the floor is not provided with anti-slip materials so it's easy for student to slip or fall because of the smooth surface on the floor of the toilet. Anti-slip materials as defined by Johnson (2017), is usually made of rubber, PVC or polyurethane and have a grit

surface of a hard substance, such as silicon carbide. It is constructed to raise worker up off the wet, slippery floor and, at the same time, allow spilled fluids to drain down through holes while the grit surface stays dry. From the interview, it is stated that in order to prevent accident, the teacher or assistant student will accompany students when they are in the toilet to avoid unexpected things.

Figure 4.10: Toilet condition at School A.

From the graph, it has been identified that the workshop and classroom are among the risky area as according to that respondent's feedback. It is because for this two (2) areas, only one (1) door is provided for the student to enter and exit. There is no second door installed for the student to escape in case of any accident happens in this school and it will get crowded since the student only have one way out. According to the standard by Department of Education, each classroom must have door at front and back of the classroom. This is to prevent teachers and student trapped in classroom when fire occurs.

One of the workshop at this school is a cooking room in which in in this area many tools are dangerous to students such as knife, hot oven, fork and many more. From the observations, the equipment in the cooking room is kept in good condition and orderly in the closer and drawer, but the accidents still happen because of the behavior of the student

in which they did not listen to the instructions of teachers and teachers also overlooked student behavior while in the cooking room. Figure 4.9 shows the condition of cooking room and classroom door.

Figure 4.11: Classroom Door and Cooking Room

Overall safety condition in this school is applied nicely because observations shows that there is no obstacle to the student route in the event of an emergency and they also have safety hand rails along the student route to prevent student from falling.

i. School B

School B is a special school for hearing impairment students in which the classroom is at ground floor only. The school building condition is old. It is because they used the old building that have been transformed to a school. In this school, the respondent agreed that the high-risk accidents area in their school is toilet. It is supported by informal interview with school representative's who stated that toilet is high-risk accident area in this school as students always slipped or fall down because of slippery surface in the toilet. From observations, it is proven that the floor in the toilet did not have slip resistant

materials on floor and hand rails are not provided too. It is because the school is adopted existing facilities in this building.

From the observation, the safety condition in this school is poor because of the building condition, and old equipment. But the management have managed to discuss to the department for upgrade their facilities at this school especially for safety requirement.

ii. School C

Meanwhile, school C implement Special Education Integration Program for problem learning student. The respondents identified the high-risk accidents area is stairs. From the observation, since all classroom, toilet and workshop are located at ground floor, then the possibility of an accident due to ascending stairs is not applicable. However, self-managed students are allowed by teachers to go to their own toilets without being accompanied by assistants' teachers or teachers, since it is often that an accident happen because the student does not go to the nearest toilet but goes up to the toilet upstairs. The toilet did not have safety hand rail and slip resistant materials to prevent slip or fall.

Overall the safety condition in this school is applied nicely but the accident usually happened because of limited space in the classroom and high number of students. This school have problem in filling students in the class according to the standard set by the department of eight (8) student in one (1) classroom.

iii. School D

School D is special school for visual impairment student. Many respondents in School D agreed that the high-risk area is stairs. Stairs is the riskiest area in school D because the students have vision disability and that would be disadvantages for them to see clearly as the students need to climb stairs to the library and classroom upstairs. In terms of

observation, there is safety rails provided along the stairs that help students to go up and down using the stairs.

There also have safety hand rails along route to the canteen and the toilet. For the visual impairment students, this safety hand rails are very important to help them to go to another place such as canteen and toilet. Figure 4.10 shows the safety hand rails at stairs and Figure 4.11 shows the route to toilet and Figure 4.12 shows route to canteen at School D.

Figure 4.12: Safety hand rails at stairs.

Figure 4.13: Safety hand rails at route to toilet.

Figure 4.14: Safety hand rails at route to canteen.

iv. School E

Meanwhile, School E is a special school for hearing impairment students. This schools have a large number of students and large buildings as well as large areas compared to other schools. It also has hostel for their student.

At School E, the high-risk accidents area that has been identified by the respondent are stairs, toilet and corridor in which it is related to slip or fall down at smooth surface. From the observation, all the area did not have slip resistant material on the floor that can prevent falls. This school did not have safety hand rail to prevent from slip or fall at stairs.

