

KNOWLEDGE, ATTITUDE AND PRACTICE OF FIRST AID AMONG PRIMARY SCHOOL TEACHERS IN PETALING JAYA, MALAYSIA

RAIHAN BINTI MOHD YUNOS

FPSK(m) 2021 10



KNOWLEDGE, ATTITUDE AND PRACTICE OF FIRST AID AMONG PRIMARY SCHOOL TEACHERS IN PETALING JAYA, MALAYSIA

By

RAIHAN BINTI MOHD YUNOS

Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia, in Fulfilment of the Requirements for the Degree of Master of Science

COPYRIGHT

All material contained within the thesis, including without limitation text, logos, icons, photographs, and all other artwork, is copyright material of Universiti Putra Malaysia unless otherwise stated. Use may be made of any material contained within the thesis for non-commercial purposes from the copyright holder. Commercial use of material may only be made with the express, prior, written permission of Universiti Putra Malaysia.

Copyright © Universiti Putra Malaysia



Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfilment of the requirement for the degree of Master of Science

KNOWLEDGE, ATTITUDE AND PRACTICE OF FIRST AID AMONG PRIMARY SCHOOL TEACHERS IN PETALING JAYA, MALAYSIA

By

RAIHAN BINTI MOHD YUNOS

February 2021

Chairman : Professor Soh Kim Lam, PhD Faculty : Medicine and Health Sciences

Introduction: Primary school children are very prone to injury and they spend more than half of their day in school. Every year, there will be cases of in-school injuries and children life is at risk. During school hours, the immediate guardian for the students will be the teachers and if anything goes wrong, teachers will be the front lines to the rescue, teachers act as a life saviour. A few seconds means life or death in a severe situation, with some basic first aid knowledge, teachers can help by giving the necessary help to reduce harm to the victim. According to the American Heart Association (2010), first aid is defined as the assessment and intervention given by a bystander or the victim himself with minimal or without medical equipment. Objective: This study aims to clarify the gap between knowledge, attitude, and practice of first aid among primary school teachers in Petaling Jaya, Selangor, Malaysia. Methodology: A cross-sectional quantitative survey was conducted from July to October 2017 among primary school teachers in Petaling Jaya, Selangor, Malaysia participants were selected using a clustered random sampling method. Data were collected using a pretested, structured self-administered questionnaire consisting of knowledge, attitude, and practice questions. Descriptive and chi-square analysis was done on the data by using statistical package for the social sciences (SPSS) version 25.

Result: The study was conducted involving 124 participants from 3 selected primary schools in Petaling Jaya. Most of the participants were female (71.8%) and most had heard the term first aid before (98.4%). Almost half of the participants, 48.4% have good knowledge and 51.6% have poor knowledge. About 66.1% of participants had a positive attitude towards first aid. Most participants agree that bleeding is one of the most common injuries that need first aid. Most of the participants chose media (64.5%), books (62.9%) and family (40.3%) as their source of knowledge on first aid. There was a significant association between knowledge and training experience of the participants (p=0.045). **Conclusion:** The findings from this study would suggest more pieces of trainings for teachers to be more knowledgeable on first aid. In addition to

that, knowledge of first aid should be widely spread through the media as well as through books as the participants prefer these sources concerning to first aid.

Keyword: Knowledge, Attitude, Practice, Teachers, Petaling Jaya



Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Master Sains

PENGETAHUAN, SIKAP DAN PENGAMALAN PERTOLONGAN CEMAS DALAM KALANGAN GURU SEKOLAH RENDAH DI PETALING JAYA, MALAYSIA

Oleh

RAIHAN BINTI MOHD YUNOS

Februari 2021

Pengerusi : Profesor Soh Kim Lam, PhD Fakulti : Perubatan dan Sains Kesihatan

Pengenalan: Kanak-kanak sekolah sangat berisiko untuk mengalami kecederaan di sekolah. Sebahagian besar dari masa mereka diluangkan di sekolah. Setiap tahun, pasti ada sahaja kes kecederaan kanak-kanak di sekolah. Semasa sesi persekolahan, penjaga terdekat pelajar adalah guru mereka. Jika sebarang kemalangan berlaku, guru merupakan orang pertama yang bertanggungjawab untuk menyelamatkan keadaan dan nyawa. Beberapa saat boleh bererti hidup dan mati sewaktu keadaan yang serius. Dengan ilmu pengetahuan asas tentang pertolongan cemas, sekurang-kurangnya guru boleh membantu memberikan pertolongan yang sepatutnya kepada mangsa. Menurut American Heart Association (2010), pertolongan cemas boleh di definisikan sebagai penilaian dan penglibatan yang diberikan oleh seorang pengamat atau mangsa sendiri dengan peralatan perubatan yang minimum atau tanpa peralatan perubatan. Objektif: Kajian ini bertujuan membantu menjelaskan jurang antara pengetahuan, sikap dan amalan pertolongan cemas di kalangan guru sekolah rendah di Petaling Jaya. Menilai tahap pengetahuan pertolongan cemas dalam kalangan guru sekolah rendah di Petaling Jaya, Selangor, Malaysia. Kaedah: Kaedah kuantitatif cross-sectional telah dijalankan dari Julai hingga Oktober 2017 di kalangan guru sekolah rendah di Petaling Jaya, Selangor, Malaysia menggunakan kaedah pensampelan rawak berkelompok. Data dikumpul dengan menggunakan soal selidik yang berstruktur yang terdiri daripada soalan pengetahuan, sikap dan amalan. Analisis deskriptif dan chi-square dilakukan berdasarkan keputusan menggunakan pakej statistik untuk sains sosial (SPSS) versi 25.

Keputusan: Kajian ini dijalankan ke atas 124 sampel dari 3 sekolah rendah di Petaling Jaya. Kebanyakan peserta adalah wanita (71.8%) dan kebanyakan (98.4%) telah mendengar istilah pertolongan cemas sebelum ini. Di antara semua 124 peserta, 48.4% mempunyai pengetahuan yang baik dan selebihnya (51.6%) mempunyai pengetahuan yang kurang baik. Enam puluh enam perpuluhan satu peserta mempunyai atitud yang positif terhadap pertolongan cemas. Seratus lapan orang peserta bersetuju

bahawa pendarahan adalah salah satu kecederaan yang paling kerap berlaku yang memerlukan pertolongan cemas. Majoriti peserta memilih media (64.5%), buku (62.9%) dan keluarga (40.3%) sebagai sumber pengetahuan mereka tentang pertolongan cemas. Terdapat persamaan penting antara pengetahuan dan pengalaman latihan guru (p=0.045). **Kesimpulan**: Penemuan dari kajian ini mencadangkan lebih banyak kursus dijalankan untuk guru supaya mereka lebih berpengetahuan tentang pertolongan cemas. Di samping itu, pengetahuan tentang pertolongan cemas perlu disebarkan secara meluas melalui media serta melalui buku kerana peserta lebih gemar sumber-sumber ini untuk mendapatkan ilmu pertolongan cemas.

