



**DETERMINANT FACTORS OF COVID-19 STANDARD OPERATING
PROCEDURE COMPLIANCE AMONG SCHOOL MANAGEMENT IN THE
KLANG VALLEY, MALAYSIA**

By

NOOR SAKINAH BINTI AHMAD

**Thesis Submitted to the School of Graduate Studies, Universiti Putra
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Science**

June 2023

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Chair : Assoc Professor Karmegam a/l Karuppiah, PhD
Faculty : Medicine and Health Sciences

Introduction: In Malaysia, the government's recent decision to reopen schools amid the COVID-19 pandemic, especially for the students sitting for essential examinations, has raised the alarm among the public. Nevertheless, the Ministry of Education (MOE) has established and enforced a Standard Operating Procedure (SOP) for education institutions to comply with protecting against transmissions of COVID-19. The school management's ability to keep the students safe from COVID-19 depends on their adherence to infection control measures, which is greatly affected by their knowledge, attitudes, and practices toward COVID-19 SOP compliance. **Objective:** This study aimed to identify the determinant factors of practice toward COVID-19 SOP compliance among school managements in Selangor, Kuala Lumpur, and Putrajaya. **Methodology:** A total of 740 respondents of school management from schools in Klang Valley were sampled using a multistage sampling method. The respondents were given a self-administered questionnaire designed to elicit sociodemographic, occupational, and lifestyle information, knowledge, attitude, and practice toward COVID-19 SOP compliance. Descriptive statistics, independent t-test, One Way ANOVA, Pearson correlation, and multiple linear regression were used in the study. **Results and Discussion:** The school management demonstrated good levels of knowledge (91.6%), attitude (94.4%), and practice (82.6%) toward the COVID-19 SOP. The attitude towards COVID-19 SOP compliance has the highest mean score (4.72 ± 0.404). There was a significant mean difference between KAP and monthly income, school location, smoking status, and physical activities ($p < 0.05$). The correlation between KAP showed a significant relationship with the values ($r = 0.348$, $p < 0.001$) and ($r = 0.358$, $p = 0.003$), respectively. Multiple linear regression revealed that seven independent variables significantly predicted practice toward SOP compliance, which were knowledge ($\beta = 0.332$, $SE = 0.078$), attitude ($\beta = 0.260$, $SE = 0.064$), age ($\beta = -0.080$, $SE = 0.036$), source of knowledge (Ministry of Health (MOH): $\beta = 0.187$, $SE = 0.075$;

MOE: $\beta=0.130$, $SE=0.053$; social media: $\beta=0.137$, $SE=0.060$), physical activities ($\beta=0.121$, $SE=0.042$), experience in managing infectious diseases ($\beta=0.087$, $SE=0.039$), exposure to infectious disease ($\beta=0.103$, $SE=0.048$) and type of infectious diseases exposed (Tuberculosis: $\beta=0.123$, $SE=0.068$; Measles: $\beta=0.110$, $SE=0.046$). Conclusion: It is implied that school management in Klang Valley complies with the SOP issued by the MOH and MOE due to their high level of understanding, proper attitude, and positive behaviour toward COVID-19. Thus, school management is responsible for managing SOPs in the school area. School management must be able to assess the risks and execute appropriate actions to maintain a conducive and safe environment. The school management and public authorities may use social media and e-government platforms effectively during the COVID-19 epidemic to increase public participation in preventive behaviour.

Keywords: Knowledge, Attitude, Practice, COVID-19, Standard Operating Procedure (SOP), School management

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

**FAKTOR-FAKTOR PENENTU PEMATUHAN TATACARA PENGENDALIAN
PIAWAI COVID-19 DI KALANGAN PENGURUSAN SEKOLAH DI LEMBAH
KLANG, MALAYSIA**

Oleh

NOOR SAKINAH BINTI AHMAD

Jun 2023

Pengerusi : Profesor Madya Karmegam a/l Karuppiah, PhD
Fakulti : Fakulti Perubatan dan Sains Kesihatan

Pendahuluan: Di Malaysia, keputusan kerajaan untuk membuka semula sekolah dikala pandemik COVID-19, terutamanya bagi pelajar yang menduduki peperiksaan penting, telah menimbulkan kebimbangan kalangan orang ramai. Namun begitu, Kementerian Pendidikan telah mewujudkan dan menguatkuasakan Prosedur Operasi Standard (SOP) bagi institusi pendidikan untuk mematuhi perlindungan daripada penularan COVID-19. Keupayaan pengurusan sekolah untuk memastikan pelajar selamat daripada COVID-19 bergantung pada pematuhan mereka terhadap langkah kawalan jangkitan, yang sangat dipengaruhi oleh pengetahuan, sikap dan amalan mereka terhadap pematuhan SOP COVID-19. **Objektif:** Kajian ini bertujuan untuk mengenal pasti faktor penentu amalan ke arah pematuhan SOP COVID-19 dalam kalangan pengurusan sekolah di Selangor, Kuala Lumpur dan Putrajaya. **Metodologi:** Seramai 740 responden pengurusan sekolah dari sekolah-sekolah di lembah Klang telah disampel menggunakan kaedah persampelan pelbagai peringkat. Responden diberikan borang soal selidik yang diubah suai untuk mendapatkan maklumat sosiodemografi, pekerjaan, gaya hidup, pengetahuan, sikap dan amalan terhadap pematuhan SOP COVID-19. Statistik deskriptif, ujian-t bebas, One Way Anova, korelasi Pearson, dan regresi linear berganda telah digunakan dalam kajian. **Keputusan dan Perbincangan:** Pengurusan sekolah menunjukkan tahap pengetahuan (91.6%), sikap (94.4%) dan amalan (82.6%) yang baik terhadap SOP COVID-19. Sikap terhadap pematuhan SOP COVID-19 mempunyai skor min tertinggi (4.72 ± 0.404). Terdapat perbezaan min yang signifikan antara KAP dan pendapatan bulanan, lokasi sekolah, status merokok, dan aktiviti fizikal ($p < 0.05$). Kolerasi antara KAP menunjukkan hubungan yang signifikan dengan nilai ($r = 0.348$, $p < 0.001$) dan ($r = 0.358$, $p = 0.003$) masing-masing. Regresi linear berganda menunjukkan bahawa tujuh pemboleh ubah bebas signifikan meramalkan amalan pematuhan SOP. Seperti pengetahuan ($\beta = 0.332$, $SE = 0.078$), sikap ($\beta = 0.260$, $SE = 0.064$), umur ($\beta = -0.080$, $SE = 0.036$),

sumber pengetahuan (KKM: $\beta=0.187$, $SE=0.075$; KPM: $\beta=0.130$, $SE=0.053$; media sosial: $\beta=0.137$, $SE=0.060$), aktiviti fizikal ($\beta=0.121$, $SE=0.042$), pengalaman dalam menguruskan penyakit berjangkit ($\beta=0.087$, $SE=0.039$), pendedahan kepada penyakit berjangkit ($\beta=0.103$, $SE=0.048$) dan jenis penyakit berjangkit yang terdedah (Tuberkulosis: $\beta=0.123$, $SE=0.068$; Campak: $\beta=0.110$, $SE=0.046$). **Kesimpulan:** Pengurusan sekolah di lembah Klang mematuhi SOP yang dikeluarkan oleh kerajaan Malaysia kerana mereka mempunyai tahap pemahaman yang tinggi, sikap yang betul dan tingkah laku positif mereka terhadap COVID-19. Justeru, Pengurusan sekolah bertanggungjawab menguruskan SOP di kawasan sekolah. Pengurusan sekolah seharusnya menilai risiko dan melaksanakan tindakan yang sesuai untuk mengekalkan persekitaran yang kondusif dan selamat. Pengurusan sekolah dan penguatkuasa awam boleh menggunakan media sosial dan platform e-kerajaan dengan berkesan semasa wabak COVID-19 untuk meningkatkan penyertaan orang ramai dalam tingkah laku pencegahan.

Kata kunci: Pengetahuan, Sikap, Amalan, COVID-19, Prosedur Operasi Standard (SOP), Pengurusan sekolah

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Karmegam A/L Karuppiah, PhD

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

Sarva Mangala Praveena, PhD

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

Nina Fatma Ali, PhD

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

Murugadas A/L Ramdas@Chelamuthu, PhD

Senior Lecturer
Jabatan Perdagangan
Politeknik Sultan Salahuddin Abdul Aziz
(Member)

ZALILAH MOHD SHARIFF, PhD

Professor and Dean
School of Graduate Studies
Universiti Putra Malaysia

Date: 8 February 2024

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LIST OF ABBREVIATIONS

KAP	Knowledge, Attitude, Practice
MOH	Ministry of Health
UPM	Universiti Putra Malaysia
WHO	World Health Organization
MOE	Ministry of Education
OSHA	Occupational Safety and Health Act 1994
SOP	Standard Operating Procedure
CDC	Centers for Disease Control and Prevention
PHEIC	Public Health Emergency of International Concern
SDG	Sustainable Development Goal
MCO	Movement Control Order
CMCO	Conditional Movement Control Order
RMCO	Rehabilitation Movement Control Order
UNICEF	United Nations International Children's Emergency Fund
UNESCO	United Nations Educational, Scientific and Cultural Organization
NRP	National Recovery Plan
MaHTAS	Malaysian Health Technology Assessment Section
JKAV	<i>Jawatankuasa Khas Jaminan Akses Vaksin</i> (The Special Committee For Ensuring Access)
CCOHS	Canadian Centre for Occupational Health and Safety
EMPL	Employment and Social Affairs Committee
SARS	Severe Acute Respiratory Syndrome
FAO	Food and Agriculture Organization

CITF	COVID-19 Immunisation Task Force
JPN	<i>Jabatan Pendidikan Negeri</i> (State Education Department)
PPD	<i>Pejabat Pendidikan Daerah</i> (District Education Office)
MKN	<i>Majlis Keselamatan Negara</i> (Malaysian National Security Council)
PKD	<i>Pejabat Kesihatan Daerah</i> (Health District Office)



CHAPTER 1

INTRODUCTION

1.1 Background

The coronavirus disease of 2019 (COVID-19) has rapidly become a threat to global public health since the outbreak in Wuhan, China, in December 2019 and has contributed to massive worldwide socio-economic disruption. COVID-19 is highly contagious; apart from that, the main symptoms are fever, dry cough, fatigue, myalgia, and dyspnea (Ministry of Health, 2020a). Thus, this disease recently emerged as a significant global epidemic and has caused an important public health issue. As a result, COVID-19 was declared a public health emergency of international concern (PHEIC) on January 30, 2020, and the World Health Organization (WHO) subsequently declared a global pandemic on March 12, 2020 (WHO, 2020c). The outbreak of COVID-19 has had a significant impact on the Sustainable Development Goal (SDG) 3: Good Health and Well-being (Vujnovic, 2020).

The government declared a Movement Control Order (MCO) on March 16, 2020. Subsequently, the MCO period has been extended to several phases, including the Conditional Movement Control Order (CMCO) and the Rehabilitation Movement Control Order (RMCO). The second wave of COVID-19 arose after the Sabah state election on September 26, 2020 (The Straits Times, 2020). Meanwhile, on January 13, 2021, the Prime Minister of Malaysia announced MCO 2.0 for the whole state to curb the spread of COVID-19. After the sudden increasing number of COVID-19 cases, which rose to 9,020 per day on May 29, 2021, the Prime Minister announced a total lockdown to all states in Malaysia from June 1, 2021, until June 14, 2021 (Nadirah, 2021).

The pandemic has had an impact on educational systems all around the world as a result of the closure of schools in the affected nations. Due to the closure of schools, over 168 million children globally were impacted and will be absent from class as of March 2020 (UNICEF, 2021a). Schools in Malaysia have already shuttered due to the MCO to stop the virus from spreading. After lifting the lockdown, reopening schools will likely lead to a rise in the number of COVID-19 cases over the next two months relative to closed schools, even with lower transmissibility of children. Still, a Safety Operating Procedure (SOP) should allow this pandemic to be kept under control without flooding the healthcare system (Domenico et al., 2020).

On June 15, 2021, the National Recovery Plan (NRP) was announced. The NRP is a roadmap for controlling the COVID-19 epidemic while gradually returning society and the economy to normalcy. Four phases of the NRP are applicable at both the state and federal levels. In the case of the state level, the state's phase is determined by case thresholds, which are then translated to a certain phase of the level (Chin, 2021; Majlis Pemulihan Negara Malaysia, 2022). The Ministry of Education (MOE) has declared that all schools would reopen in phases beginning on October 3, 2021, particularly following the immunisation of children, which will commence on September 15, 2021 (Menon, 2021).

Yet, the reopening of schools has led to the existence of numerous COVID-19 clusters despite the implementation of the existing protocols. According to the Director General of Health, Tan Sri Dr. Noor Hisham stated that between January 1 and May 7, 2021, a total of 138 clusters involving 9,330 cases were identified. These clusters included educational institutions under the MOE, private institutions registered with the MOE, and higher education institutions. From overall clusters, MOE educational institutions had the most, with 72 clusters including 3,520 cases, followed by other educational institutions with 41 clusters (3,647 cases) (BERNAMA, 2021). Home-based instruction and study (PdPR) will continue as usual until August 31, 2021 (Astro Awani, 2021). SOP are to be practiced by the public to curb COVID-19 transmissions. According to Stein-Zamir et al. (2020), Israel's Government has reported a significant high school outbreak that happened only ten days after schools' reopening and infected 153 students and 25 staff representatives. They have followed the essential requirement of SOP, such as daily health reports, hygiene, face masks, social distancing, and minimise the interaction between classes; hence the outbreak is still happening.

It is necessary to consider school-related public health strategies for the prevention and reduction of COVID-19 transmission in schools. Reducing the risk of COVID-19 transmission among children, teachers, and other school workers in schools and school-related settings is one of the main principles of WHO, United Nations Children's Fund (UNICEF), and United Nations Educational, Scientific and Cultural Organization (UNESCO) have developed for the reopening of schools. A multifaceted strategy is required to prevent the introduction and spread of COVID-19 in school settings. For school operations in all transmission scenarios, particularly at the school and classroom levels, it is important to evaluate the schools' readiness and capacity to adopt and maintain COVID-19 control mechanisms, as well as the applicable regulations (WHO, 2020a). When considering whether or not to reopen a school, six major criteria should be addressed to evaluate its readiness and guide planning: policy, funding, safe operations, learning, reaching the most marginalised students, and well-being/protection. Together, policy considerations and budgetary requirements produce the enabling environment required to support each of the other parts (UNICEF, 2021b).

In the interest of bringing an end to this COVID-19 pandemic, an effective and safe immunisation campaign is required alongside strict SOP compliance. COVID-19 vaccinations prevent COVID-19 infection, including severe sickness and death. COVID-19 vaccinations help to limit the transmission of the virus. Several vaccines from Asia have been licensed for COVID-19 vaccination up to this point. There are a few types of vaccines in Malaysia throughout the country; Pfizer-BioNTech, Sinovac, AstraZeneca, Sputnik V, and CanSinoBio (MaHTAS, 2021). Vaccines approved by MOH are both safe and effective. Initially, the COVID-19 vaccine is only available for people aged 18 and above. However, only Pfizer-BioNTech COVID-19 vaccination has been licensed for children aged below 18 (JKJAV, 2021). The COVID-19 vaccine is optional and will be given at no cost to all Malaysian residents.

1.2 Problem Statement

According to Centres for Disease Controls and Prevention (CDC) (2022a), to develop herd immunity, SOP compliance is still required after vaccination since there is little potential for vaccinated people to be infected with COVID-19. Everyone must always practice SOP compliance to prevent COVID-19 transmissions. The MOE in Malaysia has developed and implemented a series of COVID-19 SOPs for educational institutions to comply with. The fundamental rules include; screening for students with symptoms at the entrance of the school and advising and instructing students and parents not to attend school if any symptoms are present (Ministry of Education, 2020).

Despite the implementation of the current rules, the reopening of schools has resulted in the emergence of several COVID-19 clusters. After reopening school in 2021, 9,330 cases were found in 138 clusters between January 1 and May 7, 2021. These clusters comprised higher education institutions, private registered institutions, and MOE educational institutions. Other educational institutions came in second with 41 clusters (3,647 instances), while MOE educational institutions had the largest overall clusters (72 clusters, 3,520 cases) (BERNAMA, 2021). There is also a rising in cases after New Year due to the reopening of school in January 2022. The Health Director General reported that there was 107 cluster from educational sectors detected from January 1 until January 25 due to non-compliance with COVID-19 SOP (FMT Reporters, 2022; Hassan, 2022).

According to CDC (2020), much research showed that most children and adolescents infected with COVID-19 were asymptomatic or only showed some mild symptoms. Therefore, COVID-19 symptom screening will be less effective in school. The government should develop new guidelines on how to deal with students who are not vaccinated against COVID-19 ahead of the planned reopening of schools in September (Malaysiakini, 2021).

Batumalai (2020) discussed the implementation of COVID-19 SOP in schools where most teachers interviewed are at a loss to find an optimal solution that can favour all parties. All of them, who remained anonymous, agreed that the SOP supplied by the Ministry of Education and the Department of State Education is perfect on paper but difficult to comply with completely. The teachers also mentioned that the schools' infrastructure and limited workforce are huge hurdles against practicing social distance in schools.

Children and adolescents tend to not adhere to the protocols of COVID-19 and that increases the possibility of infection them (Jaureguizar et al., 2021). Other than that, the behaviour of teachers who contravene SOPs outside of school by attending mass wedding celebrations has led to the spread of the COVID-19 virus in schools (Yusof et al., 2021). Non-compliance by school administration and teachers with SOPs, whether within or outside of schools, will only enhance the danger of COVID-19 infection in schools. This raises issues about their attitudes and practices toward adopting the SOPs and how often they do so in actual situations. It necessitates determining the degree of compliance with SOPs among school management in light of this pandemic.

In the United States, the CDC stated that the school authorities must work together with state and local health officials to implement preventive measures based on the requirements of each community there. The school management also needs to revise the procedure and measures in a particular are constantly based on the virus transmission (CDC, 2021a). According to Domenico et al. (2020), school reopening must be seen thoroughly, and all the protocols and scenarios must be planned accordingly since there is much evidence showing that adolescents have a higher tendency to be infected than younger children. This problem should be addressed if the Malaysian Government decided primary school and secondary school students could physically attend schools (Povera, 2021).

A better understanding of COVID-19's basic information, transmissions, and symptoms is required to comply with the SOP. In pursuance of measuring the community's perception of COVID-19 in influencing the success of preventing its transmission, the Knowledge, Attitude, and Practice (KAP) study is a reliable tool and has been used in previous studies (Ajilore et al., 2017; Tachfouti et al., 2012). In a study conducted by Abu Hasan et al. (2020) among Malaysian residents there is still a need to improve awareness among Malaysians. Nevertheless, it was found that they both had a positive attitude and practiced amongst themselves against the infection. On the part of promoting public awareness and understanding of COVID-19, clear communication from the authorities is nevertheless essential (Azlan et al., 2020).

Despite being conducted during the later stages of the COVID-19 pandemic, this study holds significant value as it offers valuable insights and resourceful input for the ongoing enhancement of the existing guideline. Even though COVID-19 has entered an endemic phase, it still poses health hazards, and following SOPs is important for reducing the virus's spread. The school management has a responsibility to ensure a safe learning environment for the student and school staff.

In order to maintain effective preventative measures and reduce the possibility of outbreaks inside schools, it is important to understand the variables that affect their compliance. Guidelines and methods for COVID-19 may change in the future due to the development of new variations and expanding scientific understanding. It gives information on their capacity to keep current and make the required changes to maintain a secure learning environment. Examining school management's compliance throughout the endemic era offers important information regarding their readiness and capability to address upcoming health emergencies or disease outbreaks. The results can help policymakers and educational authorities improve school health policies, practices, and equality while also ensuring that schools are well prepared to handle any foreseeable public health emergency.

1.3 Study Justification

One of the school management responsibilities in school are to manage the safety and management of their students. There are various types of hazards that exist in school for example, physical, chemical, biological, psychosocial, and ergonomic hazards. Nevertheless, this study will emphasize on biological hazards, which are COVID-19 infection and transmission. COVID-19 is a newly discovered virus and currently causes a significant impact on health worldwide. COVID-19 can cause infection in human upper respiratory tracts (ex: sinuses, nose, and throat) and lower respiratory tracts (ex: windpipe and lungs). Human behaviours is one of components in human factors and was the most difficult factors to control. This study highlights factors that affect the practice of SOPs compliance during the COVID-19 pandemic.

Hence, to overcome the COVID-19 pandemic and prevent the upcoming outbreak of COVID-19 in schools, this study should be conducted to determine the determinant factors of practicing COVID-19 SOPs compliance among school management. This study findings can be a baseline for the MOH, MOE, or other authorities to know whether the school administrators and teachers are aware of and comply with the COVID-19 SOPs. Other than that, this study can also be a baseline for other researchers if they are interested in doing any intervention study to make people ready for any future public health emergencies or infectious disease outbreaks.

Management and compliance with the COVID-19 SOP in schools should be considered crucial parts during this pandemic. Nevertheless, there is less study on KAP towards COVID-19 SOP compliance among school management (teachers, school staff, and support staff) in Malaysia. The previous study in Malaysia by Azlan et al. (2020), Abu Hasan et al. (2020), and Abu Samah et al. (2020) was conducted among the Malaysian public and residents. The KAP level between school management and the Malaysian public might differ as every community has a different understanding and behaviour. This study will determine the factors that affect the practice of COVID-19 SOPs compliance. In order to combat future pandemic diseases outbreak, this study could be significant and effective in promoting to the development of strategies.