This conclude that School E is poor in safety facilities for their student. They only have basic safety requirements such as fire extinguisher and first kit aid only. This is due to the reason that the teacher overlooked this situation because their student only has hearing impairment and can self-manage themselves compared to other disability student such as visual impairment and learning problem student.

4.5.2 Summary of high-risk area in listed school

Study found the high-risk accident occurs are at area toilet and stairs. From the feedback also indicates all the respondent give feedback according to their student behavior, school building condition, and surrounding school condition.

Previous study by Tahir (2018) stated that students behavior can be difficult to control as students with learning problems is considered as lethargic, not paying attention or not interested. Therefore, the student was not attentive when the teacher gives instruction or warning about safety. Research by Nearkasen Chau (2007) indicate that student with ages below 15 years old tend to have school injuries due to lack safety awareness, lack of attention and also because of lack of knowledge.

From observation only one (1) school from five (5) of thein listed school for this study is a school and all size of the classroom followed standard by Ministry of Education for Special Education School needs. Meanwhile, the others are old building that have been modified to a school. This proved the identification of risky areas depending on the following factors such as student behavior, school building condition, and surrounding school condition.

4.6 Recognizing the main factor that associated to the accident among the impaired student.

This section recognizing the main factor that associated to the accident among the impaired student according to safety physical environment at school; safety during teaching lessons; and safety during outdoor activities.

4.6.1 Factors that contribute to school accidents according to Safety Physical Environment at School.

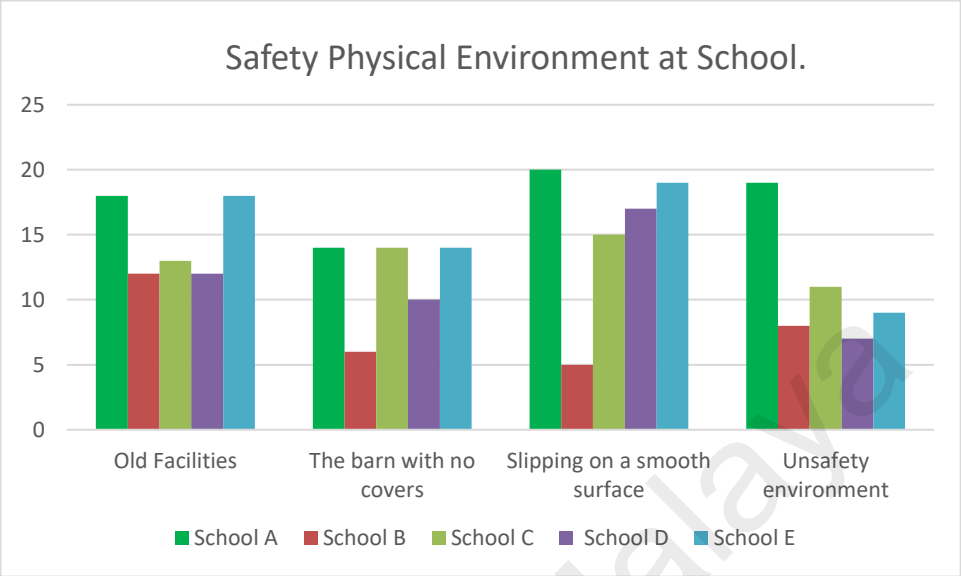

Figure 4.15: Factors that contribute accident according to Safety Physical Environment at School.

From Figure 4.15 its show respondents' opinion about the factor that contribute to school accidents accordingly to safety physical environment at school. Many factors that listed in this questionnaire for respondents gave their opinions and there are:

i. Old facilities;
ii. The barn with no covers;
iii. Slipping on the smooth surface; and
iv. Unsafety environment.

From this graph shows that many respondents at School B agreed that old facilities are the main factors that contribute to school accidents. Meanwhile, at School A, C, D and E many respondents agreed that slipping on a smooth surface are the main factors that contribute to school accidents.

From observation and informal interview at school B, the school representatives told that old facilities are a major factor for them because of School B buildings are old

buildings that are used to be schools and many equipment in the school are old equipment. While for slipping it is a big problem at school A, C, D and E because it often happens when a student slip on the toilet, stairs and even in the corridor if there is a smooth surface in the area. These results supported the findings high-risk area at the school are toilet, stairs and corridor because of factor slipping on a smooth area.