Kata Kunci: Pengetahuan, Sikap, Amalan, Pertolongan Cemas, Guru, Petaling Jaya



ACKNOWLEDGEMENTS

In the Name of Allah, the All Knowing, The Most Merciful,

First and for most I would like to extend my greatest gratitude towards Allah swt for giving me the strength and courage to continue seeking knowledge for the benefit of myself, and others. Next, I would like to thank Universiti Putra Malaysia for giving me the opportunity to continue my postgraduate studies. The beautiful landscape and humble people are something I look forward to every time. Special thanks to my supervisor Prof. Dr. Soh Kim Lam, Pn Rosna Abd Rahman (retired) who had always been there for me and guiding me throughout the course of this study. Also, Miss Salimah Japar thanks a bundle for all your advice and encouragement. May your life be filled with joy and happiness always. My statistics lecturer, Assoc.Prof Dr. Malina and Dr. Muna thanks for all your time and effort to enlighten me in this field, may Allah bless your souls. Not to forget, Dr. Ong Swee Leong (UNISZA) for her motherly advices to improve on my thesis writing. To Pn. Norhafizah Shaaban, many thanks for all the help throughout this postgraduate journey, you have been such a kind person in solving all my doubts on my study updates.

Next, I would like to thank the queen of my heart, my mother, Pn. Asmah Binti Sulaiman for all the support, you have been the greatest cheerleader in my life. To my lovely sister, a huge thanks for handing in all the documents required for me to graduate without hassle, especially during this Covid-19 situation where I can't be there myself. To my dearest brother, my extended family and friends, thanks for all the direct and indirect support, all of you have been a strong backbone throughout this journey. To my dear husband and my sweet son, thank you for all the time spend helping and motivating me to complete my studies, I hope this journey will be a motivation for us.

All and all, I'm truly contented to complete this paper and I look forward to spread the lesson that I learned. Independence, tolerance, endurance and will power can bring you places you once can only imagine. There will definitely be obstacles in between, but with all the values you built along the way, you will eventually get through it.

This thesis was submitted to the Senate of the Universiti Putra Malaysia and has been accepted as fulfilment of the requirement for the degree of Master of Science. The members of the Supervisory Committee were as follows:

Soh Kim Lam, PhD

Professor Faculty of Medicine and Health Sciences Universiti Putra Malaysia (Chairman)

Salimah binti Jaapar, PhD

Lecturer
Faculty of Medicine and Health Sciences
Universiti Putra Malaysia
(Member)

ZALILAH MOHD SHARIFF, PhD

Professor and Dean School of Graduate Studies Universiti Putra Malaysia

Date: 10 June 2021

TABLE OF CONTENTS

				Page
ABSTRA ABSTRA ACKNO	K	EMENTS	S	i iii v
APPRO	VAL			vi
DECLA	RATION	Ī		viii
LIST OF	F TABLE	ES		xiii
LIST OF	FIGUR	ES		xiv
LIST OF	FAPPEN	DICES		xv
LIST OF	F ABBRE	EVIATIO	NS	xvi
CHAPT	ER			
1		ODUCTI		1
	1.1	Backgr		1
	1.2		m Statement	3
		1.2.1	First Aid in Schools	3 4
		1.2.2		4
		1.2.3	Knowledge Level affects the Attitude and	-
	4.0	G1 1.0	Practice of First Aid	5
	1.3		cance of the Study	5
	1.4		ch Questions	6
	1.5	Objecti		6
		1.5.1	General Objective	6
		1.5.2	Specific Objectives	6
	1.6	Hypoth		7
	1.7		otual Framework	7
	1.8		ion of the Term	8
		1.8.1	Knowledge	8
		1.8.2	Attitude	9
		1.8.3	Practice	9
		1.8.4	First Aid	9
		1.8.5	Primary School	10
		1.8.6	Teachers	10
2	LITE	RATURE	E REVIEW	11
	2.1	Introduction		11
	2.2	History of First Aid		11
	2.3	First Aid in Schools		11
	2.3	2.3.1	Definition of First Aid	11
		2.3.2	Prevalence of School Injuries	13
		2.3.3	Importance of First Aid in Schools	14
	2.4		emographic Characteristics of Teachers	15
	۷.⊤	2.4.1	Gender	15
		2.4.2	Age	15
		2.4.3	Teaching Experience	16
		2.4.5	reacting Experience	10

		2.4.4 Previous First Aid Training Experience	16
	2.5	Role of Education regarding First Aid	16
	2.6	Source of Information regarding First Aid	17
	2.7	Knowledge on First Aid among Teachers	19
	2.8	Attitudes on First Aid among Teachers	20
	2.9	Practice of First Aid in Schools	20
	2.10	Factors Contributing to Poor Practice of First Aid	20
	2.10	among Teachers	21
	2.11	Comparing Teacher's Teaching Experience, Knowledge	21
	2.11	Level and Practice regarding First Aid	21
	2.12	Study Gap	22
	2.12	Study Gap	
3	STUDY	Y METHODOLOGY	23
	3.1	Introduction	23
	3.2	Study Design	23
	3.3	Study Location	23
	3.4	Study Sampling	24
		3.4.1 Inclusion Criteria	24
		3.4.2 Exclusion Criteria	24
	3.5	Sample Size	24
	3.6	Sampling Design	26
	3.7	Questionnaire Design	26
	3.8	Variables	27
	5.0	3.8.1 Dependent Variables	27
		3.8.2 Independent Variables	28
	3.9	Translation of the Questionnaire	28
	3.10	Validity and Reliability	28
	3.11	Ethical Considerations	29
	3.12	Data Analysis	29
	3.13	Data Collection Methods	29
	0.10		
4	RESUI	LTS	31
	4.1	Introduction	31
	4.2	Response Rate	31
	4.3	Sociodemographic Characteristics	31
	4.4	Knowledge on First Aid	32
	4.5	Definition of First Aid and Specific Questions on	
		Knowledge	33
	4.6	Level of Knowledge, Attitude, and Practice related to	
		First Aid among Primary School Teachers	34
		4.6.1 Level of Knowledge on First Aid	34
		4.6.2 Attitude on First Aid	35
		4.6.3 Level of Attitude towards First Aid	35
		4.6.4 Practice on First Aid	35
	4.7	Association between Sociodemographic Data (Gender,	
		Age, Training Experience, First Aid Experience) with	
		the Level of Knowledge, Attitude and Practice of First	
		Aid	37
		4.7.1 Association between Attitude and	
		Sociodemographic Data	38