There is still a limit to studying COVID-19 in Malaysia. For the purpose of generate and allocating more data regarding KAP on COVID-19, especially among those involved directly in school management, this needs to be conducted. Therefore, this study was designed to identify the determinant factors of practice toward COVID-19 SOP compliance among school management in Malaysia. This study will provide school administrators and teachers with information about the COVID-19 pandemic and the disease's implications for human health and safety. This study provides beneficial information to other researchers on how the school management thinks, interprets, and responds to COVID-19 issues. This study also will provide baseline data for KAP among school management. From the baseline data, prevention and intervention programs can be developed to reduce and minimise COVID-19 transmission among students, reducing the number of COVID-19 cases in Malaysia. This study also can provide baseline data for any other similar outbreak of the disease in the future.

1.4 Research Questions

1. What are the levels of KAP toward COVID-19 SOP compliance among the school management?
2. Are there any significant differences between the level of COVID-19 SOP compliance (KAP) and socio-demographic characteristics, lifestyle, and occupational factors among the school management?
3. Is there any significant relationship between knowledge, attitude, and practice toward COVID-19 SOP compliance by the school management?
4. What is the significant determinant of factors associated with practice towards COVID-19 SOP compliance by the school management?

1.5 Research Objectives

1.5.1 General Objective

To identify the determinant factors of practice towards COVID-19 SOP compliance among school managements in Selangor, Kuala Lumpur, and Putrajaya.

1.5.2 Specific Objectives

1. To determine the socio-demographic characteristics (Age, Gender, Race), lifestyle (Smoking, Stress level, and Physical Activity), and occupational factors (Position, Duration of services, Working hours) of the respondents.
2. To identify the level of knowledge, attitude, and practice (KAP) towards COVID-19 SOP compliance by the school management.
3. To compare the level of COVID-19 SOP compliance (KAP) by socio-demographic characteristics, lifestyle, and occupational factors among the school management.
4. To examine the relationship of knowledge and practice towards COVID-19 SOP compliance by the school management.
5. To examine the relationship between attitude and practice towards COVID-19 SOP compliance by the school management.
6. To determine the determinant of factors (knowledge, attitude, sociodemographic characteristics, lifestyle, and occupational factors) associated with practice towards COVID-19 SOP compliance by the school management.
7. To suggest the best mitigation and practice for COVID-19 SOP compliance among school management.

1.6 Hypothesis

1. There is a significant difference between the level of COVID-19 SOP compliance (KAP) and socio-demographic characteristics, lifestyle, and occupational factors among the school management.
2. There is a significant relationship between knowledge and practice towards COVID-19 SOP compliance by the school management.
3. There is a significant relationship between attitude and practice toward COVID-19 SOP compliance by the school management.
4. There is a significant association between the factors associated with practice towards COVID-19 SOP compliance by the school management.

1.7 Definitions of Terms

1.7.1 Conceptual Definition

Knowledge:

Knowledge means the fact or condition of knowing something with familiarity gained from experience or association (Merriam-Webster, 2023).

Attitude:

Attitude means a feeling or way of thinking that affects a person's behaviour (Merriam-Webster, 2023).

Practice:

Practice means the activity of doing something, again and again, to become better at it (Merriam-Webster, 2023).

COVID-19:

COVID-19 is a disease caused by a new strain of Coronavirus. 'CO' stands for corona, 'VI' for the virus, and 'D' for disease. Formerly, this disease was referred to as the '2019 novel coronavirus' or '2019-nCoV.' The COVID-19 virus is a new virus linked to the same family of viruses as Severe Acute Respiratory Syndrome (SARS) and some types of the common cold (World Health Organization (WHO), 2020).

SOP:

A Standard Operating Procedure is a document that describes the regularly recurring operations relevant to the investigation's quality. The purpose of an SOP is to carry out the operations correctly and always in the same manner. An SOP should be available at the place where the work is done (FOA, 2001)

Compliance:

An act or process of complying with a demand or recommendation (Merriam-Webster, 2023).

School management:

School is defined as a place where people are educated (Cambridge Dictionary, 2023), while management is defined as the group of people responsible for controlling and organizing a company. (Cambridge Dictionary, 2023). Therefore, the school management is a group of people that is responsible for controlling and organizing a school consisting of school administrators, teachers, and parents.

1.7.2 Operational Definition

Knowledge:

Assessment of knowledge will be measured by using a self-developed questionnaire modified from another research questionnaire. Based on a scaled response of “strongly disagree”, “disagree”, “neither agree nor disagree”, “agree”, and “strongly agree” from the respondents. Scoring is given from one to five for “strongly disagree” and “strongly agree”, respectively. Then, the result's scoring will be grouped into three different levels: good, moderate, and low.

Attitude:

Assessment of attitude will be measured by using a self-developed questionnaire modified from another research questionnaire. The answer is based on a scaled response of “strongly disagree”, “disagree”, “neither agree nor disagree”, “agree”, and “strongly agree” from the respondents. Scoring is given from one to five for “strongly disagree” and “strongly agree”, respectively. Then, the result's scoring will be grouped into three different levels: good, moderate, and low.

Practice:

Assessment of practice will be measured by using a self-developed questionnaire modified from another research questionnaire. The answer is based on a scaled response of “never”, “rarely”, “sometimes”, “often”, and “always” from the respondents. The scoring given is from one to five for “never” and “always”, respectively. Then, the result's scoring will be grouped into three different levels: good, moderate, and low.

School Management:

A group of people responsible for controlling and organizing the school located in Selangor, Kuala Lumpur, and Putrajaya fulfill the inclusive criteria.

1.8 Conceptual Framework

Figure 1.2 shows the conceptual framework of this study. The conceptual framework below will show the flow of this study from the beginning. In schools, students and school staff can be exposed to various hazards, including physical, chemical, biological, psychosocial, and not only ergonomic hazards. Hazards can be divided into physical, biological, chemical, ergonomic, psychosocial, and safety (CCOHS, 2019).

Exposure to humans to biological hazards can cause many side effects, including chronic and acute effects. According to CCOHS (2019), bacteria, viruses, plants, birds, livestock, and humans can be sources of biological

hazards. The categorization of the SARS-CoV-2 virus into risk category 3, the second most hazardous biological agent category, was discussed by members of the Employment and Social Affairs Committee (EMPL). A biological agent classified as risk category 3 may “produce severe human illness and represent a significant danger to employees; it may pose a risk of spreading to the population, although appropriate prevention or treatment is generally available,” according to the categorization. The SARS and MERS viruses are examples of Risk Category 3 viruses. Ebola is classified as a Risk Group 4 disease (European Parliament, 2020).

As those biological hazards exist and may be around us to cause-effect, this study determined the level of knowledge, attitude, and practice COVID-19 pandemic among school management to ensure a promising future in the management of COVID-19—appropriate knowledge and awareness of COVID-19 transmission, infection, and symptoms.

Knowledge and attitude have been discovered to influence practice, and the impact of knowledge and attitude on COVID-19 has been shown in a few research. Knowledge of COVID-19 has affected the use of preventative measures in South Korean research (Lee et al., 2021). Abu Hasan et al. (2020) found that the knowledge of Malaysians about COVID-19 has a moderate influence on their behaviour towards COVID-19.

Many variables, including sociodemographic traits, lifestyle choices, and occupational circumstances, might influence the KAP for SOP compliance. Prior research has indicated that differences in biological, cultural, behavioural, and social characteristics, such as comorbidities, low socioeconomic status, work conditions, living standards, intergenerational cohabitation, and health-seeking behaviours, play a role in disease transmission and progression (Wong et al., 2020). Therefore, this research must be undertaken to create and offer further data on COVID-19-related practices on SOPs compliance, particularly among school administrators and teachers. Thus, the sustainability of cities and communities will not be disturbed, and the goal of Sustainable Development Goal (SDG) 3 will be achieved.

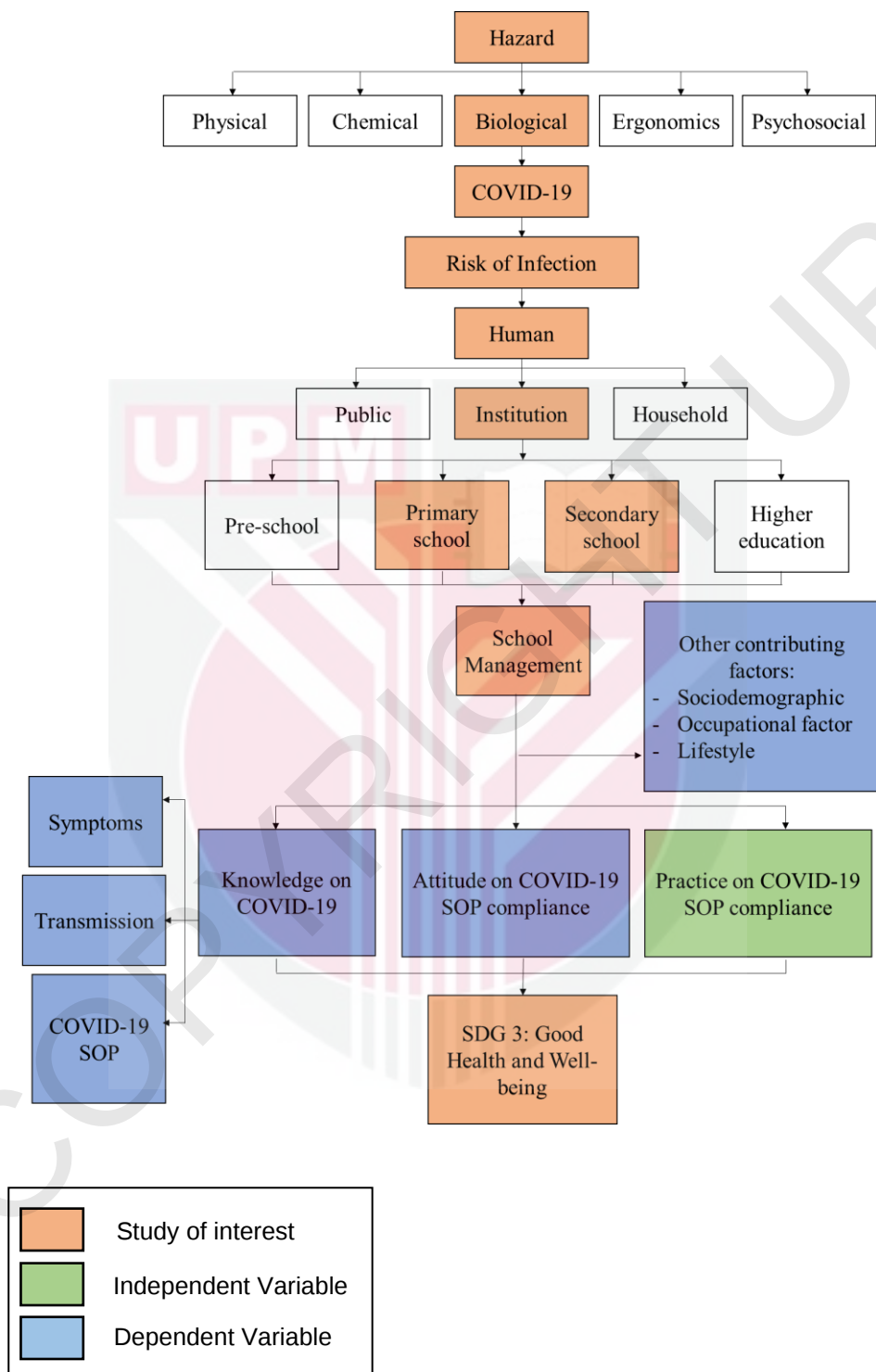


Figure 1.1: Conceptual Framework

CHAPTER 2

LITERATURE REVIEW

Knowledge, Attitude, and practice (KAP) and related research on KAP of COVID-19 will be covered in this chapter. The overview of the literature is based on previous research on this particular topic. An overview of COVID-19, cases of COVID-19 in schools, COVID-19 related legislation, COVID-19 SOP management generally in schools, and vaccination. The KAP, research studies related to KAP of COVID-19, as well as the conclusion will all be covered.

2.1 COVID-19

Coronavirus disease (COVID-19) is caused by an infectious disease, a newly discovered coronavirus. Many COVID-19-infected individuals will experience mild to moderate respiratory illness and recover without the need for special care. Older people, including those with underlying medical problems such as cardiovascular disease, diabetes, chronic respiratory disease, and cancer, are more likely to develop serious diseases (WHO, 2020c). The best way to prevent and slow down transmission is to be well-educated about the COVID-19 virus, the disease it causes, and how it propagates. Protect others from contamination by washing hands or by consistently using an alcohol-based rub and not touching skin. The COVID-19 virus spreads mainly by droplets of saliva or discharges from the nose when an infected person coughs or sneezes (WHO, 2020c).

In different ways, COVID-19 influences various individuals. Most infected individuals will experience mild to moderate disease and, without hospitalisation will recover. Fever, dry cough, or fatigue are the most common symptoms. Aches and pains, sore throat, diarrhea, conjunctivitis, fever, loss of taste or smell, skin rash, or discoloration of fingers or toes are fewer common symptoms. Severe symptoms could be shortness of breath or trouble breathing chest pain or discomfort, or lack of movement or voice (WHO, 2020c). On average, it takes 5-6 days to display symptoms when someone is infected with the virus, but it can take up to 14 days. The common prevention of transmission of COVID-19 in Malaysia is washing hands regularly with soap or using hand sanitiser 70% alcohol-based, social distancing at least 1 meter, and always wearing a mask (Ministry of Health, 2020b). The CDC performed a series of studies to evaluate two techniques for enhancing medical procedure mask effectiveness via improved fit and, therefore, filtration: 1) double masking; and 2) knotting and tucking the surgical mask (CDC, 2021b).

2.1.1 COVID-19 Cases in School

As a consequence of the closure of schools in countries impacted by the outbreak, the pandemic has affected educational systems worldwide. By March 2020, more than 168 million children worldwide would be missing from school due to school closures (UNICEF, 2021a). Due to the MCO, schools in Malaysia have already been closed to prevent the spread of the virus. Even with lesser kid transmissibility, removing the lockdown and restarting schools would likely result in an increase in COVID-19 cases over the following two months compared to when schools were closed. Yet, a Safety Operating System (SOP) should let this pandemic be contained without overwhelming the hospital system (Domenico et al., 2020). When deciding whether or not to reopen a school, six primary factors should be evaluated to determine its preparedness and guide planning: policy, finances, safe operations, learning, reaching the most disadvantaged pupils, and well-being/protection. Together, policy considerations and financial needs provide the enabling environment necessary to support each of the other components (UNICEF, 2021b).

Notwithstanding the execution of the current regulations, the reopening of schools has resulted in the development of several COVID-19 clusters. According to the Director General of Health, Dr. Noor Hisham, a total of 138 clusters comprising 9,330 patients were found between January 1 and May 7, 2021. These clusters comprised educational institutions administered by the Ministry of Education (MOE), private institutions registered with the MOE, and institutes of higher education. MOE educational institutions had the most clusters overall, with 72 clusters containing 3,520 instances, followed by other educational institutions with 41 clusters containing 3,647 cases (BERNAMA, 2021). By August 2021, Selangor had reached the highest number of cases at 6,974 and a weekly average (as of noon August 20, 2021) of 6,626 COVID-19 cases according to the Ministry of Health (COVIDNOW, 2022). Until August 31, 2021, home-based teaching and study (PdPR) will continue as normal (Astro Awani, 2021). The public must follow Standard Operating Procedures (SOPs) to reduce COVID-19 transmissions.

According to Stein-Zamir et al. (2020), the Israeli government reported a substantial high school epidemic that infected 153 pupils and 25 staff members barely 10 days after school reopened. They have adhered to SOP requirements such as daily health reporting, cleanliness, face masks, social distancing, and minimising contact across classes; yet, the epidemic continues to occur. World Health Organization reported that 180 (56.4%) of the 319 COVID-19 cases reported from schools in Columbia were among school administration, including teachers and other employees (C. Kim et al., 2021).

For the prevention and control of COVID-19 transmission in schools, it is crucial to examine school-related public health interventions. Limiting the danger of COVID-19 transmission among children, teachers, and other school personnel in schools and school-related settings is one of the primary guiding principles defined by WHO, UNICEF, and UNESCO. Preventing the introduction and spread of COVID-19 in educational settings requires a diversified approach. For school operations in all transmission situations, especially at the school and classroom levels, it is essential to assess the schools' preparedness and competence to implement and maintain COVID-19 control systems, as well as compliance with the appropriate rules (WHO, 2020b).

The National Recovery Plan (NRP) was unveiled on June 15, 2021. The NRP is a plan for containing the COVID-19 outbreak and restoring society and the economy to normality gradually (Majlis Pemulihan Negara Malaysia, 2022). The Ministry of Education (MOE) has announced that all schools would gradually reopen starting on October 3, 2021, especially after the start of immunisations on September 15, 2021 (Menon, 2021). However, COVID-19 is still a threat and has to be taken cautiously.

2.2 COVID-19 Safety and Health Management in Schools

According to the Centers for Disease Control and Prevention (CDC) (2021c), to avoid the introduction and spread of COVID-19 in schools and the community, many steps and standards should be reviewed and implemented, and to ensure the safety of children and school staff while at school. Special requirements should be considered for early childhood growth, higher education institutions, residential schools, or specialised institutions.

World Health Organization (WHO) recommended several prevention and control measures that need to be addressed by the school management (WHO, 2020b):

1. Community-level measures: early identification, testing, communication tracking, and contact quarantine; investigation of clusters; physical distancing, hand and grooming activities, and the use of age-appropriate masks; security of vulnerable groups; Community-led programs such as tackling false rumors often play a major role in reducing the risk of infection.
2. Policy, procedure, and infrastructure: Ensure the services, policies, and infrastructure required to safeguard the health and safety of all school employees, including those at higher risk, are in place.
3. Behavioral aspects: Consider students' age and ability to comprehend and appreciate the interventions placed in place. It could be more difficult for younger kids to stick to physical distance or the acceptable use of masks.

4. Safety and security: Student safety and security may be affected by school closing or reopening, and the most vulnerable children may need special care, such as during pick-up and drop-off.
5. Hygiene and regular practices at school and classroom level: physical distances of at least 1 meter between participants, including desk spacing, frequent hand, and breathing hygiene, age-appropriate use of masks, ventilation, and environmental cleaning steps, should be in place to minimise exposure.
6. Screening and treatment of sick students, teachers, and other school staff: schools should implement the “stay home if unwell” policy, waive the doctor’s note requirement, create a checklist for parents/students/staff to determine whether to go to school (taking into account the local situation), guarantee 14 days of stay at home for students who have been in touch with a COVID-19 event.
7. High-risk people protection: Schools should recognise high-risk students and teachers with pre-existing medical conditions to develop measures to keep them safe; ensure physical distance and use medical masks as well as frequent hand hygiene and respiratory etiquette.
8. Parent and student communication: Schools should keep students and parents aware of the steps being taken to ensure their collaboration and support.
9. Other education-related initiatives, such as immunisation controls and catch-up vaccine systems, include ensuring the continuation or extension of vital services, including mental well-being and school nutrition, and psychosocial help.
10. Physical distance outside classrooms: for both students (all age groups) and staff, maintain a distance of at least 1 meter, where possible.
11. Within classrooms, physical distance: Maintain a distance of at least 1 meter between all individuals of all age groups in areas with community transmission of COVID-19 for any schools remaining open. This involves increasing the spacing of desks and staging recesses, breaks, and lunch breaks; restricting the mixing of classes and age groups; considering smaller classes or rotating schedules of attendance; and maintaining good ventilation in classrooms.

2.3 COVID-19 Standard Operating Procedure (SOP) in Schools

The Government declared a Movement Control Order (MCO) on 16th March 2020. Subsequently, the MCO period has been extended to several phases including the Conditional Movement Control Order (CMCO) and the Rehabilitation Movement Control Order (RMCO). Meanwhile, on 13th January 2021, the Prime Minister of Malaysia announced PKP 2.0 for the whole state to curb the spread of COVID-19. After the sudden increasing COVID-19 cases

which has risen to 9,020 cases per day on 29th May 2021, the Prime Minister announced a total lockdown to all states in Malaysia from 1st June 2021 until 14th June 2021.

Guideline on School Management and Operations in the New Norms 2.0 was an updated version guideline based on the Guidelines for the Management and Operation of Schools in the New Norms issued on 5th October 2020 and the Guidelines for the Management of School Reopening on 4th June 2020 as well as all additional guidelines issued by the Ministry of Education Malaysia (MOE) previously (Ministry of Education, 2020). These guidelines are provided as a reference to divisional officers in the MOE, State Education Department (JPN), District Education Office (PPD), and administrators and teachers in schools on school management by taking into account measures to control the spread of COVID-19.

The Ministry of Education has announced new guidelines for school management, The Guidelines for School Management and Operation 4.0 after MOH disseminates the latest SOP as Malaysia moves towards the endemic phase (T. A. Yusof, 2022). The school will follow the newest SOP, Guidelines of School Management and Operations 3.0. Furthermore, starting May 1, 2022, there will be no more quarantine requirements for the asymptomatic students, and all co-curricular activities are allowed within the school area. In addition, on April 17, 2022, the MOE lifted the rotation system for primary schools (The Star, 2022). The SOP relaxation includes no more physical distancing and compulsory mask-wearing for outdoor activities (The Edge Malaysia, 2022).

These guidelines are provided to ensure that health and safety care is based on the 3C and 3W principles. Avoid 3C; stay away from crowded places, avoid confined spaces, and avoid talking or chatting at close range. Emphasizing the 3W practice of washing hands with water and soap or hand sanitizer (Wash), wearing a half-face mask (Wear), and Warnings, a cautious concept by the Ministry of Health (Warn), including physical distancing and not shaking hands (Ministry of Education, 2022). The school management must follow the new Reopening Safely Guidelines for education and care facilities issued by the Malaysian National Security Council (MKN) on April 1, 2022 (MKN, 2022). Furthermore, the school management must read the MKN guidelines and the guidance released by MOE, Guidelines for School Management, and Operation 4.0.