Here are some more recommendations using ergonomic concepts of ways to reduce slips, trips and falls through design and modification. Something as simple as slip resistant material on the floor can prevent falls; hand rails; and color contrast on uneven surfaces like the edges of stair steps.

4.6.2 Factors that contribute to school accidents according to safety during teaching lessons.

HSE have a checklist for safety and health in classroom (Health and Safety Executive, 2011). According to this checklist, in this study, it is analyzed that some of the factors that contribute to school accident according to safety during teaching lessons are:

i. Lack of lighting;
ii. Furniture layout;
iii. Narrow space;
iv. Sharp equipment; and
v. Injured by a classmate.

From Figure 4.16 shows that most of the respondents agreed that factor that contribute to school accidents during teaching lesson in school A is injured by a classmate; School B, D and E are narrow space and School C furniture layout respectively.

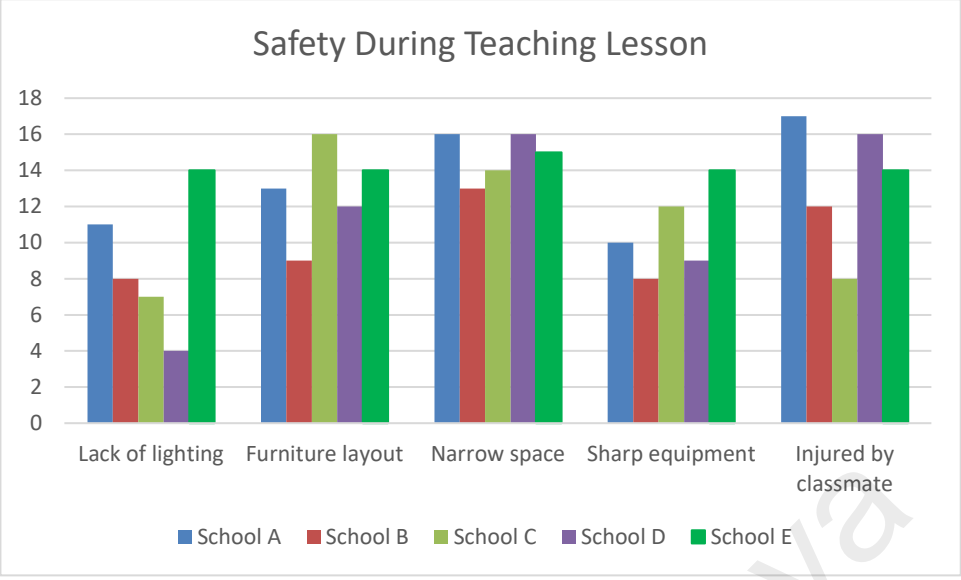

Figure 4.16: Factors that contribute accident according to safety during teaching lesson.

Its supported by observation and informal interview with school representative at school A who stated that they did not have problem with lack of lighting, furniture layout; and narrow space. It is because the school is still new and all layout of classrooms and furniture layout are in accordance with the standards set by The Special Education Department of Ministry of Education. Figure 4.17 shows the classroom condition at School A based on eight (8) student for one (1) classroom.