		4.7.2	Association	between Sociodemographic Data		
				e on First Aid	38	
			4.7.2.1	Association between Gender and		
				Practice of First Aid	38	
			4.7.2.2	Association between Age Group		
				with Practice of First Aid		
				Questions	42	
			4.7.2.3	Association between Teaching		
				Experience with Questions on		
				Practice of First Aid	45	
	4.8			Training Experience with Practice		
			Aid Question		49	
	4.9	Associa	tion between	Knowledge and Attitude	53	
	4.10	Associa	tion between	Knowledge and Practice	53	
5	DISCUS	SSION			58	
	5.1	Introduc	ction		58	
	5.2	Sociode	mographic C	Characteristics	58	
	5.3	Level of	Knowledge	Attitude and Practice on First Aid		
		among Primary School Teachers in Petaling Jaya				
		5.3.1	Knowledge		59	
		5.3.2	Attitude		60	
		5.3.3	Practice		60	
	5.4	Associa	tion between	Sociodemographic Data (Gender,		
		Age, Training Experience) with the level of Knowledge,				
				e of First Aid.	61	
		5.4.1		with sociodemographic data	61	
		5.4.2		th Sociodemographic Data	62	
		5.4.3		h sociodemographic data	63	
6	CONCI	LUSION	AND RECO	OMMENDATION CONTROL OF THE PROPERTY OF THE PRO	64	
	6.1	Conclus	ion		64	
	6.2	Strength	of the Study	7	64	
	6.3	Limitation of the Study				
	6.4	Recomn	nendations		65	
		6.4.1	Nursing Ed	ucation and Training	66	
		6.4.2	Nursing Re	_	66	
	ENCES				67	
APPEN					74	
BIODA	TA OF S	TUDEN	T		111	

LIST OF TABLES

Table		Page
3.1	Name of the selected schools in Petaling Jaya and the number of teachers involved in this study	23
3.2	Summary of the reliability testing value	28
4.1	Sociodemographic distribution of the respondents	31
4.2	Distribution of the sources of knowledge on first aid	32
4.3	Respondents knowledge on specific measures on first aid	34
4.4	Distribution of respondents based on the level of knowledge on first aid	34
4.5	Distribution of respondents on attitude related to first aid questions	35
4.6	Respondents' attitude towards first aid	35
4.7	Distribution of respondents on practice-related questions	36
4.8	Association between level of knowledge with sociodemographic data	37
4.9	Association between socio-demographic data (gender, age, training experience and first aid experience) with the level of attitude	38
4.10	Association between gender and practice questions (n=124)	39
4.11	Association between age group and practice	42
4.12	Association between teaching experience and practice on first aid	46
4.13	Association between training experience with the practice	49
4.14	Association between respondents' knowledge and attitude	53
4.15	Association between knowledge and practice	54

LIST OF FIGURES

Figure		Page
1	Conceptual Framework	8
2	Students in government and government-aided school by the level of education, Malaysia, 2017	12
3	Distribution of outdoor versus indoor injuries according to age group in the year 2002	14
4	Flow chart of data collection	30
5	Distribution of respondents' answer for injuries that needs first aid	33

LIST OF APPENDICES

Appendix		Page
A 1	Permission to use the Questionnaire	74
A 2	Questionnaire (English)	75
A 3	Questionnaire (Bahasa Melayu)	88
B 1	Approval Sheet from JKEUPM	103
B 2	Approval Sheet from Ministry of Education	105
В 3	Approval Sheet from Selangors' Education District Office	106
C 1	Approval Sheet from Sekolah Kebangsaan Kelana Jaya (2)	107
C 2	Approval Sheet from Sekolah Kebangsaan Kg. Tunku	108
C 3	Approval Sheet from Sekolah Kebangsaan Sri Kelana	109
C 4	Approval Sheet from Sekolah Kebangsaan Sg. Way	110

LIST OF ABBBREVIATIONS

AHA American Heart Association

CPR Cardiopulmonary Resuscitation

CI Confidence Interval

KAP Knowledge, Attitude and Practice

SPSS Statistical Packages for the Social Sciences

USA United States of America

WHO World Health Organization

OSHA Occupational Safety and Health Administration

MOH Ministry of Health Malaysia

< Lesser than

> More than

CHAPTER 1

INTRODUCTION

1.1 Background

The American Heart Association defined first aid as the assessment and intervention given by a bystander or the victim himself with minimal or without medical equipment (American Heart Association, 2010). It is performed immediately after an injury and is drugless. The goal of first aid is to preserve life, prevent the condition from worsening, and/or promote recovery (Singletary et al., 2015).

Today, the importance and necessity of first aid is increasing not only at medical-based institutions but also at places like schools (Qureshi, Khalid, Nigah-e-mumtaz, Assad, & Noreen, 2018). The importance of first aid in schools includes promoting the sense of safety among staffs and students, encouraging quick response to injury and making the staff and students feel secure in the school environment (Qureshi et al., 2018). When parents send their kids from the school gate, the safety of the child is in the hands of the educational institution (Aucott, 1998; Pandey et al., 2017). As unpleasant as it might be, the fact remains that accidents and injuries happen. With teachers equipped with first aid knowledge, the school can enhance the safety and health of its environment (Qureshi et al., 2018). Injury and ailments in schools too can be abetted effectively (de Lima Rodrigues et al., 2015).

To list, several studies have been conducted across the world and with the current situation in most of the schools (without first aid training) it was found that teacher's knowledge on first aid is either mediocre or poor (Al-Samghan, Faisal, Al-Shahrani, & Al-Shahrani, 2015; AlYahya et al., 2019; Bildik, Kiliçaslan, Doğru, Keleş, & Demircan, 2011; D et al., 2013; de Lima Rodrigues et al., 2015; Devashish, A.R., Gaurav, J.D., Bharat, 2013; Ganfure, Ameya, Tamirat, Lencha, & Bikila, 2018; Li, Jiang, Jin, Qiu, & Shen, 2012; Parim, 2015; Sönmez, Uskun, & Pehlivan, 2014; Yurumez, Yavuz, Saglam, Köken, & Tunay, 2007)

According to a study done in the Scandinavia, school accidents contributed about 5% of the total population which include grownups, and for the age group of 7-19, 30% of accidents are school accidents, and one fourth from the mentioned percentage was relatively severe (Jacobsson, Bek-Jensen, & Jansson, 1986). Other than that, fights and playful behaviors in school might also end up in injuries no matter mild or severe. Based on a study performed in a school in France, 52.8% of accidents occur during physical activity and 12.7% during breaks (de Lima Rodrigues et al., 2015). Regarding the injuries that happened during the accidents, obtained data were: bruises 50.7%, 18.7% injuries, tendonitis 11.7%, 9.2% distension, and others 7.3% (de Lima Rodrigues et al., 2015).

This situation calls for a comprehensive strategy in educating the teachers about the importance of first aid in schools. In Malaysia apparently, more than 50% of unintentional injury cases among children who were admitted to the government hospitals from the year 1999 to 2002 were due to road traffic accidents (Rohana, Ong, & Hassan, 1998). Among boys, the proportion of death from these accidents were highest among kids from the age of 12 to 19 years old. Besides road accidents, falls were listed as the second most common cause of an accidental injury that had been admitted in the Malaysian government hospitals, with an increased proportion of cases among boys and girls age 5 to 19 years old. Other than the 2 main causes of admittance, burns, corrosion, as well as an accidental drowning, were also more common among school-aged children (Rohana, Ong, & Hassan, 1998). It is obvious that children are very much exposed to the danger of unintentional accidents, which most of it is evitable and treatable if fast actions from the bystander, in this case, teachers are given immediately.