Table 2.1: Malaysian National Security Council (MKN) SOPs for school

Action	Explanation
Social Distancing	Ensure social distancing of 1 meter in the classroom/canteen/meeting room/service counter/elevator
Table Layout	The distance between the tables is 1 meter
Hand Sanitiser Usage	Mandatory use of hand sanitizer or provide hand washing area with soap
Measure and record the body temperature	Measure and record body temperatures of employees and visitors/customers as well as cleaners at school gates or assembly sites
Cleaning and sanitation	Cleaners perform the cleaning as per the contract and according to MOH guidelines.

(MKN, 2022)

2.4 Legislation Related to COVID-19

2.4.1 Prevention and Control of Infectious Diseases Act 1988

In the form of COVID-19, a new viral respiratory disease caused by a new strain of Coronavirus, we now face a global pandemic. Although COVID-19's virulent nature is troubling, excessive fear and greedy actions may and will cause more damage than the disease itself, such as panic buying.

Any assistance may be offered by the Prevention and Control of Infectious Diseases Act 1988. This Act aimed at preventing and managing infectious diseases. Infectious disease means any disease related to the First Schedule of the Act, Section II. COVID-19 is not mentioned therein. However, under the said schedule, this new disease could fall under the category of "any other life-threatening microbial infection" (The Commissioner Of Law Revision Malaysia, 2006).

Section 11(1) of the Act provides that if the Minister of Health is satisfied that an outbreak/threat of any infectious disease epidemic occurs in any Malaysia area, the Minister can declare that area as an infectious local area through a gazette. The section also requires the Minister to prescribe, by law, steps to be taken to contain or avoid the spread of infectious diseases within or from an infected local area. These steps include guiding any individual or class or group of persons to be subject to Immunisation or treatment; Isolation, monitoring, or observation; or Any other steps that are deemed appropriate (Suhaimi, 2020). Therefore, the Prime Minister announced the Movement Control Order (MCO) on 18th March

2020 and the subsidiary legislations issued under the Prevention and Control of Infectious Diseases Act 1988 (Othman Luk et al., 2020).

Thereafter, the duration of the MCO has been extended to include the Conditional Movement Control Order (CMCO) and the Rehabilitation Movement Control Order (RMCO). The second wave of COVID-19 emerges after the 26 September 2020 state election in Sabah (The Straits Times, 2020). In the meantime, on January 13, 2021, the Malaysian prime minister announced MCO 2.0 for the entire country to combat the spread of COVID-19. After the rapid increase in COVID-19 instances, which reached 9,020 per day on May 29, 2021, the Malaysian Prime Minister declared a nationwide lockdown from June 1 to June 14, 2021 (Povera, 2021).



Figure 2.1: Movement Control Order Timeline in Malaysia (2020-2021)

2.4.2 COVID-19 Vaccination

The virus infects the lower respiratory tract primarily and may cause severe pneumonia, resulting in deadly acute lung damage and acute respiratory distress syndrome, resulting in a high rate of morbidity and death. Currently, the primary intervention used to prevent the transmission of COVID-19 is physical distancing, good hand hygiene, and regular disinfectant cleaning of high-touched surfaces (MOH, 2021). Not only does the unexpected appearance and fast spread of the SARS-CoV-2 virus threaten lives, but it has also disturbed social and economic balance, which is why the development of a vaccine is critical in the battle against COVID-19.

Vaccines are one strategy for controlling this pandemic. Additionally, it is one of the most effective strategies for defending the community from COVID-19. Since the discovery of COVID-19, countless efforts across the world have been undertaken to create a COVID-19 vaccine. On 20th January 2021, COVID-19 Immunisation Task Force (CITF) was established to guarantee the distribution of vaccinations is carried out properly (JKJAV, 2021). In addition to stringent SOP compliance, an efficient and safe immunisation programme is needed. The COVID-19 vaccine protects against infection with the virus, including serious illness and death. Vaccinations against COVID-19 aid in preventing further viral spread. The following vaccines are available in Malaysia: Pfizer-BioNTech, Sinovac, AstraZeneca, Sputnik V, and CanSinoBio (MaHTAS, 2021). The MOH-approved vaccines are both secure and efficient. The COVID-19 vaccination is initially restricted to those who are 18 years of age or older. Nevertheless, only the Pfizer-BioNTech COVID-19 vaccine has received approval for use in children under the age of 18. (JKJAV, 2021). All inhabitants of Malaysia will receive the optional COVID-19 immunisation at no cost.

To date, only 6.2% of Malaysian are fully vaccinated equal to 1.97 million people and about 7.04 million doses have been given in Malaysia. Meanwhile, at least one dose of the COVID-19 vaccine has been administered to 22.6 percent of the world's population. Globally, 2.8 billion doses have been given, and 41.2 million doses are being administered daily. In low-income nations, just 0.9 percent of the population has gotten at least one dosage (Our World in Data, 2021).

Kenali jenis-jenis vaksin COVID-19				
VAKSIN	TEKNOLOGI	DOS	NEGARA PENGELUAR	% POPULASI DILINDUNGI
	Vaksin mRNA	2	 US	50%
	Platform berasaskan Adenoviral	2	 UK	10%
	Vaksin virus tak teraktif	2	 China	18.8%
	Platform berasaskan Adenoviral	2	 Russia	10%
	Platform berasaskan Adenoviral	1	 China	10.9%

**LINDUNG DIRI,
LINDUNG SEMUA.**

 JAWATANKUASA KHAS JAMINAN AKSES
BEKALAN VAKSIN COVID-19 (JKJAV)

Figure 2.2: Type of Vaccines (JKJAV, 2021)

The cooperation and compliance by society and management heavily affected the effectiveness of the mitigation measures. For instance, Malaysia's most significant COVID-19 cluster originated from the Sri Petaling tabligh gathering (Muhamad, 2020). Insufficient knowledge, negative attitude, and poor practices will contribute to higher COVID-19 transmission. In this current situation, there

are three critical steps to slow down COVID-19 transmission. First, use a mask to protect us and others and prevent the transmission of the virus COVID-19. Second, stay one meter or more from folks who do not reside with us (about two arm lengths). Lastly, avoid crowds. The more people we are in contact with, the more likely COVID-19 is to come into contact (CDC, 2022c).

2.5 Knowledge, Attitude, and Practice

KAP Research suggests to someone what people know about any of these things, how they feel, and how they act. Knowledge, attitude, and practice are the three subjects that a KAP research tests. In this case, the knowledge of the school management refers to their understanding of the COVID-19 pandemic. The attitude refers to their feelings about this subject and any preconceived concepts they might have about it. Furthermore, the practice refers to how, through their acts, they display their experience and attitude (Kaliyaperumal, 2004). The public's view of the disease infection process is crucial to the efficiency of COVID-19 preventive and control efforts (Ajilore et al., 2017). Lack of awareness about COVID-19 would be a significant factor in the spread of the virus (Abu Hasan et al., 2020; Mehmet et al., 2020).

KAP study is essential and can be helpful (Sybille, 2011):

- To calculate the extent of a known situation, confirm or refute a hypothesis, and provide new perspectives on the reality of a situation.
- Develop knowledge, attitude, and behaviours or practice on particular issues to define what is understood and done with different health-related subjects.
- Set a benchmark (reference value) for use in future comparisons and help to assess the efficacy of health education programs in improving health behaviours.
- Propose an intervention approach to organise activities best suited to the respective population concerned in the light of unique local circumstances and the cultural factors that affect them.

In the previous study by Kaliyaperumal (2004), each part has distinct questions that reveal the community's degree of knowledge, attitude, and practice. In this study, the Knowledge portion will assess the respondents' knowledge of COVID-19 via questions about its epidemiology, symptoms, transmission, and COVID-19 standard operating procedure in school. The Attitude portion would concentrate on the indication of beliefs, conceptions, and attitudes towards COVID-19 SOPs, as well as the amount to which respondents believe the assertions in that area. For example, the questions might include the relevance, severity, and importance of the ailment, as well as health-seeking behaviour. In the meanwhile, the section on practice will be developed to assess the respondents' behaviour concerning COVID-19 SOPs compliance.

2.5.1 KAP on COVID-19

A study conducted by Abu Hasan et al. (2020) among Malaysian residents on the knowledge, attitude, and practice toward the prevalent COVID-19 pandemic found that overall levels of respondents' knowledge were moderate, but attitude and practice regarding COVID-19 were excellent. The knowledge mean score regarding COVID-19 is 88.9%. Meanwhile, the attitude mean score is 91.9%% for a negative attitude. This shows that a high level of knowledge about specific issues can influence the attitude of a person. The knowledge mean score is high at 91.4%, but the behaviour and practice are low, with a mean score of 57.2%. According to Abu Hasan et al. (2020), there is still a need to improve awareness among Malaysians. Nevertheless, it was found that they both had a positive attitude and practiced against the infection.

Abdul Latiff et al. stated in their study on students' knowledge and attitude toward better practice in combating the COVID-19 pandemic, that poor knowledge of COVID-19 will result in rapid COVID-19 transmission. The study showed that most students have a high level of knowledge, and only a few are shown to moderate. Abdul Latiff et al. (2021) also reported a strong and positive correlation between attitude and practice. Therefore, a positive attitude towards COVID-19 helps to have good practice in combating COVID-19. Thus, the overall result showed that students were reported to have good knowledge, a positive attitude, and appropriate practice in combating the COVID-19 pandemic.

Peng et al. (2020) reported that the majority of the subjects have a high level of knowledge (82.3%), positive attitudes (73.81%), and proactive practices (87.9%) toward COVID-19. This study differentiates the knowledge, attitudes, and practices toward COVID-19 between public school students and private school students, including differences between gender and majors. Based on the student's level of knowledge, the level of knowledge was substantially higher in public school and medical school students than in private schools and non-medical majors ($p < 0.05$). This shows that different disciplines of students have different kinds of knowledge. According to Peng et al. (2020), the result showed that most Chinese undergraduate students had acquired the basic knowledge of COVID-19, but their results can differ according to the types of schools and majors. Other than that, the Attitude towards COVID-19 indicates a gender difference.

Another study conducted by Azlan et al., (2020) shows that the overall knowledge of respondents was moderate (80.5%), and the respondents have a good score of knowledge on COVID-19. The attitude score of the respondents toward the successful control of COVID-19 is also high (83.1%), which indicates a "positive attitude." Other than that, the ability of Malaysia to conquer the disease (95.9%) and the way the Malaysian Government was handling the crisis (89.9%) also showed a positive attitude. However, the result shows that (51.2%)

of the respondents have a poor practice of wearing masks for the score of practice. Most respondents showed a proactive practice by taking precautions such as avoiding crowds (83.4%) and practicing proper hand hygiene (87.8%) in the week before the movement control order started. The overall results show that Malaysians have an acceptable degree of COVID-19 knowledge and are generally optimistic about overcoming the pandemic. In order to promote public awareness and understanding of COVID-19, clear messaging from the Government or health authorities are nevertheless important.

In Saudi Arabia, Alhazmi et al. (2020) conducted a study among citizens and residents living in Saudi Arabia with age above 18 years old on determining the level of knowledge, attitude, and practice on COVID-19 preventive and precautionary measures concerning the containment of the pandemic. The study shows that more than half (81.3%) of the respondents showed satisfactory knowledge levels towards COVID-19, and the majority (86.6%) of the respondents have a good attitude towards COVID-19. After all, the practice towards COVID-19 is also good with an 81.9% score. Alhazmi et al. (2020) mentioned that the respondents of the study mainly (96.3%) believed that they were at risk of catching the infection, and about 95.9% would respond positively to isolation in a health facility if they were diagnosed with or had a suspected or confirmed case of COVID-19. Besides, attitude and practice were significantly correlated with the level of knowledge. This shows that people with a high level of knowledge have a positive attitude and good practice.

Table 2.2: List of the previous studies on KAP

Year	Country	Researcher	Title	Result
2020	Malaysia	Abu Hasan et. al, (2020)	Knowledge, Attitude, and Practice of Malaysian Residence toward Prevalent of COVID-19 Pandemic in the Early Period of Outbreak: A Cross-sectional Study	Knowledge: 88.9% (Good) Attitude: 91.9% (Positive) Practice: 91.4% (Good)
2020	Malaysia	Azlan et al., (2020)	Public knowledge, attitudes, and practices towards COVID-19: A cross-sectional study in Malaysia	Knowledge: 80.5% (Moderate) Attitude: 83.1%, 95.8%, 89.9% (Positive) Practice: 83.4%, 87.8%, 51.2% (Good)
2020	Turkey and Malaysia	Mehmet et al., (2020)	Knowledge, attitudes, and practices regarding COVID-19 among the Turkish and Malaysian general populations during lockdown: A cross-sectional online survey	Malaysia Knowledge: 9.99±1.8 (Good) Attitude: 75.6% (Positive) Practice: 94.1% (Good) Turkey Knowledge: 8.15 ± 1.6 (Good) Attitude: 59.3% (Positive) Practice: 50.2% (Moderate)
2020	China	Peng et al., (2020)	A cross-sectional survey of knowledge, attitude ,and practice associated with COVID-19 among undergraduate students in China	Knowledge: 82.3% (Good) Attitude: 73.81% (Positive) Practice: 87.9% (Good)

Table 2.2: Continued

Year	Country	Researcher	Title	Result
2020	Indonesia	Saefi et al. (2020)	Survey data of COVID-19-related knowledge, attitude, and practices among Indonesian undergraduate students	Knowledge: 35.8% (Poor) Attitude: 92.5% (Good) Practice: 85.1% (Good)
2020	China	Yang et al. (2021)	Knowledge, attitude, and practice of residents in the prevention and control of COVID-19: An online questionnaire survey	Knowledge: 85.2% (Good) Attitude: 92.9% (Positive) Practice: 84.4% (Good)
2020	Iran	Moradzadeh et al. (2020)	Knowledge, Attitudes, and Practices Toward Coronavirus Disease 2019 in the Central Area of Iran: A Population-Based Study	Knowledge: 0.77±0.13 Attitude: 4.97±0.63 Practice: 5.35±0.70
2020	India	Goruntla et al. (2020)	Knowledge, perception, and practices towards COVID-19 pandemic among general public of India: A cross-sectional online survey	Knowledge: 74.7% Perception: 57.6% Practice: 88.1%
2020	Italy	Souli & Dilucca (2020)	Knowledge, attitude, and practice of secondary school students toward COVID-19 epidemic in Italy: a cross sectional study	Knowledge: (Good) Attitude: (Positive) Practice: (Appropriate)
2020	Nepal	Paudel et al. (2020)	Knowledge, attitude, and practices (KAP) towards COVID-19 among Nepalese residents during the COVID-19 outbreak: An online cross-sectional study	Knowledge: 84.25% (Good) Attitude: 71.5% (Positive) Practice: 93.1%, 92.4% (Good)
2020	Pakistan	Malik et al. (2020)	Knowledge, Attitude, and Practices of Healthcare Professionals on COVID-19 and Risk Assessment to Prevent the Epidemic Spread: A Multicenter Cross-Sectional Study from Punjab, Pakistan	Knowledge: 94.8% (Good) Attitude: 97.9% (Positive) Practice: 94.5% (Adequate)
2020	Saudi Arabia	Alhazmi et al. (2020)	Knowledge, attitudes, and practices among people in Saudi Arabia regarding COVID-19: A cross-sectional study	Knowledge: 81.3% (Good) Attitude: 86.6% (Positive) Practice: 81.9% (Good)

Table 2.2: Continued

Year	Country	Researcher	Title	Result
2021	Japan	Hatabu et al. (2021) ^h	Knowledge, attitudes, and practices toward COVID-19 among university students in Japan and associated factors: An online cross-sectional survey	Knowledge: 100% (Good) Attitude: 96.4%, 68.5% (Positive) Practice: (Good)
2021	South Korea	Lee et al. (2021)	Knowledge, attitudes, and practices (KAP) toward COVID-19: a cross-sectional study in South Korea	Knowledge: 4.21±1.16 Attitude: 2.77±0.80, 3.77±0.85, 3.82±0.44, 3.66±0.59 Practice: 3.82±0.49, 3.51±0.66, 3.11±0.9
2021	Egypt	Hamza et al. (2021)	Cross-Sectional Study on Awareness and Knowledge of COVID-19 among Senior pharmacy Students	Knowledge: 83% (Good)
2021	Malaysia	Abdul Latiff et. al. 2021	Examining Students' Knowledge and Attitude Towards Better Practice in Combating COVID-19 Pandemic	Knowledge: 98% (Good) Attitude: 84% (Positive) Practice: 90% (Good)
2021	Palestine	Qutob & Awartani (2021)	Knowledge, attitudes, and practices (KAP) towards COVID-19 among Palestinians during the COVID-19 outbreak: A cross-sectional survey	Knowledge: 79%, 55.6%, 81%, 82% (Good) Attitude: 62%, 94% (Positive) Practice: 77% (Good)

This literature overviews the elements in the KAP towards COVID-19 SOP compliance research done by the previous scholar. The present study discusses the factors influencing KAP towards COVID-19 SOP compliance in school management as they are key roles in protecting and preventing the transmission of COVID-19 in educational institutions. Apart from that, the literature review describes the available findings on KAP regarding COVID-19 in recent years. The search concludes with the gap which is the lack of a determinant factor study that provides a deep understanding of KAP towards COVID-19 SOP compliance among school management.

Most importantly, there is a gap in the COVID-19 SOP compliance study which is a key measure in the prevention of COVID-19 transmissions. Reliable data generated from the sensors are also a gap to address. Finally, this review also highlights the importance of COVID-19 SOP and its compliance by previous scholars and organisations in preventing the transmission of the virus in school institutions.

CHAPTER 3

METHODOLOGY

3.1 Study Design

This study was a cross-sectional study designed to examine the determinants factors of knowledge, attitude, and practice towards COVID-19 SOP compliance by the school management.

3.2 Study Location

This study was conducted involving school administrators and teachers around Selangor, Kuala Lumpur, and Putrajaya. The selected areas recorded red zones with the highest number of COVID-19 for most of the time, and this has impacted the school opening (Kanyakumari, 2020; The Star, 2020). These three locations can be associated with the elevated probability of COVID-19 infection at schools in the red zones. Therefore, these locations were selected for an in-depth understanding of KAP on COVID-19 and to construct a model of its impact.

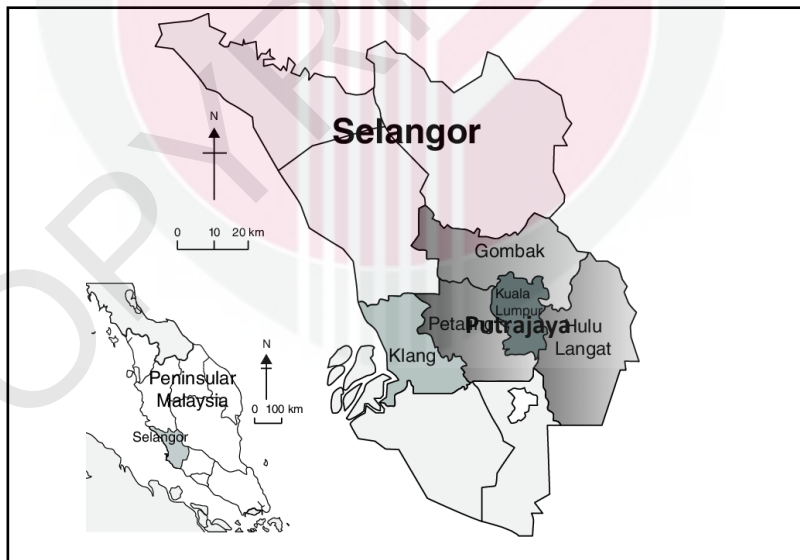


Figure 3.1: Study Location (Hamid et al., 2017)

3.3 Study Population

The research population consisted of school administrators and teachers with different backgrounds and races from various schools in Malaysia's one major state and two federal territories: Selangor, Kuala Lumpur, and Putrajaya.

3.4 Sampling

3.4.1 Sampling Frame

The sampling frame of this study was the school management of government primary and secondary schools in Selangor, Kuala Lumpur, and Putrajaya, which consists of teachers and school administrators with different backgrounds and races from various schools. As public servants in the educational sector, teachers are also part of management as stated in the description of their roles and responsibilities. The Job Description of Education Service Officer by the MOE, clearly states the task of teachers to "manage (the) class which includes ensuring (a) conducive environment for learning" and "ensuring the safety and welfare of students in class" among other tasks (Ministry of Education, 2016).

Principals, administrators, and other education officials who work in school management have important leadership and decision-making responsibilities. The safety and wellbeing of students, teachers, and staff are directly impacted by their behaviour and adherence to COVID-19 SOPs. For health and safety measures to be implemented in schools effectively, it is essential to understand the elements that affect their compliance.

3.4.2 Inclusion criteria

The sampling unit must meet the inclusion criteria:

1. Has a minimum of 1 year of working experience in school management. In order to gather the most reliable information in this study, respondent experience is an essential factor to consider.
2. Has experience in managing schools or classrooms during the COVID-19 pandemic. This is because the major concern is their practice towards COVID-19 SOP compliance during the pandemic in general.

3.4.3 Exclusion criteria

The exclusion criteria are:

1. Students or parents.
2. School staff that are not involved in school or classroom management

3.4.4 Sampling method

This study was applied to the Multistage Sampling Method. In the first stage, this study applied purposive sampling by choosing the place for the study; Selangor, Kuala Lumpur, and Putrajaya. The second stage applied cluster sampling, grouping the place by districts (Selangor and Kuala Lumpur) and precincts (Putrajaya) based on the highest COVID-19 cases (data as of August 2021). For Kuala Lumpur, four health districts zon were selected. For Putrajaya, three precincts with high cases were selected. Lastly, one subdistrict with the highest cases was selected from each nine districts in Selangor.