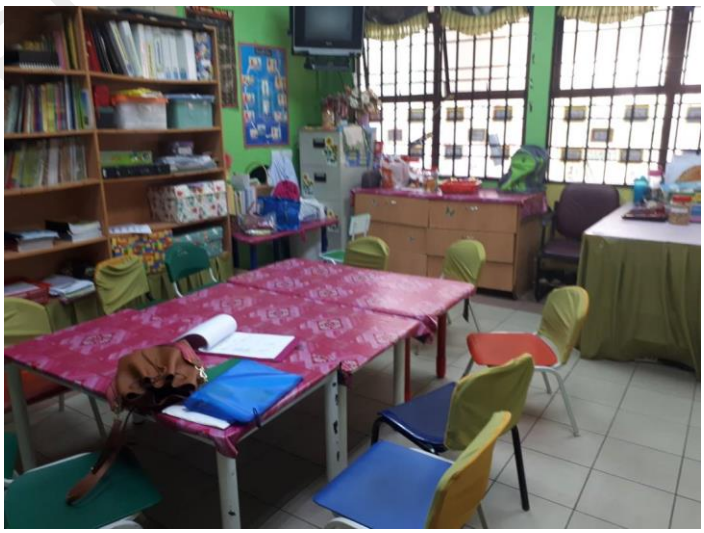

Figure 4.17: Classroom condition at School A

Meanwhile, at School B, narrow space become the main factor that contribute to accident during teaching lesson since they use present room at the old building and it does not comply with the standard. So, in one classroom will have more than eight (8) student because of the limited classroom. Previous study by (H. T. Mohd Hanafi Mohd Yasin, Mohd Mokhtar Tahar, Safani Bari, Siti Nur Nadirah Ibrahim and Rozniza Zaharudin, 2013) proved that classroom in special education school is narrow and not suitable with number of student and from the observation the classroom condition seems to be narrowed with furniture and student, it will be easy for accident to occur in the classroom.

At School D and E, they also have a problem narrow space because they cannot comply with the standard since the students are huge but classroom are limited.

At School C, furniture layout is the main factor that contribute to the school accident during teaching lesson because of limited area for classroom because the classroom are modified to become two (2) or more classroom inside in one (1) classroom. So, the classroom are filled with various furniture and compact.

4.6.3 Factors that contribute to school accidents according to safety during outdoor activities.

Simo Salminen (2013) figured out that 49.7% of school injuries occurred outdoor and 39.7% of injuries due to the school environment factors. Menckel (1997) stated that injuries happened frequently at the field for young students. In Malaysia, many of accident happen in school not only because of old or not well maintained school facilities, but lately it is because of flying blade from a lawn tractor which was being used to mow the grass at the school field (Nor, 2018). This means that accident in school area can be happened in many ways and some prevention should be taken seriously to avoid accident in the school.

In this study, it is analyzed factor that contribute to school accidents according to safety during outdoor activities are as follows:

i. Covered by equipment;
ii. No teacher supervision;
iii. No environmental investigation before performing activities;
iv. Sports equipment that is not suitable for student; and
v. Animal that dangerous or poisonous.

From Figure 4.18 shows that many respondents at School A agreed that covered by equipment is the main factors; School C no teacher supervision is the main factors and School B; D and E are animal that dangerous or poisonous.

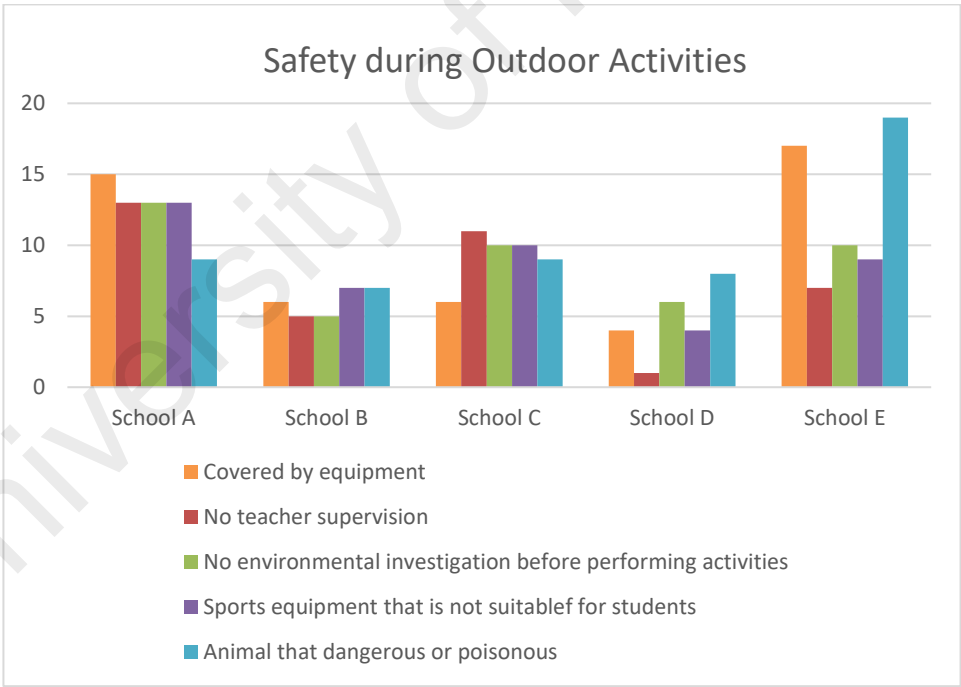

Figure 4.18: Factors that contribute accident according to safety during outdoor activities in listed school.