Some knowledge of first aid could mean the difference between life and death to the students (Abd El-Hay, Ibrahim, & Hassan, 2015). First aid can help cope with illnesses and emergencies before professional help arrives (De Buck et al., 2015). It is indeed a good idea for teachers to know the basics of first aid for them to be able to keep a victim breathing, reduce their pain or even minimize the consequences of injury or sudden illness until the medical team or ambulance arrives. Other than that, first aid can help decrease disability, decrease the cost of hospitalizations, and perhaps reduce recovery time (Hoque et al., 2017). These factors will ultimately cause a safe and happy school environment.

In school, teachers play an important role in case injury happens. They act as the closest bystander who should be able to perform immediate action and minimize worsening of an injury (Qureshi et al., 2018). They are responsible to call for help and send the victim to the nearest medical facility. First aid can help teachers to determine the severity of the child's condition and whether the child needs medical attention or if the child can safely continue their lesson in class as usual (Qureshi et al., 2018).

The need for education regarding first aid practice for teachers in school is essential, as teachers will be the first one attending to the student's injuries and ailments (Devashish, A.R., Gaurav, J.D., Bharat, 2013). Knowledge about first aid and its management can provide teachers with a good basis on how to handle an emergency well. By adhering to basic first aid guidelines, it is anticipated that teachers will have more confidence in handling victims, managing their injuries, and create a first aid friendly environment (de Lima Rodrigues et al., 2015).

To develop a safe and health-friendly school environment, the teachers should practice proper first aid measures. For them to practice well, the resources and knowledge should be made available. It is a true saying that education improves ways of life and gives way for enlightenments, (United Nations Children's Fund, 2012). Lacking first aid knowledge of the teacher, the person closest to a child at school is the fundamental

causes of accidents (Karadag Arli, Professor, Yildirim, & Senay Karadag Arli, 2017). Therefore, it is important to improve the teacher's knowledge, attitude and practice to manage accidents when it does occur in schools.

It is an important role and is the primary intervention strategy chosen to address and prevent school injuries ("School health guidelines to prevent unintentional injuries and violence.," 2001). It is understood that teachers' descriptions of job and roles do not include giving first aid or taking care of the children's health, although any member of staff may volunteer to undertake this task (Neto, Caetano, Barros, Da Silva, & De Vasconcelos, 2017). However, when in school, the safety and well-being of the children should be the responsibility of the school (Allensworth & Kolbe, 1987). Teachers and the other school staffs in charge of the students are expected to care for their students at their level best, especially during emergencies. They should make sure that the welfare of the children is being taken care of almost the same as their parents might act upon their children.

In general, the consequences of taking no action are likely to be more serious than those of trying to assist in an emergency (Crouchman, 2009). It is not intended that by having first aid training in school will cause more burden to the teachers. But it is clearly observable that it is something necessary especially in the school compound (Neto et al., 2017). Teachers are not expected to become as competent as healthcare personnel, just knowing the basics will at least help to reduce and minimize the damage that might occur to their fellow students (Hoque et al., 2017). First aid knowledge can be vast. For this study, only certain parts will be included as there are more important parts to be practice and most relevant to the school setting.

1.2 Problem Statement

1.2.1 First Aid in Schools

First aid is an important tool to reduce the risk of damage and injuries to the innocent victim (Hoque et al., 2017). According to a study done in Saudi Arabia, it was found that 50% of the participants had previous experience emergencies in school (Al-Samghan et al., 2015). Emergencies they face involved injuries and wounds, fits, burns, drowning, poisoning, insect sting/animal bites, and others (Al-Samghan et al., 2015). Other than that, the number of children with health-related issues are also increasing (Blum et al., 2008). When mentioning fits, for example, some students might experience their episode of fits in school. People often have a misconception that during a fit's episode, one should put a spoon in the victim's mouth to avoid them from choking on their tongue. This is a very dangerous act as putting objects in the mouth can lead to choking, chipped tooth, or even worst a bitten finger (O'Hara, 2007).

In Malaysia, a study done by Fong et al., 2018 found that the baseline awareness, knowledge and attitude towards epilepsy among teachers was low. The same study found that knowledge among teachers was mediocre while attitude on the other hand was positive (Fong et al., 2018). Another study done at primary schools in Kota Bharu found that head teachers' knowledge on safety and health was low (Nurul & Tengku, 2009). In addition to that this study also found that almost half of the participating schools did not implement any safety and health programme and more than 50% did not have any safety and health policy (Nurul & Tengku, 2009).

When involving common injuries like burns, fractures, and scratches, for example, teachers might know what to do but when it comes to some other major injuries involving performing the Cardiopulmonary Resuscitation (CPR), some teachers might not be well versed on how to go about it (Parim, 2015). Another instance is the practice of tilting the head back or laying a student on a bed and pinching the students' nose during an epistaxis situation. This practice may increase the risk of airway obstruction and might also cause choking (Strachan, 1998). With all the instances given, it is most likely that teachers should be educated on first aid knowledge. In an emergency, it is better to do something rather than nothing (Bollig, Wahl, & Svendsen, 2009).

1.2.2 The Need for First Aid vs. Attitude of Teachers

Medical resources in schools are abundant. Some schools even have the automated external defibrillator (AED) drilled in the walls of their corridors. However, with no first aid training in school, teachers will have lack of confidence in handling an emergency and those resources will not able to be used at its best. According to a few studies done in different locations, it was found that more than half of the participants are willing to perform first aid on a victim if they are given proper training (Al-Tameemi & Khudair, 2016; Joseph et al., 2015). This is a shred of evidence that knowledge enhances confidence.

Other studies add on to claim that the knowledge level of teachers regarding first aid is still poor (Al-Samghan et al., 2015; Joseph et al., 2015). If we put nose bleeding situation as an example, it is one of the types of bleeding. It should be taken care of immediately. It can happen to children during hot weather or due to a fall. A study done in Turkey found that when nose bleeds happened, teachers do not have the proper knowledge to give first aid to the student (Başer, Çoban, Taşci, Sungur, & Bayat, 2007). This shows that even with a positive attitude, teachers cannot perform first aid without proper knowledge. Without education and training, the teachers might continue to cause further injuries not only to the victim but also to themselves. Thus, the evaluation of attitude towards effective first aid and the cause of noncompliance among teachers should be perform to figure out the barriers among them.

1.2.3 Knowledge Level affects the Attitude and Practice of First Aid

In general, the employment of teachers in school does not include first aid as a requirement. As they compound their teaching experience, teachers might get some exposure to basic first aid measures especially by the Red Crescent Society in schools. This knowledge, although very basic and limited, should translate to a good attitude and practice of first aid, especially during an emergency episode. Some studies have shown that most teachers in schools have come across an injury episode (Al-Samghan et al., 2015; Sönmez et al., 2014). A study conducted in Egypt found that with training, there were improvements in terms of knowledge and practice among teachers (El magrabi, ElwardanyAly, & Khalaf, 2017)

Knowledge regarding first aid shows a good educational background regarding this subject no matter what the sources are. Another study showed that even though teachers have a good attitude towards first aid, their knowledge level is still poor (Al-Tameemi & Khudair, 2016). With good training, knowledge will increase. When knowledge is increased, teachers will be more confident to deliver the first aid during an emergency and will be more composed (Qureshi et al., 2018). Henceforward, the knowledge level of first aid must be assessed to help determine the current knowledge level and appropriate measures that could be taken to help improve teachers' knowledge regarding this matter.