Next stage, the school in each subdistrict and precinct was selected by simple random sampling, and the schools selected will be the place of study. The school list is obtained from Jabatan Pendidikan Negeri Selangor, Jabatan Pendidikan Wilayah Persekutuan Kuala Lumpur, and Jabatan Pendidikan Wilayah Persekutuan Putrajaya. The schools were randomly selected using the random number generator. All the people who were involved in the selected school management were the respondents. For Kuala Lumpur, ten out of 42 schools were selected, Putrajaya with six schools, and Selangor with 19 schools selected for this study.

The respondents were selected solely based on research requirements, and elements that do not suffice the purpose are kept out of the sample. The respondents also needed to comply with all the inclusion criteria: have a minimum of one year of working experience in school management so that more reliable information is provided in this study because respondent experience is an essential factor to consider. Other than that, the respondents must have experience in school management during the COVID-19 pandemic because the major concern is their practice towards COVID-19 SOP compliance during the pandemic. Thus, the 740 respondents that complied with all criteria were obtained.

1st Stage: Purposive Sampling

Study location was selected based on highest COVID-19 cases and red zone area.

- WP Kuala Lumpur
- WP Putrajaya
- Selangor



2nd Stage: Cluster Sampling

Schools in each states were clustered into health districts office/zon, percincts and districts/sub-districts.

Kuala Lumpur (42 schools)

- PKD Cheras: Bandar Tun Razak (5 schools)
- PKD Lembah Pantai: Lembah Pantai (3 schools)
- PKD Kepong: Sentul (17 schools)
- PKD Titiwangsa: Setapak (17 schools)

Putrajaya (12 schools)

- Precinct 9 (4 schools)
- Precinct 11 (7 schools)
- Precinct 17 (1 school)

Selangor (254 schools)

- Petaling: Damansara (31 schools)
- Gombak: Batu (25 schools)
- Klang: Klang (60 schools)
- Hulu Selangor: Serendah (20 schools)
- Sabak Bernam: Panchang Bedena (13 schools)
- Kuala Selangor: Ijok (5 schools)
- Kuala Langat: Tanjung 12(1) (18 schools)
- Hulu Langat: Kajang (52 schools)
- Sepang: Dengkil (30 schools)



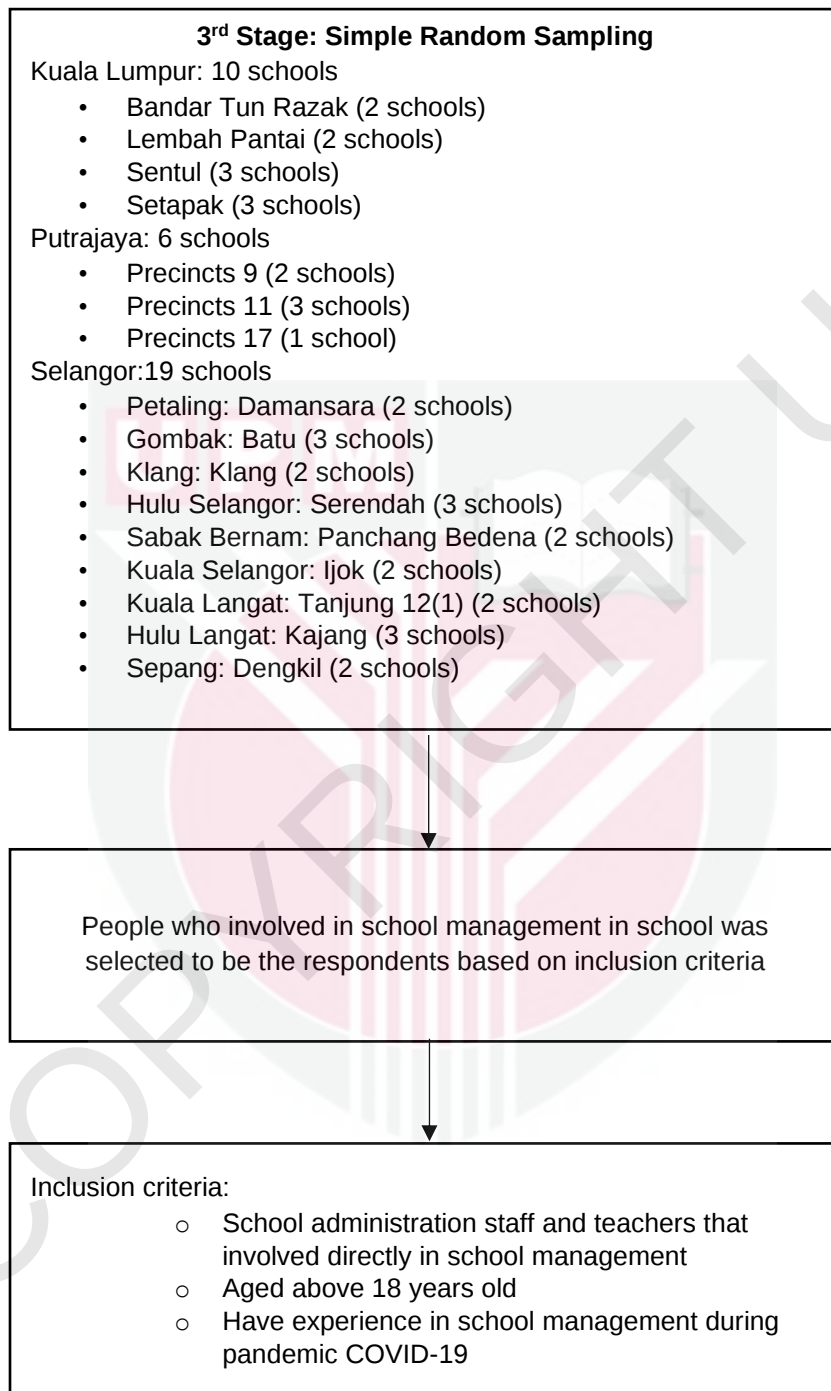


Figure 3.2: Multistage Sampling Method

FLOW CHART OF RESEARCH ACTIVITIES

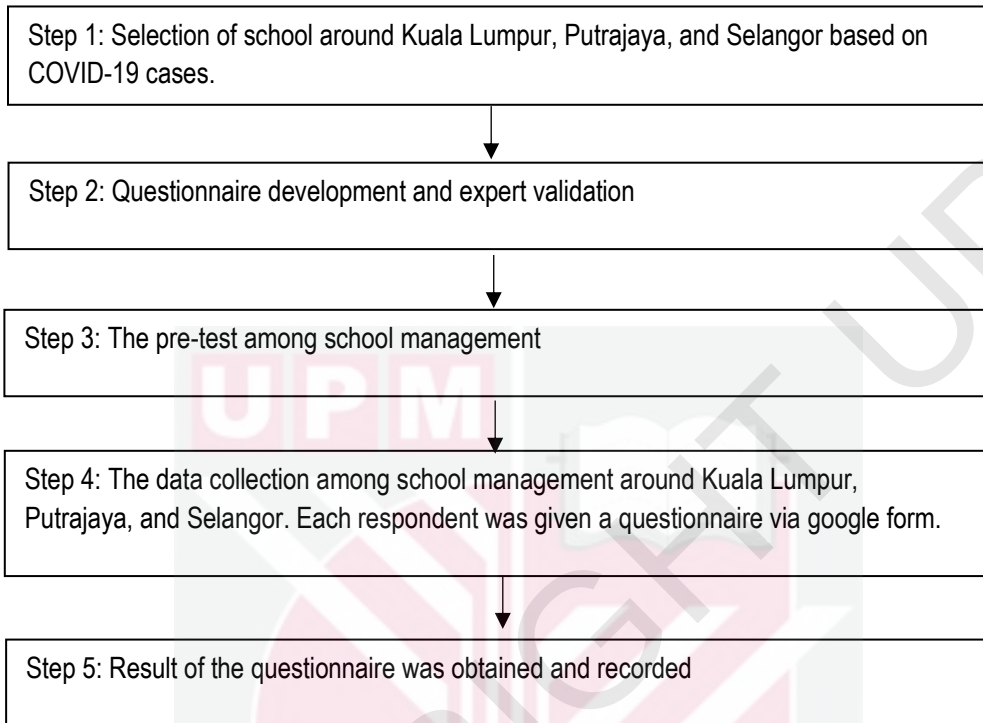


Figure 3.3: Research Flowchart

3.4.5 Sample Size

The samples involved in this sample size calculation are based on previous studies, which are as follows:

Table 3.1: Sample size calculation

Objectives	Formula	n
To determine the socio-demographic characteristics (Age, Gender, Race, Marital status, Educational level), lifestyle (Smoking and Physical Activity), and occupational factors (Position, Duration of services, Working hours) of the respondents	No sample size calculation	None

Table 3.1: Continued

To identify the school management's level of knowledge, attitude, and practice toward COVID-19 SOP compliance.	No sample size calculation	None
To compare the level of COVID-19 SOP compliance (KAP) by socio-demographic characteristics, lifestyle, and occupational factors among the school management.	K: 0.851 A:0.770 P:0.657 $n = \frac{(Z_{1-\alpha/2}\sqrt{2\bar{P}(1-\bar{P})} + Z_{1-\beta}\sqrt{P_1(1-P_1) + P_2(1-P_2)})^2}{(P_1 - P_2)^2}$ Reference: (Florence et al., 2021)	K vs P = 76 A vs P = 253
To examine the relationship of knowledge and practice towards COVID-19 SOP compliance by the school management.	Correlation sample size r = 0.198 reference: (Al ahdab, 2021)	198 samples
To examine the school management's relationship between attitude and practice toward COVID-19 SOP compliance.	Correlation sample size r = 0.210 reference: (Al ahdab, 2021)	176 samples
To determine the determinant of factors (knowledge, attitude, sociodemographic characteristics, lifestyle, and occupational factors) associated with practice towards COVID-19 SOP compliance by the school management	Regression IV: 5 $n = 50 + 8*5 \text{ (IVs)} = 90$	90 samples

By selecting the maximum number of respondents, which is 253 respondents:
Total respondents for three major states, $n = 253 \times 3 \text{ states}$, therefore, $n = 759$.

i. Adjust for the strength of the analysis.

$$N = n + 20\%$$

$$N = 759 + 20\%$$

$$N = 910.8$$

$$\approx 911 \text{ respondents}$$

Based on the formula, 759 respondents are needed for the study. The number increased by 20% for the strength of the analysis of the study and to take into account non-responsive (Habib et al., 2014). Thus, the total number of respondents for the three major states is 911 respondents. However, the number of respondents recruited throughout the sampling period was 162 from Kuala

Lumpur, 78 from Putrajaya, and 500 from Selangor, which made up 740 respondents in total. Lack of participation is because some respondents did not cooperate in answering the questionnaires

3.5 Study Instrumentation and Data Collection

3.5.1 Questionnaires

The respondents were given a set of self-administered questionnaires via a Google form, which was adapted from previous studies as the research instruments to achieve the objectives of the study (Abu Hasan et al., 2020; Abu Samah et al., 2020; Azlan et al., 2020; Ministry of Education, 2021). This self-reported research was used to determine the determinants of practicing COVID-19 SOP among school management. The questionnaire comprises four parts: socio-demographic backgrounds, lifestyle, occupational factors, and KAP. The KAP questionnaire includes questions on knowledge about COVID-19, its transmission, symptoms, and SOP, Attitude towards COVID-19, and practices towards COVID-19. Besides, information regarding respondent demographic details was also asked. Principal components analysis on the Malaysian version of KAP on COVID-19 showed a three-factor solution, knowledge of COVID-19, attitudes, and practices towards COVID-19. A pretest was conducted to validate the questionnaire used, and improvements were made where applied.

3.6 Quality Control

3.6.1 Questionnaires

An adapted questionnaire was used to know the socio-demographic background and the KAP on COVID-19 SOP compliance. The Google form was given in a dual language in Malay and English so that the respondents could easily understand the question. The questionnaire underwent content validity testing, constructive testing, and reliability testing.

In order to ensure that the items of the instrument are representative samples of the universe of content and/or behaviour of the domain being addressed, content validity requires that each test item be evaluated for its relevance to the intended construct. In reports on instrument development, the most widely reported approach for content validity is the content validity index (Chiwaridzo et al., 2017; Lam et al., 2018; Rodrigues et al., 2017; Zamanzadeh et al., 2015). Content validity (CVI) calculations were from the questionnaires' third version (6 domains, 91 questions).

The content validation was sent to six experts, and only four agreed on I-CVI Results (relevancy of individual items). The three experts were from the Department of Environmental and Occupational Health, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia and one of the experts was from the Department of Environmental Engineering, Faculty of Engineering and Green Technology, Universiti Tunku Abdul Rahman, Malaysia. The experts specialised in Health Risk Management, Public Participation, Occupational, and Environmental Health. For content validity, the number of experts should not be fewer than 2, but not more than 6 (De Alwis et al., 2016; Strickland et al., 2014). Ninety-one items were marked as relevant, and the I-CVIs ranged from 0.50 to 1.00. Sixty-six items had an I-CVI = 1.00, nineteen a score of 0.75, and six a score of 0.50. The majority of items were considered relevant. For S-CVI Results (relevancy of the comprehensive questionnaire), the S-CVI/UA = 0.82 and the S-CVI/Ave = 0.91. The Universal Agreement is calculated by adding all I-CVI's equal to 1.00 (75 items) divided by 91, while the Average takes the sum of all I-CVI (83.25) divided by 91. Overall, the Universal Agreement method and the Average approach show high content validity of the questionnaires. With S-CVI/AV = 0.90, the instrument had good face validity and good content-related validity (Lam et al., 2018).

Finally, at the end of the content validation process, the instrument had six domains and 76 items for the pilot study. For the constructive test, a pre-test was conducted. This test's function is to know whether the subjects understand the questions in the questionnaire or not. Next, the questionnaire was reviewed and edited if there were criticism from the respondents. The next day, the same questionnaire was given back to them to ensure the answer was the same.

For the reliability test, a pre-test was conducted among 30 school administrators and teachers from non-sampled schools to ensure the validity and reliability of data obtained from the study. Then, the items in the questionnaires have gone through the reliability test by measuring Cronbach's Alpha Coefficient. The aim was to identify the internal consistency of the questionnaires in order to be used as the study instrument. According to, Cronbach's alpha value should be greater than 0.7 to be acceptable. The value obtained for Cronbach's alpha was 0.826 and showed that this questionnaire was reliable.

3.7 Statistical Analysis

The data obtained from this study will be analysed using version 25 of SPSS. The data will be tested depending on the objectives listed, as each objective uses a different kind of test to analyse the data. The socio-demographic factors among respondents, the level of knowledge, attitude, and practice towards the COVID-19 pandemic will be analysed descriptively in terms of percentage, mean, and standard deviation. In order to determine the association between all the factors, bivariate analyses were used according to the normality of the data (Pearson correlation). A Pearson correlation analysis was conducted to measure

the relationship between knowledge, attitude, and practice. The strength of correlation with the correlation coefficient (r) ranges from -1.00 to +1.00, as shown in Table 3.2. The difference between the variables will be analysed using the Chi-square or Independent T-test. After testing for bivariate analysis, the factors that show significance was further tested using Linear regressions. From this, a linear regression model for determinant factors in practicing COVID-19 SOP compliance among School Management in Kuala Lumpur, Selangor, and Putrajaya was constructed.

Table 3.2: Reference value for correlation coefficient (r)

Size of Correlation	Strength of Correlation
0.91 until 1.00 or -0.91 until -1.00	Very strong
0.71 until 0.90 or -0.71 until -0.90	Strong
0.51 until 0.70 or -0.51 until -0.70	Moderate
0.31 until 0.50 or -0.31 until -0.50	Weak
0.01 until 0.30 or -0.01 until -0.30	Very weak
0.00	No correlation

Table 3.3: Statistical analysis

Objectives	Variables	Statistical Analysis
To determine the socio-demographic characteristics (Age, Gender, Race, Marital status, Educational level), lifestyle (Smoking and Physical Activity), and occupational factors (Position, Duration of services, Working hours) of the respondents	Socio-demographic Lifestyle Occupational factors	Frequency Percentage Mean Standard deviation.
To identify the school management's level of knowledge, attitude, and practice toward COVID-19 SOP compliance.	Knowledge Attitude Practice	Frequency Percentage Mean Standard deviation.
To compare the level of COVID-19 SOP compliance (KAP) by socio-demographic characteristics, lifestyle, and occupational factors among the school management.	Level of COVID-19 SOP compliance (KAP) Sociodemographic Lifestyle Occupational factor	Independent t-Test One-way ANOVA
To examine the relationship of knowledge and practice towards COVID-19 SOP compliance by the school management.	Knowledge Attitude Practice COVID-19 SOP compliance	Pearson correlation

Table 3.3: Continued

To examine the school management's relationship between attitude and practice toward COVID-19 SOP compliance.	Knowledge Attitude Practice COVID-19 compliance	SOP	Pearson correlation
To determine the determinant of factors (knowledge, attitude, sociodemographic characteristics, lifestyle, and occupational factors) associated with practice towards COVID-19 SOP compliance by the school management	Knowledge Attitude Practice Sociodemographic Lifestyle Occupational factors		Simple regression Multiple Regression Linear Linear

3.8 Ethical Concern

Ethical approval from Ethical Committee for Research Involving Human Subjects in Universiti Putra Malaysia (JKEUPM) was obtained before data collection (JKEUPM-2022-036). Moreover, permission to conduct the study in the selected schools had been obtained from the Ministry of Education (MOE) (KPM.600-3/2/3-eras(11496)), the State Education Department (JPWPKL.600-9/1/5Jld.4(64)) (JPWPP.100-2/2/Jld.9(71)) (JPNS.SPD.600-1/1/2JLD.15(68)), and the school principals. Each respondent was given a consent form to read and sign before beginning the study. The consent form states that the respondent's participation in this study is voluntary without force from other parties. It also stated in the form the purpose of the study, the steps they need to undergo in this study, the benefits, and possible risks. Participants were also free to ask any questions regarding this study.

CHAPTER 4

RESULT

4.1 Socio-demographic Characteristics, Occupational Factors and Lifestyle Information of the respondents

A total of 800 respondents participated in this study. After the screening process, 740 respondents were included in this study. The respondents in this study were voluntary based; the total of male respondents was 205, and the female respondents 535. Table 4.1 shows the socio-demographic background of the respondents for the gender, age, race, monthly income, school location, and source of COVID-19 knowledge.

The age of the respondents was between 31 to 50 years old, and the result showed an average of 40.73 ± 9.15 . Most of the respondents were Malay, with a total of 88.2%. However, only 5.8%, 5.1%, and 0.8% of the respondents were Chinese, Indian, and Others, respectively. About 23.1% and 24.5% of respondents earned less than RM4000 and RM6001 to RM8000, respectively. Most of the respondents (47.8%) have an income between RM4001 to RM6000, and only 4.8% of respondents earned above RM8001. The respondents came from different school locations. Most respondents came from Selangor (67.6%), 21.9% from Kuala Lumpur, and only 10.5% from Putrajaya.

Ministry of Health (88.0%) was used mainly by the respondents as the source of COVID-19 knowledge, followed by the Ministry of Education (76.9%), social media (79.9%), friends (58.2%), family (55.0%), and Ministry of Communication and Multimedia (52.8%).

Table 4.1: The socio-demographic background of the respondents (N=740)

Variables	Frequency (%)	Mean $\pm$ SD
Gender		
Male	205 (27.7)	
Female	535 (72.3)	
Age		40.73 $\pm$ 9.15
20 – 30	96 (13.0)	
31 – 40	244 (33.0)	
41 – 50	240 (32.4)	
51 - 60	160 (21.6)	
Race		
Malay	653 (88.2)	

Table 4.1: Continued

Variables	Frequency (%)	Mean±SD
Chinese	43 (5.8)	
Indian	38 (5.1)	
Others	6 (0.8)	
Monthly Income		5454.8±1744.4
<RM4000	172 (23.2)	
RM4001 – RM6000	351 (47.4)	
RM6001 – RM8000	181 (24.5)	
>RM8001	36 (4.8)	
School Location		
Kuala Lumpur	162 (21.9)	
Putrajaya	78 (10.5)	
Selangor	500 (67.6)	
Source of COVID-19 Knowledge		
Ministry of Health		
No	89 (12.0)	
Yes	651 (88.0)	
Ministry of Education		
No	171 (23.1)	
Yes	569 (76.9)	
Ministry of Communication and Multimedia		
No	349 (47.2)	
Yes	391 (52.8)	
Social Media		
No	149 (20.1)	
Yes	591 (79.9)	
Family		
No	333 (45.0)	
Yes	407 (55.0)	
Friends		
No	305 (41.2)	
Yes	435 (58.2)	

Table 4.2 shows the occupational information of the respondents. Of a total of 740 respondents, 19.7% of the respondents are school administrators, and the remained 80.3% are teachers. Most respondents have worked for more than 10 years (56.6%), 32.7% experienced about one to five years, and the remaining 10.7% worked for six to ten years of service.

Most respondents have zero experience handling infectious diseases (71.6%) and managing infectious disease programs (73.2%) at schools. However, almost 62.0% of respondents have been exposed to infectious diseases at school. The result showed that measles (35.5%) has the highest number of reported

diseases occurring at school, followed by dengue (27.3%) and food poisoning (24.1%). The least reported were tuberculosis (7.4%) and HFMD (6.2%).