From informal interview at School A, covered by equipment is the main factor that contribute to accident during outdoor activities because of the hyperactive behavior of the

students and they are too excited during outdoor activities. To prevent this accident in School A have activity room shows by Figure 4.19.

Figure 4.19: Activity room for learning problem student in School A.

At School B, D and E, from informal interview with school representatives, they gave information that there are dangerous or poisonous animals at school surrounding such as snake and dog. For an example at School B, if there is heavy rain, flood would occur at the school and snake would appear after the flood. Luckily there is no accident that involved student because of the animal so far. It is because staff in this school will act quickly when the event happen such as communicate with Fire and Rescue Department to handle this problem. It becomes main factor for these school as the disability of student in School B and E is hearing and School D is visual. They cannot hear and recognize the animal from a distance because of their disability. It also mention in studied Ahmad Rasdan Ismail (2017) that being bitten by snake is highest accident in field because the school field is near to the forest or bushes infested with poisonous animal unnoticed.

Meanwhile, at School C the main factor is no teacher supervision because of lack of teacher and assistant students at this school but many students to be controlled. This student is difficult to be controlled because of their aggressive and hyperactive behavior. From the informal interview, it is informed that this school rarely do outdoor activities because of lack of permission from the parent of students. They did not trust their child can do outdoor activities.

4.6.4 Summary of factors that contribute to school accidents.

From this study, it can be analyzed that many factors contribute to school accidents according to safety physical environment at school; safety during teaching lesson and safety during outdoor activities. From the respondent feedback, it is agreed that factor of old facilities and slipping on a smooth surface is the main factor according to safety physical environment at school. Injured by a classmate, narrow space and furniture layout is main factors that contribute accident according to safety during teaching lesson. Lastly, covered by equipment, no teacher supervision and animal that dangerous is the main factor according to safety during outdoor activities. This study showed all the factor is different according to type disability of student in the school, student behavior, school building condition, and surrounding school condition.

CHAPTER 5: CONCLUSION

5.1 Conclusion

This chapter explain conclusion based on the findings of this study. Overall, this study shows that the level of awareness of school staffs including managements, teacher and staff at special education primary school on safety, health and environment is middle stage. This summary is based on the following finding:

i. In term of attendance the safety courses show at middle stage. It is because at most listed school, all staff were not required to attend this safety course. So, majority all of staff did not have a comprehensive knowledge about safety information and practices.

ii. Based on safety practices using basic equipment when accident or emergency occurs also at middle stage. It shows that the knowledge and practices of using all the equipment were not fully educated to everyone.

iii. Understanding about safety information and practices also low at HIRARC and warning signage concept. This analyzed shows that all the parties were not familiar with safety information about HIRARC and warning signage. It proves that in school, the HIRARC concept and warning signage not applied among them.

iv. Awareness about frequency and type of accident in the school also low because the answers was not consistent among the respondent in the same school. It is because no formal information or documentations about the accidents were displayed or distributed to all staff for their knowledge.

v. The high-level awareness only at knowledge of school safety program, safety policies and safety procedure.

Meanwhile, the high-risk accident school area identified for this study are toilet and stairs. These results indicate that the two (2) main factors that contribute to school accidents accordingly to safety physical environmental at school are old facilities and slipping on smooth surface which refers to toilet and stairs. This study also recognize factor of injured by a classmate; narrow space and furniture layout are the main factors that contribute to school accidents during teaching lesson. For safety during outdoor activities, the main factors identified are covered by equipment; no teacher supervision and animal that dangerous or poisonous.

5.2 Suggestion for school

The main things in ensure safety at school is the school management must have clear policies, an understanding of the main stakeholders involved, clear plans and monitoring mechanism. It is means that school health and safety management must be applied at primary special education school to prevent any accidents or danger as illustrated in Figure 5.1 School Health and safety management process from ((ROSPA), 2012).