1.3 Significance of the Study

First aid is a useful knowledge that one can acquire (Abd El-Hay et al., 2015). It does not just benefit the learner but the victim of an incident as well (American Heart Association, 2010). This study intends to benefit teachers generally, as teachers act as a caregiver in school. It will be an advantage for them to have some first aid knowledge in hand. As emergency can happen at any time, fast assistance can be given immediately. This might look simple but fast management of an injury might stop it from worsening and promotes comfort to the victim (Singletary et al., 2015).

With the outcome from this study, the school will know where they stand in terms of first aid knowledge, attitudes, and practices of their teachers. From there onwards, the school management can decide if they would want to organize trainings for their staffs and vice versa. It will be an advantage for schools to have trained personnel/s to handle an emergency in school. It will act as a plus point and parents will be looking forward to send their children to a school with first aid trainer available on site. This will help to promote a safe environment in the learning institution (Qureshi et al., 2018).

Also, this study intends to help healthcare providers such as nurses, doctors, and the Ministry of Health to acquire the level of knowledge of first aid in the participating schools. This will hopefully help them to determine the necessity of first aid training in schools for teachers and the welfare of the students. There are very limited studies on

first aid among teachers, particularly in Malaysia. Understanding the factors that influence teachers to perform or not to perform first aid will help in the promotion and awareness of first aid in schools. Teachers will most probably give their full support in first aid if they are influenced to develop a positive knowledge, attitude, and practice towards first aid. Academicians too will benefit from this study as they will have a reference regarding the level of knowledge, attitude, and practice among teachers in Petaling Jaya district. The results of this study will help create a platform for developing a targeted program/training by policymakers and health personnel to establish a safe school environment in the future.

1.4 Research Questions

Following questions are formulated based on the problem statement:

- 1) What is the level of knowledge, attitude, and practice regarding first aid among primary school teachers?
- 2) Is there any relationship between demographic data (age, gender, first aid experience, teaching experience) with the level of knowledge, attitude, and practice of first aid?
- 3) What is the source of knowledge regarding first aid among teachers in primary schools?

1.5 Objectives

1.5.1 General Objective

To determine the knowledge, attitudes, and practice of first aid among primary school teachers in Petaling Jaya.

1.5.2 Specific Objectives

- 1. To determine the level of knowledge, level of attitude and the practices of first aid among primary school teachers.
- 2. To determine the source of knowledge among primary school teachers in Petaling Java
- 3. To determine the association between socio-demographic data (gender, age, training experience, teaching experience) with the level of knowledge, level of attitude, and practice of first aid.
- 4. To identify the association between level of knowledge with level of attitude and practice of first aid among primary school teachers in Petaling Jaya.

1.6 Hypothesis

Hypothesis for this study are as follows:

H₀₁: There is no significant association between socio-demographic data (gender, age, teaching experience) with the level of knowledge, attitude and practice of first aid.

H_{A1}: There is a significant association between socio-demographic data (gender, age, training experience) with the level of knowledge, attitude and practice of first aid.

H₀₂: There is no significant association between knowledge and attitude regarding first aid.

H_{A2}: There is an association between knowledge and attitude regarding first aid.

H₀₃: There is no significant relationship between knowledge and practice of first aid.

H_{A3}: There is an association between knowledge and practice of first aid.

1.7 Conceptual Framework

Figure 1 shows the conceptual framework of the study. The demographic data considered in this study were age, gender, and teaching experience of teachers. This study aims to find out if these factors influenced the knowledge level, attitude level and practice towards first aid. This is crucial as the knowledge level is interrelated to first aid attitude and practice and this will affects how the teachers act during an emergency in the school area. The demographic factor that were considered was firstly age. With age, the teachers have more experience and knowledge in dealing with the first aid situation, and it will influence the attitude and practice in giving first aid. Other factor was gender, since this profession is Malaysia is conquered by females (Hirschmann, 2020). Females were more willing to give first aid in the school environment. Teaching experience and first aid experience both are hand in hand. In this study, the concept of experience was reflected on the attitude and practice of teachers towards first aid. The experience while performing first aid previously influences the decision to perform first aid. Injuries and medical conditions experienced in previous first aid trainings such as bleeding, epistaxis, fainting, fractures and neck and spinal injuries were also significantly associated with the confidence in practicing first aid in schools (Bakke, Bakke, & Schwebs, 2017; Lee & Oh, 2018). All these relationships were determined, and the results were discussed.

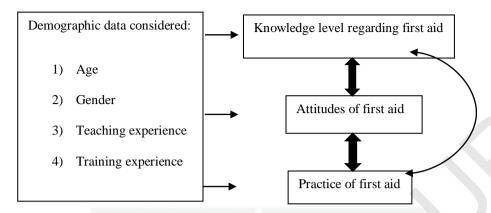


Figure 1: Conceptual Framework

1.8 Definition of the Term

This section discussed the conceptual and operational definition of each variable involved in this study. These definitions are shown below:

1.8.1 Knowledge

Conceptual definition

Facts or information that must be true and the perceiver must believe it to be true and at the position to know that it is true (Biggam, 2001).

Operational definition

The level of knowledge was assessed using a questionnaire. Each of the correct answer was given 1 mark while wrong or not answering was not given any mark. The total score range from 0-9. Then mean and median were calculated. The respondents were classified into poor knowledge or good knowledge.

1.8.2 Attitude

Conceptual definition

It is a component with attributes that include cognition, affection and behavioral. It is an effect from a stimulus that causes someone to act, think or behave in a certain (Altmann, 2008)

Operational definition

Questionnaire for attitudes is adopted from a study done by Ganfure et. al,., 2018. Then mean was calculated from the study data. The respondents were classified into positive and negative attitude. Participants who have scored above mean for attitude questions were categorized to have a positive attitude towards first aid and the ones who scored below the mean were categorized under negative attitude towards first aid.

1.8.3 Practice

Conceptual definition

The actual application or use of an idea, belief, or method, as opposed to theories relating to it (Oxford English Dictionary, 2017).

Operational definition

In this study practice is defined as the self-reported experiences by participants based on the questionnaire given regarding first aid. Practice in this study was descriptive. Yes and no questions were used to identify the practice among teachers. The questionnaire was from Ganfure et al., 2018.

1.8.4 First Aid

Conceptual definition

First aid refers to medical attention that is usually administered immediately after the injury occurs and at the location where it occurred. It often consists of a one-time, short-term treatment and requires little technology or training to administer (National Council for Occupational Safety and Health, 2018)

Operational definition

In this study, first aid is defined as the immediate help given to students/staff at school who is a victim of an accident or injury.