Table 4.2: The occupational information of the respondents (N=740)

Variables	Frequency (N=740)	%
Position		
School Administrators	146	19.7
Teacher	594	80.3
Year of services		
1 – 5 years	242	32.7
6 – 10 years	79	10.7
>10 years	419	56.6
Experience in handling infectious disease cases in school		
No	530	71.6
Yes	210	28.4
Experience in managing infectious disease program		
No	542	73.2
Yes	198	26.8
Exposure to infectious diseases at school		
No	281	38.0
Yes	459	62.0
Type of infectious disease		
Dengue		
No	538	72.7
Yes	202	27.3
Tuberculosis (TB)		
No	685	92.6
Yes	55	7.4
HFMD		
No	694	93.8
Yes	46	6.2
Food poisoning		
No	562	75.9
Yes	178	24.1
Measles		
No	477	64.5
Yes	263	35.5

Based on Table 4.3, the lifestyle factors that were included in this study were smoking status, physical activity status, whether they experience “negative stress” or stress in daily life, and sleep disturbances. Lifestyle factors such as being physically active, smoking, sleep disturbance, and experiencing negative stress were interrelated with one another (Werner et al., 2021). There is still a lack of study on the relevance between compliance and lifestyle. Therefore, this study was conducted to see whether compliance is affected by the lifestyle of the respondents or not. The majority of the respondents have never smoked before (90.3%). Of the total of 740 respondents, most of them “sometimes” do physical activity (47.0%) and “rarely” experience stress in daily life (45.5%). The majority of the respondents never have sleep disturbances in their daily lives (41.6%).

Table 4.3: The lifestyle information of the respondents (N=740)

Variables	Frequency (N=740)	%	Mean±SD
Smoking status			1.19±0.624
Never	668	90.3	
Rarely	29	3.9	
Sometimes	22	3.0	
Often	20	2.7	
Always	1	0.1	
Physical activities			3.06±0.900
Never	36	4.9	
Rarely	136	18.4	
Sometimes	348	47.0	
Often	186	25.1	
Always	34	4.6	
Stress Experience			2.25±0.807
Never	129	17.4	
Rarely	337	45.5	
Sometimes	236	31.9	
Often	36	4.9	
Always	2	0.3	
Sleep Disturbances			1.81±0.831
Never	308	41.6	
Rarely	289	39.1	
Sometimes	118	15.9	
Often	23	3.1	
Always	2	0.3	

4.2 The Level of Knowledge, Attitude, and Practice (KAP)

The mean KAP rating of respondents who were involved in this study is shown in Table 4.4, Table 4.5 and Table 4.6. The knowledge and attitude factors were measured using a 5-point Likert scale (5=Strongly Agree, 4=Agree, 3=Neither agree nor disagree, 2=Disagree, and 1=Strongly Agree) while practice was measured using (5=Always, 4=Often, 3=Sometimes, 2=Rarely, and 1=Never). The mean scores were used to define the KAP level (low = 1-2.33, medium = 2.34-3.67, and high = 3.68-5). The scoring rate was determined by dividing the actual mean score by the overall mean score and multiplying that result by 100. (Yang et al., 2021; Mamat & Ramdas, 2018).

The results of this study revealed that (refer Table 4.4) respondents were found to have a high level of knowledge on COVID-19 SOPs compliance with an overall mean of 4.58 ± 0.304 (2.88-5.00) and a scoring rate of 91.6%. Most of the respondents have a high level of knowledge about COVID-19 (4.88 ± 0.013), COVID-19 transmission (4.82 ± 0.050), COVID-19 symptoms (4.76 ± 0.152), and COVID-19 standard operating procedure (4.28 ± 1.038).

However, the item "Students are allowed to eat at the canteen during the break" scored the lowest at 42.2% (2.11 ± 1.381) than other knowledge questions. The same goes for respondents' knowledge of COVID-19-related absenteeism as a non-disciplinary issue, with a lower scoring rate of 46.1% (2.30 ± 1.442).

Table 4.4: The descriptive statistic of the Knowledge rating of the respondents (N=740)

Items	Variables	Mean $\pm$ SD (Range)	Level	Scoring rate (%)
Knowledge about COVID-19		4.88$\pm$0.013	High	97.5
K1	COVID-19 is a viral infection	4.88 $\pm$ 0.380 (1-5)	High	97.6
K2	COVID-19 can cause a severe acute respiratory syndrome	4.89 $\pm$ 0.361 (1-5)	High	97.8
K3	The first case of human infection in Wuhan, China	4.86 $\pm$ 0.407 (1-5)	High	97.3
Knowledge about COVID-19 Transmission		4.82$\pm$0.050	High	97.5
K4	COVID-19 can transmit through droplets during coughing or sneezing	4.87 $\pm$ 0.384 (1-5)	High	97.4

Table 4.4: Continued

K5	COVID-19 virus can transmit via airborne	4.74±0.663 (1-5)	High	94.8
K6	COVID-19 virus can be transmitted by touching surfaces and devices contaminated by the virus COVID-19	4.79±0.507 (1-5)	High	95.8
K7	COVID-19 can spread through close contact with infected persons	4.87±0.383 (1-5)	High	97.4
K8	COVID-19 transmit via handshaking	4.81±0.506 (1-5)	High	96.1
K9	Someone infected can transmit the virus even if they are not showing symptoms	4.85±0.419 (1-5)	High	96.9
K10	Students, staff, etc., can wear face masks to prevent infection by the COVID-19 virus	4.86±0.411 (1-5)	High	97.2
Knowledge about COVID-19 Symptoms		4.76±0.152	High	95.1
K11	Fever, cough, and shortness of breath are COVID-19 symptoms	4.84±0.445 (1-5)	High	96.8
K12	Symptoms of COVID-19 similar to the SARS virus	4.53±0.756 (1-5)	High	90.5
K13	Patient with underlying chronic diseases is at higher risk of infection	4.83±0.446 (1-5)	High	96.6
K14	People with age over 60 years old have a higher risk of developing severe diseases and death	4.83±0.434 (1-5)	High	96.6
Knowledge about COVID-19 SOP		4.28±1.038	High	85.5
K15	There is a COVID-19 SOP, particularly for an educational institution (school)	4.90±0.329 (1-5)	High	98.1
K16	School management must conduct screening tests at the entrance	4.56±0.834 (1-5)	High	91.3

Table 4.4: Continued

K17	The school management must provide a Letter of Absence (LOA) to the student who is not allowed to school in relation to COVID-19	4.35±1.036 (1-5)	High	87.1
K18	School assembly is not allowed	4.79±0.526 (1-5)	High	95.7
K19	Students or staff who have contact with someone infected should be immediately isolated. Close contact should remain in the isolation room for at least ten days or as directed by the PKD	4.86±0.404 (1-5)	High	97.1
K20	Wearing a mask is compulsory around the school area	4.90±0.356 (1-5)	High	98.0
K21	Cocurricular activities are not allowed in school	4.69±0.683 (1-5)	High	93.8
K22	Student absenteeism during a pandemic is one of the discipline issues	2.30±1.442 (1-5)	Low	46.1
K23	Students with symptoms are not allowed to attend school	4.85±0.536 (1-5)	High	97.0
K24	Students are allowed to eat at the canteen during break	2.11±1.381 (1-5)	Low	42.2
K25	School operation is based on phases in the National Recovery Plan (NRP)	4.74±0.579 (1-5)	High	94.7
	Overall Knowledge	4.58±0.304 (2.88-5.00)	High	91.6

Based on Table 4.5, the respondents' level of attitude towards COVID-19 was classified as high due to the overall attitude mean of 4.72±0.404 with a scoring rate of 94.4%. The highest scoring rate was on the belief of everyone's responsibility to prevent the spread of COVID-19 (4.90±0.409), which was 98.0%. Contradict the respondents' belief in the ability of vaccines to protect them from COVID-19 infection (4.55±0.744) had the lowest scoring rate of 90.9%

Table 4.5: The descriptive statistic of the Attitude rating of the respondents (N=740)

Items	Variables	Mean±SD (Range)	Level	Scoring rate (%)
AT1	I believe COVID-19 can be prevented by good hygiene practices	4.85±0.475 (1-5)	High	97.0
AT2	I am interested in knowing the methods of prevention of COVID-19	4.73±0.544 (1-5)	High	94.5
AT3	I believe everyone is responsible for preventing the spread of the COVID-19	4.90±0.409 (1-5)	High	98.0
AT4	The Movement Control Order (MCO) was an effective effort by the government to prevent the spread of the disease	4.72±0.624 (1-5)	High	94.5
AT5	If I get infected with COVID-19, I will not spread the virus to others to get them infected too	4.76±0.726 (1-5)	High	95.3
AT6	I agree that COVID-19 will successfully be controlled	4.63±0.639 (1-5)	High	92.6
AT7	I agree that compliance with SOP can prevent COVID-19 transmission	4.82±0.483 (1-5)	High	96.4
AT8	I believe that the vaccine can protect us against COVID-19 infection	4.55±0.744 (1-5)	High	90.9
AT9	The Ministry of Education has provided the educational institution with adequate SOP and information on COVID-19	4.66±0.584 (1-5)	High	93.2
AT10	The SOP provided is easy to understand and comply with by the school management	4.62±0.633 (1-5)	High	92.5
	Overall Attitude	4.72±0.404 (2.00-5.00)	High	94.4

Based on Table 4.6, the overall practice mean was 4.13 ± 0.422 , and the scoring rate was 82.6%, suggesting that the respondents have a high level of practice towards COVID-19 SOPs. Most of the items had a scoring rate of more than 90%. The highest was 97.6%, where most respondents wear a face mask when going out (4.88 ± 0.377). However, it was found that item P1 (I went on vacation during the outbreak) and item P2 (I went to any crowded place) have a low level

of practice with a scoring rate of 32.4% (1.62 ± 0.961) and 36.7% (1.84 ± 0.946) respectively. On the other hand, the respondents' practice of notifying the District Health Office or specific parties when there was COVID-19 infection at school (item P3) and giving a Letter of Absence (LOA) to students or staff who were infected with COVID-19 or under quarantine (item P12) were at medium level with a scoring rate of 63.9% (3.20 ± 1.67) and 61.1% (3.06 ± 1.663), respectively.

According to Table 7, the school management in this study has a high level of KAP rating. The attitude towards COVID-19 SOPs scores the highest followed by knowledge and lastly practice (refer to Figure 4.1).

Table 4.6: The descriptive statistic of the Practice rating of the respondents (N=740)

Items	Variables	Mean $\pm$ SD (Range)	Level	Scoring rate (%)
P1	I went on vacation during the outbreak.	1.62 ± 0.961 (1-5)	Low	32.4
P2	I went to any crowded place	1.84 ± 0.946 (1-5)	Low	36.7
P3	I notify the district health office or specific parties if students or staff infected with COVID-19	3.20 ± 1.67 (1-5)	Medium	63.9
P4	I wear a face mask when going out	4.88 ± 0.377 (1-5)	High	97.6
P5	I cover my mouth and nose with a tissue when coughing or sneezing	4.66 ± 0.604 (1-5)	High	93.3
P6	I wash my hands before and after each action	4.67 ± 0.554 (1-5)	High	93.4
P7	I stand 1-meter away from others (1-meter social distance)	4.61 ± 0.561 (1-5)	High	92.1
P8	I wash my hands with soap or hand sanitizer that contains at least 70% alcohol	4.59 ± 0.632 (1-5)	High	91.8
P9	I refer to the Standard Operating Procedure (SOP) issued by MOH, MKN, and MOE from time to time	4.57 ± 0.654 (1-5)	High	91.4
P10	I ensure all students, staff, etc. always wear face masks throughout the period of school	4.66 ± 0.550 (1-5)	High	93.3
P11	I supervise and ensure students or staff with temperatures above 37 °C or having any symptoms are not allowed to attend school	4.46 ± 0.863 (1-5)	High	89.3

Table 4.6: Continued

P12	I gave a Letter of Absence (LOA) to students or staff whose infected with COVID-19 or under quarantine.	3.06±1.663 (1-5)	Medium	61.1
P13	I ensure good ventilation in the classroom	4.60±0.707 (1-5)	High	92.1
P14	I make sure that the table arrangement in the classroom is rotated	4.62±0.702 (1-5)	High	92.5
P15	I supervise and ensure all the students eat in the classroom during break	4.63±0.619 (1-5)	High	92.6
P16	I provide hand washing places with soap or hand sanitizer containing 70% alcohol	4.53±0.786 (1-5)	High	90.6
P17	I ensure no mass gathering or school assembly within the school area	4.59±0.774 (1-5)	High	91.8
P18	I ensure no curriculum activities are allowed in the school area	4.53±0.839 (1-5)	High	90.6
	Overall Practice	4.13±0.422 (1.72-5.00)	High	82.6

Table 4.7: The descriptive statistic of the KAP rating of the respondents (N=740)

Variables	Mean±SD	Level
Knowledge	4.58±0.304	High
Attitude	4.72±0.404	High
Practice	4.13±0.422	High

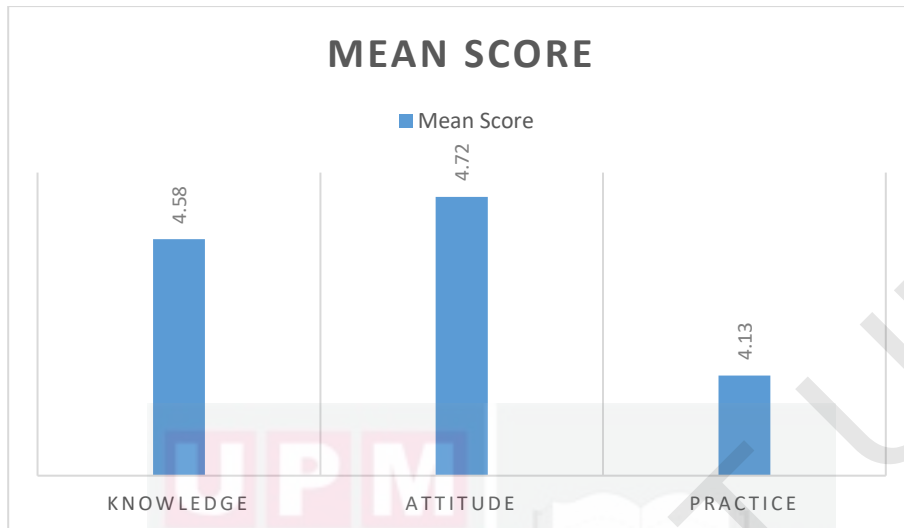


Figure 4.1: The total mean score for the KAP rating of the respondents

4.3 The Level of KAP towards COVID-19 SOP Compliance by socio-demographic characteristics, lifestyle and occupational factors among The Respondents

Table 4.8 shows a significant mean difference in monthly income (K: $p=0.0001$, A: $p=0.0001$, P: $p=0.010$) and school location (K: $p=0.001$, A: $p=0.0001$, P: $p=0.001$) between knowledge, attitude, and practice. However, gender (A: $p=0.023$, P: $p=0.045$) and source of knowledge (MOE) (A: $p=0.0001$, P: $p=0.002$) only showed a significant difference in attitude and practice. Apart from that, race (K: $p=0.042$, A: $p=0.042$) also only showed a significant difference in knowledge and attitude. Besides, age and source of knowledge (MOH, MCMC, Social Media, Family, and Friends) did not have a significant mean difference in knowledge, attitude, and practice toward COVID-19 standard operating procedures.

Table 4.9 shows the differences between occupational characteristics with knowledge, attitude, and practice. Exposure to infectious diseases at school ($p=0.002$) only showed a significant mean difference in the level of knowledge but not in attitude and practice. For the type of infectious diseases exposed in school, Dengue ($p=0.002$), Tuberculosis ($p=0.032$), Food Poisoning ($p=0.002$), and Measles ($p=0.002$) were significant mean differences in the level of knowledge, but only Food Poisoning ($p=0.016$) showed to have a significant difference in the level of practice. Meanwhile, HFMD was found not to have a significant difference in knowledge, attitude, and practice. The respondents that have experience in handling infectious disease case (K: $p=0.001$, P: $p=0.023$) and managing infectious disease program (K: $p=0.001$, P: $p=0.0001$) in school was discovered to have a significant mean difference in the level of knowledge

and practice. Position and year of service did not have a significant mean difference in knowledge, attitude, and practice level. On top of that, none of the occupational characteristics was found to have a significant mean difference in attitude toward COVID-19 standard operating procedure.

Table 4.10 shows differences between lifestyle characteristics with knowledge, attitude, and practice. Smoking status (K: $p=0.005$, A: $p=0.0001$, P: $p=0.002$) and physical activities (K: $p=0.005$, A: $p=0.0001$, P: $p=0.002$) were found to be a significant mean difference in the level of knowledge, attitude, and practice. Additionally, sleep disturbances ($p=0.006$) only showed a significant mean difference in the level of knowledge. Meanwhile, stress experience did not significantly differ in the level of knowledge, attitude, and practice.

Table 4.8: Differences between socio-demographic characteristics with knowledge, attitude, and practice (N=740)

Characteristics	Knowledge		Attitude		Practice	
	Mean±SD	P-value	Mean±SD	P-value	Mean±SD	P-value
Gender^a						
Male	4.61±0.326	0.586	4.71±0.514	0.023*	4.12±0.411	0.045*
Female	4.57±0.295		4.73±0.354		4.14±0.450	
Age^b						
20 – 30	4.54±0.263	0.092	4.64±0.606	0.064	4.12±0.535	0.326
31 – 40	4.62±0.299		4.76±0.340		4.10±0.411	
41 – 50	4.58±0.327		4.73±0.385		4.13±0.368	
51 - 60	4.55±0.298		4.71±0.365		4.18±0.438	
Race^b						
Malay	4.58±0.294	0.042*	4.72±0.396	0.042*	4.12±0.423	0.428
Chinese	4.51±0.488		4.60±0.577		4.13±0.475	
Indian	4.70±0.162		4.93±0.275		4.28±0.277	
Others	4.58±0.199		4.83±0.275		4.22±0.365	
Monthly Income^b						
<RM4000	4.50±0.333	0.0001*	4.61±0.542	0.0001*	4.04±0.515	0.010*
RM4001 – RM6000	4.57±0.301		4.71±0.381		4.15±0.374	
RM6001 – RM8000	4.55±0.247		4.63±0.449		4.10±0.500	
>RM8001	4.63±0.288		4.80±0.306		4.17±0.384	
School Location^b						
Kuala Lumpur	4.53±0.316	0.001*	4.68±0.387	0.0001*	4.02±0.435	0.001*
Putrajaya	4.50±0.367		4.56±0.681		4.16±0.410	
Selangor	4.61±0.286		4.76±0.340		4.18±0.438	

Table 4.8: Continued

Characteristics	Knowledge		Attitude		Practice	
	Mean±SD	P-value	Mean±SD	P-value	Mean±SD	P-value
Source of COVID-19 Knowledge						
Ministry of Health^a						
No	4.65±0.372	0.286	4.74±0.441	0.490	4.17±0.365	0.237
Yes	4.57±0.292		4.72±0.399		4.12±0.429	
Ministry of Education^a						
No	4.58±0.323	0.172	4.63±0.516	0.0001*	4.02±0.496	0.002*
Yes	4.58±0.299		4.75±0.359		4.16±0.392	
Ministry of Communication and Multimedia^a						
No	4.58±0.332	0.080	4.72±0.411	0.556	4.10±0.432	0.460
Yes	4.58±0.278		4.72±0.399		4.16±0.412	
Social Media^a						
No	4.66±0.308	0.629	4.76±0.363	0.263	4.09±0.455	0.091
Yes	4.56±0.301		4.72±0.413		4.14±0.413	
Family^a						
No	4.61±0.308	0.688	4.73±0.380	0.562	4.10±0.426	0.348
Yes	4.56±0.300		4.72±0.423		4.15±0.418	
Friends^a						
No	4.60±0.318	0.333	4.72±0.412	0.530	4.11±0.430	0.230
Yes	4.18±0.294		4.73±0.399		4.14±0.416	

Note: ^a Independent t-test (t-statistic), ^b One-Way ANOVA (F-statistic), *p<0.0

Table 4.9: Differences between occupational characteristics with knowledge, attitude, and practice (N=740)

Characteristics	Knowledge		Attitude		Practice	
	Mean±SD	P-value	Mean±SD	P-value	Mean±SD	P-value
Position^a						
School Administrators	4.57±0.297	0.557	4.72±0.355	0.932	4.19±0.373	0.060
Teacher	4.58±0.306		4.73±0.415		4.11±0.433	
Year of services^b						
1 – 5 years	4.54±0.263	0.092	4.64±0.606	0.064	4.12±0.535	0.326
6 – 10 years	4.62±0.299		4.76±0.340		4.10±0.411	
>10 years	4.58±0.327		4.73±0.385		4.13±0.368	
Experience in handling infectious disease cases in school^a						
No	4.55±0.308	0.0001*	4.71±0.427	0.117	4.11±0.425	0.023*
Yes	4.65±0.283		4.76±0.337		4.18±0.384	
Experience in managing infectious disease program^a						
No	4.55±0.309	0.0001*	4.71±0.424	0.075	4.08±0.438	0.0001*
Yes	4.65±0.280		4.77±0.339		4.27±0.338	
Exposure to infectious diseases at school^a						
No	4.54±0.292	0.002*	4.72±0.400	0.797	4.11±0.450	0.361
Yes	4.61±0.309		4.73±0.407		4.14±0.404	
Type of infectious disease						
Dengue^a						
No	4.56±0.303	0.002*	4.71±0.421	0.168	4.11±0.445	0.059
Yes	4.64±0.303		4.75±0.354		4.62±0.351	

Table 4.9: Continued

Characteristics	Knowledge		Attitude		Practice	
	Mean±SD	P-value	Mean±SD	P-value	Mean±SD	P-value
Tuberculosis (TB)^a						
No	4.57±0.302	0.032*	4.72±0.404	0.932	4.13±0.426	0.409
Yes	4.66±0.321		4.72±0.405		4.08±0.369	
HFMD^a						
No	4.58±0.305	0.954	4.73±0.404	0.197	4.13±0.427	0.309
Yes	4.58±0.290		4.65±0.392		4.07±0.346	
Food poisoning^a						
No	4.56±0.294	0.002*	4.71±0.407	0.164	4.11±0.432	0.016*
Yes	4.64±0.328		4.77±0.394		4.20±0.382	
Measles^a						
No	4.55±0.316	0.002*	4.72±0.396	0.929	4.14±0.435	0.353
Yes	4.63±0.276		4.73±0.419		4.11±0.397	

Note: ^a Independent t-test (t-statistic), ^b One-Way ANOVA (F-statistic), *

Table 4.10: Differences between lifestyle characteristics with knowledge, attitude, and practice (N=740)

Characteristics	Knowledge		Attitude		Practice	
	Mean±SD	P-value	Mean±SD	P-value	Mean±SD	P-value
Smoking status^b						
Never	4.53±0.338	0.005*	4.44±0.806	0.0001*	4.06±0.542	0.002*
Rarely	4.66±0.243		4.79±0.309		4.24±0.381	
Sometimes	4.55±0.330		4.71±0.383		4.09±0.411	
Often	4.57±0.294		4.74±0.387		4.11±0.366	
Always	4.65±0.203		4.77±0.282		4.09±0.670	
Physical activities^b						
Never	4.53±0.338	0.005*	4.44±0.806	0.0001*	4.14±0.450	0.002*
Rarely	4.65±0.203		4.74±0.387		4.12±0.411	
Sometimes	4.55±0.330		4.71±0.383		4.61±0.326	
Often	4.57±0.294		4.79±0.309		4.57±0.295	
Always	4.66±0.243		4.77±0.282		4.57±0.295	
Stress Experience^b						
Never	4.54±0.284	0.061	4.75±0.361	0.373	4.15±0.530	0.261
Rarely	4.57±0.305		4.74±0.349		4.12±0.408	
Sometimes	4.61±0.315		4.69±0.488		4.11±0.3386	
Often	4.63±0.285		4.66±0.427		4.19±0.2330	
Always	5.00±0.001		5.00±0.001		4.67±0.001	
Sleep Disturbances^b						
Never	4.56±0.298	0.006*	4.71±0.438	0.085	4.17±0.476	0.062
Rarely	4.62±0.225		4.76±0.352		4.11±0.392	
Sometimes	4.52±0.406		4.64±0.438		4.07±0.326	
Often	4.57±0.300		4.70±0.334		4.07±0.424	
Always	4.58±0.303		4.±0.001		4.67±0.001	

Note: ^a Independent t-test (t-statistic), ^b One-Way ANOVA (F-statistic), *p<0.05

4.4 Relationship of Knowledge, Attitude, and Practice

Table 4.11 shows the correlations between Knowledge, Attitude, and Practice. Based on the findings, there was a correlation between knowledge with practice ($p < 0.001$), attitude with practice ($p < 0.001$), and knowledge with attitude ($p < 0.001$). For the strength of correlation, the relationship between knowledge with practice was identified as weak correlation ($r = 0.348$), attitude with practice was very weak ($r = 0.358$), and knowledge with attitude was moderate ($r = 0.619$). Therefore, we accept the hypothesis that there was a significant positive relationship between knowledge, attitude, and practice toward COVID-19 SOP compliance by the school management.