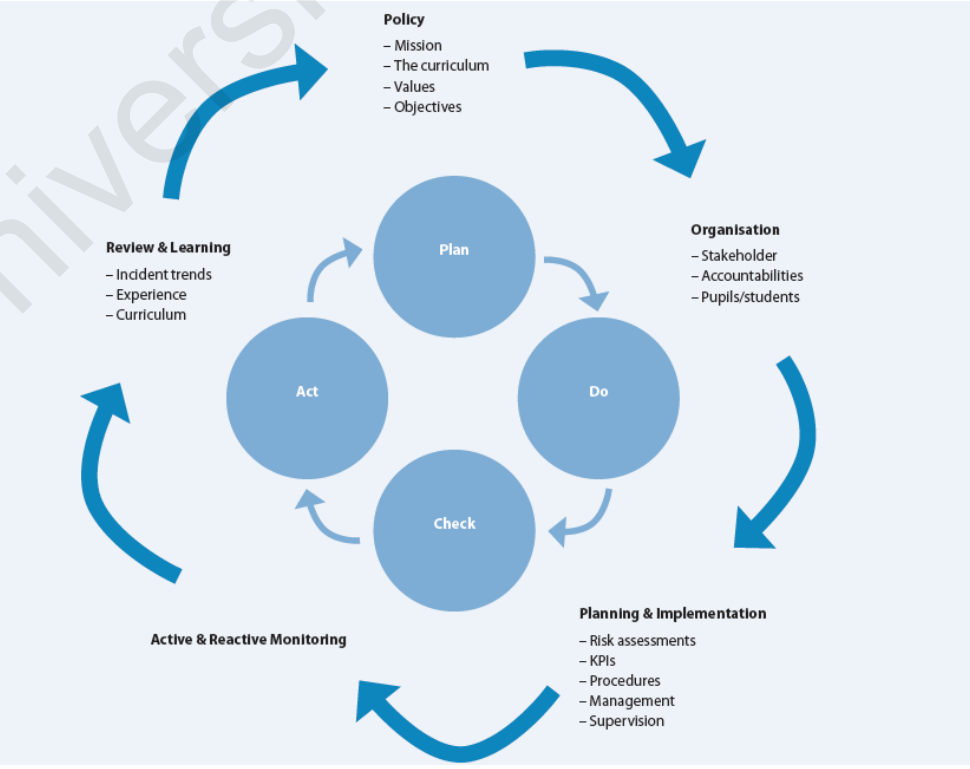

Figure 5.1: School Health and safety management process

There are several suggestions that can be considered by the school to raise the level of awareness of all school's staff to safety, health and environment such as:

i. Require safety course attendance in key performance indicator (KPI) to all staff. This is to encourage their presence to earn knowledge about information and practices on safety, health and environment. It supported by Deputy of Minister of Education said in New Straits Times Online (2014) that management and all staff have to undergo the training program which would educate them on how to identify hazard or risks in school and how to develop an effective monitoring system.

ii. Conduct continuous and regular safety programs with agencies like Fire and Rescue Department (BOMBA), Department of Occupational Safety and Health (DOSH) and Department of Health with the school. This can also expose the staff and students on the procedure to avoid and handle accidents in school. It is also supported by NIOSH Chairman Tan Sri Lee Lam Thye (The Borneo Post Online, 2014b) that NIOSH are offering to help school to create awareness of work safety and health in schools through the 'OSH in School Program'.

iii. Establish a safety committee at the school to identify the causes and to overcome accidents occurring in the schools. In (The Borneo Post Online, 2014a) stated that Ministry of Education want all management of school to develop and strengthen the role and function of the School Safety Committee to ensure safety of students and also to audit and maintain all infrastructure in the school.

iv. Apply ergonomic concepts of ways to reduce slips, trips and falls through design and modification such as slip resistant material on the floor can prevent falls; hand rails; and colour contrast on uneven surfaces like the edges of stair steps.

5.3 Recommendation for future research

For further research, it is recommended to perform demonstrations on how to use basic safety equipment such as fire extinguisher at all staff. This is because from these questionnaires, it cannot be confirmed that the staff really know how to use the equipment. This important because accident such as fire will happen at any place and all staff must know on how to use fire extinguisher in order to handle the fire quickly.

Besides that, the future project can also include an involvement of parents in safety education to raise awareness of parents. This can help to develop safety awareness in the special need student from home. It is also important so that special need student can detect or identify the hazard by themselves to avoid unexpected thing happen to them in school.

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