1.8.5 Primary School

Conceptual definition

An educational institution for children from age 7-12 (Wikipedia, 2018)

Operational definition

Pre secondary school, where those whose age is not fit for secondary school will study and attain knowledge.

1.8.6 Teachers

Conceptual definition

A person who teaches in school (Wikipedia, 2018)

Operational definition

A person who teaches in school for at least a year.

REFERENCES

- Abd El-Hay, S. A., Ibrahim, N. A., & Hassan, L. A. (2015). Effect of Training Program Regarding First Aid and Basic Life Support on the Management of Educational Risk injuries among Students in Industrial Secondary Schools. *IOSR Journal of Nursing and Health Science*. Retrieved from https://doi.org/10.9790/1959-04633243
- Abulhamail, A. S., Al-Sulami, F. E., Alnouri, M. A., Mahrous, N. M., Joharji, D. G., Albogami, M. M., & Jan, M. M. (2014). Primary school teacher's knowledge and attitudes toward children with epilepsy. *Seizure*, *23*(4), 280–283. Retrieved from https://doi.org/10.1016/j.seizure.2013.12.010
- Adams, K. S., & Christenson, S. L. (2000). Trust and the family-school relationship examination of parent-teacher differences in elementary and secondary grades. *Journal of School Psychology*. Retrieved from https://doi.org/10.1016/S0022-4405(00)00048-0
- Adib-Hajbaghery, M., & Kamrava, Z. (2019). Iranian teachers' knowledge about first aid in the school environment. *Chinese Journal of Traumatology English Edition*, 22(4), 240–245. Retrieved from https://doi.org/10.1016/j.cjtee.2019.02.003
- Al-Samghan, A. S., Faisal, ;, Al-Shahrani, M., & Al-Shahrani, F. H. (2015). Primary School Teachers' Knowledge about First-Aid. In *Cairo Univ*.
- Al-Tameemi, H. M. A., & Khudair, F. W. (2016). Knowledge and Attitudes of Primary School Teachers Toward First Aid in Al-Najaf Al-Ashraf City. *International Journal of Current Research and Academic Review*, 4(12), 64–79. Retrieved from https://doi.org/10.20546/ijcrar.2016.412.006
- Al Gharsan, M., & Alarfaj, I. (2019). Knowledge and practice of secondary school teachers about first aid. *Journal of Family Medicine and Primary Care*. Retrieved from https://doi.org/10.4103/jfmpc.jfmpc 76 19
- Allensworth, D. D., & Kolbe, L. J. (1987). The Comprehensive School Health Program: Exploring an Expanded Concept. *Journal of School Health*. Retrieved from https://doi.org/10.1111/j.1746-1561.1987.tb03183.x
- Altmann, T. K. (2008). Attitude: a concept analysis. *Nursing Forum*, *43*(3), 144–150. Retrieved from https://doi.org/10.1111/j.1744-6198.2008.00106.x
- AlYahya, I., Almohsen, H., AlSaleem, I., Al-Hamid, M., Arafah, A., Al Turki, Y., ... Alkharfi, M. (2019). Assessment of knowledge, attitude, and practice about first aid among male school teachers and administrators in Riyadh, Saudi Arabia. *Journal of Family Medicine and Primary Care*. Retrieved from https://doi.org/10.4103/jfmpc.jfmpc_316_18

- Amarasekara, P., De Silva, A., Swarnamali, H., Senarath, U. P. U. L., & Katulanda, P. (2016). Knowledge, Attitudes, and Practices on Lifestyle and Cardiovascular Risk Factors among Metabolic Syndrome Patients in an Urban Tertiary Care Institute in Sri Lanka. *Asia-Pacific Journal of Public Health*, 28, 32S-40S. Retrieved from https://doi.org/10.1177/1010539515612123
- American Heart Association. (2010). 2010 American Heart Association Guidelines for CPR and ECC. *Resuscitation*, 276, 410–528. Retrieved from https://doi.org/10.1161/CIR.0b013e3181fdf7aa
- Amro, N., & Qtait, M. (2017). General Knowledge and Attitude of First Aid among Schoolteacher's in Palestine. *International Journal of Innovative Research in Medical Science*. Retrieved from https://doi.org/10.23958/ijirms/vol02-i04/05
- Aucott, S. (1998). Together safely: Developing a whole-school approach to health and safety. Health Education. Retrieved from https://doi.org/10.1108/09654289810195373
- Bakke, H. K., Bakke, H. K., & Schwebs, R. (2017a). First-aid training in school: amount, content and hindrances. *Acta Anaesthesiologica Scandinavica*, 61(10), 1361–1370. Retrieved from https://doi.org/10.1111/aas.12958
- Bakke, H. K., Bakke, H. K., & Schwebs, R. (2017b). First-aid training in school: amount, content and hindrances. *Acta Anaesthesiologica Scandinavica*. Retrieved from https://doi.org/10.1111/aas.12958
- Başer, M., Çoban, S., Taşci, S., Sungur, G., & Bayat, M. (2007). Evaluating First-aid Knowledge and Attitudes of a Sample of Turkish Primary School Teachers.

 Journal of Emergency Nursing. Retrieved from https://doi.org/10.1016/j.jen.2006.11.003
- Bayraktar, N., Çelık, S. Ş., Ünlü, H., & Bulut, H. (2009). Evaluating the Effectiveness of a First Aid Training Course on Drivers. *Şoförlere Verilen İlk Yardım Eğitiminin Etkinliğinin Değerlendirilmesi*.
- Bergström, E., & Björnstig, U. (1991). School injuries. Epidemiology and clinical features of 307 cases registered at hospital during one school year. Scandinavian Journal of Primary Health Care. Retrieved from https://doi.org/10.3109/02813439109018520
- Biggam, J. (2001). Defining knowledge: An epistemological foundation for knowledge management. *Proceedings of the Hawaii International Conference on System Sciences*. Retrieved from https://doi.org/10.1109/HICSS.2001.927102
- Bildik, F., Kiliçaslan, I., Doğru, C., Keleş, A., & Demircan, A. (2011). The need for first aid awareness among candidate teachers. *Turkiye Acil Tip Dergisi*. Retrieved from https://doi.org/10.5505/1304.7361.2011.50490
- Blum, A. B., Murray, R. D., Gereige, R. S., Grant, L. M., Lamont, J. H., Magalnick, H., ... Wallace, R. (2008). Medical emergencies occurring at school. *Pediatrics*. Retrieved from https://doi.org/10.1542/peds.2008-2171