Table 4.11: Correlations between Knowledge, Attitude, and Practice (KAP) (N=740)

	Knowledge		Attitude		Practice	
	r	P-value	r	P-value	r	P-value
Knowledge	1	-	0.619	0.0001*	0.348	0.0001*
Attitude	0.619	0.0001*	1	-	0.358	0.0001*
Practice	0.348	0.0001*	0.358	0.0001*	1	-

Note: *Correlation is significant at $p < 0.05$ (2-tailed).

4.5 Relationship between Knowledge, Attitude, Socio-demographic Occupational, and Lifestyle Towards Practice COVID-19 of SOP Compliance

A linear regression analysis was conducted to determine the influence of the independent variable on the practice and was performed separately in the simple linear regression. The findings of simple linear regression are shown in Table 4.12.

In this study, all the independent variables found to be significantly associated with variable practice in the simple linear regression were further tested with multiple linear regression. Multiple regression was conducted to determine the significant relationships between multiple independent variables with the dependent variable and to predict a value of one variable for given values of the others. Before that, significant assumptions in multiple regression are tested to ensure no violation is met.

The assumptions that should be met are:

- 1) There must be a linear relationship between the outcome variable and independent variables.
- 2) The residuals are normally distributed.
- 3) There was no multicollinearity.
- 4) The variance of error terms is homoscedasticity.

For assumption 1, the scatterplot showed that all independent variables towards the dependent variable formed a clear linear line (Figure 4.1). Therefore, the first assumption was accepted. For assumption 2, the histogram of residuals showed that all independent variables towards the dependent variable were bell-shaped and normally distributed (Figure 4.2). Therefore, the normality assumption was accepted. As for assumption 3, which is the multicollinearity, the VIF values of the variable were used to address this assumption. Based on table 4.13, no multicollinearity exists if the value of VIF for all variables is close to 1 but below 5.

Furthermore, the correlation coefficient was below 0.8, indicating no multicollinearity (Table 4.12). Therefore, the third assumption was not violated. For the last assumption, the error term variance was homoscedasticity, which was proven by a plot of unstandardized residuals versus unstandardized predicted values. Therefore, the last assumption was fulfilled.

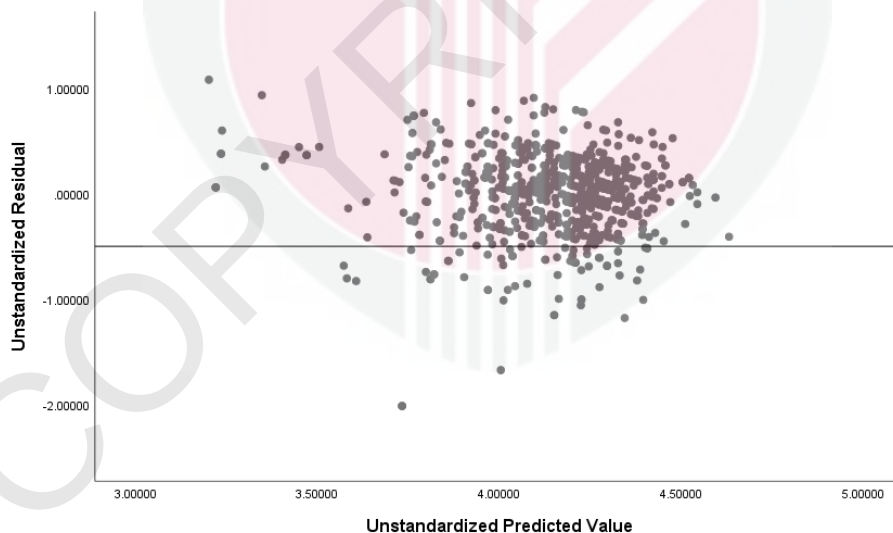


Figure 4.2: The scatterplot for homoscedasticity testing

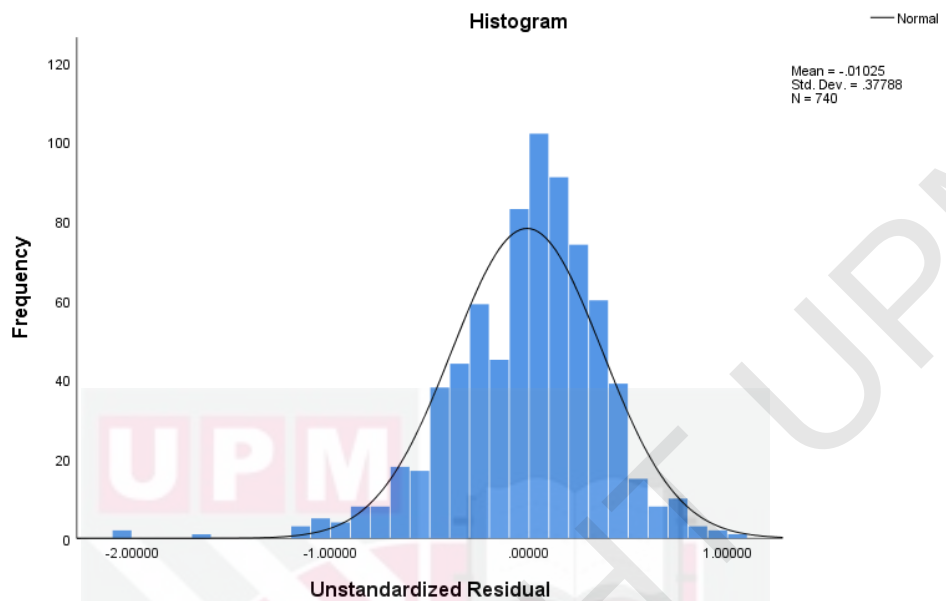


Figure 4.3: Histogram of residuals for normality testing

Table 4.12: Simple Linear Regression between Knowledge, Attitude, Socio-demographic, Occupational, and Lifestyle towards Practice of COVID-19 SOP compliance (N=740)

Variables	R-Square	Unstandardized Coefficient		Standardized Coefficient	t	p-value	95% CI	
		B	SE				Lower	Upper
(Constant)								
Knowledge	0.121	0.483	0.048	0.348	10.100	0.0001*	0.389	0.577
Attitude	0.128	0.378	0.036	0.358	10.401	0.0001*	0.303	0.444
Gender (Female vs Male)	0.0001	0.019	0.035	0.020	0.538	0.591	-0.049	0.087
Age (20-40 vs 41-60)	0.002	0.036	0.031	0.043	1.159	0.247	-0.025	0.097
Race (Malay vs Chinese)	0.0001	0.023	0.068	0.013	0.334	0.739	-0.110	0.156
Race (Malay vs Indian)	0.002	-0.077	0.072	-0.041	-1.070	0.285	-0.218	0.064
Race (Malay vs Others)	0.002	-0.223	0.177	-0.049	-1.257	0.209	-0.571	0.125
Income (RM1000-RM6000 vs RM6001 – RM 12000)	0.002	0.043	0.034	0.047	1.275	0.203	-0.023	0.110
School location (Selangor vs Kuala Lumpur)	0.021	0.140	0.038	0.143	3.721	0.0001*	0.066	0.214
School location (Selangor vs Putrajaya)	0.0001	-0.025	0.050	-0.020	-0.487	0.627	-0.123	0.074
Position (School Administrator vs Teachers)	0.005	-0.073	0.039	-0.069	-1.886	0.060	-0.150	0.003
Source of Knowledge:								
a. Ministry of Health (Yes vs No)	0.001	0.041	0.048	0.032	0.866	0.387	-0.052	0.135
b. Ministry of Education (Yes vs No)	0.020	-0.140	0.036	-0.140	-3.837	0.0001*	-0.212	-0.068
c. Ministry of Communication and Multimedia (Yes vs No)	0.005	-0.058	0.031	-0.069	-1.871	0.062	-0.119	0.003

Table 4.12: Continued

Variables	R-Square	Unstandardized Coefficient		Standardized Coefficient	t	p-value	95% CI	
		B	SE				Lower	Upper
d. Social Media (Yes vs No)	0.002	-0.051	0.039	-0.049	-1.329	0.184	-0.127	0.025
e. Family (Yes vs No)	0.003	-0.045	0.031	-0.053	-1.436	0.151	-0.106	0.016
f. Friends (Yes vs No)	0.002	-0.035	0.032	-0.041	-1.126	0.261	-0.097	0.026
Handle any infectious disease cases in school (Yes vs No)	0.007	-0.078	0.034	-0.083	-2.272	0.023*	-0.145	-0.011
Manage any infectious disease prevention program in school (Yes vs No)	0.041	-0.193	0.034	-0.203	-5.633	0.0001*	-0.261	0.126
Exposure to infectious disease in school (Yes vs No)	0.001	-0.029	0.032	-0.034	-0.915	3.61	-0.092	0.034
Dengue (Yes vs No)	0.005	-0.066	0.035	-0.069	-1.890	0.059	-0.134	0.003
Tuberculosis (Yes vs No)	0.001	0.049	0.059	0.030	0.825	0.409	0.067	0.165
HFMD (Yes vs No)	0.001	0.065	0.064	0.037	1.019	0.309	-0.061	0.192
Food Poisoning (Yes vs No)	0.008	-0.088	0.036	-0.089	-2.425	0.016*	-0.159	-0.017
Measles (Yes vs No)	0.001	0.030	0.032	0.034	0.929	0.353	-0.034	0.094
Smoking (Yes vs No)	0.0001	-0.001	0.052	-0.0001	-0.012	0.990	-0.104	0.102
Physical Activities (Yes vs No)	0.018	-0.123	0.034	-0.133	-3.638	0.0001*	-0.189	-0.056
Stress level (Yes vs No)	0.0001	0.010	0.032	0.012	0.325	0.745	-0.053	0.074
Sleep Disturbances (Yes vs No)	0.003	0.062	0.039	0.058	1.584	0.114	-0.015	0.139

Note: Significant: p-value<0.05

Table 4.13: Variance Inflation Values (VIF) (N=740)

Variables	VIF
Knowledge	1.841
Attitude	1.729
Gender (Female vs Male)	1.447
Age (20-40 vs 41-60)	1.334
Race (Malay vs Chinese)	1.046
Income (RM1000-RM6000 vs RM6001 – RM 12000)	1.262
Position (School Administrator vs Teachers)	1.234
Source of Knowledge:	
a. Ministry of Health (Yes vs No)	2.330
b. Ministry of Education (Yes vs No)	1.732
c. Ministry of Communication and Multimedia (Yes vs No)	1.481
d. Social Media (Yes vs No)	2.213
e. Family (Yes vs No)	3.347
f. Friends (Yes vs No)	3.135
Handle any infectious disease cases in school (Yes vs No)	1.793
Manage any infectious disease prevention program in school (Yes vs No)	1.567
Exposure to infectious disease in school (Yes vs No)	2.450
Dengue (Yes vs No)	1.540
Tuberculosis (Yes vs No)	1.333
HFMD (Yes vs No)	1.131
Food Poisoning (Yes vs No)	1.512
Measles (Yes vs No)	1.816
Smoking (Yes vs No)	1.502
Physical Activities (Yes vs No)	1.067
Stress level (Yes vs No)	1.379
Sleep Disturbances (Yes vs No)	1.244

Table 4.14 shows the multiple regression testing for independent variables with practice toward COVID-19 SOPs compliance. The change in variance in practice explained by the independent variables is 23.4% (adjusted R-square). The table showed a significant positive influence of the independent variables toward practice ($F=13.231$, $p<0.001$). Seven independent variables had a significant influence on practice, which were knowledge ($\beta=0.332$, $SE=0.078$), attitude ($\beta=0.260$, $SE=0.064$), age ($\beta=-0.080$, $SE=0.036$), source of knowledge (MOH: $\beta=0.187$, $SE=0.075$; MOE: $\beta=0.130$, $SE=0.053$; social media: $\beta=0.137$, $SE=0.060$), physical activities ($\beta=0.121$, $SE=0.042$), experience in managing infectious diseases ($\beta=0.087$, $SE=0.039$), exposure to infectious disease ($\beta=0.103$, $SE=0.048$) and type of infectious diseases exposed (Tuberculosis: $\beta=0.123$, $SE=0.068$; Measles: $\beta=0.110$, $SE=0.046$).

The model is:

Practice (y) = 1.456 + 0.332 (knowledge) + 0.260 (attitude) – 0.080 (age) + 0.187 + 0.130 + 0.130 (source of knowledge; MOH, MOE and social media) + 0.108 (physical activities) + 0.087 (experience in managing infectious diseases) + 0.103 (exposure to infectious disease) + 0.123 + 0.110 (type of infectious diseases; Tuberculosis and Measles)

An increase in 1 standard deviation of knowledge will increase the practice by 0.332 standard deviations, while an increase in 1 standard deviation of attitude will increase the practice by 0.260 standard deviations. School management aged 51-60 have 0.080 practice more than school management aged 21-30. School management who often performed physical activities has 0.108 practice more than school management who never performed physical activities. In conclusion, school management that has a good understanding of COVID-19 was 0.332 times more likely to have good practice in SOPs compliance. Meanwhile, school management that has a good attitude towards COVID-19 was 0.260 more likely to practice SOPs compliance.

Table 4.14: Multiple Linear Regression (N=740)

Variables	Unstandardized Coefficient		Standardized Coefficient	t	p-value	95% CI	
	B	SE				Lower	Upper
(Constant)	1.456	0.320		4.552	0.0001*	0.827	2.085
Knowledge	0.332	0.078	0.233	4.232	0.0001*	0.178	0.486
Attitude	0.260	0.064	0.216	4.042	0.0001*	0.133	0.386
Age (20-40 vs 41-60)	-0.080	0.036	-0.098	-2.225	0.027*	-0.151	-0.009
Source of Knowledge:							
a. Ministry of Health (Yes vs No)	0.187	0.075	0.151	2.492	0.013*	0.040	0.335
b. Ministry of Education (Yes vs No)	0.130	0.053	0.125	2.479	0.014*	0.234	0.027
d. Social Media (Yes vs No)	0.137	0.060	0.132	2.295	0.022*	0.255	0.020
Manage any infectious disease prevention program in school (Yes vs No)	0.087	0.039	0.099	2.219	0.027*	0.165	0.010
Exposure to infectious disease in school (Yes vs No)	0.103	0.048	0.122	2.154	0.032*	0.197	0.009
Tuberculosis (Yes vs No)	0.123	0.068	0.078	1.798	0.073*	0.011	0.257
Measles (Yes vs No)	0.110	0.046	0.129	2.392	0.017*	0.020	0.201
Physical Activities (Yes vs No)	0.108	0.038	0.119	2.827	0.005*	0.182	0.033

Note: R=0.503, R Square=0.253, Adjusted R Square=0.234, F=13.231 ANOVA p-value=0.0001, *indicates p<0.05

CHAPTER 5

DISCUSSION

This study aimed to identify the determinants of practicing COVID-19 SOPs among school management in Kuala Lumpur, Putrajaya, and Selangor. All objectives of this study were obtained by determining the respondent's background and the KAP rating.

5.1 Socio-demographic Characteristics, Occupational Factors, and Lifestyle Information of the Respondents

A total of 740 school administrators and teachers were involved as respondents, and most of the respondents were female. The respondents' ages ranged from 20 – 60 years old, and the mean age was 40.73. Most respondents were Malay, followed by Chinese, Indian, and Others. According to the Department of Statistics Malaysia (2022), Malay had the highest population in Malaysia, followed by Chinese, Indian, and Others. Jabatan Pendidikan Selangor reported that most teachers were Malay and female (DOSM Selangor, 2020). Additionally, the Department of Statistics stated in the open data that most of the teachers in Selangor, Wilayah Persekutuan Kuala Lumpur, and Putrajaya were female (Department Of Statistics Malaysia, 2020).

Teachers' monthly income can range from RM1,589 to RM5,137 for those in grade DG 29 and RM1,917 to RM8,652 for those in grade DG 41 (Format Skim Perkhidmatan DG41 Dan DG29, 2022). The respondents mostly had a monthly income of RM4001 to RM6000. Most respondents came from Selangor, followed by Kuala Lumpur and Putrajaya. According to the Ministry of Health, Kuala Lumpur has the highest number of COVID-19 cases, followed by Putrajaya and Selangor (COVIDNOW, 2022). However, Selangor has the highest number of COVID-19 deaths in Malaysia (DOSM, 2022).

For sources of COVID-19 knowledge, the majority of the respondents refer to the Ministry of Health, followed by social media, the Ministry of Education, Friends, Family, and lastly Ministry of Communication and Multimedia. According to Mohamed et al. (2020b), most Malaysian refer to the Ministry of Health as the source of information since it is a local authority on public health. Besides that, social media also significantly influences the dissemination of information regarding COVID-19 (Syed Anwar Aly et al., 2021). False information or rumours can heavily affect preventive behaviour toward COVID-19 (Cuan-Baltazar et al., 2020). Therefore, a reliable source of information during the pandemic is essential in maintaining compliance with COVID-19 standard operating procedures.

Of the total of 740 respondents, 80.3% were teachers, and the rest were school administrators. More than half of the respondents have worked for more than ten years, and only a few have experienced about one to five years and six to ten years of service. Most respondents have no experience handling and managing infectious disease programs at schools. However, more than half of the respondents have been exposed to infectious diseases at school. Measles has the highest type of reported disease at school, followed by dengue, food poisoning, tuberculosis, and HFMD.

5.2 The Level of Knowledge, Attitude, and Practice (KAP)

The level of Knowledge, Attitude, and Practice (KAP) was measured based on three levels of the mean score; low (1.00-2.33), medium (2.34-3.67), and high (3.68-5.00). In this study, the school management has a high level of knowledge (91.6%), attitude (94.4%), and practice (82.6%). The overall knowledge, attitude, and practice mean score of the school management was 4.58 ± 0.304 , 4.72 ± 0.404 , and 4.13 ± 0.422 respectively, which showed that the school management has a high level of knowledge, attitude, and practice on COVID-19. The level of knowledge was slightly higher than in the previous study by Chen et al. (2021), 4.46 ± 1.25 . The slight difference might be because, after the COVID-19 arrival, people are pretty familiar with COVID-19. However, the knowledge score was slightly lower than the attitude score (4.72 ± 0.404) but slightly higher than the practice score (4.13 ± 0.422); contrast with a study among teachers in China showed that knowledge was slightly higher than practice and attitude was the lowest (Chen et al., 2021).

The school management has a high level of knowledge about COVID-19 (97.5%), COVID-19 transmission (97.5%), COVID-19 symptoms (95.1%), and COVID-19 standard operating procedures (85.5%), similar to the previous study by Abu Hasan et al. (2020). Most school management knew there was a particular COVID-19 SOP for educational institutions (98.1%). Even though many of the knowledge questions had high scores, it was discovered that some school management might be uncertain about the student ban on eating in the canteen during recess (79.4%) and student absenteeism as a non-disciplinary matter (75.6%).

The most recent MOE update states that pupils who skip class out of concern for COVID-19 infection will not receive a warning letter (Mohd Sulaiman, 2021). Meanwhile, with teachers present, only boarding school students are permitted to eat in the dining hall during breaks (Ministry of Education, 2021). The confusion could be due to the altering of SOPs throughout time, as SOPs depend on the state's phase as defined by the National Recovery Plan (NRP) (Majlis Pemulihan Negara Malaysia, 2022). Furthermore, the behaviour of teachers who contravene SOPs outside of school (S. M. Yusof et al., 2021). In pursuance to ensure that all school management is aware of accurate and

updated information in the current rules, it is necessary to strengthen the methods of information dissemination.

The school management believes that it is everyone's responsibility to prevent the transmission of COVID-19 (98.0%) and also believes that the vaccine will protect them from COVID-19 infection (90.9%). Consistent with the study by Abu Hasan et. al (2020), most Malaysian residents believe that everyone is responsible for preventing the spread of the COVID-19 infection.

Wearing a mask when going out was the highest practice towards COVID-19 SOP compliance among the school management (97.6%). Similar to a previous study by Chai et.al (2022a), Malaysian during the later stage of the pandemic had the highest wearing mask compliance compared to the early stage of the pandemic (Azlan et al., 2020). However, there were some concerns when the respondents showed a low level of practice in item P1 (I went on vacation during the outbreak) and item P2 (I went to any crowded place). These practices may enhance the likelihood of COVID-19 infection in educational institutions. Visiting busy locations, such as supermarkets, is acceptable to obtain necessities, but social distance must be maintained (Abu Samah et al., 2020; Umair et al., 2021). Although the government has eased restrictions on interstate travel, school management should not relax their vigilance during the summer or anywhere else.

5.3 The Level of KAP Towards COVID-19 SOP Compliance by socio-demographic characteristics, lifestyle, and occupational factors among the respondents

Different school locations and monthly incomes have significantly diverse knowledge, attitude, and practices. Those who have worked at schools located in Selangor and have higher incomes had a better mean score of knowledge, attitude, and practice. The school's location and working conditions may have made the staff more adaptable to new scenarios, or they may have encountered a situation comparable to the current one. According to the Ministry of Health's COVID-19 case data, Selangor had more COVID-19 cases than Kuala Lumpur and Putrajaya (Ministry of Health, 2022), where Selangor residents may have better awareness and behaviour due to more COVID-19 cases in their area, and they need to have these two good criteria to protect themselves from COVID-19 infection.

Consistent with other previous studies, higher incomes respondents have a better understanding, attitude, and practice of COVID-19 (Azlan et al., 2020; Chai et al., 2022a; Lee et al., 2021; Zhong et al., 2020). Based on various sources of reference, sociodemographic characteristics such as gender and income were usually compared with various types of study. In this study, sociodemographic characteristics are also analysed and discovered to be one

of the factors that influence COVID-19 SOP compliance (Hadizadeh-Talasaz et al., 2022; Uddin et al., 2021). There are a lot of factors that can influence compliance with SOPs. It does not solely depend on one factor, for example, the low-income group is less practiced on SOP compared to the higher-income group. Less compliance among low-income groups could be because of a lack of knowledge, lack of amenities, their beliefs, and high-risk behaviour (Firouzbakht et al., 2021). Therefore, more attention should be paid to the mass media to make more people aware of COVID-19 through interventions that raise awareness among low-income groups (Al-Hanawi et al., 2020).

Female respondents and those who obtain information from the Ministry of Education showed better attitudes and practices toward COVID-19 SOPs. Similar findings were found in the study by Maung et al. (2022), female gender was significantly associated with attitude and adherence to COVID-19 SOPs. There are similarities between the knowledge and attitudes expressed by Indians in this study and those described by Bachok et al. (2021), Indians are more knowledgeable and have better attitudes compared to other races.

For occupational characteristics, those who have experience in handling infectious diseases and managing infectious disease programs in school have better knowledge and practice toward COVID-19 SOP. Consistent with a study showing that nurses who have dealt with COVID-19 cases in an isolation ward have higher KAP scores than those who have not (Wen et al., 2021). School management that has exposure to infectious diseases at school has also been shown to have better knowledge of COVID-19. Contrary to this, research by Yang et al. (2021) demonstrates that there is no significant mean difference between exposure to SARS and the epidemic area and knowledge. However, the experience of being afflicted or exposed to the disease may increase the KAP level of the school management. In this study, none of the occupational characteristics was found to have a significant mean difference in attitude toward COVID-19 standard operating procedure.

Our data suggested that, generally, school management who did not smoke and are physically active has better knowledge, attitude, and practice towards COVID-19 SOP than those who smoked and are physically inactive. Very little was found in the literature on the question of between smoking status and physical activities with KAP toward COVID-19 SOP, however, a study by Pascawati et al. (2020) revealed that smoking was associated with KAP on the risk of COVID-19 transmission and infection. According to a WHO report, smoking increases the risk of COVID-19 transmission because the act of smoking involves the contact of fingers (and possibly contaminated cigarettes) with the lips, which increases the likelihood of virus transmission from hand to mouth (WHO, 2020d).

This study also revealed that sleep disturbances can affect the understanding of COVID-19. This study demonstrates that this can have an impact on COVID-19 SOP compliance, as those who frequently experience trouble sleeping and sleep disturbances have slightly lower mean KAP scores. A study by Gulia et al. (2020) found that having stress and anxiety will lead to low quality of sleep. According to Firouzbakht et al. (2021), lifestyle significantly influences the preventive behaviours against COVID-19. Mental health during the pandemic was related to daily lifestyle such as stress management and sleep quality. There is still a lack of study on the relevance between compliance and lifestyle. Therefore, this study was conducted to see whether compliance is affected by the lifestyle of the respondents or not.

5.4 The Relationship of Knowledge and Attitude Towards Practice on COVID-19 SOP Compliance

Positive and significant relationships were discovered between knowledge and practice, attitude and practice, and knowledge and attitude among school management ($p < 0.001$). These positive and significant relationships indicated that more people had excellent knowledge of and attitudes toward best practices for SOP compliance. These results were reflected in the previous study by Moradzadeh et al. (2020) and Tan et al. (2022) who also found that there was a weak and positive correlation between knowledge, attitude, and practice on COVID-19.

In addition, a positive moderate correlation exists between knowledge and attitude. This is consistent with the findings of M. Lee et al. (2021) and Zhang et al. (2020), which indicate that knowledge of COVID-19 affects attitude and preventative behaviour. This demonstrates that the school administration has a high level of understanding and a positive attitude, which corresponds to good practices for COVID-19 SOP compliance.

In other studies by (Abu Hasan et al., 2020; Al ahdab, 2021; Chai et al., 2022b), a similar correlation between KAP was found, emphasizing the requirement to strengthen school management's knowledge and experience in order to improve SOPs compliance.

5.5 Relationship between Knowledge, Attitude, Socio-demographic, Occupational, and Lifestyle Towards Practice COVID-19 of SOP Compliance

Knowledge, attitude, age, physical activities, source of knowledge, exposure to infectious diseases, and experience in managing infectious diseases were significant predictors of compliance with COVID-19 SOPs. The study's findings suggest that having good knowledge and attitude will improve practice for complying with COVID-19 SOPs. As a result, since the SOP is entirely based on the risks in the area, risk communication needs to be adaptable and flexible to ensure its efficacy. Consistent with other studies, people with higher COVID-19 knowledge significantly improved COVID-19 practice (Al-Hanawi et al., 2020; Erfani et al., 2020; Lee et al., 2021; Mat Din et al., 2020). The attitude toward COVID-19 was also discovered to be a strong predictor of excellent practice by Singh et al. (2022) and Zhong et al. (2020).

The level of SOP compliance was significantly greater among school management over 50. According to Chai et al. (2022b), respondents between the ages of 18 and 40 received considerably lower scores for practices than Malaysians over 60 and those between the ages of 41 and 60. An analysis of citizens from 12 Asian nations discovered a significant link between practice and the elderly population (Chua et al., 2021). Thus, it showed that older people have higher practice than the younger generation might because of their vulnerability to the COVID-19 infection.

Interestingly, a high rate of SOP compliance was also significantly correlated with regular physical activity. There is not much research that links physical activity to COVID-19 preventative measures. A previous study observed that regular exercise is a practical method for preventing viral infection (Ferreira et al., 2020). Exercise improves immune response and lowers the risk of severe COVID-19-related illness, hospitalisation, and even death (CDC, 2022b; da Silveira et al., 2021). Therefore, being physically inactive might impact COVID-19 SOP compliance in school settings; hence an intervention programme that encourages people to be physically active is required.

In this study, the school management often refers to the Ministry of Health, Ministry of Education, and social media (Facebook, Instagram, Twitter, etc.) compared to other sources of information. According to Mohamad et al. (2020a), most Malaysian refer to the Ministry of Health (MySejahtera) as the main source of information since it is a local authority on public health. Besides that, social media also significantly influences the dissemination of information regarding COVID-19 (Syed Anwar Aly et al., 2021). False information or rumours can heavily affect preventive behaviour toward COVID-19 (Cuan-Baltazar et al., 2020).

Sources from the Ministry of Health provide the most accurate information on COVID-19, as evidenced by the fact that the mean practice scores of the respondents were higher for those who used the MOH as the source of COVID-19 knowledge. Social media can be a helpful source of information, but it depends on the context of the information being sought, which might increase the risk of disinformation (K. S. Kim et al., 2011; S. Kim et al., 2021; Maher et al., 2014). A study by Mat Dawi et al. (2021) revealed that 81.9% of Malaysian used Social Media as the source to obtain information related to COVID-19. Therefore, a reliable source of information during the pandemic is essential in maintaining compliance with COVID-19 standard operating procedures. The side of ensuring that all school management is aware of accurate and updated information in the current rules is necessary to strengthen the methods of information dissemination. The school management and public authorities may use social media and e-government platforms effectively during the COVID-19 epidemic to increase public participation in preventive behaviour.

The results of this study suggested that those who had dealt with infectious disease cases and were exposed to infectious diseases in school are more likely to comply with COVID-19 SOPs. Previous research indicates that healthcare professionals who have dealt directly with COVID-19 cases are more likely to have extensive experience than others (Jawed et al., 2020; Wen et al., 2021). A person who has direct experience would have a greater understanding of infectious diseases and most likely would not make mistakes they have made in the past.

Although the government has eased restrictions on interstate travel, school management should not loosen their vigilance during the holiday seasons or anywhere else. Taking lessons from previous educational clusters in our country (BERNAMA, 2021; Harun, 2021), school administrators and teachers should take additional care when traveling and closely adhere to standard operating procedures.

CHAPTER 6

CONCLUSION AND RECOMMENDATION

6.1 Conclusion

The study's findings show that school management has good knowledge of COVID-19 SOPs during the pandemic (91.6%), a positive attitude toward them (94.4%), and practices them (82.6%) effectively. Other than that, those who have worked at schools located in Selangor and have higher incomes had a better mean score of SOP. The school management also showed a positive and significant relationship between knowledge and practice, attitude and practice, and knowledge and attitude. Based on the significant predictors of practice, good knowledge of COVID-19, a positive attitude towards SOP compliance, age above 50, experience in handling an infectious disease, exposure to infectious diseases, and being physically active are contributing factors to the high practice of the COVID-19 SOPs. In the interest of promoting high KAP toward the SOPs, health intervention programs targeting teachers and administrators in early adulthood, and early middle age, are essential, according to the significant predictors of practice identified in this study. Health authorities and policymakers can use the study's findings to design intervention programs and improve existing SOPs for avoiding COVID-19 infections in schools in the future. It is also advised that MOE and MOH entirely use their official media to inform all active educational institutions about COVID-19 and SOPs and explain the risk effectively. Even though the COVID-19 pandemic has transitioned into an endemic phase, examining school management's adherence to COVID-19 SOPs is still important and relevant for ensuring a safe and healthy learning environment, responding to changing conditions, and being prepared for future health issues.

6.2 Strength and Study Limitations

The strength of this study is one of the studies to assess the KAP for COVID-19 SOP compliance in educational settings during the pandemic and might act as a standard for further studies. This study is a starting point for evaluating the effectiveness of the government's prevention initiatives and identifying the locations and types of actions required to manage these diseases. This study provides a comprehensive analysis of the determinants of practicing COVID-19 SOPs among school management. It effectively combines socio-demographic, occupational, and lifestyle factors with the KAP framework to gain insights into the factors influencing SOP compliance. The findings contribute to the understanding of COVID-19 preventive behaviours among school management in the specified region. There is still limited study conducted on COVID-19 SOP compliance. This study will serve as fundamental data for Ministry of Education and other authorities or researcher. This study will provide school administrators

and teachers with information about the COVID-19 pandemic and the disease's implications for human health and safety. This study provides beneficial information to other researchers on how the school management thinks, interprets, and responds to COVID-19 issues. This study also will provide baseline data for KAP among school management. From the baseline data, prevention and intervention programs can be developed to reduce and minimise COVID-19 transmission among students, reducing the number of COVID-19 cases in Malaysia.

It is essential to be aware of the limitations of this study. First, the results may not apply to school management at MOE-funded preschools or private schools because they were not included in this study. The study also was conducted in Kuala Lumpur, Putrajaya, and Selangor, limiting the applicability of the findings to other regions in Malaysia or different countries. Next, the identified practice level might not entirely reflect their adherence to all SOPs in the guidelines because additional SOPs, such as SOPs for managing student residences, private institutions, and preschools, are not examined. The data collected relied on self-reporting by the respondents leading to inaccuracies or overestimation of compliance with COVID-19 SOPs and recollection bias could exist as a result of the self-reported nature of the questionnaire. Since this study only relied on quantitative data, the result might not have fully captured every aspect of the factors affecting COVID-19 SOP compliance. Incorporating qualitative techniques, such as focus groups or interviews, may offer deeper insights into participants' viewpoints and experiences.

6.3 Recommendation

- Based on the primary determinants of practice identified in this research, health intervention programmes aimed at school administrators in early adulthood, early middle age, and physically inactive lifestyles are essential for cultivating high KAP towards the SOPs.
- In addition, it is recommended that the MOH and MOE fully optimise their use of official media to offer sufficient information on COVID-19 SOPs and clearly explain the threat to all educational institution personnel.
- The results of this research may be used by health professionals and policymakers to give ongoing training to school administrators and teachers to enhance current SOPs for avoiding new COVID-19 infections or other infectious diseases in schools. Due to a lack of facilities or their school environment, not all schools can adhere to the SOPs.
- Moreover, health authorities might establish SOPs that can handle different sorts of schools.
- Furthermore, intervention programmes and the effective communication of SOPs to school management are also crucial in ensuring COVID-19 SOP compliance.

- Following the Occupational Safety and Health Act (OSHA) 1994 objectives, the State Department of Education shall examine the assignment of a safety and health officer to each state education department and district education office.
- Further research may be conducted to serve a broader community in Malaysia, not only teachers. In addition, future research might target a different demographic, concentrating not only on school management but also on people from diverse occupations and locations of residence, which may provide a different distinction from this study.



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APPENDICES

Appendix A: Consent Form



**JAWATANKUASA ETIKA UNIVERSITI UNTUK
PENYELIDIKAN MELIBATKAN MANUSIA (JKEUPM)
UNIVERSITI PUTRA MALAYSIA, 43400 UPM SERDANG,
SELANGOR, MALAYSIA**

FORM 2.4: RESPONDENT'S INFORMATION SHEET AND INFORMED CONSENT FORM

Please read the following information carefully and do not hesitate to discuss any questions you may have with the researcher.

1. STUDY TITLE :

Determinant Factors of Practicing COVID-19 Standard Operating Procedure (SOP) Compliance among School Management in Kuala Lumpur, Selangor and Putrajaya

2. INTRODUCTION:

COVID-19 was declared a public health emergency and subsequently declared a global pandemic by the WHO on 12th March 2020. Nevertheless, the Ministry of Education has established and enforced a Standard Operating Procedure (SOP) for education institutions to comply and prevent transmissions of COVID-19 in schools. The school management's responsibility to keep the students safe from the COVID-19 depends on their adherence to infection control measures, which is greatly affected by their knowledge, attitudes, and practices towards COVID-19 SOP compliance. The main purpose of this study to be carried out is to identify the determinant factors of practice towards COVID-19 SOP compliance among school managements in Selangor, Kuala Lumpur and Putrajaya. A cross-sectional study will be conducted from December 2021 to May 2022, with estimation of 911 respondents from primary and secondary schools in Kuala Lumpur, Selangor and Putrajaya will be selected randomly. A modified self-administered questionnaire will be used to assess the determinants factors. This study is important as it can help to increase the knowledge and awareness for school management on the issue of risk factors and prevention towards COVID-19 infection in school.

3. WHAT WILL YOU HAVE TO DO?

If you agree to involve with this research, you will get a set of online questionnaires and you need to complete it. The answer of the questionnaire will be recorded directly to the online system. The questionnaire consists of six sections: Section A (Background information), Section B (Occupational information), Section C (Lifestyle information), Section D (Knowledge), Section E (Attitude), Section F (Practice).

9. CONSENT

I Identity Card No.
address.....
.....hereby
voluntarily agree to take part in the research stated above *(clinical /drug
trial/video recording/ focus group/interview-based/ questionnaire-based).

I have been informed about the nature of the research in terms of methodology,
possible adverse
effects and complications (as written in the Respondent's Information Sheet).
I understand that I have the right to withdraw from this research at any time
without giving any reason whatsoever. I also understand that this study is
confidential and all information provided with regard to my identity will remain
private and confidential.

I* wish / do not wish to know the results related to my participation in the
research

I agree/do not agree that the images/photos/video recordings/voice recordings
related to me be used in any form of publication or presentation (if applicable)

* delete where necessary

Signature

Signature

.....
(Respondent)

.....
(Witness)

Date :
Name :
I/CNo. :

Date :
Name :
I/CNo. :

I confirm that I have explained to the respondent the nature and purpose of the
above-mentioned research.

Date

Signature
(Researcher)

Appendix B: Questionnaires



QUESTIONNAIRE FORM

BORANG KAJI SELIDIK

DETERMINANT FACTORS OF PRACTICING COVID-19 STANDARD OPERATING PROCEDURE (SOP) COMPLIANCE AMONG SCHOOL MANAGEMENT IN KUALA LUMPUR, PUTRAJAYA, AND SELANGOR

*FAKTOR-FAKTOR PENENTU AMALAN PEMATUHAN PROSEDUR OPERASI STANDARD
(SOP) COVID-19 DALAM KALANGAN PENGURUSAN SEKOLAH DI KUALA LUMPUR,
PUTRAJAYA DAN SELANGOR*

ID NO./NO.ID:

DATE/TARIKH:

QUESTIONS INSTRUCTIONS:

Arahan soalan:

1. THIS QUESTIONNAIRE FORM CONSISTS OF SEVERAL SECTIONS: -

Borang soal selidik ini terdiri daripada beberapa bahagian: -

SECTION A : BACKGROUND INFORMATION

BAHAGIAN A : MAKLUMAT DIRI

SECTION B : OCCUPATIONAL INFORMATION

BAHAGIAN B : MAKLUMAT PEKERJAAN

SECTION C : LIFESTYLE INFORMATION

BAHAGIAN C : MAKLUMAT GAYA HIDUP

SECTION D : KNOWLEDGE

BAHAGIAN D : PENGETAHUAN

SECTION E : ATTITUDE

BAHAGIAN E : SIKAP

SECTION F : PRACTICE

BAHAGIAN F : AMALAN

2. PLEASE MARK THE ANSWER IN THE PROVIDED ANSWER SECTION.

Sila tandakan jawapan di bahagian yang telah disediakan.

SECTION A : BACKGROUND INFORMATION

BAHAGIAN A: MAKLUMAT DIRI

A1 AGE :

Umur

A2 GENDER :

Jantina

☐ **MALE**
Lelaki

☐ **FEMALE**
Perempuan

A3 RACE :

Bangsa

☐ **MALAY**
Melayu

☐ **CHINESE**
Cina

☐ **INDIAN**
India

☐ **OTHERS**
Lain-lain

A4 MONTHLY INCOME :

Pendapatan Bulanan

A5 PLACE OF RESIDENCE :

Tempat Tinggal

☐ **KUALA LUMPUR**

☐ **PUTRAJAYA**

☐ **SELANGOR**

DISTRICTS/PRECINCT :

Daerah/Presint

MUKIM :

A6 SCHOOL :

Sekolah

A7 SCHOOL LOCATION :

Lokasi Sekolah

☐ **KUALA LUMPUR**

☐ **PUTRAJAYA**

☐ **SELANGOR**

DISTRICTS/PRECINCT :

Daerah/Presint

MUKIM :

A8 SOURCE OF COVID-19 KNOWLEDGE
Sumber Pengetahuan COVID-19

: ☐ **MINISTRY OF HEALTH**
Kementerian Kesehatan

☐ **MINISTRY OF EDUCATION**
Kementerian Pendidikan

☐ **MINISTRY OF COMMUNICATION AND MULTIMEDIA**
Kementerian Komunikasi dan Multimedia

☐ **SOCIAL MEDIA**
Media Sosial

☐ **FAMILY**
Keluarga

FRIENDS
Rakan-rakan

☐ **OTHERS**
Lain-lain

SECTION B: OCCUPATIONAL INFORMATION

BAHAGIAN B: MAKLUMAT PEKERJAAN

B1: Have you worked at a different school before?

Pernah anda bekerja di tempat lain sebelum ini?

1. ☐ **Yes**
Ya
2. ☐ **No**
Tidak

B2: If yes, what was your previous position?

Jika ya, apakah jawatan anda dahulu?

B3: How long have you worked as (previous position as stated above)?

Berapa lamakah anda telah bekerja sebagai (pekerjaan dahulu seperti di atas)?

_____ years / tahun

B4: What is your position now?

Apakah jawatan anda sekarang?

-

B5: How long have you worked as (current position as stated in B4)?

Berapa lamakah anda telah bekerja sebagai (pekerjaan seperti di B4)?

_____ years / tahun

B6: Have you ever handle any infectious disease (e.g. dengue) cases in school?

Pernahkan anda menangani kes penyakit berjangkit (e.g. denggi) di sekolah ?