- Bollig, G., Wahl, H. A., & Svendsen, M. V. (2009). Primary school children are able to perform basic life-saving first aid measures. *Resuscitation*. Retrieved from https://doi.org/10.1016/j.resuscitation.2009.03.012
- Combs, D. M., & Roseman, B. (2017). *School safety manual Tools for teachers*. 1–83. Retrieved from http://unesdoc.unesco.org/images/0026/002613/261350e.pdf
- Crouchman, C. M. (2009). Teachers' views of their role in emergency first aid at school. *British Journal of School Nursing*. Retrieved from https://doi.org/10.12968/bjsn.2009.4.1.39190
- D, S. K., Kulkarni, P., Srinivas, N., Prakash, B., Hugara, S., & Nc, A. (2013). PERCEPTION AND PRACTICES REGARDING FIRST-AID AMONG SCHOOL TEACHERS IN MYSORE. 4(2), 349–352.
- De Buck, E., Van Remoortel, H., Dieltjens, T., Verstraeten, H., Clarysse, M., Moens, O., & Vandekerckhove, P. (2015). Evidence-based educational pathway for the integration of first aid training in school curricula. *Resuscitation*. Retrieved from https://doi.org/10.1016/j.resuscitation.2015.06.008
- de Lima Rodrigues, K., Ferreira de Lima Antão, J. Y., Silveira Sobreira, G. L., Nobre de Brito, R., Saraiva Freitas, G. L., Caeira Serafim, S., ... Pinheiro Bezerra, I. M. (2015). Teacher's Knowledge About First Aid In The School Environment: Strategies To Develop Skills. *International Archives of Medicine*, 1–9. Retrieved from https://doi.org/10.3823/1808
- Department of Statistics Malaysia. (2018). Department of Statistics Malaysia Press Release. *Department of Statistics Malaysia*. Retrieved from https://doi.org/10.1017/CBO9781107415324.004
- Devashish, A.R., Gaurav, J.D., Bharat, B. (2013). Assessment of Knowledge and Practices of First Aid among the School Teachers of Vadodara City. 3(4), 21–23.
- El magrabi, N. M., ElwardanyAly, S., & Khalaf, S. A.-R. K. (2017). Impact of training program regarding first aid knowledge and practices among preparatory schools' teachers at Assiut City. *Journal of Nursing Education and Practice*. Retrieved from https://doi.org/10.5430/jnep.v7n12p89
- Eze, C. N., Ebuehi, O. M., Brigo, F., Otte, W. M., & Igwe, S. C. (2015). Effect of health education on trainee teachers' knowledge, attitudes, and first aid management of epilepsy: An interventional study. *Seizure*. Retrieved from https://doi.org/10.1016/j.seizure.2015.10.014
- Faydall, S., Küçük, S., & Yeşilyurt, M. (2019). Incidents That Require First Aid in Schools: Can Teachers Give First Aid? *Disaster Medicine and Public Health Preparedness*, 13(3), 456–462. Retrieved from https://doi.org/10.1017/dmp.2018.66

- Fong, C. Y., Foo, J. C., Kong, A. N., Rithauddin, A. M., Adnan, A., Lua, P. L., & Ng, K. H. (2018). Improving awareness, knowledge and attitude of epilepsy using an interactive animated epilepsy education programme (IAEEP) among Malaysian teachers and students. *Neurology Asia*.
- Ganfure, G., Ameya, G., Tamirat, A., Lencha, B., & Bikila, D. (2018). First aid knowledge, attitude, practice, and associated factors among kindergarten teachers of Lideta sub-city Addis Ababa, Ethiopia. *PLoS ONE*. Retrieved from https://doi.org/10.1371/journal.pone.0194263
- Hasan, S. S. (2016). Knowledge and attitude of primary school teachers regarding choking's first aid in Erbil city Kurdistan region Iraq. *The Malaysian Journal of Nursing*, 8(2), 36–42.
- Hemalatha, K., & Ram Prabhakar, V. (2018). Prevalence of childhood injuries: A survey of injury epidemiology in rural population of Tamil Nadu, India. *JMS Journal of Medical Society*. Retrieved from https://doi.org/10.4103/jms.jms_7_17
- Hirschmann, R. (2020). Share of female primary education teachers in Malaysia from 2009 to 2018. Retrieved from https://www.statista.com/statistics/733541/malaysia-female-primary-education-teachers/
- Hoque, D. M. E., Islam, M. I., Salam, S. S., Sadeq-Ur Rahman, Q., Agrawal, P., Rahman, A., ... Alonge, O. (2017). Impact of first aid on treatment outcomes for non-fatal injuries in rural Bangladesh: Findings from an injury and demographic census. *International Journal of Environmental Research and Public Health*. Retrieved from https://doi.org/10.3390/ijerph14070762
- Jacob, O. M., Goswami, A., Ahamed, F., Dubey, M., Goswami, K., & Gupta, N. (2018). A training program on first aid and basic life support skills among teachers of a school in South Delhi: a feasibility assessment. *International Journal Of Community Medicine And Public Health*. Retrieved from https://doi.org/10.18203/2394-6040.ijcmph20183972
- Jacobsson, B., Bek-Jensen, H., & Jansson, B. (1986). One year's incidence of school accidents and their severity in a swedish municipality. *Scandinavian Journal of Primary Health Care*. Retrieved from https://doi.org/10.3109/02813438609014834
- Joseph, N., Narayanan, T., Bin Zakaria, S., Nair, A. V., Belayutham, L., Subramanian, A. M., & Gopakumar, K. G. (2015). Awareness, attitudes and practices of first aid among school teachers in Mangalore, South India. *Journal of Primary Health Care*. Retrieved from https://doi.org/10.1071/HC15274
- Kalaf, Y., & Mbch, H. A. (2013). Knowledge of Primary School Teachers Regarding First Aid In Baghdad Al-Rusafa. 9(1), 54–59.

- Karadag Arli, S., Professor, A., Yildirim, Z., & Senay Karadag Arli, A. (2017). The Effects of Basic First Aid Education on Teachers' Knowledge Level: A Pilot Study. *International Journal of Caring Sciences May*.
- Kumar, S., Kulkarni, D., Srini-Vas, P., Prakash, N., Hugara, B., & Ashok, S. (2013).
 Perception And Practices Regarding First-Aid Among School Teachers In Mysore. *National Journal of Community Medicine*.
- Lee, J., & Oh, W. O. (2018). Effects of a first aid coaching program on first aid knowledge, confidence, and performance of child care teachers. *Child Health Nursing Research*. Retrieved from https://doi.org/10.4094/chnr.2018.24.3.310
- Li, F., Jiang, F., Jin, X., Qiu, Y., & Shen, X. (2012). *Pediatric first aid knowledge and attitudes among staff in the preschools of Shanghai*, *China*. 1–7.
- Li, F., Sheng, X., Zhang, J., Jiang, F., & Shen, X. (2014). Effects of pediatric first aid training on preschool teachers: a longitudinal cohort study in China. 14(1), 1–8. Retrieved from https://doi.org/10.1186/1471-2431-14-209
- M. Bashir, S., Bakarman, M, A. (2014). 1, 2 1. 11(11), 986–989.
- MOE. (2018). Quick Facts 2018. Mininistry of Education, Malaysia.
- National Council for Occupational Safety and Health. (2018). Website Department of Occupational Safety and Health Malaysia. Retrieved from https://doi.org/10.1093/cercor/bhm153
- Neto, N. M. G., Caetano, J. Á., Barros, L. M., Da Silva, T. M., & De Vasconcelos, E. M. R. (2017). First aid in schools: Construction and validation of an educational booklet for teachers. ACTA Paulista de Enfermagem. Retrieved from https://doi.org/10.1590/1982-0194201700013
- Nurul, A. H., & Tengku, M. A. (2009). Situational analysis on safety and health in primary school in Kota Bharu. *Jurnal Kesihatan Masyarakat*.
- O'Hara, K. A. (2007). First aid for seizures: The importance of education and appropriate response. *Journal of Child Neurology*. Retrieved from https://doi.org/10.1177/0883073807303066
- Oxford English Dictionary. (2017). Oxford English Dictionary Online.
- Pandey, R., Chauhan, R., Dobhal, S., Dabral, S., Nathani, S., Negi, S., ... Bharadwaj, R. (2017). First aid knowledge among health assigned teachers of primary schools. *International Journal of Research in Medical Sciences*. Retrieved from https://doi.org/10.18203/2320-6012.ijrms20171257
- Parim, G. A. (2015). A Cross Section of Practicing Teachers ' a nd Prospective Teachers 'knowledge of First AID. 2(1), 286–293.
- Pearn, J. (1994). The earliest days of first aid. *BMJ*. Retrieved from https://doi.org/10.1136/bmj.309.6970.1718