1. ☐ **Yes**
Ya
2. ☐ **No**
Tidak

If yes, state type of infectious disease _____

Jika ya, nyatakan jenis penyakit berjangkit _____

B7: Have you ever manage any infectious disease program (e.g. dengue prevention program) in school?

Pernahkan anda mengelola program berkaitan penyakit berjangkit (e.g. program pencegahan denggi) di sekolah ?

1. ☐ **Yes**
Ya
2. ☐ **No**
Tidak

If yes, state type of program _____

Jika ya, nyatakan jenis program _____

B8: Have you been exposed to any infectious diseases (at school) as stated below:

Pernahkah anda terdedah dengan sebarang penyakit berjangkit seperti dinyatakan dibawah:

- | | |
|---|--|
| 1. ☐ Dengue fever
<i>Demam denggi</i> | 2. ☐ Tuberculosis (TB)
<i>Tuberkulosis (TB)</i> |
| 3. ☐ Hand, foot and mouth disease
<i>Penyakit tangan, kaki dan mulut</i> | ☐ Food Poisoning
<i>Keracunan makanan</i> |
| ☐ Measles
<i>Demam campak</i> | ☐ Others: _____
<i>Lain-</i> |

lain: _____

SECTION C: LIFESTYLE INFORMATION

BAHAGIAN D: MAKLUMAT GAYA HIDUP

D1 I take illegal drugs (any type).

Saya mengambil dadah (sebarang jenis dadah).

- | | | |
|--|--|---|
| ☐ Never
<i>Tidak pernah</i> | ☐ Rarely
<i>Jarang-jarang</i> | ☐ Sometimes
<i>Kadang-kadang</i> |
| ☐ Often
<i>Selalu</i> | ☐ Always
<i>Sangat kerap</i> | |

D2 I smoke.

Saya merokok.

- | | | |
|--|--|---|
| ☐ Never
<i>Tidak pernah</i> | ☐ Rarely
<i>Jarang-jarang</i> | ☐ Sometimes
<i>Kadang-kadang</i> |
| ☐ Often
<i>Selalu</i> | ☐ Always
<i>Sangat kerap</i> | |

If yes, _____ smokes a day

Jika ya, _____ batang sehari

D3 **I do any physical activities.**

Saya melakukan sebarang aktiviti fizikal.

☐ **Never**
Tidak pernah

☐ **Rarely**
Jarang-jarang

☐ **Sometimes**
Kadang-kadang

☐ **Often**
Selalu

☐ **Always**
Sangat kerap

If yes, state _____

Jika ya, nyatakan _____

D4 **I experienced "negative stress" lately**

Saya mengalami tekanan negatif kebelakangan ini

☐ **Never**
Tidak pernah

☐ **Rarely**
Jarang-jarang

☐ **Sometimes**
Kadang-kadang

☐ **Often**
Selalu

☐ **Always**
Sangat kerap

D5 **I experienced a lot of stress in my daily life**

Saya mengalami banyak tekanan dalam kehidupan seharian

☐ **Never**
Tidak pernah

☐ **Rarely**
Jarang-jarang

☐ **Sometimes**
Kadang-kadang

☐ **Often**
Selalu

☐ **Always**
Sangat kerap

D6 **I experienced trouble in sleeping.**

Saya mengalami kesukaran untuk tidur.

☐ **Never**
Tidak pernah

☐ **Rarely**
Jarang-jarang

☐ **Sometimes**
Kadang-kadang

☐ **Often**
Selalu

☐ **Always**
Sangat kerap

D7 **I experienced sleep disturbances.**

Saya mengalami gangguan ketika tidur.

☐

Never
Tidak pernah

☐

Rarely
Jarang-jarang

☐

Sometimes
Kadang-kadang

☐

Often
Selalu

☐

Always
Sangat kerap

SECTION D: KNOWLEDGE

BAHAGIAN E: PENGETAHUAN

PLEASE CIRCLE YOUR ANSWER USING THE SCALE OF 1 TO 5 AS FOLLOWS:

Sila bulatkan jawapan anda dengan menggunakan **skala 1 hingga 5** seperti di bawah:

1 2 3 4 5
 STRONGLY DISAGREE NEITHER AGREE AGREE STRONGLY AGREE
 DISAGREE Tidak Setuju NOR DISAGREE Setuju Sangat Setuju
 Sangat Tidak Setuju Ragu-ragu

Knowledge about COVID-19						
K1	COVID-19 is a viral infection <i>COVID-19 adalah jangkitan virus</i>	1	2	3	4	5
K2	COVID-19 can cause severe acute respiratory syndrome <i>COVID-19 boleh menyebabkan sindrom pernafasan yang teruk</i>	1	2	3	4	5
K3	The first case of human infection in Wuhan, China <i>Kes pertama jangkitan manusia di Wuhan, China</i>	1	2	3	4	5
Knowledge about COVID-19 Transmission						
K4	COVID-19 can transmit through droplets during coughing or sneezing <i>COVID-19 boleh menular melalui titisan semasa batuk atau bersin</i>	1	2	3	4	5
K5	COVID-19 virus can transmit via airborne <i>COVID-19 boleh menular melalui udara</i>	1	2	3	4	5
K6	COVID-19 virus can be transmitted by touching surfaces and devices contaminated by virus COVID-19	1	2	3	4	5

	<i>Virus COVID-19 boleh dijangkiti dengan menyentuh permukaan dan peranti yang tercemar oleh virus COVID-19</i>					
K7	COVID-19 can spread through close contact with infected persons <i>COVID-19 boleh tersebar melalui kontak rapat dengan orang yang dijangkiti</i>	1	2	3	4	5
K8	COVID-19 transmit via hand shaking <i>COVID-19 boleh menular melalui bersalaman tangan</i>	1	2	3	4	5
K9	Someone infected can transmit the virus even if they are not showing symptoms <i>Orang yang dijangkiti boleh menyebarkan virus walaupun tidak menunjukkan sebarang simptom</i>	1	2	3	4	5
K10	Students, staff and etc. can wear face masks to prevent the infection by the COVID-19 virus <i>Murid, kakitangan dan lain-lain boleh memakai pelitup muka bagi mencegah jangkitan virus COVID-19</i>	1	2	3	4	5
Knowledge about COVID-19 Symptoms						
K11	Fever, cough, and shortness of breath are COVID-19 symptoms <i>Demam, batuk dan sesak nafas adalah simptom COVID-19</i>	1	2	3	4	5
K12	Symptom of COVID-19 similar to SARS virus <i>Simptom COVID-19 adalah sama seperti virus SARS</i>	1	2	3	4	5
K13	Patient with underlying chronic diseases is at higher risk of infection <i>Pesakit yang mempunyai sejarah penyakit kronik adalah berisiko tinggi untuk dijangkiti</i>	1	2	3	4	5
K14	People with age over 60 years old have a higher risk of developing severe disease and death <i>Golongan yang berumur 60 tahun ke atas adalah berisiko tinggi untuk mendapat penyakit yang teruk dan membawa kepada kematian.</i>	1	2	3	4	5
Knowledge about COVID-19 SOP						
K15	There is a COVID-19 SOP particularly for educational institution (school) <i>Terdapat SOP COVID-19 yang perlu dipatuhi di institusi Pendidikan (sekolah)</i>	1	2	3	4	5
K16	School management must conduct screening test at the entrance <i>Pihak sekolah perlu melakukan ujian saringan di pintu masuk sekolah</i>	1	2	3	4	5
K17	The school management must provide a Letter of Absence (LOA) to the student who is not allowed to school in relation of COVID-19	1	2	3	4	5

	<i>Pihak sekolah perlu memberikan Letter of Absence (LOA) kepada murid yang tidak dibenarkan ke sekolah berkaitan dengan COVID-19</i>					
K18	School assembly is not allowed <i>Perhimpunan sekolah tidak dibenarkan</i>	1	2	3	4	5
K19	Students or staff who have contact with someone infected should be immediately isolated. Close contact should remain in the isolation room for at least 10 days or as directed by the PKD <i>Pelajar atau kakitangan yang mempunyai hubungan dengan seseorang yang dijangkiti harus segera diasingkan. Kontak rapat perlu kekal berada di bilik pengasingan selama sekurang-kurangnya 10 hari atau seperti yang diarahkan oleh PKD.</i>	1	2	3	4	5
K20	Wearing a mask is compulsory around school area <i>Memakai pelitup muka di kawasan sekolah adalah diwajibkan</i>	1	2	3	4	5
K21	Cocurricular activities is not allowed in school <i>Aktiviti kokurikulum di sekolah tidak dibenarkan</i>	1	2	3	4	5
K22	Student absenteeism during pandemic is one of discipline issue <i>Ketidakhadiran murid ke sekolah ketika pandemic dianggap satu kesalahan disiplin</i>	1	2	3	4	5
K23	Students with symptoms is not allowed to attend school <i>Murid bergejala tidak dibenarkan hadir ke sekolah</i>	1	2	3	4	5
K24	Students are allowed to eat at canteen during break <i>Murid dibenarkan makan di kantin ketika waktu rehat</i>	1	2	3	4	5
K25	School operation is based on phases in the National Recovery Plan (NRP) <i>Pengoperasian sekolah adalah berdasarkan fasa-fasa di dalam Pelan Pemulihan Negara (PPN)</i>	1	2	3	4	5

SECTION E: ATTITUDES						
BAHAGIAN F: SIKAP						
PLEASE CIRCLE YOUR ANSWER USING THE SCALE OF 1 TO 5 AS FOLLOWS:						
Sila bulatkan jawapan anda dengan menggunakan <u>skala 1 hingga 5</u> seperti di bawah:						
1 STRONGLY DISAGREE Sangat Tidak Setuju 2 DISAGREE Tidak Setuju 3 NEITHER AGREE NOR DISAGREE Ragu-ragu 4 AGREE Setuju 5 STRONGLY AGREE Sangat Setuju						
AT1	I believe COVID-19 can be prevented by good hygiene practices <i>Saya percaya COVID-19 boleh dicegah melalui amalan kebersihan yang baik</i>	1	2	3	4	5
AT2	I am interested in knowing the methods of prevention of COVID-19 <i>Saya berminat untuk mengetahui cara mencegah COVID-19</i>	1	2	3	4	5
AT3	I believe everyone is responsible for preventing the spread of the COVID-19 <i>Saya percaya semua orang bertanggungjawab untuk mencegah penularan COVID-19</i>	1	2	3	4	5
AT4	The Movement Control Order (MCO) was an effective effort by government to prevent the spread of the disease <i>Perintah Kawalan Pergerakan (PKP) adalah satu usaha yang efektif oleh kerajaan bagi membendung penularan penyakit</i>	1	2	3	4	5
AT5	If I get infected with COVID-19, I will not spread the virus to others to get them infected too <i>Jika saya dijangkiti COVID-19, saya tidak akan menyebarkan virus ini daripada menjangkiti orang lain</i>	1	2	3	4	5
AT6	I agree that COVID-19 will successfully controlled <i>Saya bersetuju bahawa COVID-19 akan berjaya dikawal</i>	1	2	3	4	5
AT7	I agree that compliance to SOP can prevent COVID-19 transmission <i>Saya bersetuju bahawa kepatuhan pada SOP dapat mencegah penularan COVID-19.</i>	1	2	3	4	5
AT8	I believe that vaccine can protect us against COVID-19 infection <i>Saya percaya bahawa vaksin dapat melindungi kita daripada mendapat jangkitan COVID-19</i>	1	2	3	4	5
AT9	The Ministry of Education has provided the educational institution with adequate SOP and information on COVID-19	1	2	3	4	5

	Kementerian Pendidikan telah menyediakan SOP dan informasi yang mencukupi mengenai COVID-19					
AT10	The SOP provided is easy to understand and comply by the school management <i>SOP yang disediakan amat mudah untuk difahami dan dipatuhi oleh pihak sekolah</i>	1	2	3	4	5

SECTION F: PRACTICE						
BAHAGIAN G: AMALAN						
PLEASE CIRCLE YOUR ANSWER USING THE SCALE OF 1 TO 5 AS FOLLOWS:						
Sila bulatkan jawapan anda dengan menggunakan <u>skala 1 hingga 5</u> seperti di bawah:						
1 NEVER Tidak Pernah 2 RARELY Jarang-jarang 3 SOMETIMES Kadang-kadang 4 Often Selalu 5 Always Sangat kerap						
P1	I went on vacation during the outbreak. <i>Saya pergi melancong ketika wabak</i>	1	2	3	4	5
P2	I went to any crowded place <i>Saya pergi ke tempat yang sesak</i>	1	2	3	4	5
P3	I notify the district health office or specific parties if students or staff infected with COVID-19 <i>Saya memberitahu Pejabat Kesihatan Daerah (PKD) atau pihak berkenaan jika murid atau kakitangan dijangkiti COVID-19</i>	1	2	3	4	5
P4	I wear a face mask when go out <i>I memakai pelitup muka bila keluar</i>	1	2	3	4	5
P5	I cover mouth and nose with a tissue when coughing or sneezing <i>Saya menutup mulut dan hidung dengan tisu ketika batuk atau bersin</i>	1	2	3	4	5
P6	I wash my hands before and after each action <i>Saya mencuci tangan sebelum dan selepas membuat sesuatu perkara</i>	1	2	3	4	5
P7	I stand 1-meter away from others (1 meter social distance) <i>Saya mengekalkan jarak sosial 1 meter dari orang sekeliling (penjarakan sosial 1 meter)</i>	1	2	3	4	5
P8	I wash hands with soap or hand sanitizer that contains at least 70% alcohol <i>Saya mencuci tangan dengan sabun atau pembersih tangan yang mengandungi sekurang-kurangnya 70% alkohol</i>	1	2	3	4	5
P9	I refer to the Standard Operating Procedure (SOP) issued by MOH, MKN and MOE from time to time	1	2	3	4	5

	<i>Saya merujuk Prosedur Operasi Standard (SOP) yang dikeluarkan oleh KKM, MKN dan KPM dari semasa ke semasa</i>					
P10	I ensure all students, staff, etc. always wear face masks throughout the period of school <i>Saya memastikan semua pelajar, kakitangan dan lain-lain sentiasa memakai pelitup muka sepanjang tempoh persekolahan.</i>	1	2	3	4	5
P11	I supervise and ensure students or staff with temperatures above 37 ° C or having any symptoms are not allowed to attend school <i>Saya menyelia dan memastikan pelajar atau kakitangan yang bersuhu melebihi 37°C atau bergejala tidak dibenarkan hadir ke sekolah</i>	1	2	3	4	5
P12	I gave a Letter of Absence (LOA) to students or staff whose infected with COVID-19 or under quarantine. <i>Saya memberikan surat ketidakhadiran (LOA) kepada pelajar dan kakitangan yang telah dijangkiti atau yang sedang dalam tempoh kuarantin.</i>	1	2	3	4	5
P13	I ensure good ventilation in the classroom <i>Saya memastikan bilik darjah mempunyai pengudaraan yang baik</i>	1	2	3	4	5
P14	I make sure that the table arrangement in the classroom is rotated <i>Saya memastikan susun atur meja di kelas dengan penggiliran</i>	1	2	3	4	5
P15	I supervise and ensure all the students eat in the classroom during break <i>Saya menyelia dan memastikan murid makan di dalam kelas ketika waktu rehat.</i>	1	2	3	4	5
P16	I provide hand washing place with soap or hand sanitizer containing 70% alcohol <i>Saya menyediakan tempat membasuh tangan berserta sabun atau pembersih tangan yang mengandungi 70% alkohol</i>	1	2	3	4	5
P17	I ensure no mass gathering or school assembly within school area <i>Saya memastikan tiada perhimpunan sekolah dijalankan di kawasan sekolah</i>	1	2	3	4	5
P18	I ensure no curriculum activities is allowed in school area <i>Saya memastikan tiada aktiviti kokurikulum dijalankan di kawasan sekolah</i>	1	2	3	4	5

Appendix D: Research Approval Ministry of Education And State Education Office



KEMENTERIAN PENDIDIKAN MALAYSIA
BAHAGIAN PERANCANGAN DAN PENYELIDIKAN DASAR PENDIDIKAN
ARAS 1-4, BLOK E8
KOMPLEKS KERAJAAN PARCEL E
PUSAT PENTADBIRAN KERAJAAN PERSEKUTUAN
62604 PUTRAJAYA

TEL : 0388846591
FAX : 0388846579

Ruj. Kami : KPM.600-3/2/3-eras(11496)
Tarikh : 10 Disember 2021

NOOR SAKINAH BINTI AHMAD
NO. KP : 960613086598

NO 127, JALAN SARI ILHAM 1/5,, ILHAM 2, ALAM SARI
KAJANG 43000 KAJANG
SELANGOR

Tuan,

**KELULUSAN BERSYARAT UNTUK MENJALANKAN KAJIAN :
DETERMINANT FACTORS OF PRACTICING COVID-19 SOP COMPLIANCE AMONG SCHOOL MANAGEMENT IN KUALA
LUMPUR, SELANGOR AND PUTRAJAYA**

Perkara di atas adalah dirujuk.

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

**" KELULUSAN INI BERGANTUNG KEPADA PERTIMBANGAN PENGARAH BAHAGIAN PENDIDIKAN DAN LATIHAN
TEKNIKAL VOKASIONAL, PENGARAH JPN DAN PERTIMBANGAN PENTADBIR SEKOLAH. "**

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

4. Surat kelulusan ini sah digunakan bermula dari 11 Disember 2021 hingga 9 Jun 2022

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

Sekian untuk makluman dan tindakan tuan selanjutnya. Terima kasih.

"BERKHIDMAT UNTUK NEGARA"

Saya yang menjalankan amanah,

Ketua Penolong Pengarah Kanan
Sektor Penyelidikan dan Penilaian Dasar
b.p. Pengarah
Bahagian Perancangan dan Penyelidikan Dasar Pendidikan
Kementerian Pendidikan Malaysia

salinan kepada:-

JABATAN PENDIDIKAN SELANGOR
JABATAN PENDIDIKAN WILAYAH PERSEKUTUAN KUALA LUMPUR
JABATAN PENDIDIKAN WILAYAH PERSEKUTUAN PUTRAJAYA

* SURAT INI DIJANA OLEH KOMPUTER DAN TIADA TANDATANGAN DIPERLUKAN *



KEMENTERIAN PENDIDIKAN MALAYSIA

Jabatan Pendidikan Wilayah Persekutuan Kuala Lumpur
Persiaran Tuanku Syed Sirajuddin
50604 Kuala Lumpur

Tel : 03 6204 6000
Fax : 03 6204 6801
Portal : jpwpkl.moe.gov.my
Emel : jpn.wp@moe.gov.my

Ruj. Tuan : -
Ruj.Kami : JPWPKL.600-9/1/5 Jld.4(64)
Tarikh : 24 Disember 2021

Noor Sakinah binti Ahmad

No.127, Jalan Sari Ilham 1/5, Ilham 2, Alam Sari,
43000 Kajang,
Selangor.

Puan,

**KEBENARAN UNTUK MENJALANKAN KAJIAN :
DETERMINANT FACTORS OF PRACTICING COVID-19 SOP COMPLIANCE AMONG
SCHOOL MANAGEMENT IN KUALA LUMPUR, SELANGOR AND PUTRAJAYA**

Dengan sukacitanya perkara di atas dirujuk dan e-mel puan serta surat dari Bahagian Perancangan dan Penyelidikan Dasar Pendidikan, Kementerian Pendidikan Malaysia KPM.600-3/2/3-eras(11496) bertarikh 10 Disember 2021 adalah berkaitan.

2. Dimaklumkan bahawa permohonan puan untuk menjalankan kajian bertajuk **"DETERMINANT FACTORS OF PRACTICING COVID-19 SOP COMPLIANCE AMONG SCHOOL MANAGEMENT IN KUALA LUMPUR, SELANGOR AND PUTRAJAYA"** diluluskan dan puan adalah tertakluk kepada syarat-syarat berikut:

- 2.1 Kelulusan ini adalah tertakluk kepada kandungan dalam cadangan penyelidikan yang telah diluluskan oleh Kementerian Pendidikan Malaysia dan merujuk kepada klausa 2.4.14 Garis Panduan Pengurusan dan Pengoperasian Sekolah dalam Norma Baharu 2.0 yang menyatakan bahawa:
"Pihak luar yang bukan warga KPM termasuk orang kenamaan tidak dibenarkan memasuki kawasan sekolah kecuali bagi tujuan pengoperasian sekolah"
- 2.2 Sila kemukakan surat kebenaran ini ketika berurusan dengan pihak pengurusan di Sektor/Pejabat Pendidikan Daerah atau Pengetua/Guru Besar di sekolah berkenaan;
- 2.3 Kebenaran ini bergantung kepada pertimbangan pihak pentadbir sekolah berkenaan;
- 2.4 Kelulusan ini hanya untuk sekolah-sekolah di bawah pentadbiran Jabatan Pendidikan Wilayah Persekutuan Kuala Lumpur sahaja.
- 2.5 Maklumat penyelidik dimasukkan dalam instrumen kajian.
- 2.6 Puan hendaklah mengemukakan senaskhah hasil kajian kepada jabatan ini sebaik sahaja ia siap sepenuhnya;
- 2.7 Penyelidik perlu mendapatkan kebenaran bertulis daripada ibu bapa/penjaga murid yang terlibat dalam kajian ini;
- 2.8 Rakaman video terhadap aktiviti pengajaran dan pembelajaran murid di dalam bilik darjah tidak dibenarkan.
- 2.9 Maklumat peribadi serta data murid adalah sulit dan tidak boleh dikeluarkan tanpa kelulusan jabatan ini.

...2/-

"JPWPKL MERCU KEGEMILANGAN"

PUBLICATION

Noor, S.A., Karmegam, K., Praveena, S.M., Nina, F. A., Murudagas, R., & Nur, A. D. M. Y. (2024) Cracking the code: uncovering the factors that drive COVID-19 standard operating procedures compliance among school management in Malaysia. *Sci Rep* 14, 556. <https://doi.org/10.1038/s41598-023-49968-4>