- Peltzer, K., & Pengpid, S. (2015). Unintentional injuries and psychosocial correlates among in-school adolescents in Malaysia. *International Journal of Environmental Research and Public Health*. Retrieved from https://doi.org/10.3390/ijerph121114936
- Qureshi, F. M., Khalid, N., Nigah-e-mumtaz, S., Assad, T., & Noreen, K. (2018). First aid facilities in the school settings: Are schools able to manage adequately? *Pakistan Journal of Medical Sciences*. Retrieved from https://doi.org/10.12669/pjms.342.14766
- Ramsden, S., & Cresswell, R. (2019). First Aid and Voluntarism in England, 1945-85. *Twentieth Century British History*. Retrieved from https://doi.org/10.1093/tcbh/hwy043
- Rohana, J., Ong, L. C., & Abu Hassan, A. (1998). Epidemiology of head injury in Malaysian children: a hospital-based study. *The Medical Journal of Malaysia*.
- Rohana, J., Ong, L. C., & Hassan, A. A. A. (1998). Epidemiology of Head injury in M alaysian Children: A Hospitcd ~ Based Study. 53(3), 217–222.
- Saad, M., Elsoud, A., Dr, P., Abdul, H., Ahmed, H., Mohamed, A., ... Farg, K. (2018). Assessment Knowledge of Primary Schools Teachers About First Aid At Ismailia City. 7(4), 79–85. Retrieved from https://doi.org/10.9790/1959-0704097985
- Sambasivam, S. S., Karuppiah, K., Subramaniam, K., Praveena, S. M., & Abidin, E. Z. (2017). Potential safety risks in schools: Ensuring the safety of our precious ones. *Annals of Tropical Medicine and Public Health*. Retrieved from https://doi.org/10.4103/ATMPH.ATMPH_81_17
- School health guidelines to prevent unintentional injuries and violence. (2001).

 MMWR. Recommendations and Reports: Morbidity and Mortality Weekly Report. Recommendations and Reports / Centers for Disease Control.
- Sharma, R., Kumar, A., & Masih, S. (2014). Knowledge and practice of primary school teachers about first aid management of selected minor injuries among children. *International Journal of Medicine and Public Health*. Retrieved from https://doi.org/10.4103/2230-8598.144114
- Singletary, E. M., Charlton, N. P., Epstein, J. L., Ferguson, J. D., Jensen, J. L., MacPherson, A. I., ... Zideman, D. A. (2015). Part 15: First Aid. *Circulation*. Retrieved from https://doi.org/10.1161/cir.00000000000000269
- Sminkey, L. (2008). World report on child injury prevention. *Injury Prevention*. Retrieved from https://doi.org/10.1136/ip.2007.018143
- Sönmez, Y., Uskun, E., & Pehlivan, A. (2014). *Knowledge levels of pre-school teachers related with basic first-aid practices*, *Isparta sample* *. Retrieved from https://doi.org/10.5152/tpa.2014.1581

- Strachan, D. (1998). First-aid treatment of epistaxis Confirmation of widespread ignorance. *Postgraduate Medical Journal*. Retrieved from https://doi.org/10.1136/pgmj.74.868.113
- Taklual, W., Mekie, M., & Yenew, C. (2019). Determinants of first aid knowledge and basic practice among elementary school teachers in Debre Tabor City, Northwest Ethiopia.
- Thein, M. M., Lee, B. W., & Bun, P. Y. (2005). *Knowledge*, attitude and practices of childhood injuries and their prevention by primary caregivers in Singapore. 46(3), 122–126.
- United Nations Children's Fund. (2012). School Readiness and Transitions. A Companion to the Child Friendly Schools Manual. *Unicef*.
- Whitmer, D. E., LaGoy, M. R., & Sims, V. K. (2018). Understanding emergency response: Lessons learned from the helping literature. *International Journal of Emergency Management*. Retrieved from https://doi.org/10.1504/IJEM.2018.089187
- Yurumez, Y., Yavuz, Y., Saglam, H., Köken, R., & Tunay, K. (2007). EVALUATION OF THE LEVEL OF KNOWLEDGE OF FIRST AID AND BASIC LIFE SUPPORT OF THE EDUCATORS WORKING IN PRESCHOOLS. 17–20.

BIODATA OF STUDENT

The student, Raihan Binti Mohd Yunos was born in Kuala Lumpur, Malaysia. She completed her primary education at Sekolah Kebangsaan Kelana Jaya (2), Petaling Jaya. She continued the secondary education in Sekolah Menengah Kebangsaan Kelana Jaya, Petaling Jaya until her completion of Sijil Peperiksaan Menengah Rendah (PMR) in 2004 and continued her form 4 and form 5 study in the same school until her completion of Sijil Pelajaran Malaysia (SPM) in 2006. She then continued her study in Centre for Foundation Studies, International Islamic University of Malaysia, Petaling Jaya for 2 years.

In 2009, after completing the foundation studies in Petaling Jaya, she continued bachelor's degree course in Nursing at International Islamic University of Malaysia, Kuantan Campus and successfully graduated in October 2013. From October 2013, she got her first job at a private school as a school nurse. She worked there for almost 6 months. Then, she got an offer at Subang Jaya Medical Centre as an Imaging Nurse, she worked there for almost 7 months before getting an offer in a Multinational company dealing with dialysis products. Since her passion was very much in the nephrology area, she continued working here until today which almost reaching 6 years.

In 2015, she was accepted to pursue a full-time master research program in nursing without any fellowship or sponsorship. While she was pursuing her master, she had the opportunity to present her paper in Maltepe University as an oral presenter in March 2019.